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A molecular phylogeny and classification of Anisoptera (Odonata)

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Abstract

A phylogeny of Anisoptera employing 510 representatives of 184 genera (of ca. 380) in 11 families is presented based on an analysis of over 10,000 nucleotides from portions of the large and small subunit nuclear and mitochondrial ribosomal RNA's, the mitochondrial protein coding genes COI and COII, and portions of the nuclear protein coding genes EF-1α and Histone H3. Ribosomal sequences were structurally aligned and sequences carefully checked to eliminate alignment errors, contamination, misidentification and paralogous gene amplicons. Both the RAxML and Bayesian topology based on consolidation of data at the generic level is ((Austropetaliidae, Aeshnidae), ((Gomphidae, Petaluridae), ((Chlorogomphidae, (Neopetaliidae, Cordulegastridae)), (Synthemistidae, (Macromiidae, (Corduliidae, Libellulidae)))))). As the positions of Petaluridae, Chlorogomphidae, Neopetaliidae, and Cordulegastridae are weakly supported, possible alternative hypotheses are discussed. New taxonomic groups established include: in Gomphidae, Stylogomphini **trib.n.** and Davidioidini **trib.n.**, and in Libellulidae, Dythemistinae **subfam.n.** including Dythemistini **trib.n.**, Pachydiplactini **trib.n.** and Elgini **trib.n.** New taxonomic arrangements include: placement of Hemigomphini in Ictinogomphinae, and provisional expansion of Synthemistidae to include Gomphomacromiinae and a number of genera formerly placed in several small subfamilies of Corduliidae. Idomacromiinae is placed sister to remaining Synthemistidae *s.l.* based on molecular analysis of *Idomacromia* Karsch and *Oxygastra* Selys. Hemicorduliidae and Macrodiplactidae are nested well within Corduliidae and Libellulidae, respectively, and therefore are not accorded family rank. Eleven monophyletic subdivisions of Libellulidae are tentatively recognized as subfamilies: Dythemistinae **subfam.n.**; Sympetrinae (including Leucorrhiniini and Rhyothemistini); Macrodiplactinae; Brachydiplactinae; Tetrathemistinae; Trameinae; Zyxommatinae; Palpopleurinae; Diastatopidinae; Pantalinae (including Trithemistini and Onychothemistini); and Libellulinae. Zygonychini is paraphyletic to and therefore included within Onychothemistini.

Key words

Anisoptera, Odonata, phylogeny, Austropetaliidae, Aeshnidae, Gomphidae, Petaluridae, Synthemistidae, Macromiidae, Corduliidae, Libellulidae, 18S, 28S, 16S, 12S, COI, COII, EF-1α, H3, congruence.

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Figures, Tables, and Matrices with an 'S' preceding their number are part of the Electronic Supplement. They are not included in the printed article but can be downloaded at www.arthropod-systematics.de; their legends are printed at the end of this article.

1. Introduction

Odonata are considered to be among the "charismatic megafauna" of insects: they are large, diurnal, often colorful, exhibit elaborate behaviors, and have become cultural icons in many parts of the world. Odonata were among the first animals to fly, and exhibit a unique flight mechanism and wing venation (Snodgrass 1935; Riek & Kukalová-Peck 1984; Pfau 1986; Brauckmann & Zessin 1989). They have complex mating systems and unique copulatory structures (Schmidt 1915; Carle 1982a; Pfau 1971, 2011), and have been the subjects of important studies of behavior and ecology (Corbet 1999). They are cosmopolitan, yet many subgroups are geographically or environmentally restricted, making them useful study organisms for biogeographers (e.g., Tillyard 1917; Watson 1977; Carle 1982a, 1995; Turgeon et al. 2005) including the identification of areas of endemism (e.g., Tillyard 1917; Mitra et al. 2010; Clausnitzer et al. 2012). They are valuable indicators of water quality and useful in the determination of ecological integrity (Carle 1979; Oertli 2008). The popularity of Odonata collecting with careful recording of collection data has enabled their utilization as indicators of climate change (e.g., Hassel et al. 2007; Roble et al. 2009). Nonetheless, the exact phylogenetic placement of Odonata within Pterygota and the phylogenetic arrangement of constituent families has remained in dispute despite a rich fossil record and numerous rather recent morphological phylogenetic studies (Hennig 1981; Carle 1982b, 1986, 1995, 1996; Nel et al. 1993; Carle & Louton 1994; Bechly 1996; Lohmann 1996; Trueman 1996; Carle & Kjer 2002; Fleck et al. 2003; Rehn 2003; Klass 2008; Huang & Nel 2009; Blanke et al. 2013; Thomas et al. 2013).

Early results from rRNA (Fig. S7), employing several methods of analysis, supported the topology: ((Austropetaliidae + Aeshnidae) (Gomphoidea (Petaluroidea (Cordulegastridae (Neopetaliidae (Libellulidae (Macromiidae + Corduliidae))))))). A combined analysis employing data from rRNA, EF-1α, mitochondrial DNA, and morphology, and including additional taxon sequences from Gen Bank (Fig. S8), resulted in a topology similar to that derived from rRNA alone, except with Corduliidae as sister to Libellulidae. Subsequently, a proliferation of phylogenetic hypotheses has been generated based on molecular evidence for Anisoptera (Misof et al. 2001; Saux et al. 2003; Hasegawa & Kasuya 2006; Letsch 2007; Ware et al. 2007; Bybee et al. 2008; Carle et al. 2008; Fleck et al. 2008b; Dumont et al. 2010; Davis et al. 2011; Blanke et al. 2013). Most of these hypotheses have been consistent in finding both Anisoptera and Zygoptera monophyletic, with *Epiophlebia* Calvert, 1903 sister to Anisoptera, though relationships within suborders have eluded consensus.

In Anisoptera, except for universal recognition that the Libellulidae was one of the last major groups to evolve, nearly every possible arrangement of families has been proposed, as well as establishment of yet to be recognized families. It has become clear that many of the genera formerly placed in Corduliidae either form a group paraphyletic to Synthemistidae (the "GSI" of Ware et al. 2007) or are paraphyletic relative to remaining Libelluloidea and should be placed in one or more separate families. Broad intrafamilial relationships are also poorly understood for the most part, although some well-supported subfamilial or tribal groupings have emerged (e.g., Ware et al. 2007; Letsch 2007; Fleck et al. 2008a,b).

Our aim here has been to develop a phylogeny from selected molecular data to shed light on these persistent problems and contradictions in anisopteran phylogeny. To that end we generated new sequence data and added to it available mitochondrial, nuclear protein coding, and ribosomal sequences with sufficient taxon coverage, using structural alignment for rRNA, along with careful editing to eliminate paralogous gene copies, contamination, misidentification, and alignment errors. The resulting data matrix is the largest yet applied to anisopteran phylogeny, both in terms of the number of nucleotides and the number of taxa included.

2. Materials and methods

2.1. Outgroup selection

Odonata rRNA sequences were relatively easy to align across the order, but are difficult to align across even closely related outgroups. Odonata is almost certainly monophyletic, as is Anisoptera (e.g., Calvert 1893; Needham 1903; Tillyard 1917; Fraser 1957; Carle 1982a, 1995; Rehn 2003; Bybee et al. 2008; Carle et al. 2008). The sister taxon of Anisoptera is also very strongly corroborated as *Epiophlebia* (Fraser 1957; Hennig 1969, 1981; Carle 1982b, 1995; Trueman 1996; Pfau 1991; Bechly 1996; Rehn 2003; Bybee et al. 2008; Carle et al. 2008; Klass 2008; Davis et al. 2011). Therefore, to avoid problems with homology due to alignment ambiguity, outgroups were chosen from within Zygoptera. Analysis of Zygoptera (Carle et al. 2008) showed that the suborder could be well represented by Lestidae, Synlestidae, Calopterygidae, and Coenagrionidae, so representatives from these families were used to provide the outgroup data for (*Epiophlebia* + Anisoptera).

2.2. Data selection

Several laboratories have been working on anisopteran phylogeny using overlapping molecular data: the Misof lab (Misof et al. 2001; Letsch 2007; Fleck et al. 2008a,b); Kjer and Ware labs (Ware et al. 2007; Carle et al. 2008); Branham, Bybee and Whiting labs (Bybee et al. 2008); von Dohlen lab (Pilgrim & von Dohlen 2008); and the Dumont lab (Dumont et al. 2010), with many other papers including additional fragments. Although our group has sequenced much of the data needed for a major analysis, there are so many other data available that it was decided that it would be unjustified to exclude GenBank data. This led to a series of decisions, some of them arbitrary, that had to be made about which data, and which taxa to include in the analysis. The most commonly sequenced fragments for Odonata are the nuclear rRNA (18S, 28S), the nuclear elongation factor, subunit 1 alpha (EF-1α), and mitochondrial rRNA (12S, 16S), all which we sequenced. In addition, others have commonly sequenced the mitochondrial cytochrome oxidase, subunits 1 and 2 (COI, COII), and the nuclear Histone H3. Selected markers included the 18S and 28S rRNA (6836 sites), mitochondrial 12S-16S plus the intervening Val tRNA, along with COI and COII (4602 sites), Histone H3 (324 sites) and EF-1α (1068 exon sites), because data exist for these fragments that can completely represent all anisopteran higher groups. Other fragments in GenBank were not included because they would have resulted in mostly missing data. The degree to which missing data is problematic is still debated (Wiens 2005; Wiens & Morrill 2011; Lemmon et al. 2009), but while missing data may not be devastating to an analysis, there is general agreement that it is better to have data present and well distributed throughout the tree than to have mostly missing data with sporadic taxon representation.

2.3. Lab protocols

DNA was extracted, amplified and purified using standard protocols. Selected primers used are listed in Table S9. PCR conditions followed standard profiles, with 50°C annealing temperatures. Amplicons from both strands were purified and used as templates for cycle sequencing using Applied Biosystems BigDye ReadyMix. DNA sequencing was performed under a variety of platforms; first with an ABI 377 sequencer using acrylamide gels and later with the capillary sequencers at GeneWiz (Piscataway, NJ). Forward and reverse sequences were edited and consensus sequences created as in Kjer et al. (2001).

2.4. Alignment

Exonic portions of protein coding genes were invariant in length, and alignment was unambiguous. Ribosomal data were manually aligned according to secondary structure as described in Kjer (1995) and Kjer et al. (2007). Alignment ambiguous sites were removed from the analysis according to the following prespecified criteria: single stranded regions of rRNA were considered alignment ambiguous if they were length variable, and did not contain conserved motifs; conserved motifs are loosely defined as strings of at least 3 nucleotides conserved across 75% of the taxa; these motifs are often found in the middle of single-stranded hairpin stem loops. This approach is justified by the observation that stem-strand slippage most frequently results in the lengthening and contracting of hairpin stems, leaving both the base and the tips of the loops conserved (Gillespie et al. 2004). In cases where an otherwise alignable single stranded loop is made alignment ambiguous by a few taxa, the nucleotides from these taxa are shifted into the deleted regions, so that they would be treated as missing data.

2.5. Taxon selection and combination

In order to further minimize missing data, a multi-tiered analysis was conducted which began with a supermatrix (electronic supplement: Matrix S1), in which each species was kept as a separate taxon. Congeners were then examined. Congeners, by being placed in the same genus, have been considered by some taxonomist to be closely related, at least in some sense. However, since the purpose of our analysis is, in part, to test current taxonomic hypotheses, and to propose a phylogeny-based classification, congeners were not automatically combined. A preliminary phylogenetic analysis of the initial supermatrix (Matrix S1) was conducted using the PR-reweighting scheme described in Kjer & Honneycutt (2007) in order to assign each nucleotide to one of 5 partitions according to its substitution rate, followed by a RAxML (Stamatakis 2006) analysis using a GTR plus CAT model. Results of this preliminary analysis were examined and the data from monophyletic congeners were merged to create a more complete data matrix; markers for which sequences were contributed by more than one of the congeneric taxa were combined into a consensus sequence that included IUPAC ambiguity codes at polymorphic sites. For example, *Hemigomphus heteroclytus* plus *Hemigomphus magela* came out monophyletic in the preliminary analysis so a chimeric single *Hemigomphus* terminal was created that contains the 28S, 12S, and 16S from *H. heteroclytus* and the 18S and H3 from *H. magela*. Congeners that were not placed in an exclusive monophylum in the preliminary analysis were kept separate. This allowed a drastic reduction in the amount of missing data and reduced the number of terminal taxa. Taxa that were mostly missing data and that could not be phylogenetically linked to a congener were eliminated. These decisions were more arbitrary, in that a precise method was not used to balance decisions based upon the amount of missing data with interest in the taxon. In other words, some taxa with few data were retained because they were of critical taxonomic interest, while others were excluded because closely related taxa with more data were available. In the latter cases, taxa were favored that had large amounts of 28S and 16S data; taxa that had only a single fragment were deleted; taxa that had only a few fragments were also deleted if their putative subfamily was well represented by other taxa. Using these criteria for selection of taxa and combinations of data a "consolidated data matrix" was created, reducing the number of taxa from 510 in the preliminary analysis to 233 in the definitive analysis (including 20 outgroup taxa). This matrix, created directly from matrix in Matrix S1, is available in the electronic supplement (Matrix S2). The alignments and Nexus files for both Matrices S1 and S2 are available on Kjer's website, http://rci.rutgers.edu/~insects/pdata.htm. All new sequences have been submitted to GenBank (see supplement file 10 for accession numbers).

Analyses using a matrix without combination of congeners or deletion of taxa (resulting in "non-consolidated" trees) were performed on three subgroups supported in the consolidated tree: Aeshnoidea, Gomphoidea, and Libelluloidea *s.s.* Since the most recent common ancestor of subgroups existed more recently than the common ancestor of all of Odonata, the data exclusion decisions were re-evaluated so that fewer nucleotides were excluded because of alignment ambiguity. Data partitions (usually the COI) that were represented by three or fewer taxa were not included. These matrices were also created from Matrix S1, and the alternative (relaxed) data exclusion sites (unaligned "charsets") are listed at the end of the Nexus file (Matrix S1).

2.6. Phylogenetic analyses

Aligned and concatenated sequence data from reduced taxon set (Matrix S2) were partitioned into 5 site-specific rate classes according to KJER & HONNEYCUTT (2007). This method places individual nucleotides into discreet bins according to their estimated substitution rates, which are estimated according to their best fit on a mixture of trees generated from pseudoreplicate (bootstrap) datasets. Thus, for example, a slow third codon position (such as one coding for tryptophan) may be placed in the same partition as a second codon site. In other words, the method attempts to partition the data into bins according to similar substitution rates. Because protein coding data is often subdivided into 3 codons, but we note that there are both 2-fold and 4-fold redundant third codon sites, and Leucine first codon sites can also change without changing the amino acid state for which they code, we selected 5 rate classes to capture these potentially different rates among sites. This is admittedly aribitrary, but less so than arbitrarily partitioning into 3 codon subsets. More research is needed on selecting the optimum number of rate classes (FRANDSEN et al. 2015). A GTR+gamma model, approximated with the CAT model for efficiency (STAMATIAKIS 2006), was used for each partition, analyzed with RAxML (STAMATIKIS 2006), to calculate a best tree, with rapid bootstrap values, using command "-f a -q". Subgroup analyses from dataset S1 (without the consolidation of taxa) were partitioned by genes. The 28S and 18S were considered to be the same partition, and the mt rRNA, COI and COII were also pooled into the same partition. Results from individual genes should not be considered phylogenetic hypotheses, but rather, they provide independent sources for evidence of congruence or incongruence. These trees from analyses of individual partitions can be found in the electronic supplement (Figs. S3–S6). Congruence of the combined analysis with the nuclear rRNA, mt rRNA+COI/COII, EF-1α and H3 partitions is indicated on Fig. 1.

In addition, a Bayesian analysis was performed using MRBAYES 3.1.1 (HUELSENBECKWRONQUIST 2001) for matrix S2 only, using GTR rate model determined using the Akaike information criterion (AIC, AKAIKE 1974) in Modeltest 3.6 (POSADA & CRANDALL 1998), and using the same partitions as described above. Analyses were performed with random starting trees without constraints. Two sets of four Markov chains were run simultaneously for 10,000,000 generations with sampling every 2000th. A burn-in value of 200,000 was empirically determined based on evaluation of likelihood scores converging on stable values.

2.7. Error reduction

DNA was utilized from at least 22 PCR amplicons. We recognized that sequences in GenBank may be contaminants (i.e., DNA from an organism other than the specimen intended to have been sequenced), or involve misidentification, including mislabeling. Such erroneous results can be expected even from careful workers, so it was assumed that some of our sequences as well as sequences obtained from GenBank may not have been what they were thought to be. Phylogenetically distant contaminants can be identified from a BLAST (ALTSCHUL et al. 1990) search, but this might be much less successful in detecting misidentifications and phylogenetically close contaminants (e.g., from previous rounds of DNA amplification in the same lab). A more phylogenetically based approach was preferred here for that reason, and because often there are many families represented in the top hits from a BLAST search, because fragments may not have enough variable sites to distinguish among taxa with a distance based approach. However, identifying taxonomic errors in a multi-locus dataset with phylogenetic approaches can also be difficult for the same reason as BLAST may fail (too few characters). Therefore, error detection involved an analysis of the entire dataset, but each PCR amplicon of the evaluated fragment was individually upweighted 1000-fold so that signal from each selected fragment would dominate an analysis. Using this method, where there was insufficient signal from the targeted fragment, the other data could resolve the tree, but even a single nucleotide out of place would be amplified 1000-fold, and thus, detected. For this analysis pseudoreplicate reweighted parsimony was utilized (PRP: KJER et al. 2001; KJER & HONEYCUTT 2007). While parsimony is rejected in general for molecular data, it is applicable for this method of error detection because PRP can be rapidly completed, and was found to be among the most effective weighting schemes, and as efficient as both likelihood and Bayesian approaches in terms of phylogenetic accuracy (KJER et al. 2007). Each site from the combined data was assigned a weight according to its best fit on 1000 bootstrap trees. These weights were then imported to an Excel file, which was then used to multiply these weights by 1000 for each of the 22 PCR amplicons successively, leaving the other weights for each of the non-targeted fragments. A heuristic search was then completed for each targeted fragment. Resultant phylograms were then examined. We looked for two characteristic signs of contamination and misidentification: excessively long terminal branches or taxa placed outside their families. This method detected not only contaminants and misidentifications, but also misalignments. For example, imagine that the last 5 nucleotides in a PCR amplicon are shifted 1 nucleotide to the right of all their neighbors. This shift would be magnified to 5000 autapomorphies that are then easily detected on a phylogram by branch length. Contaminants are similarly identified, because even a few nucleotides (multiplied by 1000) will cast a taxon out of where it should belong, and give it an easily identified long terminal branch. Fragments in question from taxa that demonstrated these long terminal branches were first examined for alignment errors, and the alignment was adjusted when errors were found. If the problem with the fragment was not the result of alignment error the fragment was submitted to a BLAST search. Only when the BLAST search resulted in strongest matches outside a given family, the data were considered to be contaminants or misidentifications, and discarded. Misidentifications inside families, however, would not be detected by this method. Paralogous gene copies can also seriously affect the results of a phylogenetic analysis (Djernæs & Damgaard 2006). EF-1α included three amplicons and in order to insure that all amplicons were from the targeted gene copy, primers were designed with substantial amplicon overlap. Non-chimeric amplicon sets from incorrect gene copies were detected by employing the phylogenetic weighting scheme utilized for detecting other contaminated amplicons. As for genetically similar species, however, our methods cannot insure distinction among very similar paralogous copies.

3. Results

Our principal results are presented in Figs. 1–4, with support values given on the trees. All analyses recovered monophyletic *Epiophlebia* + Anisoptera and a monophyletic Anisoptera with very high support by all criteria: maximum likelihood, Bayesian posterior probability, and congruence with individual gene partitions. Consequently, Anisoptera is regarded as an established taxon throughout. Comparison of Figs. 1 (based on all data) and S4 (based on mitochondrial data alone) shows that the mitochondrial partition is probably approaching saturation within the suborders (Misof et al. 2001), as it only shows appreciable congruence with the consolidated tree at the terminal branches, especially in Libellulidae. The H3 partition (Fig. S6) reveals little topology in common with the topology of the combined data tree. Visualizing congruence on Fig. 1 shows that nuclear and mitochondrial rRNA, as well as EF-1α recover many nodes that are found in the combined data topology. Note that in Fig. 1B and 1C bootstrap values and posterior probabilities appear, respectively, above and below each branch leading to the node to which the support metrics refer. Figure 1A (outgroup taxa) and Figs. 2–4 ('unconsolidated' trees) show only bootstrap support.

3.1. Major anisopteran monophyletic groups and their relationships

Results, except those from H3 (Fig. S6), consistently recover Aeshnoidea (Aeshnidae + Austropetaliidae), Petaluroidea (Petaluridae), Gomphoidea (Gomphidae), Cavealabiata (= Cavilabiata Bechly, 1996 and Libelluloidea *sensu* Carle 1986) and its constituent families (Cordulegastridae, Neopetaliidae, Chlorogomphidae, Synthemistidae, Macromiidae, Corduliidae, and Libellulidae). Herein the Libelluloidea is restricted to the Synthemistidae, Macromiidae, Corduliidae, and Libellulidae. Aeshnoidea (Austropetaliidae + Aeshnidae, Figs. 1B, 2) is sister to the remaining Anisoptera with 100% bootstrap support (= BS) for Aeshnoidea and 99% BS for the remaining Anisoptera; nuclear rRNA and EF-1α trees are congruent with this topology, as are Bayesian results

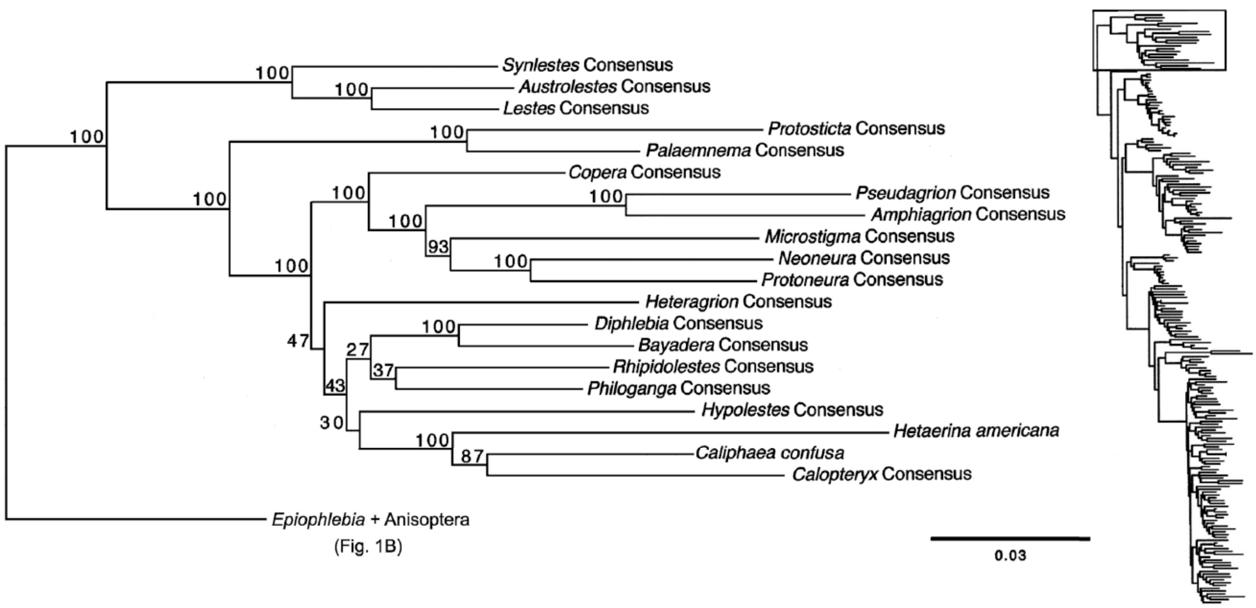

Fig. 1A. 'Consolidated' maximum likelihood (RAxML) phylogram, derived from Matrix S2, showing selection of Zygoptera outgroup taxa used to root the consolidated Anisoptera tree shown in Figs. 1B and 1C. The position of these taxa within extant Odonata as a whole is shown by the rectangular outline on the reduced tree to the right. Numbers at each node are bootstrap support values.

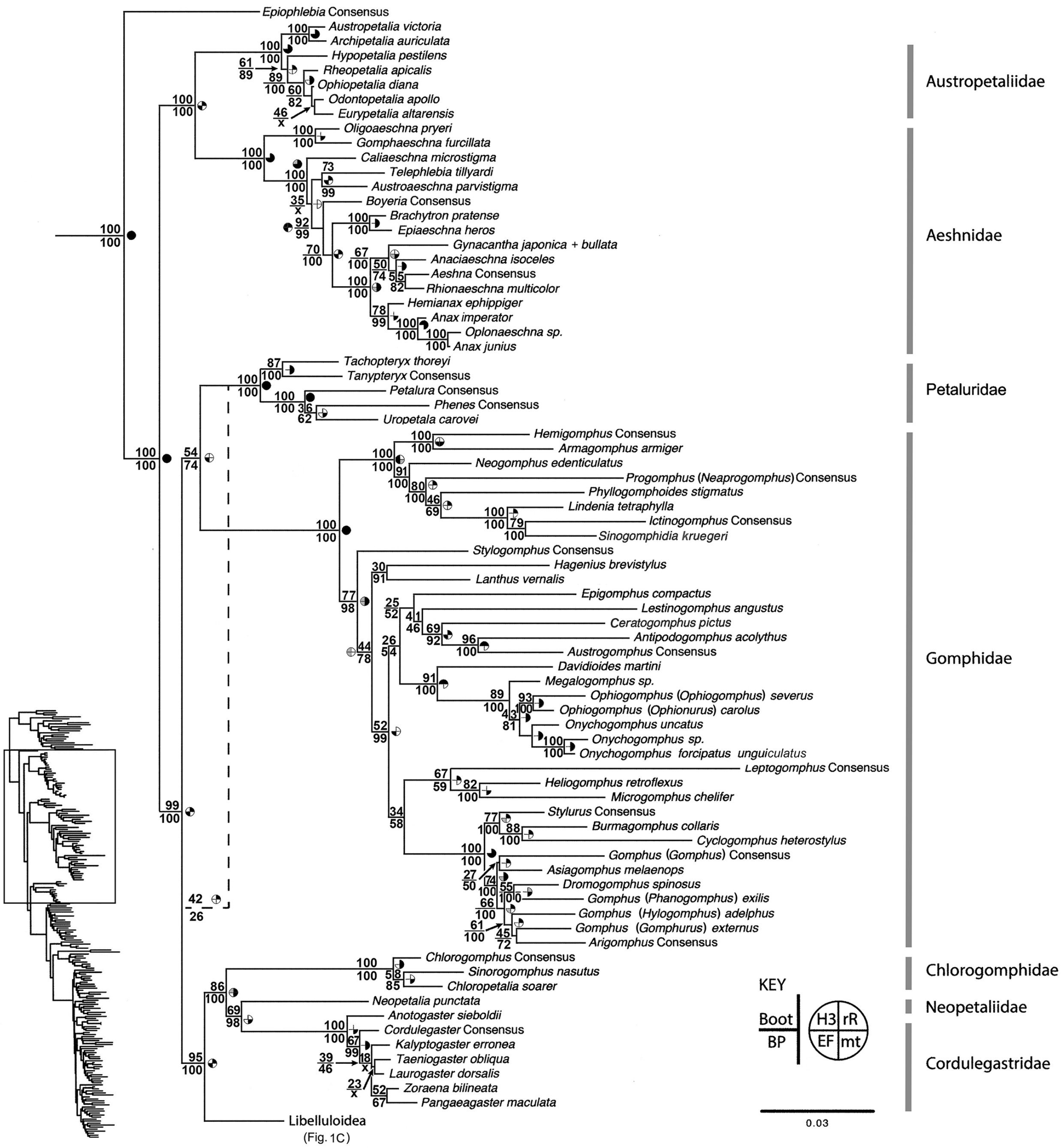

Fig. 1B. 'Consolidated' maximum likelihood (RAxML) phylogram derived from matrix S2 for *Epiophlebia* plus Anisoptera excluding Libelluloidea. — Position of each subtree within extant Odonata is shown by the rectangular outline on the reduced tree at left bottom. The extent of each family is indicated by the bar at the right. Bootstrap support, Bayesian posterior probability, and congruence with trees generated from individual data partitions are shown at each node with support as indicated in the 4partite circle key: white = none, gray = partial, black = complete or nearly so, white without a circumference line = insufficient information to categorize (H3 = histone3, EF = EF-1α, rR = nuclear rRNA, mt = mitochondrial rRNA, COI and COII); an 'x' in place of the Bayesian probability indicates that the Bayesian analysis did not recover the group in question.

with 100% posterior probabilities (= PP). The next major split is either between Gomphoidea and (Petaluroidea + Cavealabiata) or between (Petaluroidea + Gomphoidea) and Cavealabiata with the latter topology supported independently only by EF-1α. Resolution in favor of either topology is not clear cut in the consolidated analysis. Posterior probability of Petaluroidea + Gomphoidea in the Bayesian analysis is 74%, but the other 26% of trees all group Petaluridae with Cavealabiata as does the nuclear rRNA data partition (which we consider reliable; Figs. 1B, S3). Petaluridae is weakly supported as sister to Aeshnoidea by the mitochondrial partition (BS = 27%; Figs. 1B, S4).

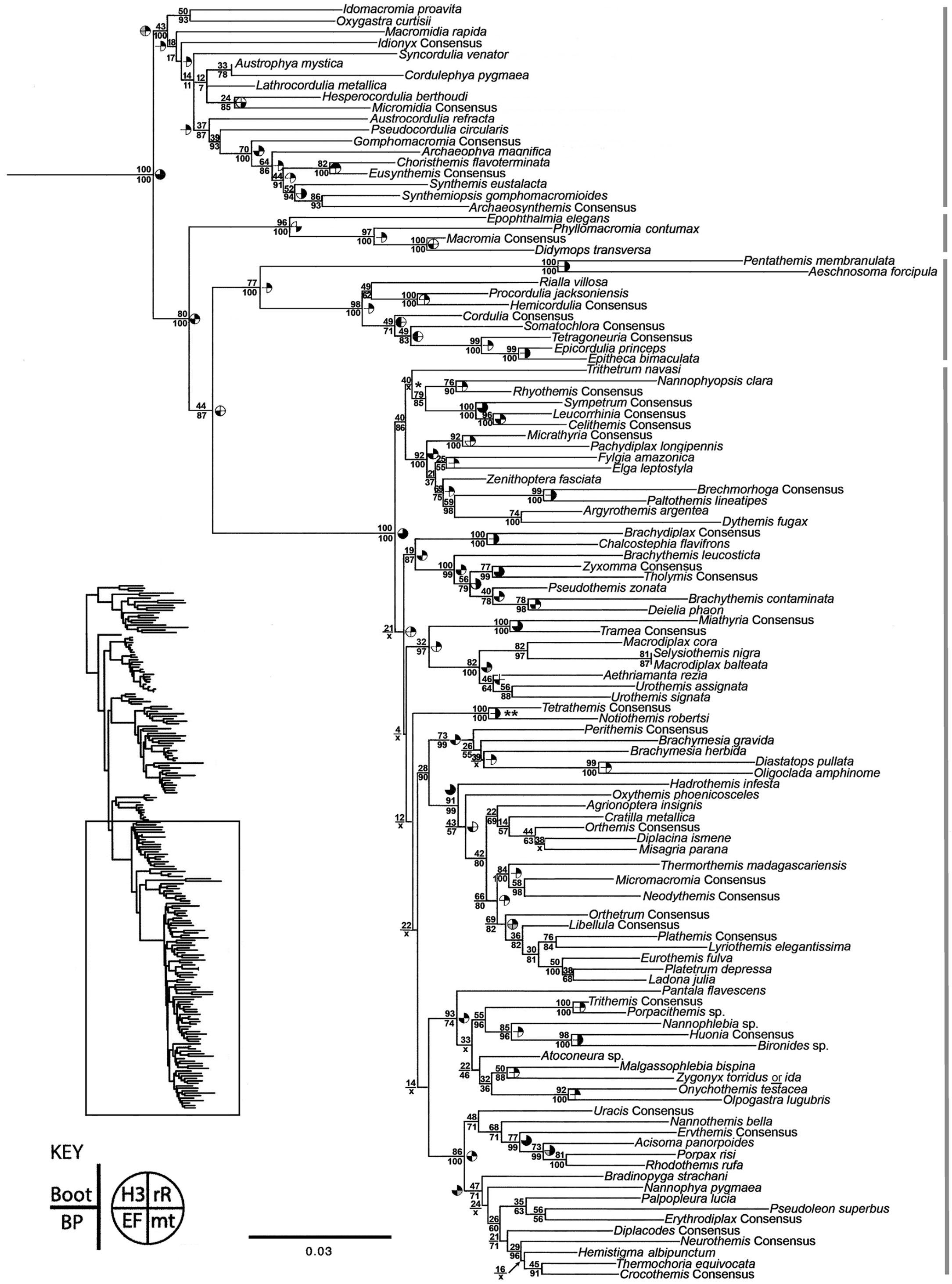

Fig. 1C. 'Consolidated' maximum likelihood (RAxML) phylogram derived from Matrix S2 for Libelluloidea. — Sub-tree position, family extent, bootstrap support, Bayesian posterior probability, and congruence of data partitions as in Fig. 1B. * = Bayesian tree excludes *Trithetrum navasi* from this group; ** = Bayesian tree includes *Trithetrum navasi* in this group.

3.2. Relationships within Austropetaliidae and Aeshnidae

All analyses split Austropetaliidae into Australian Austropetaliinae + Tasmainian Archipetaliinae (*Austropetalia* Tillyard, 1916 – *Archipetalia* Tillyard, 1917 ["–" meaning from the former to the latter taxon in phylogenetic trees]) and Chilean Hypopetaliinae + Eurypetaliinae (*Hypopetalia* McLachlan, 1870 – *Eurypetalia* Carle, 1996) with high confidence (Figs. 1B, 2). However, RAxML analyses of the mitochondrial markers (Fig. S4) and of EF-1α (Fig. S5), place Hypopetaliinae sister to (Austropetaliinae + Eurypetaliinae).

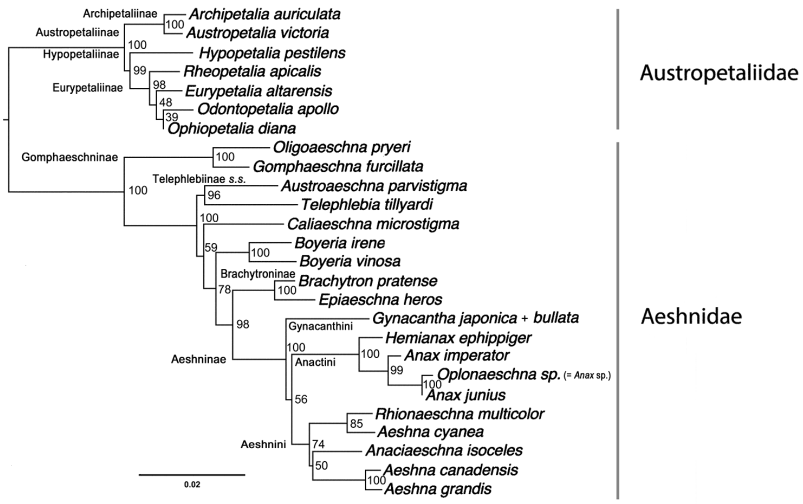

Fig. 2. 'Non-consolidated' maximum likelihood (RAxML) phylogram using relaxed exclusion criteria for sequence fragments (Matrix S1) for Aeshnoidea *sensu* Carle & Louton (1994). — This superfamily arises from the most basal node of the anisopteran topology. Families are indicated as in Fig. 1B, with selected subfamilies labeled at the base of corresponding nodes. Node support is indicated by bootstrap values.

Gomphaeschninae is well supported as sister to the remaining aeshnids, however Brachytroninae as defined by Fraser (1957) is not supported and forms a paraphyletic series relative to Aeshninae. Aeshninae (*Gynacantha* Rambur, 1842 – *Anax* Leach, 1815) is a strongly supported monophyletic group represented by three of its traditional tribes: Anactini, Gynacanthini and Aeshnini. Note that *Oplonaeschna* sp. is placed within *Anax* Leach, 1815. Based on the many morphological dissimilarities between these genera, this is almost certainly incorrect and suggests that the *Oplonaeschna* sequences from GenBank were misidentified or mislabeled. Although *Oplonaeschna* was misplaced in all testing topologies, our prescribed means of detecting contaminants would not have confirmed a mislabeling in this case.

3.3. Relationships within Gomphidae and Petaluridae

The deepest phylogenetic division within Gomphidae almost always appears within the plesiotypic "Octogomphinae" (*Hemigomphus* Selys, 1854 – *Lanthus* Needham, 1895; Carle & Cook 1984; Carle 1986; Figs. 1B, 3); this split places a paraphyletic Hemigomphini (*Hemigomphus – Neogomphus* Selys, 1854) at the base of Ictinogomphinae (*Hemigomphus – Sinogomphidia* Carle, 1986; Fig. 1B). The exception to this arrangement occurs in the nuclear rRNA partition (Fig. S3), where all Octogomphinae are weakly clustered near the base of the other main branch of Gomphidae which also includes: Epigomphinae, Phyllogomphinae, Austrogomphinae, Onychogomphinae, and Gomphinae. Placement of New World Progomphini (*Progomphus* Selys, 1854) and Gomphoidini (*Phyllogomphoides* Belle, 1970; Figs. 1B, 3) within Ictinogomphinae (Tillyard & Fraser 1940; Carle 1986, as Lindeniinae) is well supported, with Selys' (1854) Old World Légion Lindenia (*Lindenia* de Hann, 1826 – *Sinogomphidia*) firmly placed as the most highly derived group of Ictinogomphinae.

In the combined analysis the second basal branch of Gomphidae (BS = 77, PP = 98; Figs. 1B, 3), begins with two weak nodes that when collapsed result in a polytomy of the remaining Octogomphinae (*Stylogomphus* Fraser, 1922 – *Lanthus*) and the Hageniinae (*Hagenius* Selys, 1854) placed at the base of remaining Gomphidae (BS = 52, PP = 99). At this level of the topology collapsing nodes with less than 35% bootstraps results in a polytomy of the remaining subfamilies of Gomphidae: with (Phyllogomphinae + Austrogomphinae) represented by *Lestinogomphus* Martin, 1911 – *Austrogomphus* Selys, 1854 (BS = 41, PP = 46); Onychogomphinae represented by *Davidioides* Fraser, 1924 – *Onychogomphus* Selys, 1854 (BS = 91, PP = 100); and Gomphinae represented by *Stylurus* Needham, 1897 – *Arigomphus* Needham, 1897 (BS = 100, PP = 100). In addition, Epigomphinae is represented by the remaining two branches of the polytomy, which include the New World *Epigomphus* Hagen in Selys, 1854, and the Old World *Leptogomphus* Selys, 1878, *Microgomphus* Selys, 1858 and *Heliogomphus* Laidlaw, 1922 (BS = 67, PP = 59). These branches of Epigomphinae occupy alternative sister group positions relative to Gomphinae in Figs. 1B and 3. The high support for placement of *Stylurus* Needham, 1897 within the Cyclogomphini clearly differentiates it from the Gomphini with which it has often been placed.

Petaluridae is clearly divided into two groups, corresponding to Northern Hemisphere Tachopteryginae and Southern Hemisphere Petalurinae (Carle 1995).

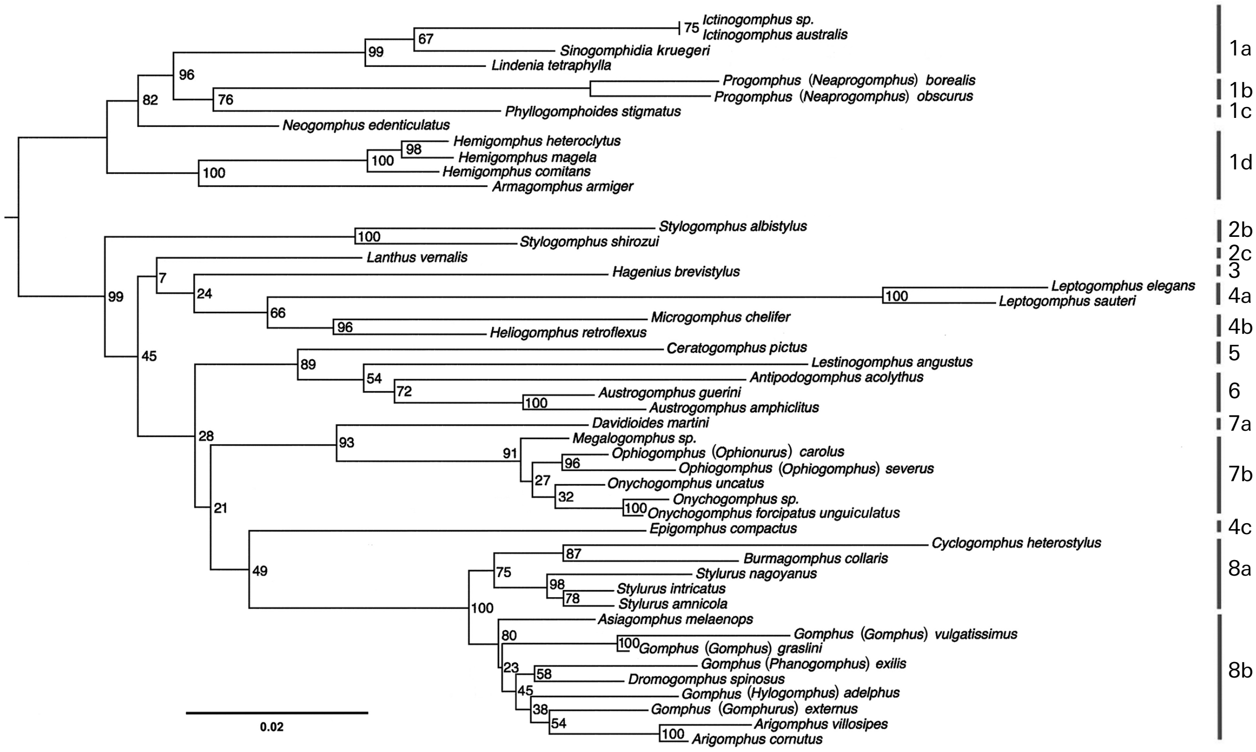

Fig. 3. 'Non-consolidated' maximum likelihood (RAxML) phylogram using relaxed exclusion criteria for sequence fragments (Matrix S1) for Gomphidae. — The eight subfamilies recognized by Carle (1986) are numbered to the right of the tree, they are: **1** – Ictinogomphinae (**1a** Ictinogomphini, **1b** Progomphini, **1c** Gomphoidini, **1d** Hemigomphini); **2** – Octogomphinae (**2a** Stylogomphini **trib.n.**, **2b** Octogomphini); **3** – Hageniinae; **4** – Epigomphinae (**4a** Leptogomphini, **4b** Microgomphini, **4c** Epigomphini); **5** – Phylogomphinae; **6** – Austrogomphinae; **7** – Onychogomphinae (**7a** Davidioidini **trib.n.**, **7b** Onychogomphini); **8** – Gomphinae (**8a** Cyclogomphini, **8b** Gomphini). Node support is indicated bybootstrap values.

3.4. Relationships within Cavealabiata

Cordulegastridae, Neopetaliidae, and Chlorogomphidae form a monophyletic group, with good support (BS = 86, PP =100, Fig. 1B), including congruence with both nuclear rRNA and mitochondrial data partitions, although EF-1α weakly supports a paraphyletic topology leading to Libelluloidea (Fig. S5). The three families are each individually well supported as monophyletic and separated by moderately long internodes. Note that we follow Carle (1983) and Lohmann (1992) in recognizing cordulegastrid genera and Carle (1995) for chlorogomphid and synthemistid genera.

Libelluloidea consists of four apparent monophyletic groups in Fig. 1C; with Macromiidae, Corduliidae, and Libellulidae well-supported (BS = 96, PP = 100; BS = 77, PP = 100; BS = 100, PP = 100, respectively). The fourth and earliest offshoot, Synthemistidae (here tentatively regarded as equivalent to the GSI of Ware et al. 2007) receives fair support in the combined analysis (BS = 43, PP = 100) and is supported by the nuclear rRNA partition (BS = 67). The GSI group includes Synthemistidae (*sensu* Tillyard 1917; *Choristhemis* Tillyard, 1910 – *Archaeosynthemis* Carle, 1995 in Fig. 1C) plus genera previously placed in Corduliidae (*Idomacromia* Karsch, 1896 – *Archaeophya* Fraser, 1959 in Fig. 1C; Fraser 1957; Davies & Tobin 1985). *Gomphomacromia* Brauer, 1864 and *Archaeophya* are recovered within traditional Synthemistidae, as morphology suggests (Theischinger & Watson 1984; Carle 1995), and *Pseudocordulia* Tillyard, 1909 is sister to Synthemistidae in the restricted sense, again as suggested by morphology, but with poor support in the RAxML analysis. The Corduliphyinae of Tillyard (1917), and the Gomphomacromiinae, Idionychinae, and Idomacromiinae (Tillyard & Fraser 1940) form a paraphyletic series within an expanded Synthemistidae *s.l.* In the combined analysis Idomacromiinae (represented by *Idomacromia* and *Oxygastra* Selys, 1870; BS = 50, PP = 93) is placed as sister to remaining Synthemistidae *s.l.* The mitochondrial tree (Fig. S4) recovers Synthemistidae *s.l.* as paraphyletic relative to the remaining Libelluloidea with a partial polarity reversal relative to the combined analysis, and with *Oxygastra* Selys, 1870 in a polytomy with Macromiidae and plesiotypic Corduliidae, while *Macromidia* Martin, 1907 is placed sister to remaining Corduliidae.

Except for the tentative removal of a few synthemistids from Corduliidae, the remaining three monophyletic families of Libelluloidea correspond perfectly to the three traditional families, Macromiidae, Corduliidae and Libellulidae. *Hemicordulia* Selys, 1870 and *Procordulia* Martin, 1907, sometimes placed in their own family

Table 1. Comparison of our proposed Libellulidae subfamilies to major subdivisions proposed in the literature. For Letsch and Ware, letters are their designations for groups, numerals indicate immediate sister groups from the basal node of the lettered group, 'sub' indicates a more distal group within the labeled group. For other trees, groups were not given markers, so they are identified by the included taxa that are most distant from one another. Cells with '—' are those in which the taxon sample included no more than one of the genera in our corresponding group; 'not recovered' indicates that two or more genera of our group were sampled but did not form a monophyletic group. Groups in square brackets are nearly but not quite identical to our corresponding group, as indicated by superscript letters: [a] *Rhyothemis* excluded; [b] only two genera represented vs. at least four in present study; [c] three adjacent but paraphyletic groups.

This Study (Fig. 4)	Letsch 2007	Pilgrim & van Dohlen 2007	Ware et al. 2008	Fleck et al. 2008 (fig. 2)	Fleck et al. 2008 (fig. 3)	Dumont et al. 2009
1	B	*Dythemis – Micrathyria*	F	—	—	—
2	A	[*Celithemis – Sympetrum*][a]	D	[*Celithemis – Sympetrum*][a]	*Celithemis – Sympetrum*	*Leucorrhinia – Sympetrum*[b]
3	C2	*Macrodiplax – Urothemis*[b]	B	*Urothemis – Macrodiplax*[b]	*Macrodiplax – Urothemis*	—
4	sub D2	—	sub E	*Brachydiplax – Chalcostephia*	*Chalcostephia – Brachydiplax*[b]	—
5	D1	—	A	*Tetrathemis – Notiothemis*	*Notiothemis – Tetrathemis*	—
6	C1	*Tramea – Miathyria*	–	—	—	—
7	sub D2	*Tholymis – Brachythemis*[b]	sub E	—	—	—
8	E	[*Nannothemis – Erythrodiplax*][c]	G	*Nannophya – Acisoma*	*Nannophya – Acisoma*	*Neurothemis – Diplacodes*[b]
9	F1	—	—	—	—	—
10	F2	*Onychothemis – Trithemis*	C + sub H1	not recovered	not recovered	*Zygonyx – Trithemis*[b]
11	G	*Orthemis – Libellula*	H2	*Orthetrum – Hadrothemis*	*Orthemis – Cratilla*	*Micromacromia – Orthetrum*

Hemicorduliidae, are here recovered well within Corduliidae. The somewhat aberrant corduliids *Pentathemis* Karsch, 1890 and *Aeschnosoma* Selys, 1870, long considered close relatives by Williamson (1908) and Watson (1969), are placed sister to all other Corduliidae, with high support both in the combined analysis (BS = 77, PP = 100; Fig. 1C) and for nuclear rRNA (BS = 94; Fig. S3). This result agrees with morphological analyses by Fleck (2012) and Fleck & Legrand (2013).

The Macrodiplactidae of Fraser (1950) here represented by *Macrodiplax* Brauer, 1868 – *Urothemis* Brauer, 1868 (Fig. 1C) is placed well within, and therefore considered a subfamily of, Libellulidae. Results provided herein further improve the placement of genera into larger groups, most of which are placed within existing subfamilies with the exception of genera placed in a new subfamily sister to Sympetrinae. Numbers and subfamily names are as in Fig. 4 and Table 1: **1** – sister group of Sympetrinae (BS = 87, PP = 100); **2** – Sympetrinae including Leucorrhiniini and Rhyothemistini (BS = 89, PP = 85); **3** – Macrodiplactinae (BS = 86, PP = 100); **4** – Brachydiplactinae (BS = 100, PP = 100); **5** – Tetrathemistinae (BS = 35 – 100, PP = 67 – 100); **6** – Trameinae (BS = 99, PP = 100); **7** – Zyxommatinae (BS = 100, PP = 99); **8** – Palpopleurinae (BS = 86, PP = 100); **9** – Diastatopidinae (BS = 72, PP = 99); **10** – Pantalinae including Trithemistini and Onychothemistini (BS = 97, PP = 74 – 97); and **11** – Libellulinae (BS = 93, PP = 99). However, the composition of these redefined and sometimes provisional subfamilies is often quite different than their traditional generic make-up (e.g., Fraser 1957; Bridges 1994). There is also moderate indication of relationships among groups of subfamilies, but some deeper nodes remain frustratingly tenuous. Five possible groupings of subfamilies are recovered, weakly but fairly consistently, in various RAxML and Bayesian analyses (Figs. 1C, 4): Sympetrinae and its sister group (BS = 40 – 78, PP = 80 – 86), which are placed sister to remaining Libellulidae (BS = 78, PP = 80), Trameinae + Macrodiplactinae (BS = 32, PP = 97), Diastatopidinae + Libellulinae (BS = 28, PP = 90), Brachydiplactinae + Zyxommatinae (BS = 19, PP = 87), and Palpopleurinae + Diastatopidinae + Pantalinae + Libellulinae (BS = 20, PP = 69).

4. Discussion

4.1. Tree support, topology and taxonomic conclusions, with comments on biogeography

The data utilized here encompass more taxa and more sequence data than any previous analysis of Anisoptera, with particular care taken to eliminate misidentified taxa and erroneous sequences and misalignments. Among important confirmatory results is that all of the commonly recognized families are recovered, and some aspects of their internal topology are confirmed.

4.1.1. Major anisopteran monophyletic groups

Epiophlebioidea is the nearest extant sister group to Anisoptera, although several taxa, reportedly paraphyletic to modern Anisoptera, evolved during the interval between the origins of Epiophlebioidea and Aeshnoidea (Carle 1982; Bechly 1996), but then failed to survive the K-T extinction event, perhaps owing to a reliance on lentic habitats. *Epiophlebia* and plesiotypic Anisoptera

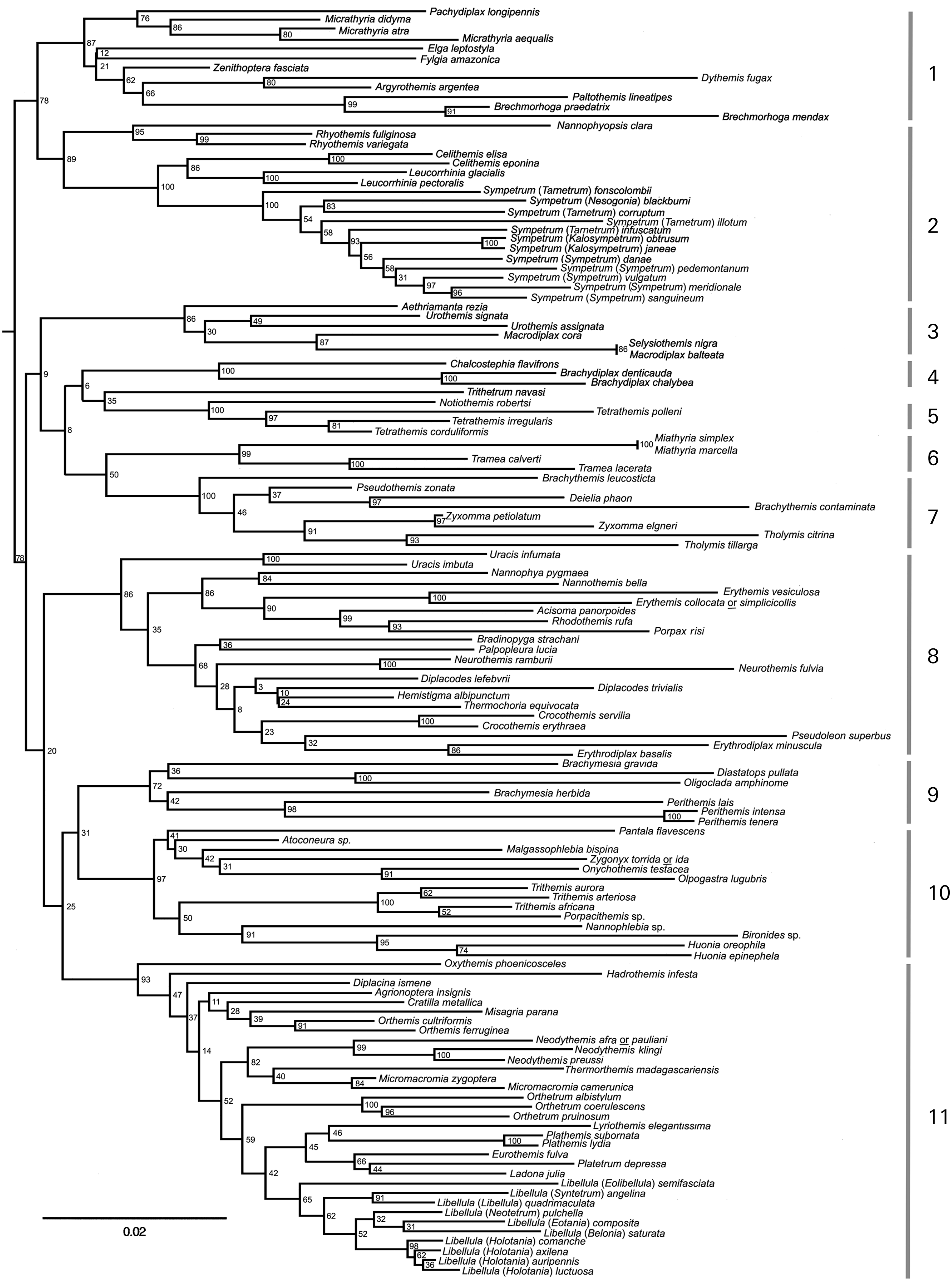

Fig. 4. 'Non-consolidated' maximum likelihood (RAxML) phylogram using relaxed exclusion criteria for sequence fragments (Matrix S1) for Libellulidae. — Based on the present analysis, as well as previous studies, 11 subfamilies are recogonized and numbered in the column to the right of the tree, they are: **1** – Dythemistinae **subfam.n.**; **2** – Sympetrinae; **3** – Macrodiplactinae; **4** – Brachydiplactinae; **5** – Tetrathemistinae; **6** – Trameinae; **7** – Zyxommatinae; **8** – Palpopleurinae; **9** – Diastatopidinae; **10** – Pantalinae; and **11** – Libellulinae. These subfamilies are compared with previous results from the literature in Table 1. Node support is indicated by bootstrap values. *Trithetrum* is likely a Sympetrinae, but its topological position is weak and varies greatly, suggesting a possible amplicon mislabeling (cf. Figs. 1C, S5).

(Austropetaliidae) today occupy small stream or seepage habitats and have isolated, relictual distributions in opposite hemispheres. This habitat, distinguished by the environmental stability of emerging ground water and the reliable flow of energy and nutrients through detritus based ecosystems, apparently provides some protection from global extinction events and may be crucial to the long term survival of these ancient insects (Carle 2012).

Results presented here and those of many recent workers (but see, e.g., Dumont et al. 2010; Fleck et al. 2008) clearly do not support the Aeshnoidea *s.l.* of Fraser (1954, 1957) and earlier authors, which placed Aeshnidae, Gomphidae and Petaluridae together in Aeshnoidea *s.l.* based on symplesiomorphic, or so-called "primitive" characters (e.g., Tillyard 1917; Fraser 1954; Needham & Westfall 1955; Walker 1958). Rather, our molecular results closely resemble the paraphyletic topology proposed by Carle (1982a, 1986, 1996), with the arrangement of superfamilies similar to that presented by Carle & Kjer (2002), i.e., (Aeshnoidea (Gomphoidea (Petaluroidea + Cavealabiata))); at this level our molecular topology differs only in that Gomphoidea and Petaluridae are grouped together.

Aeshnoidea, as defined by Carle & Louton (1994), i.e., Austropetaliidae + Aeshnidae, is placed as sister to all other Anisoptera and supported by the unique ventral development of the apical penile section into a sperm displacement and removal organ (Carle & Kjer 2002), correlated vestigial posterior hamules, and by molecular analyses of Letsch (2007), Bybee et al. (2008), Carle et al. (2008), and Davis et al. (2011). In addition, elongate posterior hamuli between which the anisopteran penis developed are present in both fossil and extant forms except Aeshnoids, affirming that the unique apical section of the Aeshnoid penis is likely fundamentally different from that of other Anisoptera. Here Aeshnoidea *sensu* Carle & Louton alone is recovered as sister to all other Anisoptera, with 100% bootstrap and Bayesian support. This topology is congruent with at least two independent molecular partitions for both the aeshnoid and the non-aeshnoid groups (Fig. 1B), thus providing very strong evidence for the Aeshnoidea as the sister group to all other Anisoptera. Non-aeshnoid Anisoptera are typically characterized by a closed sperm duct of penile section three (Pfau 2005) and the loss of endophytic oviposition. The earliest nodes of our topology are somewhat similar to Pfau's proposed topology (1991, 2005, 2011), but his extended "Petaluroidea" is not recovered, as predicted by Carle (1995). Pfau has insisted that ejaculation during the positive pressure phase of the penile sperm pump in cordulegastroids and during the negative phase in libelluloids must have evolved independently from austropetaloid precursors. Our topology suggests, rather, that the libelluloid condition developed gradually from that of plesiotypic Cavealabiata, apparently via development of a biphasic sperm pump following increased size of the apical chamber coupled with reduced outer wall sclerotization, as in Chlorogomphidae, which allowed inflection of the outer wall and consequent ejaculation during the end of the negative penile pressure phase.

Another group suggested as sister to all other Anisoptera is Gomphoidea (Hennig 1969; Carle 1982a; Saux et al. 2003; Blanke et al. 2013). However, subsequent to Carle & Kjer (2002) employing the morphological results of Pfau (1991) and Carle & Louton (1994), only workers either excluding molecular data or using a very limited taxon sample have recovered Gomphoidea as sister to all other Anisoptera. In the present analysis, the posterior probability of Gomphoidea alone being sister to the remainder of the suborder is zero and bootstrap support for its inclusion among non-aeshnoid families is very high.

Some recent phylogenies place Petaluroidea as the sister group of all other Anisoptera (e.g., Bechly 1996; Rehn 2003; Davis et al. 2011). Others have recovered Petaluroidea + Aeshnoidea *s.s.* (Fleck et al. 2008b: parsimony) or ((Petaluroidea + Aeshnoidea) Gomphoidea) (Bybee et al. 2008: parsimony; Fleck et al. 2008b: Bayesian analysis) in this position. Our results, however, provide no support for these topologies, and in fact Bayesian posterior probabilities are zero for each.

Within our topology non-aeshnoid Anisoptera show two arrangements in Fig. 1B. The combined analysis places Petaluridae as sister to Gomphidae with moderate support (BS = 54, PP = 74; Fig. 1B), but it is supported independently only by the EF-1α partition and little morphological evidence. This result may be affected by the long branches leading to extant Gomphidae and Petaluridae relative to the short internode recovered in the paraphyletic topology. In contrast, Carle & Kjer (2002), Letsch (2007) and Carle et al. (2008) recovered Petaluroidea as sister to Cavealabiata, the latter with 100% posterior probability. Our Bayesian analysis also recovered this relationship in the remaining 26% of cases, as did the nuclear rRNA data partition, with modest bootstrap support (Fig. S3). This latter topology is also supported by several morphological apomorphies including: male penis with elongate posteriorly directed ejaculatory duct (Pfau 2005), loss of endophytic oviposition, bilaterally symmetrical proventriculus, and larval labium: with prementum ca. as wide as long, with spatulate palpal lobes, and with movable end hook shorter than palpal lobe (Carle 1995).

Originally Selys (1854) placed *Cordulegaster* Leach, 1815, *Chlorogomphus* Selys, 1854, and *Petalia* Hagen, 1854 (= *Neopetalia*) in his Division Fissilabres of the subfamily Gomphines of his family Aeschnidées. Tillyard (1917), however, removed *Petalia* from the Gomphinae and placed it in his composite Petaliini of the Aeschnidae [sic], until Carle & Louton (1994) reconfirmed Selys' (1854) relative placement of *Neopetalia.* Here Cordulegastridae, Neopetaliidae, Chlorogomphidae and Libelluloidea are placed within Cavealabiata; this grouping is equivalent in composition to the Cordulegasteroidea [sic] of Tillyard & Fraser (1940) except that the latter excluded *Neopetalia* Cowley, 1934. Their group included the Cordulegasteridae and (illogically) the Libelluloidea, the latter equivalent to our Libelluloidea in composition. Cordulegasteroidea was later redefined by Fraser (1957) to include only Cordulegasterinae and Chlorogomphinae, and Walker (1958) emended the spelling to Cordulegastroidea. Despite many characteristics listed by both authors, only the large irregular teeth of the labial palps are a likely synapomorphy for the redefined Cordulegastroidea[1]. Carle (1995) summarized nine morphological characters that support Cordulegastridae, Neopetaliidae, and Chlorogomphidae as successively paraphyletic relative to Libelluloidea. In addition, the morphological evidence exhibits inverse character state polarities relative to the monophyletic Cordulegasteroidea topology (Carle 1983; Lohmann 1996; Bechly 1996). Better support for a monophyletic Cordulegastroidea comes from molecular results (Figs. 1B, S3, S4), Letsch (2007), Bybee et al. (2008: parsimony tree), Carle et al. (2008), and Davis et al. (2011: third tree). However, we are somewhat concerned that the long branches leading to extant Cordulegastridae, Neopetaliidae, and Chlorogomphidae could potentially overshadow support for the short internodes of the paraphyletic topology, especially here since different genes result in different, mutually exclusive topologies which may combine to support a monophyletic grouping. Molecular results that support the paraphyletic topology include Misof et al. (2001), Ware et al. (2007), Fleck et al. (2008: Bayesian tree), and Davis et al. (2011: second tree). A suitable and more extensive character set may allow for unambiguous determination of the true topology of this ancient rapid radiation. In either case these families are morphologically distinct and molecular based phylogenies reveal long branches leading to each.

4.1.2. Aeshnoidea

Within Aeshnoidea, Austropetaliidae and Aeshnidae are unequivocally distinct based on both molecular and morphological evidence including the loss of the apical sperm chamber in Aeshnidae. A North-South vicariance is likely between the austropetaliids of Australia-Chile and plesiotypic Aeshnidae (Gomphaeschninae) of the Northern Hemisphere, presumably before the dissolution of the trans-Pangaean highlands (Carle 1995). Within Austropetaliidae a clear-cut separation of Australian Austropetaliinae + Tasmainian Archipetaliinae from the Hypopetaliinae + Eurypetaliinae of Chile suggests a Mesozoic phylogenetic vicariance consequent to the breakup of southernmost Gondwana (Carle 1995, 1996). High molecular support values, morphological distinctiveness, ecological uniqueness, and isolated geographic occurrence all support the subfamily rank attributed to the groups of Austropetaliidae as proposed by Carle (1996), i.e., Austropetaliinae, Archipetaliinae, Hypopetaliinae and Eurypetaliinae. Here short internodes and terminal branch lengths could be linked to both relatively long generation times and stable environments of Temperate Zone spring seeps and spring fed streams (Carle 2012). The latter is supported by the relatively long terminal branch of the river inhabitant *Hypopetalia* (Fig. 1B).

The diversity of aeshnid taxa for which molecular data are available is currently inadequate to fully clarify the phylogenetic topology within Aeshnidae, but the morphological analysis by von Ellenrieder (2002) provides a topology for evaluation. Despite the limits of the molecular taxon sample, strong evidence supports the restricted Gomphaeschninae proposed by von Ellenrieder, comprising *Gomphaeschna* Selys, 1871, and *Oligoaeschna* Selys, 1889, and presumably also *Sarasaeschna* Karube & Yeh, 2001, and *Linaeschna* Martin, 1908, as the sister group to remaining Aeshnidae. The results also support a restricted Brachytroninae, consisting of von Ellenrieder's group 2 genera, as sister to Aeshninae. However, the topologies differ in that *Boyeria* McLachlan, 1895 and *Caliaeschna* Selys, 1883 do not form a monophyletic group, as in von Ellenrieder's trees. Within Aeshninae, Aeshnini and Gynacanthini appear to be sister groups indicating that their sister group, the Anactini (*Anax* Leach, 1815 + *Hemianax* Selys, 1871), is a valid tribe and not nested within Aeshnini as implied by von Ellenrieder and others. In addition, the new topology does not support the establishment of either Aeshnidae *s.s.* (Bechly 1996) or Telephlebiidae (Bechly 1996; Theischinger & Hawking 2006), although we do utilize both family group names for subfamilies of Aeshnidae (Fig. 2).

4.1.3. Gomphoidea

Species diversity of Gomphidae is likely higher than that of any other family of Anisoptera with the possible exception of Libellulidae, and yet no definitive phylogeny of Gomphidae has been published. Nevertheless, Carle's (1986) classification of Gomphidae provides a framework for phylogenetic evaluation and results presented herein are in substantial accord with that classification (hereafter family group names from Carle 1986 are used for concordant groupings recovered here). The diversity of gomphid taxa for which molecular data are available (Figs. 1B, 3) include representatives of all eight subfamilies, 70% of the tribes, and approximately 40% of the genera listed by Carle (1986). A basal dichotomy placing Ictinogomphinae *s.l.* (including Hemigomphini), as sister to remaining Gomphidae is strongly supported in the combined analysis, however the nuclear rRNA partition (Fig. S3) clusters all Octogomphinae together. Even so, it appears from the combined molecular topology that the "Octogomphinae *s.l.*" are even more plesiotypic than previously supposed. Putative apomorphic character states of morphological features (e.g., hamular denticulation and costal brace location) used by Carle (1986) to group the tribes of Octogomphinae are evident-

[1] However, if the expanded labial palps and elongate teeth are a duplication of the ancestral palpal armature, then this could explain the intermediate palps of various, often basal branching libelluloid genera (Tillyard 1917: fig. 32), including *Cordulephya* Selys, 1870 (Cordulephyinae), *Archaeosynthemis* (Synthemistinae) and *Epophthalmia* Burmeister, 1839 (Macromiidae).

ly plesiomorphic and the Hemigomphini (*Armagomphus* Carle, 1986 – *Neogomphus*) actually represent the sister group to all other Ictinogomphinae (*Progomphus* – *Sinogomphidia*; Fig. 1B). This split within "Octogomphinae *s.l.*" may reflect a similar history of vicariance as the split within Petaluridae between Gondwana and Laurasia, while the antipodean split within Ictinogomphinae may similarly parallel the basal vicariance within Austropetaliidae. Ictinogomphines eventually dispersed throughout the Neotropical region, with the Progomphini (*Progomphus*) and Gomphoidini (here represented by *Phyllogomphoides*) reaching the Nearctic, and with the highly derived and vagile Ictinogomphini reaching tropical Africa and beyond. The implied great age of the monogeneric Progomphini along with the morphological and ecological diversity among its 70 or so species (Carle 1986), suggest that *Progomphus* may require taxonomic revision.

Within the other major branch of Gomphidae the remaining "Octogomphinae" including the Trigomphini *s.l.* (represented by *Stylogomphus* Fraser, 1922), and Octogomphini (represented by *Lanthus*), along with the Hageniinae arise successively from the basal nodes. This molecular topology confirms the basal position of the "octogomphines" and along with strong differences in mitchondrial data, offers an explanation for the heterogeneous nature of Trigomphini, which is here divided into two tribes as follows:

Trigomphini *s.s.* – Type genus *Trigomphus* Bartenev, 1912; also including *Xenogomphus* Needham, 1944 and *Fukienogomphus* Chao, 1954 – Hind wing with 2–4 postmedian crossveins, anterobasal angle of forewing triangle acute, anal triangle typically 4–6 celled; male sternum 9 well sclerotized lateral to gonocoxae, female sternum 9 with laterobasal elongate-triangular sclerites, male epiproctal rami divergent, male anterior lamina with raised V-shaped posterior ridge, penile prepuce produced posteriorly, and apex of penis with short flagellum; and

Stylogomphini trib.n. – Type genus *Stylogomphus* Fraser, 1922 – Hind wing with 1 postmedian crossvein, anterobasal angle of forewing triangle slightly acute, anal triangle 3 celled; male sternum 9 semimembranous lateral to gonocoxae, female sternum 9 with laterobasal short-subtriangular sclerites, male epiproctal rami subparallel, male anterior lamina without raised V-shaped posterior ridge, penile prepuce globose, and apex of penis circular-flangelike.

Support values for the arrangement of the remaining four large subfamilies of Gomphidae are weak and for now considered to form a polytomy, but a Gondwanan group of the phyllogomphine + austrogomphine tribes (*Ceratogomphus* Selys, 1892 – *Austrogomphus* Selys, 1854) is well defined, with the Neotropical Epigomphini only weakly supported as its sister group (cf. Figs. 1B, 3). The three other supported monophyletic groups are relatively diverse in the Northern Hemisphere, but also have representatives in the Afrotropical region. These are: Leptogomphini + Microgomphini (i.e., *Leptogomphus* – *Heliogomphis*, placed by morphology within Epigomphinae; Fraser 1936; Tillyard & Fraser 1940; Carle 1986); Onychogomphinae (*Davidioides* – *Onychogomphus*); and Gomphinae (*Cyclogomphus* Selys, 1854 – *Arigomphus*).

Carle's (1986) placement of the aberrant *Davidioides* Fraser within the Onychogomphinae is well supported by a 91% bootstrap and 100% posterior probability, but it is morphologically distinct and separated from other Onychogomphinae by an unusually long internode and an even longer terminal branch. Consequently, a new tribe is established for the genus, which is distinguished from other Onychogomphinae as follows:

Davidioidini trib.n. – Type genus *Davidioides* Fraser, 1924 – Occiput black and slightly concave; hind wing triangle with transverse crossvein, anterior side of hind wing triangle 2.3 times length of proximal side, apical planate parallel to RP_1 and straight; abdominal segments 9 and 10 black, male cerci conical bright yellow and ca. as long as abdominal segment 10, epiproctal rami strongly divaricate; anterior hamuli long and slender, posterior hamuli wide and sinuous.

At the generic level the transfer of *Heliogomphus* from the Leptogomphini to the Microgomphini seems warranted (BS = 82, PP = 100), as does the transfer of *Stylurus* from Gomphini to Cyclogomphini (BS = 77, PP = 100). The latter shift suggests that the simplified anterior hamuli of these genera may represent an important synapomorphy, one also typical of the African *Neurogomphus* Karsch, 1890. Within Gomphini the placement of *Gomphus* (*Gomphus*) Leach, 1815 with *Asiagomphus* Asahina, 1985; placement of *Gomphus* (*Phanogomphus*) Carle & Cook, 1984 with *Dromogomphus* Selys, 1854; and placement of both *Gomphus* (*Hylogomphus*) Westfall & May, 2000 and *Gomphus* (*Gomphurus*) Needham, 1901 with *Arigomphus* Needham, 1897 suggest that the subgenera of *Gomphus* should either be treated as genera, or all genera and subgenera of this group be considered subgenera of *Gomphus*.

4.1.4. Petaluroidea

Our molecular derived topology within the Petaluridae is nearly identical to that proposed by Ware et al. (2014), with the Northern Hemisphere Tachopteryginae (*Tachopteryx thoreyi*, *Tanypteryx* spp.), with two species from North America and one from Japan, and with at least one fossil species, *Protolindenia wittei* Giebel, 1860 of Europe; and with the Southern Hemisphere Petalurinae, with two species from Chile (*Phenes* spp.), two from New Zealand (*Uropetala* spp.) and five from Australia (*Petalura* spp.), as reported by Carle (1995); it does not support Pheninae (including only *Phenes*; Fleck 2011).

4.1.5. Cordulegastridae, Neopetaliidae, Chlorogomphidae

The internal phylogeny of Cordulegastridae was determined from morphology by Carle (1983) and Lohmann

(1992), and by Carle (1995) for the Chlorogomphidae (although the latter topology has been disputed by Karube 2002). However, morphological analyses produced inverted phylogenetic topologies as compared to the molecular results shown in Figs. 1B, S3, and S4. For example, morphology predicted that the sister groups of remaining Cordulegastridae and Chlorogomphidae were *Zoraena* Kirby, 1890 and *Chloropetalia* Carle, 1995, respectively; and that the most recently derived genera were *Anotogaster* Selys, 1854 and *Sinorogomphus* Carle, 1995, respectively. In any case the families are morphologically distinct, and molecular based phylogenies reveal long internodes leading to each.

4.1.6. Libelluloidea

4.1.6.1. Synthemistidae. Fraser (1954; 1957) presented the topology of Libelluloidea as: (Synthemistidae (Corduliidae (Macrodiplactidae + Libellulidae))); he included in Corduliidae: Cordulephyinae, Neophyinae, Idomacromiinae, Macromiinae (as Epophthalmiinae), Idionychinae, Gomphomacromiinae, and Corduliinae. Monophly of Fraser's Corduliidae became questionable when *Gomphomacromia*, *Archaeophya* and possibly *Pseudocordulia* were shown to form the apparent sister group of Synthemistidae (Theischinger & Watson 1984; Carle 1995). A further expanded Synthemistidae which includes all of Fraser's Corduliidae except Macromiinae and Corduliinae, (i.e., the GSI of Ware et al. 2007), was recovered here (BS = 43; PP = 100) and also by Letsch (2007; PP = 100) and Bybee et al. (2008; BS = 90 – 100, PP = 99 – 100). Additional genera of Synthemistidae *s.s.* not represented by molecular data, almost certainly will be included based on a number of strong morphological synapomorphies and similar geographic origin, these genera include: *Austrosynthemis* Carle, 1995 *Calesynthemis* Carle, 1995 *Palaeosynthemis* Förster, 1903 *Parasynthemis* Carle, 1995 and *Tonyosynthemis* Theischinger, 1998.

Although not recovered in all studies (e.g., Fleck et al. 2008b), and with somewhat equivocal support here (e.g., Fig. S4 with *Oxygastra* and *Macromidia* closest to Macromiidae and Corduliidae *s.s.*), we believe monophyly of a group containing at least the majority of GSI taxa is well established. The subordinate group including the traditional Synthemistidae with the addition of *Gomphomacromia* and *Archaeophya* are closely tied by morphological synapomorphies as well as molecular evidence (Fig. 1B). However, some workers (Fleck et al. 2008b; Dumont et al. 2010; J. Ware, pers. comm. 2013) have recovered one or more of the genera: *Oxygastra*, *Idomacromia* Karsch, 1896, *Macromidia*, *Idionyx* Selys, 1871, and *Neocordulia* Selys, 1882, either within Macromiidae or Corduliidae or in a polytomy with Macromiidae, Corduliidae, or Libellulidae. *Idomacromia* and *Oxygastra*, along with *Nesocordulia* McLachlan, 1882, *Neocordulia* Selys, 1882, and *Neophya* Selys, 1881, share an apparent apomorphy with Corduliidae + Libellulidae, i.e., the anal loop has an evenly curved bisector forming a pleat. Our mitochondrial data partition recovered the GSI genera, except for a slightly expanded Synthemistidae, as a paraphyletic assemblage with *Oxygastra* and *Macromidia* closest to Macromiidae and Corduliidae *s.s.*, respectively (Fig. 1B; we now refer to Corduliidae as recovered here). Here again a more extensive character set is required to achieve congruence among all results, but at least at present, it seems most reasonable to recognize an expanded monophyletic Synthemistidae *s.l.*

4.1.6.2. Macromiidae, Corduliidae. Although Fraser (1957) recognized seven subfamilies within the Corduliidae, this analysis reveals that only genera of Corduliinae and Macromiinae form polytypic monophyletic groups; the first of these is placed as the sister group of Libellulidae, and Macromiinae placed sister to (Corduliidae *s.s.* + Libellulidae). This topology indicates that Macromiinae should also be accorded family rank, as proposed by Gloyd (1959). Macromiidae and Corduliidae *s.s.*, are again very strongly supported except for lower bootstraps tying *Aeschnosoma* Selys, 1870 + *Pentathemis* Karsch, 1890 to the Corduliidae *s.s.* The position of these two genera clearly supports Fleck's (2012) and Fleck & Legrand's (2013) separation of these plus *Libellulosoma* Martin, 1907 as a very distinctive group within Corduliidae *s.s.* Both Macromiidae and Corduliidae *s.s.* have been recovered by nearly all previous molecular analyses, although here the latter two "maverick" genera are also included. Intrafamily structure is again not definitively resolved, but it is noteworthy that within Macromiidae *Phyllomacromia* Selys, 1878 is distinct from *Macromia* Rambur, 1842, and that *Hemicordulia* and *Procordulia* are grouped well within Corduliidae *s.s.* and therefore not accorded family rank. Not fully determined from the data is which of these two families is sister to the Libellulidae, although both morphology and our Bayesian analysis (PP = 87) support the common hypothesis that Corduliidae *s.s.* occupies that position.

4.1.6.3. Libellulidae. Libellulidae is one of the most successful and recently differentiated anisopteran families. These dragonflies are found worldwide and are ubiquitous in nearly every lentic habitat where Odonata occur. Numerous attempts have been made over the years to organize this family into smaller subdivisions, mostly based on the work of Ris (1909) who recognized ten numbered "Gruppen", based almost entirely on wing venation; eight of these were later named as tribes by Tillyard (1917). Fraser (1957) eventually split *Onychothemis* Brauer, 1868 and *Zygonyx* Hagen, 1867 + *Olpogastra* Karsch, 1895 from Ris' group 8; and placed *Rhyothemis* Hagen, 1867 and *Zyxomma* Rambur, 1842 + *Tholymis* Hagen, 1867 into their own subfamilies and placed *Aethriamanta* Kirby, 1889, *Macrodiplax*, *Selysiothemis* Ris, 1897, and *Urothemis* into a separate family, the Macrodiplactidae. Fraser did not consider group IX of Ris (1909). Although Fraser's Macrodiplactidae has most often been given subfamily rank, the remaining subfamilies, when used at all, have remained essentially unchanged in rank and composition (Davies & Tobin 1984; Bridges 1994; Bechly 1996; Steinmann 1997).

All libellulid genera for which data are available are here assigned to one of eleven clusters (Fig. 4) that have bootstrap support > 85% (except for group 9 at 72%), and posterior probability > 90% (except for group 2 at 85%; Figs. 1C, 4; Table 1). Most are also consistent with one or more individual data partitions (Fig. 1C) and, allowing for differences in taxon sampling, are in agreement with most previous molecular studies (Table 1). The three studies that included the most genera, those of Letsch (2007), Pilgrim & von Dolen (2008), and Ware et al. (2007), recovered groups that corresponded very closely to our groups 1–5, 8, 10, and 11, and in the case of Letsch (2007), the branching order was reasonably similar to (Fig. 4). This increases confidence that most of the principal subsidiary groups have been identified and even that their interrelationships are emerging. Although the overlap among studies in both taxa and genetic markers precludes any strong statement that congruence among these phylogenies derives from entirely independent data, it can be at least noted that similarities are unlikely to be the result of individual analytical idiosyncrasies. It is true, nonetheless; that our arrangements are not identical between Figs. 1 and 4, and the taxon sample includes only a little more than half the libellulid genera (81 of ca. 143). Clearly the final topology of the libellulid tree has yet to be completely settled. However, sampling one representative of each of our eleven clusters for transcriptome or genomic sequencing is likely to resolve the phylogeny of the libellulid radiation in the near future.

The main groups of Libellulidae have been identified here and by others from both morphological and molecular evidence, but it is difficult to characterize groups unambiguously based on morphology in this large rapidly evolving family owing to the prevalence of convergence. The molecular results suggest that as few as three subfamilies may be eventually recognized within Libellulidae (e.g., Sympetrinae, groups 1 and 2; Trameinae, groups 3–7; and Libellulinae, groups 8–11), but here intrafamily group designations currently in common use are retained as subfamilies, with the exceptions of Leucorrhiniinae, Rhyothemistinae, Trithemistinae, Onychotheminae and Zygonychinae (of which the first two are recognized as tribes of Sympetrinae, the next two as tribes of Pantalinae, and the last is combined with the Onychothemini). Ongoing morphological and molecular study to determine intergroup relationships may necessitate changes in their taxonomic rank, final composition and morphological definitions as more taxa are analyzed. Subfamilies currently recognized, listed in order of their group number from Fig. 4 are: **1** – Dythemistinae **subfam.n.**; **2** – Sympetrinae (including Leucorrhiniini and Rhyothemistini); **3** – Macrodiplactinae; **4** – Brachydiplactinae; **5** – Tetrathemistinae; **6** – Trameinae; **7** – Zyxommatinae; **8** – Palpopleurinae; **9** – Diastatopidinae; **10** – Pantalinae (including Trithemistini and Onychothemistini); and **11** – Libellulinae. A new subfamily of Libellulidae is established with three new tribes for genera previously placed in groups V, VI and IX of Ris (1909); these genera have been more recently placed in Pantalinae, Sympetrinae, Brachydiplactinae and Tetrathemistinae (Fraser 1957; Davies & Tobin 1985). In our molecular topology (Fig. 1C) the new subfamily is placed as the sister group of Sympetrinae and these together form the sister group of remaining Libellulidae. Transferred genera are primarily Neotropical or southern Nearctic or both in distribution. The likely misplacement of *Zenithoptera* within Dythemistinae **subfam.n.** (Figs. 4, 1C, S3) may have resulted from the lack of mitochondrial data overlap; morphological characters suggest that *Zenithoptera* might be eventually placed elsewhere, possibly near *Rhyothemis*.

Dythemistinae subfam.n. – Type genus *Dythemis* Hagen, 1861. – Adult color non- to slightly metallic, typically with yellow markings; compound eyes in life typically bright bluish green; forewing nodus displaced distally so that antenodals are typically greater in number than postnodals and with distal antenodal typically unmatched; wings with RP, and MA (sectors of arculus) fused basally, reverse oblique vein weakly developed, apical planate weakly developed, radial planate typically well developed, typically with 1 bridge crossvein (with 1–3 in *Micrathyria*), with 1 cubital-anal crossvein (occasionally 2 in *Micrathyria*), and with anal loop well developed with angulated bisector, anal loop open distally in *Argyrothemis*.

Dythemistini trib.n. – Type genus *Dythemis* Hagen, 1861. – Adult with prothoracic hind margin slightly expanded; wings with arculus typically arising from near second antenodal, wings with R_2 undulate, forewing intraradial crossveins 9–12 (i.e., crossveins between RA and RP from arculus to subnodus), radial and medial planates well developed, forewing triangle three sided with proximal side more than twice length of costal side, forewing triangle with costal side less than 3/8 length of supratriangle; hind wing triangle with proximal side slightly basal to arculus, hind wings with MP not arising from outer side of triangle, forewing trigonal interspace with 2–3 cell rows; larva with dorsal abdominal spines. Also includes: *Macrothemis* Hagen, 1868, *Scapanea* Kirby, 1889, *Paltothemis* Karsch, 1890, *Brechmorhoga* Kirby, 1894, and *Gynothemis* Calvert, 1909.

Pachydiplactini trib.n. – Type genus *Pachydiplax* Brauer, 1868. – Adult with prothoracic hind margin prominent and bilobate, wings with arculus typically arising between first and second antenodal, forewing intraradial crossveins 4–6, radial planate well developed and medial planate vestigial, forewing triangle three sided with proximal side more than twice length of costal side, costal side of forewing triangle less than 3/8 length of supratriangle; hind wing triangle with proximal side at arculus, hind wings with MP arising from outer side of triangle, forewing trigonal interspace with 2–3 cell rows; larva without dorsal abdominal spines. Also includes *Micrathria* Kirby, 1889, and *Anatya* Kirby, 1889.

Elgini trib.n. – Type genus *Elga* Ris, 1911. – Adult with prothoracic hind margin moderately to greatly expanded, wings with arculus typically arising from near second antenodal, forewing intraradial crossveins 5–6, radial and medial planates vestigial or obsolete, forewing triangle four sided with proximal side less than twice length of costal side, costal side of forewing triangle nearly 1/2 length of supratriangle; hind wing triangle with proximal side slightly distal to arculus, hind wings with MP not arising from outer side of triangle, forewing trigonal interspace with one cell row. Also includes: *Nephepeltia* Kirby, 1889, *Fylgia* Kirby, 1899, *Argyrothemis* Ris, 1911 and possibly *Edonis* Needham, 1905.

Molecular results also lend support to previous morphological arrangements of subgenera within *Libellula* (24 species) and also to some extent within *Sympetrum* (62 species). The topology for *Libellula* and its near relatives is similar to that presented by Carle & Kjer (2002); significant differences include the placement of *Platetrum* Newman, 1833, with both *Ladona* Needham, 1901, and *Eurothemis* Kennedy, 1922; and the placement of *Libellula* (*Eolibellula*) Kennedy, 1922, as sister to remaining *Libellula*. In addition, establishment of *Eotainia* Carle & Kjer, 2002, separate from *Holotainia* Kirby, 1899, is supported. In *Sympetrum* the putative subgenus *Tarnetrum* Needham & Fisher, 1936, forms a basal paraphyletic cluster that also includes *Nesogonia* Kirby, 1898 while *Kalosympetrum* Carle, 1993 and *Sympetrum* Newman, 1833 both appear to be monophyletic, although still sparsely sampled.

4.2. Rapid ancient radiations

A phylogenetic topology of rapid ancient radiations that is characterized by short deep internodes followed by much longer branches is difficult to recover (Whitfield & Kjer 2008). In an ancient group like Odonata variation in the rate of evolution is very likely to leave this pattern of short and long branches deep within a phylogenetic tree. Occurrence of a rapid phylogenetic radiation is most likely when circumstances simultaneously enhance the exploitation of unoccupied niche space while increasing the rate of reproductive isolation. Environmental factors that can dramatically influence fundamental niche utilization include: continental drift and associated orogenesis (Carle 1995), climate change and its effect on ocean and rainfall levels, and meteoric impacts and extreme volcanism which can result in extinction events that free-up niche space (Alvarez et al. 1980; Knoll et al. 2007; Carle 2012). Important organismal factors include morphological preadaptations and subsequent innovations, particularly those that affect vagility and that modify the copulatory scheme (Carle 1982c).

From Fig. 1 it is clear that a rapid ancient radiation occurred among the first evolutionary splits among Anisoptera and was followed by long branches leading to extant Aeshnoidea, Gomphidae, Petaluridae, Cordulegastridae, Neopetaliidae, Chlorogomphidae, and Libelluloidea. Radiation of the anisopteran superfamilies was probably initiated by the Permian-Triassic extinction event and perhaps trimmed by the Triassic-Jurassic extinction event, with current distributions of the less vagile, stream or seepage-restricted families (Austropetaliidae, Gomphidae, Petaluridae, Cordulegastridae, Neopetaliidae, and Chlorogomphidae) explained by their radiation before the dispersion of Pangaea (Carle 1982a). This is also true of many aeshnid genera, although the modern lentic adapted *Gynacantha* Rambur, 1842, *Aeshna* Fabricius, 1775, and *Anax* Leach, 1815, are cosmopolitan and comprise nearly half the species of the family; invasion of lentic habitats apparently fosters dispersial and speciation, and undoubtedly also fossilization, but may have left the resultant species susceptible to global extinction events, and has consequently led to a disjunction between phylogenies derived from fossil and living Odonata (Carle 2012).

By far the most diverse anisopteran superfamilies are the Gomphoidea and Libelluloidea; both groups have independently evolved similar methods of fossorial larval concealment which has negated the selective link between endophytic oviposition and plant related cover for larval development (Carle 1995). Probably even more importantly from the standpoint of speciation, constraints imposed by the endophytic ovipositor were removed, thus freeing penile and ovipositor morphology to play a greater role in reproductive isolation. At the subfamily level within Gomphidae and at the family level within Libelluloidea the relatively mild Jurassic-Cretaceous extinction events may have led to gradual radiations of lotic forms in both groups which were quite similar in extent. However, the infamous Cretaceous-Paleogene extinction event at ca. 65.5 million years ago apparently marked the final demise of the gigantic and probably lentic adapted dragonflies Stenophlebioidea Pritykina, 1980 and Aeschnidioidea Carle & Wighton, 1990 (Zhang 1999; Carle 2012). Exploitation of unoccupied lentic niche space coupled with preadaptations including complex yet efficient copulatory, oviposition, and flight processes, and subsequent innovations such as secretive female behavior, may have led to a dramatic radiation of the Libellulidae. The situation within Libellulidae clearly presents the signature of a rapid radiation (Fig. 1C), with nearly all early internodes that lead to listed subfamilies short, with terminal branches within subfamilies relatively long. Ware et al. (2008) estimated the origin of the Libellulidae (its split from Corduliidae) to have occurred ca. 87–57 million years ago, depending on the nucleotide substitution model employed. The younger end of this range is shortly after the Cretaceous-Paleogene extinction event which in particular decimated lentic communities through long term daylight reduction (Carle 2012), thus opening these habitats to eventual exploitation by the rapidly evolving Libellulidae. In addition, Gingerich (2006) describes the early Eocene as a period of unusual warmth and high rainfall which could enhance lentic habitats that were expanding in both local and geographic extent.

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Electronic Supplement Files

at http://www.senckenberg.de/arthropod-systematics (“Contents”)

File 1: carle&al-anisopteraphylogeny-asp2015-electronicsupplement-1.docx — **Matrix S1.** Nexus file with Matrix S1; unaligned ”charset” commands to extract matrices for Figs. S3 – S6 at end.

File 2: carle&al-anisopteraphylogeny-asp2015-electronicsupplement-2.docx — **Matrix S2.** Phylip file with Matrix S2, formed from Matrix S1 by consolidation of monophyletic genera into single chimeric taxa.

File 3: carle&al-anisopteraphylogeny-asp2015-electronicsupplement-3.pdf — **Fig. S3.** ‘Non-consolidated’ maximum likelihood phylogram, using all available taxa with appropriate data available in Matrix S1, constructed using data from nuclear rRNA (18S, 28S) only.

File 4: carle&al-anisopteraphylogeny-asp2015-electronicsupplement-4.pdf — **Fig. S4**. ‘Non-consolidated’ maximum likelihood phylogram, using all available taxa with appropriate data available in Matrix S1, constructed using data from mitochondrial rRNA (12S, 16S) and protein coding genes COI and COII only.

File 5: carle&al-anisopteraphylogeny-asp2015-electronicsupplement-5.pdf — **Fig. S5**. ‘Non-consolidated’ maximum likelihood phylogram, using all available taxa with appropriate data available in Matrix S1, constructed using data from nuclear protein coding gene EF-1α only.

File 6: carle&al-anisopteraphylogeny-asp2015-electronicsupplement-6.pdf — **Fig. S6**. ‘Non-consolidated’ maximum likelihood phylogram, using all available taxa with appropriate data available in Matrix S1, constructed using data from nuclear protein coding gene H3 only.

File 7: carle&al-anisopteraphylogeny-asp2015-electronicsupplement-7.pdf — **Fig. S7**. Maximum likelihood phylogram for Odonata with special attention to Anisoptera based on a combination of rRNA, EF-1α, mtDNA, and morphology. From the presentation by Carle F.L. & Kjer K.M. 2000. Dragonfly phylogeny: molecules, morphology and behavior. – Entomological Society of America Annual Meeting.

File 8: carle&al-anisopteraphylogeny-asp2015-electronicsupplement-8.pdf — **Fig. S8**. Phylogenetic topology of Anisoptera for rRNA-MP and EF-1α-ML with agreement listed on nodes for various other methods of analysis. From the presentation by Carle F.L. & Kjer K.M. 2000. Dragonfly phylogeny: molecules, morphology and behavior. – Entomological Society of America Annual Meeting.

File 9: carle&al-anisopteraphylogeny-asp2015-electronicsupplement-9.docx — **Table S9.** Selected sequencing Primers designed for 18S, 28S, 12S&16S, and EF-1α. Primer name lists the following information: Gene, fragment, direction, year, series letter. UP = Forward Primer. DN = Reverse Primer. Amplicon length is approximate and for EF-1α includes introns.

File 10: carle&al-anisopteraphylogeny-asp2015-electronicsupplement-10.docx — Gene bank accession numbers for sequences newly obtained during this study.

S1 Nexus file

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Matrix

Unaligned
Unaligned_Zygoptera
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Protosticta_curiosa
Protosticta_sanguinostigma
Sinosticta_ogatai
Palaemnema_paulicoba
Palaemnema_domina
Palaemnema_melanostigma
Isosticta_robustior
Rhadinosticta_simplex
Amphisticta_silvarum
Labidosticta_vallisi
Orosticta_filicola[sp]
Platycnemis_pennipes
Copera_annulata
Copera_vittata
Copera_marginipes[sp]
Coeliccia_albicauda
Coeliccia_cyanomelas
Calicnemia_miles
Prodasineura_vittata[sp]
Chlorocnemis_abbotti[sp]
Nososticta_solida
Phylloneura_westermanni
Onychargia_atrocyana
Argia_moesta
Argia_nahuana
Argiocnemis_rubescens
Mortonagrion_aborense[sp]
Agriocnemis_pygmaea
Austroagrion_watsoni
Archibasis_viola
Coenagrion_puella
Coenagrion_resolutum
Pseudagrion_cingillum
Pseudagrion_aureofrons
Pseudagrion_ignifer
Erythromma_najas
Paracercion_plagiosum
Erythromma_lindenii
Paracercion_hieroglyphicum
Acanthagrion_quadratum
Leptobasis_vacillans
Amphiagrion_saucium
```

Amphiagrion_abbreviatum
Xiphiagrion_cyanomelas
Hesperagrion_heterodoxum
Ishnura_elegans
Ishnura_barberi
Ischnura_graellsii[sp]
Anomalagrion_hastatum
Amphiallagma_parvum
Azuragrion_granti
Azuragrion_nigridorsum
Enallagma_cyathigerum
Enallagma_sp
Enallagma_aspersum
Aciagrion_pallidum
Aciagrion_borneense
Protoneura_capillaris
Protoneura_cara
Psaironeura_remissa
Elattoneura_analis_or_glauca
Neoneura_aaroni
Neoneura_amelia
Neoneura_maria
Ceriagrion_aeruginosum
Telebasis_salva
Leptagrion_elongatum
Leptagrion_sp
Metaleptobasis_manicaria
Diceratobasis_melanogaster
Pyrrhosoma_nymphula
Chromagrion_conditum
Seychellibasis_alluaudi[sp]
Nehalennia_gracilis
Coryphagrion_grandis
Microstigma_rotundatum
Microstigma_anomalum
Mecistogaster_ornata
Mecistogaster_linearis
Megaloprepus_coerulatus
Haplostigma_modesta
Pseudostigma_aberrans
Rhinagrion_mima
Sciotropis_cyclanthorum
Heteragrion_mitratum
Heteragrion_sp
Oxystigma_cyanifrons
Dimeragrion_percubitale
Tatocnemis_malgassica
Philogenia_cassandra
Philogenia_terraba
Philogenia_berenice[sp]
Teinopodagrion_venale

Teinopodagrion_lepidum
Amanipodagrion_gilliesi
Nesolestes_elizabethae
Protolestes_kerckhoffae
Argiolestes_ochrostomas
Pyrrhargiolestes_sidonia
Caledopteryx_maculata
Trineuragrion_percostale
Caledargiolestes_uniseries
Podopteryx_roseonotata
Austroargiolestes_icteromelas
Griseargiolestes_albescens
Griseagriolestes_eboracus[sp]
Miniargiolestes_minimus
Lestomima_flavostigma
Rhipidolestes_hiraoi
Rhipidolestes_aculeata
Paraphlebia_zoe
Thaumatoneura_inopinata
Hypolestes_clara_
Hypolestes_sp
Agriomorpha_fusca
Sinocnemis_yangbingi
Miocora_peraltica
Cora_marina
Cora_cyane
Polythore_sp
Polythore_boliviana
Euthore_fasciata
Rimanella_arcana
Pentaphlebia_stahli
Devadatta_podolestoides
Amphipteryx_longicaudata
Pseudolestes_mirabilis
Philoganga_vetusta
Philoganga_robusta_
Lestoidea_conjuncta
Diphlebia_lestoides
Diphlebia_coerlescens
Bayadera_melanopteryx
Bayadera_brevicauda
Dysphaea_gloriosa
Euphaea_formosa
Anisophaea_decorata
Anisopleura_sp
Disparocypha_biedermanni
Libellago_semiopaca
Heliocypha_biseriata
Platycypha_caligata
Chlorocypha_curta
Sundacypha_petiolata

Aristocypha_fenestrella
Rhinocypha_tincta
Heliocharis_amazona
Hetaerina_americana
Caliphaea_confusa
Noguchiphaea_yoshikoae
Vestalis_beryllae
Matrona_basilaris
Atrocalopteryx_atrata
Echo_modesta
Neurobasis_ianthinipennis
Sapho_orichalcea
Calopteryx_amata
Calopteryx_splendens
Calopteryx_aequabilis
Iridictyon_myersi
Iridictyon_trebbaui
Unaligned_lestoid
Nubiolestes_diotima
Perilestes_kahli
Perissolestes_remotus
Perissolestes_magdalenae
Chlorolestes_umbratus[sp]
Euchlorolestes_tessellatus[sp]
Phylolestes_ethelae
Synlestes_weyersii
Synlestes_tropicus
Chorismagrion_risi
Episynlestes_cristatus
Episynlestes_albicaudus
Megalestes_micans
Megalestes_kurahashii
Orolestes_octomaculatus
Austrolestes_annulosus
Sympecma_paedisca
Sympecma_fusca
Austrolestes_analis
Indolestes_peregrinus
Indolestes_cyaneus
Chalcolestes_viridis
Archilestes_grandis
Lestes_rectangularis
Lestes_eurinus
Hemiphlebia_mirabilis
Unaligned_Anisoptera
Epiophlebia_superstes
Epiophlebia_laidlawi
Unaligned_Aeshnoid
Archipetalia_auriculata
Austropetalia_victoria
Hypopetalia_pestilens

Rheopetalia_apicalis
Odontopetalia_apollo
Eurypetalia_altarensis
Ophiopetalia_diana
Gomphaeschna_furcillata
Oligoaeschna_pryeri
Austroaeschna_parvistigma
Telephlebia_tillyardi
Boyeria_vinosa
Boyeria_irene
Brachytron_pratense
Epiaeschna_heros
Caliaeschna_microstigma
Anaciaeschna_isoceles
Oplonaeschna_sp
Aeshna_Aeshna_canadensis
Aeshna_Rhionaeschna_multicolor
Aeshna_Aeshna_cyanea
Aeshna_Aeshna_grandis
Gynacantha_japonica_or_bullata
Austrogynacantha_heterogena
Hemianax_ephippiger
Anax_junius
Anax_imperator
Unaligned_gomphid
Sinogomphidia_kruegeri
Ictinogomphus_australis
Ictinogomphus_sp
Lindenia_tetraphylla
Phyllogomphoides_stigmatus
Progomphus_Neaprogomphus_obscurus
Progomphus_Neaprogomphus_borealis
Hagenius_brevistylus
Lanthus_vernalis
Davidius_nanus
Neogomphus_edenticulatus
Armagomphus_armiger
Hemigomphus_comitans
Hemigomphus_heteroclytus
Hemigomphus_magela
Trigomphus_sp
Stylogomphus_albistylus
Stylogomphus_shirozui[sp]
Davidioides_martini
Burmagomphus_collaris
Cyclogomphus_heterostylus
Anisogomphus_pinratani
Dromogomphus_spinosus
Arigomphus_villosipes
Arigomphus_cornutus
Stylurus_intricatus

Stylurus_amnicola
Stylurus_nagoyanus
Gomphus_Gomphurus_externus
Asiagomphus_melaenops
Gomphus_Phanogomphus_exilis
Gomphus_Gomphus_graslini
Gomphus_Hylogomphus_adelphus
Gomphus_Gomphus_vulgatissimus
Megalogomphus_sp
Onychogomphus_uncatus
Onychogomphus_forcipatus_unguiculatus
Onychogomphus_sp
Ophiogomphus_Ophionurus_carolus
Ophiogomphus_Ophiogomphus_severus
Ophiogomphus_Ophiogomphus_caecilia
Leptogomphus_elegans
Leptogomphus_sauteri
Epigomphus_compactus
Microgomphus_chelifer
Heliogomphus_retroflexus
Macrogomphus_parallelogramma
Ceratogomphus_pictus
Lestinogomphus_angustus
Austrogomphus_guerini
Austrogomphus_amphiclitus
Antipodogomphus_acolythus
Unaligned_Petalurid
Tanypteryx_hageni
Tanypteryx_sp
Tanypteryx_pryeri
Tachopteryx_thoreyi
Phenes_raptor
Phenes_centralis
Uropetalura_carovei[sp]
Petalura_hesperia
Petalura_gigantea
Petalura_litorea[sp]
Petalura_ingentissima
Zoraena_bilineata
Taeniogaster_obliqua
Kalyptogaster_erronea
Pangaeagaster_maculata
Laurogaster_dorsalis
Cordulegaster_boltonii
Cordulegaster_picta
Anotogaster_sieboldii
Neopetalia_punctata
Chloropetalia_soarer
Sinorogomphus_nasutus
Chlorogomphus_brunneus
Chlorogomphus_sp

Synthemis_eustalacta
Archaeosynthemis_macrostigma
Archaeosynthemis_leachii
Eusynthemis_brevistyla [*]
Eusynthemis_guttata [*]
Eusynthemis_nigra [*]
Choristhemis_flavoterminata
Synthemiopsis_gomphomacromioides [*]
Gomphomacromia_chilensis[*]
Gomphomacromia_paradoxa [*]
Syncordulia_serendipator
Syncordulia_venator
Idionyx_imbricata
Idionyx_selysi
Macromidia_rapida
Oxygastra_curtisii
Cordulephya_pygmaea
Pseudocordulia_circularis[*]
Hesperocordulia_berthoudi
Lathrocordulia_metallica
Micromidia_convergens
Micromidia_atrifrons
Austrophya_mystica
Austrocordulia_refracta [*]
Archaeophya_magnifica [*]
Epophthalmia_elegans
Didymops_transversa
Macromia_illinoiensis
Macromia_amphigena
Macromia_eurynome
Macromia_magnifica
Macromia_splendens
Phyllomacromia_bifasciata_or_nyanzana_or_sp
Idomacromia_proavita
Aeschnosoma_forcipula
Pentathemis_membranulata
Tetragoneuria_cynosura[sp]
Tetragoneuria_costalis
Tetragoneuria_canis
Epicordulia_princeps
Epitheca_marginata
Epitheca_bimaculata
Rialla_villosa
Cordulia_aenea
Cordulia_shurtleffii
Somatochlora_alpestris
Somatochlora_flavomaculata
Somatochlora_metallica
Somatochlora_tenebrosa
Hemicordulia_min_nipponica
Hemicordulia_australiae

Procordulia_jacksoniensis
Unaligned_Libellulid
Notiothemis_robertsi
Tetrathemis_irregularis
Tetrathemis_polleni
Urothemis_signata
Urothemis_assignata
Macrodiplax_cora
Macrodiplax_balteata
Zyxomma_elgneri
Zyxomma_petiolatum
Zygonyx_torridus_or_ida
Nannophlebia_sp_or_risi
Bironides_sp_HOL_2010
Huonia_epinephelaHuonia_oreophila
Onychothemis_testacea
Rhyothemis_variegata_or_imperatrix
Rhyothemis_fuliginosa
Miathyria_marcella
Miathyria_simplex
Tholymis_citrina
Tholymis_tillarga
Pantala_flavescens
Tramea_lacerata
Tramea_calverti
Sympetrum_Kalosympetrum_janeae
Sympetrum_Kalosympetrum_obtrusum
Sympetrum_Sympetrum_vulgatum
Sympetrum_Sympetrum_pedemontanum
Sympetrum_Nesogonia_blackburni
Sympetrum_Sympetrum_sanguineum
Sympetrum_Tarnetrum_corruptum
Sympetrum_Tarnetrum_fonscolombii
Sympetrum_Tarnetrum_illotum
Sympetrum_Sympetrum_infuscatum
Sympetrum_danae
Sympetrum_meridionale
Leucorrhinia_pectoralis
Leucorrhinia_glacialis
Celithemis_elisa
Celithemis_eponina
Brachymesia_gravida
Brachymesia_herbida
Brachythemis_leucosticta
Brachythemis_contaminata
Deielia_phaon
Pachydiplax_longipennis
Erythemis_collocata_or_simplicicollis_or_sp
Acisoma_panorpoides
Erythrodiplax_minuscula

Erythrodiplax_basalis
Crocothemis_servilia
Crocothemis_erythraea
Rhodothemis_rufa
Neurothemis_fulvia_
Neurothemis_ramburii
Diplacodes_lefebvrii
Diplacodes_trivialis
Bradinopyga_strachani
Brachydiplax_denticauda
Brachydiplax_chalybea_or_flavovittata
Chalcostephia_flavifrons
Micrathyria_aequalis
Micrathyria_atra
Micrathyria_didyma
Uracis_imbuta
Uracis_infumata
Nannophya_pygmaea
Nannothemis_bella
Paltothemis_lineatipes
Brechmorhoga_mendax
Brechmorhoga_praedatrix
Dythemis_fugax
Trithemis_aurora
Trithemis_africana
Trithemis_arteriosa
Perithemis_tenera
Perithemis_intensa
Perithemis_lais
Palpopleura_lucia
Diastatops_pullata
Zenithoptera_fasciata
Neodythemis_afra_or_pauliani
Selysiothemis_nigra
Trithetrum_navasi
Porpax_risi
Micromacromia_camerunica
Neodythemis_preussi
Neodythemis_klingi
Hadrothemis_infesta
Thermorthemis_madagascariensis
Agrionoptera_insignis
Cratilla_metallica
Pseudoleon_superbus
Orthemis_cultriformis
Orthemis_ferruginea
Orthetrum_albistylum
Orthetrum_pruinosum
Orthetrum_coerulescens
Lyriothemis_elegantissima
Eurothemis_fulva

Ladona_julia
Platetrum_depressa
Plathemis_subornata
Plathemis_lydia
Libellula_Libellula_quadrimaculata
Libellula_Syntetrum_angelina
Libellula_Eolibellula_semifasciata
Libellula_Belonia_saturata
Libellula_Eotainia_composita
Libellula_Neotetrum_pulchella
Libellula_Holotania_comanche
Libellula_Holotania_auripennis
Libellula_Holotania_axilena
Libellula_Holotania_luctuosa
Aethriamanta_rezia
Tetrathemis_corduliformis
Diplacina_ismene
Erythemis_vesiculosa
Nannophyopsis_clara
Oligoclada_amphinome
Idiataphe_sp[_HOL_2010]
Atoconeura_sp[_HOL_2010]
Elga_leptostyla
Fylgia_amazonica
Hemistigma_albipunctatum
Porpacithemis_sp
Thermochoria_equivocata
Malgassophlebia_bispina
Micromacromia_zygoptera
Argyrothemis_argentea
Pseudothemis_zonata
Oxythemis_phoenicosceles
Olpogastra_lugubris
Misagria_parana
Unaligned_Outgroups
Ephemerella_sp
Paraleptophlebia_vaciva
Anthopotamus_sp
Caenis_luctuosa
Ephemera_sp
Callibaetis_sp
Callibaetis_ferrugineus
Baetis_sp
Hexagenia_sp
Cloeon_dipterum
Leucrocuta_maculipennis
Centroptilum_luteolum
Stenonema_sp
Trigoniopthalmus_altern
Allomachilis_froggart
Machilis_hrabei

Dilta_littoralis
Ctenolepisma_longicaudata
Lepisma_sp
Lepisma_saccharina
Thermobia_domestica
Tricholepidion_gertschi
Gromphadorhina_laevigata
Isoperla_davisi
Isoperla_sp
Gomphocerinae
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Begindata;
Dimensionsntax=514nchar=2142;
Formatdatatype=rnasymbols="0123456789"gap=-interleave;
Matrix]
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8 9 10 V2
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15 5â€šÃ„Ã´ 16 4â€šÃ„Ã´ 17 18
A B Aâ€šÃ„Ã´Bâ€šÃ„Ã´]
Unaligned____________________ 1111111111111111111??
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Unaligned_Zygoptera ???
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Protosticta_sp_A_ZPA________ ???
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ZPCs_Protosticta_curiosa____ ??????????????????????????????
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Protosticta_sanguinostigm???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]

ZSOg_Sinosticta_ogatai______ ???
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Palaemnema_paulicoba________ ???
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Palaemnema_domina_ZPDm______ ???
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Palaemnema_melanostigma_6????????????????????UAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-ACACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Isosticta_robustior_666_____ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCAG-UUUUACUGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Rhadinosticta_simplex_612???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACCAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--AUCUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Amphisticta_silvarum________ ???
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Labidiosticta_vallisi_AY7??????????????????????GUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--AUUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Orosticta_filiciola_________ ???
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Platycnemis_pennipes________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Copera_annulata_____________ ???
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Copera_vittata_6585198______ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Copera_marsouipes___________ ???
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Coeliccia_albicauda_________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACCAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGGAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Coeliccia_cyanomelas_636____ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACCAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGGAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Calicnemia_miles____________ ???
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Prodasineura_vitatta________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]

Chlorocnemis_abboti_________ ???
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Nososticta_solida_61451 ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Phylloneura_westermanni_6???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCA-GGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Onychargia_atrocyana_ZOA____ ???
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Argia_moesta________________ ???
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?????????????????????CGCGGUAAUUCCAGCUCCAA[-   ]
Argia_nahuana_6815221_______ ????????????????????UAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Argiocnemis_rubescens_ZAR???
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Mortonagrion_binocellata____ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGGAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUCCGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Agriocnemis_pygmea_6095   ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGGAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC

CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Austroagrion_watsoni________ ???
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Archibasis_viola_ZAV________ ???
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C_puella_AJ488546___________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
FN356069_C_resolutum ?????????GAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA
Pseudagrion_cingillum_______ ???
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Pseudagrion_aureofrons_61???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAUUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUACCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Pseudagrion_ignifer_________ ???
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Erythromma_najas_1238_______ ???UGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGGAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]

Cercion_plagiosum_AJ488552UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Cercion_lindenii_AJ488550UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Paracercion_calamorum_______ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGGAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Acanthagrion_quadratum______ ???
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ZLV_Leptobasis_vacillans____ ???
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Amphiagrion_saucium_________ ???
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Amphiagrion_abbreviatum_6???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACGCUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGGAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGC---------UCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Xiphiagrion_cyanomelas_ZXC???
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Hesperagrion_sp_AY749911???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACGCUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGGAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGC---------UCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC

CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Ischnura_elegans_1239_______ ??UGCAUGUCUCAGUACAAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACGCUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGGAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGC---------UCGUCCCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGG
GUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGCGC-GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAA
CGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAGGGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Ishnura_barberi_5965136???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCUUUAAGG-CGAAACC-GC GAAUGGCUCAUUAAAUCA-
GUUAUGGUUCCUUGGAUCUUAC-CCACGCUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGGAGGGGUGCUU UUAUUA-GAACAAA--ACCAAUCGGC-
--------UCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Ischnura_graellsi_AJ488545UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACGCUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGC---------UCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Anomalagrion_hastatum_______ ???
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Enallagma_parvum_AJ420939UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACGCUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGGAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGC---------UCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Enallagma_granti_AJ420937UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACGCUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGGAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGC---------UCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
E_nigridorsumAJ420938_______ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACGCUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGGAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGC---------UCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Enallagma_cyathigerum_0110???
??CUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACGCUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGC---------UCGU-CCGU--UGCCUUGGUGACUNUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAA-CGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]

Enallagma_sp_6005140________ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACGCUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGC---------UCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCAGCUCCAA[-   ]
E_aspersum_DQ087506_________ ??????????????????????????????CUUGUCUCAA-GAUUAAGCCAUGCAUGUCUCAGUACAAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACGCUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGC---------UCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCAGCUCCAA[-   ]
Aciagrion_pallidum__________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACGAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACGCUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGGAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGC---------UCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUGGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCAGCUCCAA[-   ]
Aciagrion_borneence_ZAB   ???
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Protoneura_capillaris_644???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCUCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCCUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCAGCUCCAA[-   ]
Protoneura_cara_ZPC_________ ???
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FN356189_Psaironeura_remis?????????GAUCGUGNCAGUAGUCAUAUGCUGGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACCAACCGCUUUAAGG-CGAAACCCGC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCAGCUCCAA[-   ]
Elattoneura_analis__________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCAGCUCCAA[-   ]
Neoneura_aaroni_____________ ???
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Neaneura_amelia_ZNA_________ ???
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Neoneura_maria_6425182______ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCUGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Ceriagrion_aeruginosum______ ???
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Telebasis_salva_6325172?????????????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Leptagrion_elongatum________ ???
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Leptagrion_sp   ???
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Metaleptobasis_manicaria____ ???
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Diceratobasis_sp_A_ZDA______ ???
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Pyrrhosoma_nymphula_1202____ ??UGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Chromagrion_conditum________ ???
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Teinobasis_alluaudi_________ ???
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Nehalenia_gracilis__________ ???
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Coryphagrion_grandis________ ???
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Microstigma_rotunda_________ ???
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Microstigma_anomalum_672____ ??????????????????????????????????GUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Mecistogaste_ornata_FN356130UACCUGGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAACCC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Mecistogaster_linearis_67???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC

CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Megaloprepus_caerulatus_____ ???
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Haplostigma_modesta_ZHM_____ ???
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Pseudostigma_aberans________ ???
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Rhinagrion_mima_____________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Sciotropis_cyclanthorum_6???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Heteragrion_mitratum________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUACCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Heteragrion_sp_6735213______ ??? ????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUACCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Oxystigma_cyanifrons_ZOC____ ???
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ZDP_Dimeragrion_percubital???
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Tatocnemis_malgassica_ZTMa???
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Philogenia_cassandra________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCCUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
ZPT_Philogenia_terraba______ ???
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ZPBn_Philogenia_bernice_____ ???
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Teinopodagrion_venale_676??????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACGAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--AUCUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUCGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Teinopodagrion_lepidum_ZTL???
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Amanipodagrion_gilliesi_____ ???
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Nesolestes_elizabethae_ZNE???
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Protolestes_kerckhoffaeZPK???
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Argiolestes_ochrostomasZAO???
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Argiolestes_sidonia_605_____ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-ACACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCU-CCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUC-UAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Caledopteryx_maculata_669???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUC-UAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Trineuragroin_percostale____ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACCAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUC-UAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Caledargiolestes_uniserie???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACCAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUCAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGGAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUCGGCUGAUCGCACGGUCC-AGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Podopteryx_roseonotata_ZPR???
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Austroargiolestes_icterom?????????????????????UAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUCGGCUGAUCGCACGGUC-UAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]

Griseargiolestes_albescens???????????????GCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUC-UAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Griseagriolestes_eboracus???
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Miniargiolestes_minimusZMM???
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Lestomima_flavostigma_OPB???
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Rhipidolestes_hiraoi_ORH____ ???
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Rhipidolestes_aculeata_63???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUC-GCACCGCGACCAGUG-AUGGAAGAGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Paraphlebia_zoe_____________ ???
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Thaumatoneura_inopinata_____ ???
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Hypolestes_clara_HYP________ ???
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Hypolestes_sp_EU055183______ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAUUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUA-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCCUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Agriomorpha_fusca_ZAF6______ ???
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Sinocnemis_yangbingi_ZSY____ ???
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Miocora_peraltica_ZMP_______ ???
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Cora_marina_POL_OCMr________ ???
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Cora_cyane_6775217__________ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUC?????????[-   ]
Polythore_spZ   ???
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Polythore_boliviana_EU055225????????????????????UAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]

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Euthore_fasciata_678521???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-          ]
Rimanella_arcana____________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-          ]
Pentaphlebia_stahli_________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCCUCCGC-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUC?????????[-          ]
Devadatta_podolestoides_6???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACCAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCCUCCGC-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-          ]
Amphipteryx_longicaudata____ ???????????????????????????????????????????????????????????????????????????????????????????
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Pseudolestes_mirabilis_68???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACCAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGGAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--U-UUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-          ]
Philoganga_vetusta__________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGACCCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-          ]
Philoganga_robusta_PGN______ ???????????????????????????????????????????????????????????????????????????????????????????
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Lestoidea_conjuncta_664???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACGAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU  UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
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CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC   GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Diphlebia_lestoides_________ ???
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Diphlebia_coerulescen_AY7???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACGAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Bayadera_melanopteryx_______ ???
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Bayadera_brevicauda_638_____ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACGAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAAUAAA-AACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Dysphaea_gloriosa___________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACGAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUA-GCACCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUC?????????[-   ]
Euphaea_formosa_6375177???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUC-GCGCACCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--AUCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Euphaea_decorata____________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCUUUAAGG-CAAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUC-GCGCACCGACCAGUG-AUGGAAGGCGUGCUU UUAUUA-
GAACAAA--AUCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACA
UCCAAGGAAGGCAGCAGGCGC-GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-
CUUUAACGAGGAUCUAUUGGAGGGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Anisopleura_sp_A____________ ???
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Disparocypha_biedermanni____ ???
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Libellago_semiopaca_657_____ ??????????? ????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-ACACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Heliocypha_biseriata_650____ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCCUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Platycypha_caligata_________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUCGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCGGCGGUAAUUCCAGCUCCAA[-   ]
Chlorocypha_curta_CHL_______ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUUGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Sundacypha_petiolata_CHL____ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Rhinocypha_fenestrella_CHL???
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Rhinocypha_tincta_60351 ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUC?????????[-   ]
Heliocharis_amazonaUACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC   GAAUGGCUCAUUAAAUCA-
GUUGUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUC-GUGCCCCGACCAGUG-AUGGAAGGUGUGCUU   UUAUUA-GAACAAA--
ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC

CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUC?????????[-]
Hetaerina_americana_________ ???UCUCAGUACUAACCGCCUUUAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUC-GUGCCUCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCUGAGCGCCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Calaphaea_confusa___________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCGUUGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUC?????????[-   ]
Noguchiphaea_yoshikoae______ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACCAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCGUUGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Vestalis_beryllae_66252 ??????????????????????????????CUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACCAGUG-AUGGAAGGGGUGCGU UUAUUA-
GAUCAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCGUUGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Matrona_basilaris_64151 ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACCAGUG-AUGGAAGGGGUGCGU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCGUUGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUUAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Atrocalopteryx_atrata_Y12889UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUACCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCGUUGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Echo_modesta_6545194________ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUACCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCGUUGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Neurobasis_ianthinipennis???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAUCUC-GUACCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCGUUGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]

Sapho_orichalcea____________ UAC CUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CUACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAUCUA-GUACCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCGUUGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUC?????????[-   ]
Calopteryx_amata____________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUACCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCGUUGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
AJ459186Calopteryx_splendUACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUACCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCGUUGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Calopteryx_aequabi_AY338716?????????????????????????AUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUUAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUACCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCGUUGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Iridictyon_myersi___________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUACCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCAUUGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Iridictyon_trebbaui   ???
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Unaligned_lestoid   ???
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Nubiolestes_diotima_________ ???
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Perilestes_kahli_683522???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-ACACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUUGG--UCUUCCAU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC

CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Perissolestes_remotus_682????????????????????UAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUAGG--ACUUCCUU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Perissolestes_magellenae____ ???
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Chlorolestes_umbrata________ ???
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Euchlorolestes_tessellata???
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Phylolestes_ethelae_________ ???
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Synlestes_weyersii_6265 ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACCAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Synlestes_tropicus__________ ???
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Chorismagrion_risi_6655 ??? ????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACCAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-UUCUGCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUACCGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]

Episynlestes_cristatus______ ??
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Episynlestes_albicauda_61???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACCAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Megalestes_micans___________ ??
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Megalestes_kurahashii_______-ACCUGGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGACGG--UUCUCCGC-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Orolestes_octomaculatus_____ ??
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Austrolestes_annulosus_61??AAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGAUUAAACCCGA-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUCGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Sympecma_paedisca_65151 ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CCUACUCGA-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Sympecma_fusca______________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CCUACUCGA-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUC?????????[-   ]
EU055157_Austrolestes_ann??AAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGAUUAAACCCGA-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUCGCACCGGCGACGCAUCUUUCAAAUGUCUGC

CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Indolestes_peregrinus_______ ???
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Indolestes_cyaneus_DIC UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUG
GAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUUUUAUUA-GAACAAA-- ACCAAUCGGUCGACUAAACUCGA-
CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUCGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA
Chalcolestes_viridis________ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGACUCAACUCGA-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUCGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Archilestes_grandis_645_____ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CCUACUCGA-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Lestes_rectangularis_OLR____ ???
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Lestes_eurinus______________ ???
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FN356183Hemiphlebia_________ ??????????AUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGGCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Unaligned_Anisoptera ???
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Epiphlebia_superstes________----??GUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGAAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Epiphlebia_laidlawiJQ943598??
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GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAnnnAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGnnUCUGC???
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Unaligned_Aeshnids   ???
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Archipetalia_aur_FN356039??????????? ?????????????????????????????AGAUUAnGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCGA-GUGCCUCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCAAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAWAWC-CUUnAACGAGGAUHDRWUGGAG
GGCAAGUCUGGUGCCAGCASMCSSGGUAAUUCCAGCUCCAA[-]
Austropetalia_victoria______ ?? ?????????????????????????????????????
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Hypopetalia_pestilens_______ ???
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FJ596639_Phyllopetalia_api???
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Phyllopetalia_apollo_684____ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCGA-GUGCCUCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCAAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]

Eurypetalia_altarensis______ ??? ??
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Ophiopetalia_diana__________ ???
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?????????????????????CGCGNUAAUUCCAGCUCMMA[-   ]
Gomphaeschna_furcilata______ ???
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Oligoaeschna_pryeri_________ ???
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Austroaeschna_parvistigma???
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Telephlebia_tillyardi_______ ???
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Boyeria_vinosa_OBV__________ ???
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Boyeria_irene_FN356042______ ?ACCUGGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGAAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCGCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Brachytron_pratense_AF461232???UGCAUGUCUCAGUACAAGCCGAAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCGCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC

CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC   GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Epiaeschna_heros____________ ???
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Caliaeschna_micro_DQ008197??GUACAAGCCAAAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCGCCGACCAGAG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Anaciaeschna_iso_DQ008199??GUACAAGCCGAAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCAAACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACGUGAAACUC-GUGCUCCGACUAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
GQ118262_Oplonaeschna_sp____ ??????????????????AGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGAAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCAAACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCGCCGACUAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Aeshna_canadensis_OAC_______ ???
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EU055147_Rhionaeschna_mult???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGAAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCAAACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCGCCGACUAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Aeshna_cyanea_1203__________ ???UGCAUGUCUCAGUACAAGCCGAAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCAAACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCGCCGACUAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
FJ596630_Aeshna_grandis_____ ???
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FN356092_Gynacantha_bulla?????GGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGAAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCAAACAUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCGCCGACUAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUUACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Austrogynacantha_heteroge???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGAAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCAAACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCGCCGACUAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
FN356093_Hemianax_ephippig????????UGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGAAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCAAACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCGCCGACUAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Anax_junius_AY749908________ ??????????????????AGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGAAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCAAACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCGCCGACUAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
FN356035_Anax_imperator_____ UACCUGGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGAAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCAAACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCGCCGACUAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Unaligned_gomphid   ???
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Sinogomphidia_kruegeri______ ???
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Ictinogomphus_australis_6???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
FN356095_Ictinogomphus_sp   ??????????????????AGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC

CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGnnGnnCUAUUGnnG
GGCAAGUCUGGUGCCANCAGCCGCGGUAAUUCCAGnnCCAA[-]
FN356120_Lindenia_tetraph?????GGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUAAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Phyllogomphoides_stigmatus???
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Progomphus_obscurus_________ UACCUGGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUA-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGAGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUC?????????[-]
Progomphus_borealis_633_____ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCUCCGACCAGUG-AUGGAAGGUGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGAGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Hagenius_brevistylusDQ008193???GUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUAUUAC-CCACACUUACAUGGACAACUGUGGUAAUUCUAGAGCUAAUACACGAACCUU-GUGCCCCGACCAGUG-AUGGAAGGGGUGUAU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUCCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAG
GAAGGCAGCAGGCGC-GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAAC
GAGGAUCUAUUGGAGGGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Lanthus_vernalis____________ ???
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Davidius_nanus_DQ010047_____ ???
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Neogomphus_edenticulatus____ ???
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Armagomphus_armiger_613_____ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUAGUACGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Hemigomphus_comitans_AHC____ ???
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FJ596622_Hemigomphus_heter???
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Hemigomphus_magela_5935 ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-UCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Trigomphus_sp_FN356176______ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUA-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
FJ596615_Lanthus_albistylu???
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FJ712325_Stylogomphus_shir???
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Davidioides_martini_648_____ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUAAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUAGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCGCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Burmagomphus_collaris_______ ???
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Cyclogomphus_heterostylus???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCAUAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGAUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGUGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAGUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Anisogomphus_pinr_FN356037UACCUGGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCACAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACAYYUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCARGUCNGGUGMCARGACCGCGGGUAAUYYCASSUCCAA[-   ]
Dromogomphus_spinosus_______ ???UACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Arigomphus_villosipes_______ ??GUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Arigomphus_cornu_DQ008188??GUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGAAGGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Stylurus_intricatus_DQ008185??GUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUNNAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Stylurus_amnicola___________ ??GUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACGUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
FJ596610_Stylurus_nagoyanu???
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DQ008184_Gomphus_externus???GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGNANNNNNNNNNNC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Asiagomphus_melaenops_______ ???
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DQ008187_Gomphus_exilis_____ ??GUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGANACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCG-CACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Gomphus_Phanogomphus_grasl???
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Gomphus_adelphus____________ ??GUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGANACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCG-CACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
FN356091_Gomphus_vulgatisUACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
FN356132_Megalogomphus_spUACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Onychogomphus_uncatus_______ ???
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FN356138_Onychogomphus_for????????????????CCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCANAUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC

CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC   GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUUCUGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
A_FJ712322_Onychogomphus_s???
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Ophiogomphus_carolus________ ??AUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAG?CGCGGUAAUUCCAGCUCCAA[-]
Ophiogomphus_sev_FJ596618??AUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
FN356139_Ophiogomphus_caec??????????????UGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Leptogomphus_elegans________ ???
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FJ596609_Leptogomphus_saut???
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Epigomphus_compactus________ ???
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FJ712323_Microgomphus_chel???
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Heliogomphus_retroflexus____ ??
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FN356121_Macrogomphus_paraUACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUAAGUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUU-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Ceratogomphus_pictus _______ ??
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Lestinogomphus_angustus_____ ??
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Austrogomphus_guerini_______ ??
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Austrogomphus_amphiclitus??GCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CC-CACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Antipodogomphus_acolythus???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Unaligned_Petaluridae   ??
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Tanypteryx_hageni_EU05517???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAGG-UGAAA
CC-GCGAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGC
GCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC

CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC   GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Tanypteryx_hageni_FN356174   nncCUGGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC
GCCGCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAnUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAn
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
FJ712330_Tanypteryx_pryeri???
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Tachopteryx_thor_FN356173UACCUGGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GUGCCCCGACCAGUG-AUGGAAGGGUCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAA?UC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Phenes_raptor_AY338720______ ??UCAGUACAAGCCGCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUA-GUGCCCCGACCAGUG-AUGGGAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Phenes_centralis_OPR________ ???
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Uropetalura_carvori_________ ???
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Petalura_hesperia___________ ???
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Petalura_gigantea_EU05515???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUA-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]

Petalura_litolae____________ ???
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Petalura_ingentissima_______ ???
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Zoraena_bilineata___________ ???
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Taeniogaster_obliqua________ ???
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Kalyptogaster_erronea_______ ???
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?????????????????????CGCGGUAAUUCCAGCUCCAA[-   ]
FJ712317_Cordulegaster_mac???
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EU055179_Cordulegaster_dor???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUC-GUGCCCCGGCCAGUG-AUGGGAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Cordulegaster_bol_FN356072UACCUGGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUKACAUGGAUAACUGUGGUAAUWCUAGAGCUAAUACAUGAA?CUC-GUGCCCCGGCCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUYCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAA?UC-CUUUAACGAGGAUYUAUUGGAG
GCCAAGUCUGGYGCCABCAKCYCCGGUAAUUCCMGYUCCAA[-]
Cordulegaster_pic_DQ008198??GUACAAGCCGCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUC-GUGCCCCGGCCAGUG-AUGGGAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC

CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUGCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
FJ596638_Anotogaster_siebo???
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Neopetalia_punctata_________ ???
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Chloropetalia_soarer________ ???
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Sinorogomphus_nasutus_______ ???
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ChlorogomphbrunneusEU055186???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAA----------GG-CGAAGCC-GC
GAAUGGCUCGUUAAAUCA-GUUAUGGUUACUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAGUA-
GAGCAAA--ACCAAUCGGUCGG-CUUGCCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCGUGGUCGUAA---GUG----GGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGURGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
FN356060_Chlorogomphus_sp????????????????????????????????????UCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAGG-GGAAACC-GG
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUMCAUGGAUAACUGUGGUAAUUCUAGAGUUAAUACAUGAACCUC-GCGCCCCGACCASUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--AMCAAUCGGUCGG-CUSGUCCGU-CCGU--UGCCUUGGUGACUNUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUGUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Synthemis_eustalacta________ ???
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Synthemis_marcrostigma_EU???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUAAGUACAAGCCGCAAUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACACGAACCUA-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UAAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]

Archaeosynthemis_leachii____ ???
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Eusynthemis_brevistyla______ ??-???????-??
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FJ596573_Eusynthemis_gutta__???
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Eusynthemis_nigra_EU05516???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACACGAACCUA-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Choristhemis_flavotermina???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACACGAACCUA-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Synthemiopsis_gomphomac_____ ???
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Gomphomacromia_chilensis____ ???
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FJ712318_Gomphomacromia_p???
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Syncordulia_serendipator____ ???
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Syncordulia_venator_________ ???
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Idionyx_imbricata_EU05518???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAC-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUA-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUUGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Idionyx_selysi______________ ???
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FN356129_Macromidia_rapi____ ?????????GAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-GCACAC-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUA-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
FN356186_Oxygastra_curtis?????GGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAC-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUA-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Cordulephya_pygmaeaEU0551???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUA-GUGCCCCGACCAGUG-AUGGAAGGUGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Pseudocordulia_circularis???
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Hesperocordulia_berthoudi???????????????????UAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAC-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUA-GUGCCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]

Lathrocordulia_metallica____ ???
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Micromidia_convergens_EU0???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAC-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUA-GUGCCCCGACCAGUG-AUGGAAUGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Micromidia_atrifrons________ ???
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Austrophya_mystica__________ ???
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Austrocordulia_refracta_____ ???
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Archaeophya_magnifica_______ ???
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Epophthalmia_elegans________ ???
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FN356079_Didymops_transve???????????UUUUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAGUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAC-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCCG-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGAUUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
FN356124_Macromia_illinoieUACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAGUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAC-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCCG-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC

CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Macromia_amphigena_FN356127UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAGUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAC-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCCG-GUGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGAUUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Macromia_eurynome_EU05519???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAGUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCCU-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Macromia_magnifica_________ ???
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FN356128_Macromia_splendeUACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAGUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCCG-GCACCUCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGAUUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
FN356146_Phyllomacromia_nyUACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCACUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUG-GCGCCCCGACCAGAG-AUGGAAGAGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGAUUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Idomacromia_proavita_________ ???
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Aeschnosoma_forcipula_______ ???
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Pentathemis_membranulata____ ???
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Tetragoneuria_cynosure______ ???
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Tetragoneuria_costalis______ ???
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Tetragoneuria_canis_________ ???
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Epicordulia_princeps________ ???
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Epitheca_marginata__________ ???
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FN356087_Epitheca_bimacul?????GGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCAAAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCAC-GUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACAUU-GCAUCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGAUUCUGAAUAAC-UUUGUGCUGAUCGCACGGUC-UAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGAUUCUGCGUCUACCAUGGUCGUUACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Rialla_villosa______________ ???
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FN356074_Cordulia_aenea_____ UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAGUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACAUU-GCACCCCGACCAGAG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGAUUCUGCGCCUACCAUGGUUGUUACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Cordulia_shurtleffii_EU05???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCAC-GUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACAUU-GCACCCCGACCAGAG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUC-UAGCACCGGCGACGCAUCUUUCAAAUGUCUGC

CUUAUCAACUUUCGAUGGUAGAUUCUGCGCCUACCAUGGUUGUUACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
FN356163_Somatochlora_alpeUACCUGGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCAAUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-CCAC-GUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACAUU-GCACCCCGACCAGAG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUC-UAGCACCGGCGACGUAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGAUUCUGCGCCUACCAUGGUUGUUACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Somatochlora_flavomac_1242???UGCAUGUCUCAGUACAAACCGCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-CCAC-GUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACAUU-GCACCCCGACCAGAG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUC-UAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGAUUCUGCGCCUACCAUGGUUGUUACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Somatochlora_metallica______ ???
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FJ010028_Somatochlora_tene???
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A_FJ596562_Hemicordulia_mi???
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Hemicordulia_australEU055168???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCAC-GUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAUAUU-GUACCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUC-UAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGAUUCUGCGCCUACCAUGGUUGUUACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Procordulia_jacksoniensis???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCAAUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCAC-GUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAUAUU-GUACCCCGACCAGUG-AUGGAAGGGGCGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUC-UAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGAUUCUGCGCCUACCAUGGUUGUUACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Unaligned_Libellulid   ???
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FJ596583_Notiothemis_rober???????????????????????????????????????????????????????????????????????????????????????????
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FJ596578_Tetrathemis_irreg???????????????????????????????????????????????????????????????????????????????????????????
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Tetrathemis_polleni_________ ???????????????????????????????????????????????????????????????????????????????????????????
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FJ596587_Urothemis_signata???????????????????????????????????????????????????????????????????????????????????????????
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Urothemis_assignata_________ ???????????????????????????????????????????????????????????????????????????????????????????
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Macrodiplax_cora____________ ???????????????????????????????????????????????????????????????????????????????????????????
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Macrodiplax_balteata_EU05???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-          ]
Zyxomma_elgneri_____________ ???????????????????????????????????????????????????????????????????????????????????????????
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Zyxomma_petiolatum           ???????????????????????????????????????????????????????????????????????????????????????????
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FN356181_Zygonyx_ida________ UACCUGGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-GCGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Nannophlebia_sp_EU055138____ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACCA-GUACCCCGACUU--U-GCGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACUCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Bironides_sp________________ ???
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Huonia_epinephela___________ ???
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Huonia_oreophila____________ ???
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Onychothemis_testacea_______ ???
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FJ596582_Rhyothemis_varieg???
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FJ712327_Rhyothemis_fuligi???
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Miathyria_marcella__________ ???
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Miathyria_simplex   ???
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FJ596577_Tholymis_citrina???
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Tholymis_tillarga___________ ???
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Pantala_flavescens_EF680326???
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Tramea_lacerata_EU055171____ ???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACCACU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACCA-G?ACCCCGACUU--U-GCGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGGGGG-CUCGUCCCU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGAGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Tramea_calverti_____________ ???
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Sympetrum_Kalosympetrum_ja???
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EF636437_Sympetrum_obtrusu???
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DQ008201Sympetrum_vulgatum???
??AUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUU-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGUGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCAGUAAUCGGAAUGAGAACACUUUAAAUCGCUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
FN356171_Sympetrum_pedemon?????GGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUU-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGUGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Sympetrum_Nesogonia_blackb???
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Sympetrum_sanguineum________ ??????????AUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUU-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGUGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGG?AAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Sympetrum_corruptum_EU055??????????? ????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUU-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGUGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Sympetrum_fonscolomb_Y12900_UACCUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCUUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUA?-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUU-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CU--UCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Sympetrum_Tarnetrum_illotu???
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Sympetrum_Tarnetrum_infusc???
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AF461243_Sympetrum_danae   ???UGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUU-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UACCUUGGUGACUCUGAAUAAC-UUUGUGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
FJ712328Sympetrummeridionale???
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Leucorrhinia_pectoral_0610???UGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGUGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Leucorrhinia_glacialis______ ???
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FJ010031_Celithemis_elisa???
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Celithemis_eponina_1233_____ ???UGCAUGUCUCAGUACAAGCCGCACUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGUGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Brachymesia_gravida_________???
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Brachymesia_herbida   ???
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Brachythemis_leucosticta____ ???
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Brachythemis_contaminata____ ???
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Deielia_phaon_______________ ???
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Pachydiplax_longipennis_____ ???
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Erythemis_sp_AY749910_______ ??? ?????????????????UAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
FN356030_Acisoma_panorpoi?????GGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACACUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCCAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Erythrodiplax_minuscula_E???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Erythrodiplax_basalis_______ ???
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Crocothemis_servilia________ ???
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DQ008200_Crocothemis_eryt??GUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
FJ596590_Rhodothemis_rufa???
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Neurothemis_fulvi_FN356136?????GGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCnAGCUCCAA[-]
Neurothemis_ramburii   ???
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Diplacodes_lefebv_FN356080?????????????????????????????????GUCUnAAAGAUUAAGCCnUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Diplacodes_trivialis   ???
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Bradinopyga_strachani_______ ???
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Brachydiplax_denticauda_E???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACGUGAAACCA-GUACCCCGACUU--U-GCGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]

FJ596585_Brachydiplax_chal???
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FN356059_Chalcostephia_fl????????UGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-GCGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Micrathyria_aequalis________ ??
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Micrathyria_atra____________ ??
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Micrathyria_didyma   ??
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Uracis_imbuta________________ ??
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Uracis_infumata_____________ ??
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FJ596589_Nannophya_pygmaea???
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Nannothemis_bella___________ ??
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Paltothemis_lineatipes______ ??
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Brechmorhoga_mendax_________ ??
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Brechmorhoga_praedatrix   ??
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Dythemis_fugax______________ ??
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Trithemis_aurora_EU055203???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACCA-GUACCCCGACUU--U-GCGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-UUCG-CCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Trithemis_africana__________ ??
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Urithemis_arterio_FN356177??CUUGGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACCA-GUACCCCGACUU--U-GCGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-UUCG-CCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCnAA[-]
Perithemis_tenera___________ ??
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?????????????????????CGCGGUAAUUCCAGCUCCAA[-   ]

Perithemis_intensa_EU0551???????????????????GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-UCUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACACCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGGCGA-UUC-UUCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCAUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Perithemis_lais_GU196362   ???
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Palpopleura_sp_FN356143_____ ?ACCUGGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGnAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
FJ596579_Diastatops_pullat???
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Zenithoptera_fasciata_______ ???
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Neodythemis_afra_pauli???
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FN356162_Selysiothemis_nig?????????GAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
FN356179_Urithetrum_navasi?????????GAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-UCUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Porpax_risi_________________ ???
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FN356133_Micromacromia_cam??CCUGGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAACUUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Allorrhizucha_preussFN356034????????UGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUUUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-GCGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCCUAAUCGGAAUGAGAACACUUUARAUA-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Neodythemis_klingi__________ ??
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FJ596575_Hadrothemis_infes???????????????   ??
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FJ596595_Thermorthemis_mad??
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FJ596599_Agrionoptera_insi??
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FJ596593_Cratilla_metallic??
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Pseudoleon_superbus_________ ??
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FJ596597_Orthemis_cultrifo???
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Orthemis_ferruginea_________ ???
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Orthetrum_albi_DQ008203_____ ??GUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-]
Orthetrum_pruinosum_________ ???
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Orthetrum_coerulescens______ ???
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FJ596600_Lyriothemis_elega???
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DQ008205_Ladona_fulva_______ ??GUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Ladona_julia________________ ???
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Platetrum_depressa_DQ008204_???????????????????????????????UUGUCUCAAAGAUUAAGCCAUGCAUGUGUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-GCGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC

CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAAC???????????????
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Plathemis_subornata_________ ??
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Plathemis_lydia_____________ ??
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FN356119_Libellula_quadrimUACCUGGUUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-GCGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Libellula_Syntetrum_angeli??
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Libellula_Eolibellula_semi??
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AY338717_Libellula_saturat????????????????CCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAGG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCUUAC-ACUUUU-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--U-ACGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCCUAGCACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Libellula_Eotainia_composi??
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Libellula_pulchella_U65109   ??
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???CCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC

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GC-GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-CUUUAACGAGGAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-          ]
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Tetrathemis_corduliformis    ???????????????????????????????????????????????????????????????????????????????????????????
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Erythemis_vesiculosa         ???????????????????????????????????????????????????????????????????????????????????????????
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Nannophyopsis_clara   ???
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Malgassophlebia_bispina      ???????????????????????????????????????????????????????????????????????????????????????????
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Argyrothemis_argentea        ???????????????????????????????????????????????????????????????????????????????????????????
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Pseudothemis_zonata          ???????????????????????????????????????????????????????????????????????????????????????????
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Oxythemis_phoenicosceles     ???????????????????????????????????????????????????????????????????????????????????????????
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Olpogastra_lugubris          ???????????????????????????????????????????????????????????????????????????????????????????
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Misagria_parana              ???????????????????????????????????????????????????????????????????????????????????????????
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Unaligned_Outgroups          ???????????????????????????????????????????????????????????????????????????????????????????
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Ephemerella_sp_____________ ???????????????????????????????????????????????????????????????????????????????????????????
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GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-UUUUAACAAGUACCUAAUGGAG
GGCAAGUCUGGUGCCAGCAGUCGCGGUAAUUCCAGCUCCAU[-  ]
Paraleptophlebia_sp_________ ??????????????????????????????????????????AUUAAGCCAUGCAUGUCUCAGUGCAAGCCACAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-AUAUCC-UACUUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGCAACCA-GAGCCUUGCCCAGAA-AUGGGUAAGGCGCAC UUAUUA-
GAUCAAA--ACCAAUCGGUCGGGCUUGCCCUU-CCGU--GGAUUUGGUGACUCUGGAUAAAACCACAGCUGAUCGUACGGCCUUGGUGCCGGCGACGUAUCCUUCGAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUACGCUUACCAUGGUUGUAACGGGUAACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUCUAAAUC-UUUUAACAAGUACCUAAUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAU[-         ]
Anthopotamus_sp_____________ ??????????????????????????????????????????????????AUGCAUGUCUCAGUGCAAGCCACAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCCUAC-UUAUUC-UACUUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGCAACCA-GAGCUGUGACCGGAA-ACGGUCACGGCGCAU UUAUUA-
GAUCAAA--ACCAAUCGGUCGGGCUCGCCCUU-CCGU--GGUCUUGGUGACUCUGAAUAA--CCACCGCUGAUCGCACGGNCUCGGUGCCGGCGACGCAUCUUUCGAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUAACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-UUUUAACGAGUACCUAAUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAU[-         ]
Caenis_luctuosa_____________ ??????????AUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUAAGUGCAAGCUACAAUAAAG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCCUAC-CUAUCC-UACUUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGCAACCA-GAGCCGUGUCCGGAA-ACGGGCACGGCGCAC UUAUUA-
GAUCAAA--ACCAAUCGGUUGA??????????-CCGU--UGUUUUGGUGACUCUGGAUAA--CCACUGCUGAUCGCAUGGCCUCUGCGCCGGCGACGUAUCUUUCGAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUAACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-UUUUAACGAGUACCUAAUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAU[-         ]
Ephemera_sp_________________ UAC CUGGUGGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCCGUACAAGCUACAUUAAAG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCCUAC-CAUGUU-UACAUGGAUAACUGUGGCAAUUCUAGAGCUAAUACAUGCAACCA-GAACCGUGGCUGGAA-ACGGCCACGGUGCAC UUAUUA-
GAUCAAA--ACCAAUCGGUCGG??????????-CCGU--GGCUUUGGUGACUCUGGAUAAG-CCACAGCUGAUCGCACGGCCCUCGCGCCGGCGACGUAUCUUUCGAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUCACGUGCCUACCAUGGUUGUAACGGGUAACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGCACACUCUAAAAA-CUUUAACGAGUACCUAAUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAU[-         ]
Callibaetis_sp_AY749925_____ ???????????????????????????????????????????????????????????????????????????????????????????
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Callibaetis_ferrugine_______ ???????????????????????UCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUGCAAGCCACAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCCUAC-AAAUCC-UACUCGGAUAACUGUGGUAAUUCUAGAGCUAAUACGUGCACCCA-GAGCUCCGUCCAGAA-AUGGCCGGGGCGCAG UUAUUA-
GAUCAAA--ACCAAUCGGUCGGGUUCGCCCGU-CCGU--CGUUUUGGUGACUCUGAAUAA--CCACUGCUGAUCGCACGGCCU-CGCGCCGGCGACGUAUCCUUCGAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUAACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-UUUUAACGAGUACCUAAUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAU[-         ]
Baetis_buceratus____________ ????????????????????????????????????????????????????????????CAGUACAAGCCGAAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCCUAC--UAUCC-UACUUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGCACCCA-GAGCCCCGUCCAGAA-AUGGUCGGGGCGCAA UUAUUA-
GACCAAA--ACCAAUCGGUCGGGUUCGCCCGU-CCGU--UGACUUGGUGACUCUGAAUAA--CCACUGCUGAUCGCACGGCCU-CGCGCCGGCGACGUAUCCUUCGAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUAACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCC-GGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-UUUUAACGAGUACCUAAUGGAG
GGCAAGUCUGGUGC-AGCCGCCGCGGUAAUUCCAGCUCCAU[-         ]
Hexagenia_rigida???????????????????????????????????????????????????UGCAUGUCUCAGUACGAGCUACAUUAAAG-UGAAACC-GC       GAAUGGCUCAUUAAAUCA-
GUUAUGGUUCCUUGGAUCCUAC-AAUUCC-UACAUGGAUAACUGUGGCAAUUCUAGAGCUAAUACAUGCAACCA-GAACCGUGCCCGGAA-ACGGGCAGGGUGCAC           UUAUUA-GAUCAAA--
ACCAAUCGGUCGG??????????-CCGU--CGUUUUGGUGACUCUGGAUAAG-CCACAGCUGAUCGCACGGCCUCCGCGCCGGCGACGUAUCUUUCGAAUGUCUGC
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CUUAUCAACUGUCGAUGGUAGGUUACGUGCCUACCAUGGUUGUAACGGGUAACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC        GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGUACACUCUAAAAA-CUUUAACGAGUACCUAAUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAU[-  ]
Cloeon______________________ ????????????????????UAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUGCAAGCUAAAUUAAAG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCCUAC-CAAUCC-UACUUGGACAACUGUGGUAAUUCUAGAGCUAAUACAUGCACCCA-GAGCCCCGUCCAGAA-AUGGUCGGGGCGCAG UUAUUA-
GAUCAAA--ACCAAUCGGUCGGGCUCGCCCGU-CCGU--AGUUUUGGUGACUCGGAAUAA--CCACGGCUGAUCGCACGGCCU-CGCGCCGGCGACGUAUCCUUCGAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUAACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-UUUUAACGAGUACCUAAUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAU[-          ]
Leucrocuta_aphrodite________ ??????????????????????????????????????????????????UGCAUGUCUCAGUGCAAGCCUAAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUCAC-UUAUCC-UACUUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGCAACCA-GAGCCGUGCCCAGAA-AUGGGCACGGCGCAC UUAUUA-
GAUCAAA--ACCAAUCGGUCGGGCUCGCCCUU-CCGU--AGUUUUGGUGACUCUGGAUAACACCACAGCUGAUCGCACGGCCUUUGUGCCGGCGACGUAUCCUUCGAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUACGCUUACCAUGGUUGUAACGGGUAACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-UUUUAACAAGUACCUAAUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAU[-          ]
Centroptilum_luteolum_______ ???????UUGAUCCUGCCAGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUGCAAGCUAAAUUAAAG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCCUAC-CAAUCC-UACUUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGCACCUA-GAGCUCCGUCCAGAA-AUGGCCGGGGCGCAG UUAUUA-
GAUCAAA--ACCAAUCGGUCGGGUUCGCCCGU-CCGU--AGUUUUGGUGACUCUGAAUAAC--CACGGCUGAUCGCACGGCCU-UGCGCCGGCGACGUAUCCUUCGAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUAACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGAA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-UUUUAACGAGUACCUAAUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAU[-          ]
Stenonema_sp________________ ??????????????????????????????????????????????????UGCAUGUCUCAGUGCAAGCCUCCUUAAGG-UGA-ACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-UUAUCC-UACUUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGCAACCA-GAGCCUUGCCCAGAA-AUGGGUAAGGCGCAC UUAUUA-
GAUCAAA--ACCAAUCGGUCGGGCUCGCCCUU-CCGU--AGUUUUGGUGACUCUGGAUAAAUCCGCAGCUGAUCGCACGGCCUUGGUGCCGGCGACGUAUCCUUCGAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUACGCUUACCAUGGUUGUAACGGGUAACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUC-UUUUACCAAGUACCUAAUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAU[-          ]
Trigoniopthalmus_altern_____ ?????????????????????????????????????????????????????????????????????????????????????????
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GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACAAUACGGGACUCAUCCGAGGCCCCGUAAUUGGAAUGAGUACACUUUAAAUC-CUUUAACGAGUAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-  ]
Allomachilis_froggart_______ ??????????????????????UCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUAAGUACGAGCU???????AG-CGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUCACGGUUCCUUGGAUGGAUG-CGAAA--GACUUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGCCUAUUCGAGCUCCGACC--UG-ACGGAAAGAGCGCUU UUAUUA-
GAUCAAA--AUCAAUCGGUCGG??????????-CCGUCCACUUUUGGUGACACUGGAUAAC-UUACAGCGGAUCGCACGGUC-UCGCACCGGCGACGAGUCUUUCAAACGUCUGC
UCUAUCAACUGGCGAUGGUAGUGACUCCGCCUACCAUGGUCGUCACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGAUCACUUUAAAUC-CUUGAACGAGUAUCGAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-          ]
EF199981_Machilis_hrabei____ ?????????????????????????????????????????????????????????????????????????????????????????
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Dilta_littoralis____________ ?????GGUUGAUCCUGCCAGUAGUCAUAUGCUCGUCUCAAAGAUUAAGCCAUGCAUGUCUAAGUGCAAGCCGAGCUAAGG-UGAAACC-GC
GAACGGCUCAUUAUAUCA-GUUAUGGUUCCAUGGGCCGAGC-GCAAAGAUACUUGGACAACUGUGGCAAUUCUAGAGCUAAUACAUGCAAACU-GAGCUCCGACCUUUG-ACGGUGAGAGCGCUU UUAUUA-
GACCAAG--ACCAAACGGGCCC??????????-CCGC--CGCCUUGGUGACUCUGAAUAAC-UUGGUGCCGAUCGCACGGUCCUAGCACCGGCGACGUACCUUUCAAAUGUCUGA
CUUAUCAACUUUUGAUGGCAGUUCCCGCGCCUGCCAUGGUCACCACGGGUGACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGGGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACAAUACGGGACUCAUCCGAGGCCCCGUGAUUGGAAUGAGUACACUUUAAAUC-CUUUAGCGAGUACCUAUUGGAG
GGAAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-          ]
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Ctenolepisma_longicaudata??
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Lepisma_sp__________________ UACCUGGUUGAUCCUGCCAGUAGUUAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUGCAAACCAAAACAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCGUAC-CAAUCU-UACUUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGCUAAUU-GAACCCCGACCAGAA-AUGGAAGGGGUGCUU UUAUUA-
GAUCAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUUAAUAAC-UUUGUGCUGAUCGCACGGUCUUCGUACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUUACGGGUAACGGGGAAUCAGGGUUCGAUUCCGGAAAAGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAAUACACUUUAAAUC-CUUUAAUAAGGAUCUAUUGAAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUUCAA[-   ]
EU376048_Lepisma_saccharin??
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Thermobia_domestica_________ ???????????????????????UCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCUACAUUAAAG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCGUAC-CAAUCC-UACUUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGCAAACA-GAAUCCCGACCAGUA-AUGGAAGGGAUGCUU UUAUUA-
GAUCAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUGGGCUGAUCGCACGGUCUUCGUACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUUACGGGUAACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAUUACACUUUAAAUC-CUUUAAAGAGAAUCUAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Tricholepidion_gertschi_____ ???????????????????????UCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUUCAAGCUAAAAU?AAG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUCGUAC-CAUUUU-UACUUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGCAAAUU-GAGUCCGGAACAGAA-AUGUGAUGGACGUUU UUAUUA-
GAACAAAAAAUCAAUCGGUCAU??????????-CCGU-CAAUCUUGGUGACUCUGAAUAAC-CUUGAGCUGAUCGCACGGUCUUAGUACCGGCGACAUAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUUACGGGUAACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAAUAGCUACCACAUCCAAGGAAGGCAGCAGGC AC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGUACACUUUAAAUC-CUUUAACAAGGAUCCAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Gromph_laevigata_AY210820?????????????????????AGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUGCAAGCCACAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUGGUGG-ACAG-U-UACUUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGCAACUC--GGUCCCGACCGGAA-GCGGAAGGGACGCUU UUAUUA-
GAUCAAA--ACCAAUCGGGCG--CUCGC--GU-CCGU-UUGCCUUGGUGACUCUGAAUAAA-UUGUGGCAGAUCGCACGGUCUCCGUACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGUUCUGCGCCUACCAUGGUUGUAACGGGUAACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGCACACUUUAAAUC-CUUUAACGAGUAUCCAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
Isoperla_davisi_AY121148____ ???UAAGUGCAAGCCAAAUUAAGG-UGAAACC-GC
GAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUAGAUAAUAC-UCCAAGUUACUUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGCAAACA-GAGUUCCGACUCGAG-AGGGGAGGAACGCUU UUAUUA-
GAUCAAA--ACCAAUCGGUCGC??????????-AUUC--GUAUUUGGUGACUCUGAAUAACCACUUAGCAGAUCGCACGGUCU-CGUACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUGUCGAUGGUAGGCUCUGCGCCUACCAUGGUUGUAACGGGUAACGGGGAAUCAGGGUUCGAUUCCGGAGAGGGAGCCUGAGAAACGGCUACCACAUCCAAGGAAGGCAGCAGGC GC-
GCAAAUUACCCACUCCCGGCACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUCAUCCGAGGCCCCGUAAUCGGAAUGAGCACAACUUAAAUA-CUUUAACGAGUAUCCAUUGGAG
GGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCAGCUCCAA[-   ]
EU414717_Isoperla_sp________ ???
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AY859546_Gomphocerinae______ ???
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[Anisopleura_comes_FN356038   ???????????????????--------------------------------------CCUCAGUACGAACCGCUUUAAGG-CGAAACC-GC
GAAUGGAUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACACUUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUC-GCGCCCCGACCAGUG-AUGGAAGGGGUGCUU UUAUUA-
GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCGU--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCCAGNACCGGCGACGCAUCUUUCAAAUGUCUGC
CUUAUCAACUUUCGAUGGUAGGUUCUGCGCCUAACAUGGUUGnnACGGGUGACGGGGAAUCANGGUUCNAUNCCGGANAGGGAGCCUGANAAACGGUUACCACAUNCAAGGAAGGCAGCAGGG GC-
CCAAAUUACCCACUCCCGGAACGGGGA-GGUAGUGACGAAAAAUAACGAUACGGGACUUAUCCNAGGCCCCGUAAUCGGAAUGAGAACACUUUAAAUG-CUUUAACGAGGAUCUAUUGGAG GGCA-
GCCUGGUGCCAGCANCCGCGGUAAUnnCAGCUCCAA[-                ]
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[#NEXUS
V4REPLACEMENTSEQUENCESThesehavefulllengthsequencesfromotherindividuals,andIprefernottocreatechimarras
Isosticta_robustior_ZIR_____ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGU---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUGUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU????????????????????????????????????????????????????[-                ]
Prodasineura_vittata_OPV____?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---AAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAu????????????????????????????????????????????????????[-                ]
Chorismagrion_risi_ZCRi_____ ?????????????????????????????????????uaguc-ggagGUGUGUCUCGGA-CGGUCGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCCCCGUUAUCCUUCUUUGGUGCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUccgggggaaguau????????????????????????????????????????????????????[-                ]

V4CORRECTEDANDTRIMMEDThesehavefulllengthsequencesfromotherindividuals,andIprefernottocreatechimarras
Mecistogaster_ornata_ZMO____ ?????????????????????????????????????uaguc-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU????????????????????????????????????????????????????[-                ]
Anisophaea_decorata_________ ??GCGUAUAYUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGAGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCA????????????[-                ]

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Umma_dedivium_ZUD___________ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---AAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
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UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??[-   ]
Austrolestes_analus_OAAn____ ?????????????????????????????????????UAGUC-GgAGGUGUGUCUCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCUCCGUUAUCCUUCUUUAGUGCUCUUCACCGAGUGCUUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??[-   ]
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Begindata;
Dimensionsntax=472nchar=616;
Formatdatatype=rnasymbols="0123456789"gap=-;
Matrix Chorismagrion_risi_ZCRiProdasineura_vittata_OPVhadV4fromFLCandendsfromGenBank] [
3â€šÃ„Ã´ 22x 23
E23-4 23-5 23-6 E234â€šÃ„Ã´ 8 9 101110â€šÃ„Ã´ E23-12
11â€šÃ„Ã´ 8â€šÃ„Ã´ 14 14â€šÃ„Ã´ 24 25
26 24â€šÃ„Ã´ 23â€šÃ„Ã´ 27 28 29
30xâ€šÃ„Ã´ 28â€šÃ„Ã´ 22â€šÃ„Ã´ 31 2â€šÃ„Ã´ 32 33]
Unaligned___________________ ????????????????????????????????????-?????-????????
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Unaligned_Zygoptera ????????????????????????????????????-?????-????????
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Protosticta_sp_A_ZPA________ ?????????????????????????????????????uaguc-ggaggugugucucgga-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-AGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUCCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAAnGAAA
GUUAGAGGUUCGAAGGCGAUCAnAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUau??[-   ]
ZPCs_Protosticta_curiosa____ ????????????????????????????????????-?????-????????
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Protosticta_sanguinostigmUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-CGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA

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GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUGUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                  ]
Sinosticta_ogatai_ZSOg______ ??????????????????????????????????????uaguc-ggaggugugucuCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGgggaaguau??????????????????????????????????????????????????????[-                  ]
Palaemnema_paulicoba_ZPP____ ??????????????????????????????????????uaguc-ggaggugugucucgga-cgguCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-CGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAaguau??????????????????????????????????????????????????????[-                  ]
Palaemnema_domina_ZPDm______ ??????????????????????????????????????uaguc-ggaggugugucucggA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGU-AAAAGGCCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-CGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGggggaaguau??????????????????????????????????????????????????????[-                  ]
Palaemnema_melanostigma_6UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCCCCGGCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-CGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                  ]
Isosticta_robustior_666_____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGU---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUGUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                  ]
Rhadinosticta_simplex_612UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---AAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                  ]
Amphisticua_silvarum_ZAS____ ??????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGU---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??????????????????????????????????????????????????????[-                  ]
Labidiosticta_vallisi_AY7UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---AAGGUCCCGUGAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                  ]
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Orosticta_filicola_ZOF______ ??????????????????????????????????????uagUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---AAGGUCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU???[-]
Platycnemis_pennipes________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Copera_annulata_OCAn________ ??????????????????????????????????????uaguc-ggaggugugucucggA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAguau???[-]
Copera_vittata_6585198______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Copera_marginipes_ZCM_______ ??????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUau???[-]
Coeliccia_albicauda_________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUUUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Coeliccia_cyanomelas_636____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUUUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUGUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Calicnemia_miles_OCMi_______ ??????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAu???[-]
Prodasineura_vittata_OPV____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---AAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA

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GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAuGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                 ]
Chlorocnemis_abbotti_ZCAb?????????????????????????????????????uaguC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---AAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU????????????????????????????????????????????????????[-                 ]
Nososticta_solida_61451 UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                 ]
Phylloneura_westermanni_6UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUG
GAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUAGGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACG
AACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAAGUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCU
AGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAU
UGACGGAAGGGCACCACCAGGAGUG[-      ]
Onychargia_atrocyana_ZOA____ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU????????????????????????????????????????????????????[-                 ]
Argia_moesta_OAM____________ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU????????????????????????????????????????????????????[-                 ]
Argia_nahuana_6815221_______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                 ]
Argiocnemis_rubescens_ZAR?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---AAGGCCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU????????????????????????????????????????????????????[-                 ]
Mortonagrion_binocellata____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUGUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
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GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Agriocnemis_pygmea_6095 UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---AAGGCCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Austroagrion_watsoni_ZAW____ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCCCCGUCAUCCUUCUUUGGuCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??[-   ]
Archibasis_viola_ZAV________ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGUCGC---AAGGCCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??[-   ]
C_puella_AJ488546___________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGUCGC---GAGACCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FN356069_C_resolutum   UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Pseudagrion_cingillum_OAAL?????????????????????????????????????UAGUC-gGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGUCGC---AAGACCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??[-   ]
Pseudagrion_aureofrons_61UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---AAGGCCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Pseudagrion_ignifer_OPi_____ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGUCGC---AAGACCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAu??[-   ]

Erythromma_najas_1238_______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Cercion_plagiosum_AJ488552UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Cercion_lindenii_AJ488550UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Paracercion_calamorum_______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Acanthagrion_quadratum_ZAQ??????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCUC---ACGGCCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CGGGACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUau???[-]
Leptobasis_vacillans_ZLV2??????????????????????????????????????uagUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??[-]
Amphiagrion_saucium_OAS_____ ???????????????????????????????????????uaguc-ggaggugugucucgga-cggucgguucgccgcuugucggugcuc-aacug-
gccg--guccggacguccugccg-guggggccuc---gcggccccgucauccuucuuugguccucuucaccgagugccuugguggg-ccggcacguuuacuuugaacaaauuagagugc
ucaaagcaggccguuggucgccugaauac-ugugugcauggaauaauggaauaggaccucgguucc-auuuuguugguuuu--cgggacu--cgagguaaugauuaaua
gggacggacgggggcauucguauugcgacguuagagGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAggcgaucagauaccgcccuaguucuaaccauaaacgaugccagcuagccauccgccgaaguuccuucuaugacucggcgggcagcuucccgggaaacca-aagcu-
cuuggguuccgggggaaguau??[-]
Amphiagrion_abbreviatum_6UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCUC---GCGGCCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CGGGACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Xiphiagrion_cyanomelas_ZXC??????????????????????????????????????uAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCUC---GCGGCCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CGGGACU--CGAGGUAAUGAUUAAUA

GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU???[-   ]
Hesperagrion_sp_AY749911____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCUC---GCGGCCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CGGGACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Ischnura_elegans_1239_______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCUC---ACGGCCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CGGGACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Ishnura_barberi_5965136UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCUC---GCGGCCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CGGGACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Ischnura_graellsi_AJ488545UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCUC---ACGGCCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CGGGACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Anomalagrion_hastatum_OAH???????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCUC---GCGGCCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CGGGACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU???[-   ]
Enallagma_parvum_AJ420939UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCUC---GCGGCCCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CGGGACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUUUUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Enallagma_granti_AJ420937UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
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GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
E_nigridorsumAJ420938_______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
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GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]

Enallagma_cyathigerum_0110UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
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CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Enallagma_sp_6005140________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
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CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
E_aspersum_DQ087506_________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
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CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Aciagrion_pallidum__________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
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CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Aciagrion_borneence_ZAB_____ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
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CUUGGGUUCCGGGGGAAGUAU??[-   ]
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CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Protoneura_cara_ZPC_________ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
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GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
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CUUGGGUUCCGGGGGAAGUAU??[-   ]
FN356189_Psaironeura_remisUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
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CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Elattoneura_analis__________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
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CUUGGGUUCCGGGGGAAGUAU??[-   ]
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cuuggguuccgggggaaguau??[-   ]
Neoneura_maria_6425182______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCCGCUUGUCGGUGUUU-AACUG-
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Ceriagrion_aeruginosum_ZCAE_?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
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CUUGGGUUCCGGGGGAAGuau??[-   ]
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Leptagrion_elongatum_ZLE____ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
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cuuggguuccgggggaaguau????????????????????????????????????????????????????[-                ]
Seychellibasis_alluaudi_ZUA2?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
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CUUGGGUUCCGGGggaaguau????????????????????????????????????????????????????[-                ]
Coryphagrion_grandis_ZCG____ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU????????????????????????????????????????????????????[-                ]
Microstigma_rotunda_OMRu____ ?????????????????????????????????????uaGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU????????????????????????????????????????????????????[-                ]
Microstigma_anomalum_672____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                ]
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Mecistogaster_ornataFN356130UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Mecistogaster_linearis_67UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Megaloprepus_caerulatus_ZMC_?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---AAGGCUCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
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GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGggggaaguau??[-   ]
Haplostigma_modesta_ZHM_____ ?????????????????????????????????????uaGUG-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??[-   ]
Pseudostigma_aberans_OPA____ ?????????????????????????????????????uaguC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAaguau??[-   ]
Rhinagrion_mima_____________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGU---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUGGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Sciotropis_cyclanthorum_6UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAUGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCUUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUAGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Heteragrion_mitratum________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Heteragrion_sp_6735213______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA

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GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                ]
Oxystigma_cyanifrons_ZOC____ ?????????????????????????????????????uaguc-ggaggugugucucgga-cgGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU????????????????????????????????????????????????????[-                ]
Dimeragrion_percubital_ZDP?????????????????????????????????????uaguc-ggaggugugucucgga-cgGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU????????????????????????????????????????????????????[-                ]
Tatocnemis_malgassica_ZTMa?????????????????????????????????????uAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU????????????????????????????????????????????????????[-                ]
Philogenia_cassandra________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                ]
Philogenia_terraba_ZPT______ ?????????????????????????????????????uAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU????????????????????????????????????????????????????[-                ]
Philogenia_berenice_ZPBn____ ?????????????????????????????????????uaguc-ggagGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU????????????????????????????????????????????????????[-                ]
Teinopodagrion_venale_676UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCCCCGUUGUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUACUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                ]
Teinopodagrion_lepidum_ZTL?????????????????????????????????????uaguc-ggaggugugucucgga-cggucgguucgccgcuugucggugcuc-aacug-
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GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGccagcuagccauccgccgaaguuccuacuaugacucggcgggcagcuuccgggaaacca-aagcu-
cuuggguuccgggggaaguau????????????????????????????????????????????????????[-                ]
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Amanipodagrion_gilliesi_ZAG_?????????????????????????????????????uaguc-ggaggugugucucgga-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGU---GAGGCCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
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CUUGGGUUccgggggaaguau???[-   ]
Nesolestes_elizabethae_ZNE?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
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GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUACUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU???[-   ]
Protolestes_kerckhoffaeZPKc?????????????????????????????????????uaguc-ggaggugugucucgga-cGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
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GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCcgggggaaguau???[-   ]
Argiolestes_ochrostomas_ZAOc?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUACUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU???[-   ]
Argiolestes_sidonia_605_____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUACUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Caledopteryx_maculata_669UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUACUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Trineuragroin_percostale____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUACUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Caledargiolestes_uniserieUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUCAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUACUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Podopteryx_roseonotata_ZPR?????????????????????????????????????uaguc-ggaggugugucucgga-cggucgguucgccgcuugucggugcuc-aacug-
gccg--guccggacguccugccg-guGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGuuggucgccugaauac-ugugugcauggaauaauggaauaggaccucgguucc-auuuuguugguuuu--cagaacu--cgagguaaugauuaaua

gggacggacgggggcauucguauugcgacguuagaggugaaauucuuggaucgucgcaagacgaaccgaugcgaaagcauuugccaagaacguuuucguugaucaagaacgaaa
guuagagguucgaaggcgaucagauaccgcccuaguucuaaccauaaacgaugccagcuagccauccgccgaaguuccuacuaugacucggcgggcagcuuccgggaaacca-aagcu-
cuuggguuccgggggaaguau??[-   ]
Austroargiolestes_icteromUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGUUU-UACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
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GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUACUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Griseargiolestes_albescensUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUACUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Griseagriolestes_eboracusZGE?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUACUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??[-   ]
Miniargiolestes_minimusZMMn?????????????????????????????????????uAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUACUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??[-   ]
Lestomima_flavostigma_OPB????????????????????????????????????-?????-????????
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Rhipidolestes_hiraoi_ORH____ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUggguuccgggggaaguau??[-   ]
Rhipidolestes_aculeata_63UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Paraphlebia_zoe_OPZ_________ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-U
GUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUAGGGACGGACGGGGGCAUU
CGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA

GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??[-   ]
Thaumatoneura_inopinata_OUI3??????????????????????????????????????uaguC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??[-   ]
Hypolestes_clara_OHC________ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUGAUCCUUCUUUGGUCCUCUUCACUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??[-   ]
Hypolestes_sp_EU055183______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUGAUCCUUCUUUGGUCCUCUUCACUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Argiomorpha_fusca_ZAF6______ ?????????????????????????????????????uaguc-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAu??[-   ]
Sinocnemis_yangbingi_ZSY____ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??[-   ]
Miocora_peraltica_ZMP_______ ?????????????????????????????????????uAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??[-   ]
Cora_marina_OCMr____________ ?????????????????????????????????????uAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
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GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??[-   ]
Cora_cyane_677__5217________ ?????????????????????????????????UCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAA?G??[-   ]

Polythore_spZ   UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG
Polythore_boliviana_EU055225UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Euthore_fasciata_678521UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Rimanella_arcana____________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGUCGC---GAGGCCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Pentaphlebia_stahli_________ UNGCGUAUAYUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUGUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUU????????????????????????[-   ]
Devadatta_podolestoides_6UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Amphipteryx_longicaudataZAL_?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUUACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??[-   ]
Pseudolestes_mirabilis_68UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Philoganga_vetusta__________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA

GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Philoganga_robusta_OPRb_____ ??????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGgUUCCGGGGGAAGUAU???[-]
Lestoidea_conjuncta_664_____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Diphlebia_lestoides_ZDL_____ ??????????????????????????????????????uaguC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGguuccgggggaaguau???[-]
Diphlebia_coerulescen_AY7UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Bayadera_melanopteryx_ZBM??????????????????????????????????????uaguc-gGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGUCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
Cuuggguuccgggggaaguau???[-]
Bayadera_brevicauda_638_____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUGUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Dysphaea_gloriosa_ODG_______ ??????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGaaguau???[-]
Euphaea_formosa_6375177UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]

Euphaea_decorata____________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Anisopleura_sp_A_ZAA________ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGAGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??[-]
Disparocypha_biedermanni_ZDB?????????????????????????????????????uaguc-ggaggugugucUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGUUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUACUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCgggggaaguau??[-]
Libellago_semiopaca_657_____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGUUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUGUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUACUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Heliocypha_biseriata_650____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGUUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUACUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Platycypha_caligata_________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUACUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Chlorocypha_curta_CHL_______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUACUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Sundacypha_petiolata_CHL____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGUUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUACUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Aristoocypha_fenestrella_ORF?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGUUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGUCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA

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GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUACUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU????????????????????????????????????????????????????[-                ]
Rhinocypha_tincta_60351 ????????????????????????UUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGUUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGUCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUACUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCU????????????????????????????????????????[-                ]
Heliocharis_amazona_ZHAz3????????????????????????????????????uaGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU????????????????????????????????????????????????????[-                ]
Hetaerina_americana_________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGUCCGC--GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCU????????????????????????????????????????[-                ]
Calaphaea_confusa_ZCC_______ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUccgggggaaguau????????????????????????????????????????????????????[-                ]
Noguchiphaea_yoshikoae______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                ]
Vestalis_beryllae_66252 UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                ]
Matrona_basilaris_64151 UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                ]
Atrocalopteryx_atrata        UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                ]
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Echo_modesta_6545194________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Neurobasis_ianthinipennisUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU
GGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Sapho_orichalcea_OSO________ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---AAGGCUCCUUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGcuuccgggaaacca-aagcu-
cuuggguuccgggggaaguau??[-   ]
Calopteryx_amata____________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAA???[-   ]
AJ459186Calopteryx_splendUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCCCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Calopteryx_aequabiliAY338716UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Iridictyon_myersi___________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Iridictyon_trebbaui_ZIT_____ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGC---GAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAu??[-   ]
Unaligned_lestoid   ?????????????????????????????????????-?????-????????
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?????????????????????????[-   ]
Nubiolestes_diotima_OND_____ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCUCCGUUAUCCUUCUUUGGUGCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU???[-   ]
Perilestes_kahli_683522UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCCCCGUUAUCCUUCUUUGGUGCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Perissolestes_remotus_682UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCCCCGUUAUCCUUCUUUGGUGCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
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GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Perissolestes_magellena_OPMg?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCCCCGUUAUCCUUCUUUGGUGCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCgGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGgUUCCGGGGGAaGUAU??[-   ]
Chlorolestes_umbratus_OCU?????????????????????????????????????uaguc-ggaggugugucucgga-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCCCCGUUAUCCUUCUUUGGUGCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUccgggggaaguau??[-   ]
EuchlorolestestessellatusOET?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCCCCGUUAUCCUUCUUUGGUGCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??[-   ]
Phylolestes_ethelae_OPE2____ ?????????????????????????????????????uaguc-ggaggugugucucgga-CGGUCGGUUCGCUGCUUGUCAGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCCCCGUUAUCCUUCUUUGGUGCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
Cuuggguuccgggggaaguau??[-   ]
Synlestes_weyersii_6265 UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCCCCGUUAUCCUUCUUAGGUGCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA

GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Synlestes_tropicus_ZST______ ?????????????????????????????????????uaguc-ggaggugugucucgga-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCCCCGUUAUCCUUCUUAGGUGCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-aagcu-
cuuggguuccgggggaaguau??[-   ]
Chorismagrion_risi_ZCRi_____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-uaguc-ggagGUGUGUCUCGGA-CGGUCGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCCCCGUUAUCCUUCUUUGGUGCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUA GAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUccgggggaaguauGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Episynlestes_cristatus_ZEC2_?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCCCCGUUAUCCUUCUUUGGUGCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAaguau??[-   ]
Episynlestes_albicauda_61UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCCCCGUUAUCCUUCUUUGGUGCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Megalestes_micans_ZMMc______ ?????????????????????????????????????uaguc-gGAGGUGUGUCUCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCUCCGUUAUCCUUCUUUGGUGCUCUUCACUGAGUGCCCUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAu??[-   ]
Megalestes_kurahashii_______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCUCCGUUAUCCUUCUUUGGUGCUCUUCACUGAGUGCCCUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Orolestes_octomaculatus_ZOO_?????????????????????????????????????uaguc-ggaggugugucuCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCUCCGUUAUCCUUCUUUGGUGCUCUUCACCGAGUGCUUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUuggguuccgggggaaguau??[-   ]
Austrolestes_annulosus_61UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-UGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]

Sympecma_paedisca_65151 UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCUCCGUUAUCCUUCUUUGGUGCUCUUCACCGAGUGCUUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Sympecma_fusca_ZSF__________ ?????????????????????????????????????uagUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCUCCGUUAUCCUUCUUUGGUGCUCUUCACCGAGUGCUUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUA GAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU???[-   ]
EU055157_Austrolestes_annUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-UGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Indolestes_peregrinus_OIP?????????????????????????????????????uagUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCUCCGUUAUCCUUCUUUAGUGCUCUUCACCGAGUGCUUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGuau???[-   ]
Indolestes_cyaneus_DIC______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCUCCGUUAUCCUUCUUUAGUGCUCUUCACCGAGUGCUUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Chalcolestes_viridis________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCUCCGUUAUCCUUCUUUGGUGCUCUUCACCGAGUGCUUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Archilestes_grandis_645_____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCUCCGUUAUCCUUCUUUGGUGCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Lestes_rectangularis_OLR____ ?????????????????????????????????????UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCUCCGUUAUCCUUCUUUGGUGCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCgGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGgUUCCGGGGGAaGUAU???[-   ]
Lestes_eurinus_OLE__________ ?????????????????????????????????????uAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCUGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGUCAAAAGUCUCCGUUAUCCUUCUUUGGUGCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA

GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAU??[-   ]
FN356183Hemiphlebia_________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCUGCUUGUCGGUGUUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUA GAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Unaligned_Anisoptera   ????????????????????????????????????-?????-????????
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Epiophlebia_superstes_______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Epiophlebia_laidlawi   ????????????????????????????????????-?????-????????
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Unaligned_Aeshnids   ????????????????????????????????????-?????-????????
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Archipetalia_auriculata_AAAuUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Austropetalia_victoria_AAV???????????????????UGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGA???????????????????????????[-   ]
Hypopetalia_pestilens_______ ???????????????????UGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA

GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGA???????????????????????????[-   ]
FJ596639_Phyllopetalia_api??????????????????????????????????????-?????-????????
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Phyllopetalia_apollo_684____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Eurypetalia_altarensis_OEA???????????AAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAU?????????????????????????[-   ]
Ophiopetalia_diana_________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCU??[-   ]
Gomphaeschna_furcilata______ ????????????????????????????????CUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUC
GCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUAGGGACGGACGGGGGCAUU
CGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAG???[-   ]
Oligoaeschna_pryeri_________ ????????????????????????????????????-?????-????????
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Austroaeschna_parvistig_AAPs??????????AAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCA????????????[-   ]
Telephlebia_tillyardi_______ ?????????????????????CGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA

GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAU?????????????????????????[-   ]
Boyeria_vinosa_OBV__________ ????????????????????????????????????-?????-????????
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Boyeria_irene_FN356042______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Brachytron_pratense_EU055UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Epiaeschna_heros____________ ????????????????????????????????????-?????-????????
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Caliaeschna_micro_DQ008197????????????????????????????????????-?????-????????
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CAGAACU--CGAGGUAAUGAUUAAUAGGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUU
UGCCAAGAACGUUUUCGUUGAUCAAGAACGAAAGUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCU
AGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAU
UGACGGAAGGGCACCACCAGGAGUG[-   ]
DQ008199_Anaciaeschna_isoUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-UGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGUACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
GQ118262_Oplonaeschna_sp____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-UGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGUACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Aeshna_canadensis_OAC_______ ????????????????????????????????????-?????-????????
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EU055147_Rhionaeschna_multUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-UGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGUACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Aeshna_cyanea_1203__________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-UGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGUACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FJ596630_Aeshna_grandis_____ ????????????????????????????????????-?????-????????
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FN356092_Gynacantha_bullaUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-UGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGUACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Austrogynacantha_heterogeUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-UGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGUACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FN356093_Hemianax_ephippigUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-UGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGUACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Anax_junius_AY749908________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-UGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGUACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FN356035_Anax_imperator_____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-UGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGUACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA

GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Unaligned_gomphid ?????????????????????????????????????-?????-????????
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Sinogomphidia_kruegeri______ ???????????????????UGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--UGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGC???[-]
Ictinogomphus_australis_6UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--UGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Ictinogomphus_sp____________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-nnnUCGnnUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--UGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG
FN356120_Lindenia_tetraphUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGUGCUGU-AAAAGGCACCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--UGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Phyllogomphoides_stigmatus?????????????????GUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCUU--CUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAU??????????????????????????[-]
Progomphus_obscurus_________ ???????????????????????????????GCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUAU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--UGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAA???[-]
Progomphus_borealis_633_____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--UGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]

Hagenius_brevistylusDQ008193UAGCGUAUAUUAAAGNUGUUGCGGNUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAAAGGACCUCUGUUCC-AUUUUGUUGGUUUU--CAGAACU--AGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Lanthus_vernalis_OLV________ ????????????????????????UUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCU??[-   ]
Davidius_nanus_DQ010047_____???
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Neogomphus_edenticulatus____ ???????????????????UGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGA???????????????????????????[-   ]
Armagomphus_armiger_613_____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Hemigomphus_comitans_AHC____ ???????????AAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FJ596622_Hemigomphus_heter????????????????????????????????????-?????-????????
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Hemigomphus_magela_5935 UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]

Trigomphus_sp_FN356176______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FJ596615_Lanthus_albistylu????????????????????????????????????-?????-????????
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FJ712325_Stylogomphus_shir????????????????????????????????????-?????-????????
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Davidioides_martini_648_____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAAGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Burmagomphus_collaris_______ ???????????????????UGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGA???????????????????????????[-   ]
Cyclogomphus_heterostylusUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUUUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AA GCUUCUUGGGU
UCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Anisogomphus_pinr_FN356037UAGGGUAUAUUAARGUNGUUGSGGUUAAAAAGCUNG-UAGUC-GAAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-?AAAGGCUCCGUUAUCCUUCUUCGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Dromogomphus_spinosus_______ UAGCGUA--UUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]

Arigomphus_villosipes_______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUUCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU- CUUGGGUU
CCGGGGGAAGUAUGGUUGCAAAGCU???[-]
Arigomphus_cornu_DQ008188UAGCGUAUAUUAAAGCUGUUGCGGNUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Stylurus_intricatus_DQ008185UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Stylurus_amnicola___________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
FJ596610_Stylurus_nagoyanu????????????????????????????????????-?????-????????
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DQ008184_Gomphus_externusUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Asiagomphus_hainanensis_____ ????????????????????????????????????-?????-????????
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DQ008187_Gomphus_exilis_____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]

Gomphus_Phanogomphus_grasl???????????????????????????????????-?????-????????
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Gomphus_adelphus____________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCU??[-   ]
FN356091_Gomphus_vulgatisUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FN356132_Megalogomphus_spUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Onychogomphus_uncatus_______ ???????????????????????????????????-?????-????????
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Onychogomphus_forcipDQ008190UAGCGUAUAUUAAAGCUGUUGCGGCUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
A_FJ712322_Onychogomphus_s???????????????????????????????????-?????-????????
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Ophiogomphus_carolus________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAGGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]

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FJ596618_Ophiogomphus_sevUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCGCUAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                ]
FN356139_Ophiogomphus_caecUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                ]
Leptogomphus_elegans________ ???????????????????UGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUU-AACUG-
GCCG--GUCUGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGGUCGCUGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAAGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAU?????????????????????????[-                ]
FJ596609_Leptogomphus_saut????????????????????????????????????-?????-????????
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Epigomphus_compactus________ ???????????????????UGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGA???????????????????????????[-                ]
FJ712323_Microgomphus_chel????????????????????????????????????-?????-????????
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Heliogomphus_retroflexus____ ????????????????????????????????????-?????-????????
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FN356121_Macrogomphus_paraUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCUUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCAUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                ]
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Ceratogomphus_pictus_OCH???????????AAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGA???????????????????????????[-   ]
Lestinogomphus_angustus_ALA_???????????AAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-A??-????????????????????????????????
???????????????????????GAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGA???????????????????????????[-   ]
Austrogomphus_guerini_______ ???????????????????UGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGA???????????????????????????[-   ]
Austrogomphus_amphiclitusUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Antipodogomphus_acolythusUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAAGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Unaligned_Petaluridae   ?????????????????????????????????????-?????-????????
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Tanypteryx_hageni_EU05517UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCUGCUUGUCGGUGUUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FN356174_Tanypteryx_sp______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCUGCUUGUCGGUGUUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Tanypteryx_pryeri_ATP_______ ???????????AAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCUGCUUGUCGGUGUUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC

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UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGA???????????????????????????[-                ]
FN356173_Tachopteryx_thorUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCUGCUUGUCGGUGUUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                ]
Phenes_raptor_AY338720______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                ]
Phenes_centralis_OPR________ ???????????????UUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGAC?????????????????????[-                ]
Uropetalura_carvori_________ ?????????????AGUNGUNGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGA???????????????????????????[-                ]
Petalura_hesperia___________ ???????????????????UGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGA???????????????????????????[-                ]
Petalura_gigantea_EU05515UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                ]
Petalura_litolae____________ ????????????????????GCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAG?????????????????????????????[-                ]
Petalura_ingentissima_______ ?????????????????GUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
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GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGA????????????????????????????[-   ]
Zoraena_bilineata_OZB_______ ??????????????GUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGA????????????????????????????[-   ]
Taeniogaster_obliqua_OTO____ ?????????????????GUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAU??????????????????????????[-   ]
Kalyptogaster_erronea_______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCU??[-   ]
FJ712317_Cordulegaster_mac??
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EU055179_Cordulegaster_dorUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC UCAAAG
CAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUAGGGACGGACGGGGGCA
UUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FN356072_Cordulegaster_bolUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCGUAAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAKAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
DQ008198_Cordulegaster_picUAGCGUAUAUUAAAGUUGCUGCGGCUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FJ596638_Anotogaster_siebo????????????????????????????????????-?????-????????
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Neopetalia_punctata_________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGUUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGUCGAAGUUCCUUAUAUGACUCGACGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCU??[-   ]
Chloropetalia_soarer________ ???????????AAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GAAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACG????????????????????[-   ]
Sinorogomphus_nasutus_OSN???????????AAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAU?????????????????????????[-   ]
Chlorogomphus_brunneus_EUUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUCGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FN356060_Chlorogomphus_spUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUCGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Synthemis_eustalacta________ ?????????????AGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAA??????????????????????????????????????[-   ]
Synthemis_marcrostigma_EUUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUGUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Archaeosynthemis_leachii_OAL???????????AAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGA???????????????????????????[-   ]

Eusynthemis_brevistyla______ ???????????AAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAA?????????????????????????????????????[-   ]
FJ596573_Eusynthemis_gutta????????????????????????????????????-?????-????????
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Eusynthemis_nigra_EU05516UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Choristhemis_flavoterminaUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Synthemiopsis_gomphomac_____ ???????????????????UGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAU?????????????????????????[-   ]
Gomphomacromia_chilensis_OGC???????????AAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGAC??????????????????????[-   ]
FJ712318_Gomphomacromia_p????????????????????????????????????-?????-????????
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Syncordulia_serendipator____ ????????????????????????????????????-?????-????????
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Syncordulia_venator_________ ????????????????????????????????????-?????-????????
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Idionyx_imbricata_EU05518UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Idionyx_selysi______________ ????????????????????????????????????-?????-????????
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FN356129_Macromidia_rapi____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FN356186_Oxygastra_curtisUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Cordulephya_pygmaeaEU0551UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Pseudocordulia_circularis????????????????????????????????????-?????-????????
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Hesperocordulia_berthoudiUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAA?????????????????[-   ]

Lathrocordulia_metallica____ ????????????????????????????????????-?????-????????
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Micromidia_convergens_EU0UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Micromidia_atrifrons________ ????????????????????????????????????-?????-????????
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Austrophya_mystica__________ ????????????????????????????????????-?????-????????
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Austrocordulia_refracta_____ ????????????????????????????????????-?????-????????
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Archaeophya_magnifica_______ ????????????????????????????????????-?????-????????
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Epophthalmia_elegans________ ????????????????????????????????????-?????-????????
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FN356079_Didymops_transveUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA

GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FN356124_Macromia_illinoieUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Macromia_amphigena_FN356127UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Macromia_eurynome_EU05519UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUUCGUUAUCCUUCUUUGGUCCUCUUCACUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Macromia_magnifica__________ ????????????????????????????????????-?????-????????
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FN356128_Macromia_splendeUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FN356146_Phyllomacromia_nyUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Idomacromia_proavita________ ????????????????????????????????????-?????-????????
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Aeschnosoma_forcipula_______ ????????????????????????????????????-?????-????????
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Pentathemis_membranulata____????????????????????????????????????-?????-????????
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Tetragoneuria_cynosure______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCUACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUC???????????????????????????????????????[-   ]
Tetragoneuria_costalis______ ????????????????????????????????????-?????-????????
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Tetragoneuria_canis_________ ????????????????????????????????????-?????-????????
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Epicordulia_princeps________ ????????????????????????????????????-?????-????????
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Epitheca_marginata__________ ????????????????????????????????????-?????-????????
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FN356087_Epitheca_bimaculUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUUGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]

Rialla_villosa______________ ????????????????????????????????????-?????-????????
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FN356074_Cordulia_aenea_____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Cordulia_shurtleffii_EU05UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FN356163_Somatochlora_alpeUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGUUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGUCGU-AAAAAGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Somatochlora_flavomac_1242UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGUUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGU-AAAAAGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Somatochlora_metallica______ ????????????????????????????????????-?????-????????
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FJ010028_Somatochlora_tene??????????UAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGUUU-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCCGU-AAAAAGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAA?????????????????[-   ]
A_FJ596562_Hemicordulia_mi????????????????????????????????????-?????-????????
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Hemicordulia_australEU055168UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGUUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGUCUGU-AAAAGGUCCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUUGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Procordulia_jacksoniensisUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGUUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGUCCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUUGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Unaligned_Libellulid   ????????????????????????????????????-?????-????????
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FJ596583_Notiothemis_rober????????????????????????????????????-?????-????????
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FJ596578_Tetrathemis_irreg????????????????????????????????????-?????-????????
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Tetrathemis_polleni_________ ????????????????????????????????????-?????-????????
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FJ596587_Urothemis_signata????????????????????????????????????-?????-????????
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Urothemis_assignata_________ ????????????????????????????????????-?????-????????
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Macrodiplax_cora____________ ????????????????????????????????????-?????-????????
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Macrodiplax_balteata_EU05UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Zyxomma_elgneri_____________ ????????????????????????????????????-?????-????????
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Zyxomma_petiolatum   ????????????????????????????????????-?????-????????
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FN356181_Zygonyx_ida________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Nannophlebia_sp_EU055138____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
CCCG--CUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Bironides_sp________________ ????????????????????????????????????-?????-????????
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Huonia_epinephela___________ ????????????????????????????????????-?????-????????
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Huonia_oreophila____________ ????????????????????????????????????-?????-????????
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Onychothemis_testacea_______ ????????????????????????????????????-?????-????????
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FJ596582_Rhyothemis_varieg????????????????????????????????????-?????-????????
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FJ712327_Rhyothemis_fuligi????????????????????????????????????-?????-????????
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Miathyria_marcella__________ ????????????????????????????????????-?????-????????
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Miathyria_simplex   ????????????????????????????????????-?????-????????
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FJ596577_Tholymis_citrina????????????????????????????????????-?????-????????
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Tholymis_tillarga___________ ???????????????????????????????????-?????-????????
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Pantala_flavescens_EF680326-------------------------UAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU- CUUGGGUUCCGGGG-
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Tramea_lacerata_EU055171____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Tramea_calverti_____________ ???????????????????????????????????-?????-????????
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Sympetrum_Kalo_janeae_OSJUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGG??[-   ]
EF636437_Sympetrum_obtrusu???
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DQ008201Sympetrum_vulgatumUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGUUGU-AAAAGACUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FN356171_Sympetrum_pedemonUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCCGCUUGCCGGUGCUC-AACUG- GCCG--
GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUA

GAGUGCUCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Sympetrum_Nesogonia_blackb????????????????????????????????????-?????-????????
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Sympetrum_sanguineum________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGAAGUAUGGUUGCAAAGCU??[-   ]
Sympetrum_corruptum_EU055UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Y12900Sympetrum_fonscolombUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAUGUGUGUCUCGGA-CGGUUGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUAAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Sympetrum_Tarnetrum_illotu????????????????????????????????????-?????-????????
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Sympetrum_Tarnetrum_infusc????????????????????????????????????-?????-????????
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AF461243_Sympetrum_danae   UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Sympetrum_m   ????????????????????????????????????-?????-????????
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Leucorrhinia_pectoral_0610UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUC?UUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Leucorrhinia_glacialis______ ????????????????????????????????????-?????-????????
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Celithemis_elisa_OCE_______ ???????????AAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUCG-CGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAA?????????????????[-   ]
Celithemis_eponina_1233_____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUCG-CGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCU??[-   ]
Brachymesia_gravida_________ ????????????????????????????????????-?????-????????
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Brachymesia_herbida   ????????????????????????????????????-?????-????????
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Brachythemis_leucosticta____ ????????????????????????????????????-?????-????????
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Brachythemis_contaminata____ ????????????????????????????????????-?????-????????
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Deielia_phaon_______________ ????????????????????????????????????-?????-????????
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Pachydiplax_longipennis_____ ????????????????????????????????????-?????-????????
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Erythemis_sp_AY749910_______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FN356030_Acisoma_panorpoiUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Erythrodiplax_minuscula_EUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Erythrodiplax_basalis_______ ????????????????????????????????????-?????-????????
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Crocothemis_servilia________ ????????????????????????????????????-?????-????????
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DQ008200_Crocothemis_erytUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUUGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FJ596590_Rhodothemis_rufa????????????????????????????????????-?????-????????
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FN356136_Neurothemis_fulviUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGUGCUGU-AAAAGGCACCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Neurothemis_ramburii   ????????????????????????????????????-?????-????????
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FN356080_Diplacodes_lefebvUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Diplacodes_trivialis   ????????????????????????????????????-?????-????????
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Bradinopyga_strachani_______ ????????????????????????????????????-?????-????????
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Brachydiplax_denticauda_EUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCACUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA

GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FJ596585_Brachydiplax_chal??????????????????????????????????????-?????-????????
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FN356059_Chalcostephia_flUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGAUGU-AAAAGUCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Micrathyria_aequalis________ ????????????????????????????????????-?????-????????
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Micrathyria_atra____________ ????????????????????????????????????-?????-????????
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Micrathyria_didyma   ????????????????????????????????????-?????-????????
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Uracis_imbuta_______________ ????????????????????????????????????-?????-????????
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Uracis_infumata_____________ ????????????????????????????????????-?????-????????
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FJ596589_Nannophya_pygmaea????????????????????????????????????-?????-????????
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Nannothemis_bella___________ ????????????????????????????????????-?????-????????
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Paltothemis_lineatipes______ ????????????????????????????????????-?????-????????
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Brechmorhoga_mendax_________ ????????????????????????????????????-?????-????????
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Brechmorhoga_praedatrix      ????????????????????????????????????-?????-????????
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Dythemis_fugax______________ ????????????????????????????????????-?????-????????
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Trithemis_aurora_EU055203UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                ]
Trithemis_africana__________ ????????????????????????????????????-?????-????????
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FN356177_Urithemis_arterioUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUCGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Perithemis_tenera___________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCAGA-CGGUCGGUUCGCCGCUCG-CGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCU???[-   ]
Perithemis_intensa_EU0551UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCAGA-CGGUCGGUUCGCCGCUCG-CGGUGCUC-AACUG-
GCCG--GUCUGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Perithemis_lais_GU196362   ????????????????????????????????????-?????-????????
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FN356143Palpopleura_sp______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FJ596579_Diastatops_pullat????????????????????????????????????-?????-????????
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Zenithoptera_fasciata_______ ????????????????????????????????????-?????-????????
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Neodythemis_afra_pauli????????????????????????????????????-?????-????????
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FN356162_Selysiothemis_nigUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
FN356179_Trithetrum_navasiUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Porpax_risi_________________ ????????????????????????????????????-?????-????????
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FN356133_Micromacromia_camUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Allorrhizucha_preussFN356034UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Neodythemis_klingi__________ ????????????????????????????????????-?????-????????
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FJ596575_Hadrothemis_infes????????????????????????????????????-?????-????????
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FJ596595_Thermorthemis_mad????????????????????????????????????-?????-????????
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FJ596599_Agrionoptera_insi????????????????????????????????????-?????-????????
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FJ596593_Cratilla_metallic????????????????????????????????????-?????-????????
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Pseudoleon_superbus_________ ????????????????????????????????????-?????-????????
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FJ596597_Orthemis_cultrifo????????????????????????????????????-?????-????????
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Orthemis_ferruginea_________ ????????????????????????????????????-?????-????????
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DQ008203_Orthetrum_albi_____ UAGCGUAUAUUAAAGUUGUUGCGGCUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUA GAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Orthetrum_pruinosum_________ ????????????????????????????????????-?????-????????
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Orthetrum_coerulescens______ ????????????????????????????????????-?????-????????
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FJ596600_Lyriothemis_elega????????????????????????????????????-?????-????????
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DQ008205_Ladona_fulva_______ UAGCGUAUAUUAAAGCUGCUGCGGCUAAAAAGCUCG-UAGCC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUGACUUUGAACAAAUUAUAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Ladona_julia________________ ????????????????????????????????????-?????-????????
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Platetrum_depressa_DQ008204_UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUCAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Plathemis_subornata_________ ????????????????????????????????????-?????-????????
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Plathemis_lydia_____________ ????????????????????????????????????-?????-????????
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FN356119_Libellula_quadrimUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Libellula_Syntetrum_angeli????????????????????????????????????-?????-????????
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Libellula_Eolibellula_semi????????????????????????????????????-?????-????????
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AY338717_Libellula_saturatUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Libellula_Eotainia_composi????????????????????????????????????-?????-????????
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LPU65109_Libellula_pulchelUAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGUCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGGGCUGU-AAAAGGCUCCGUUAUCCUUCUUUGGUCCUCUUCAUUGAGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCCUGAAUAC-UGUGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGAACGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUAUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Libellula_Holotania_comanc????????????????????????????????????-?????-????????
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Libellula_Holotania_auripe????????????????????????????????????-?????-????????
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Libellula_Holotania_axilen????????????????????????????????????-?????-????????
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Libellula_Holotania_luctuo????????????????????????????????????-?????-????????
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Aethriamanta_rezia_GU196369????????????????????????????????????-?????-????????
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Tetrathemis_corduliformis    ????????????????????????????????????-?????-????????
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Diplacina_ismene_GU196366    ????????????????????????????????????-?????-????????
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Erythemis_vesiculosa         ????????????????????????????????????-?????-????????
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Nannophyopsis_clara          ????????????????????????????????????-?????-????????
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Oligoclada_amphinome         ????????????????????????????????????-?????-????????
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Idiataphe_sp_HOL_2010        ????????????????????????????????????-?????-????????
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Atoconeura_sp_HOL_2010_      ????????????????????????????????????-?????-????????
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Elga_leptostyla              ????????????????????????????????????-?????-????????
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Fylgia_amazonica_            ????????????????????????????????????-?????-????????
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Hemistigma_albipunctatum_    ????????????????????????????????????-?????-????????
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Porpacithemis_sp_            ????????????????????????????????????-?????-????????
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Thermochoria_equivocata_     ????????????????????????????????????-?????-????????
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Malgassophlebia_bispina   ????????????????????????????????????-?????-????????
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Micromacromia_zygoptera   ????????????????????????????????????-?????-????????
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Argyrothemis_argentea   ????????????????????????????????????-?????-????????
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Pseudothemis_zonata   ????????????????????????????????????-?????-????????
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Oxythemis_phoenicosceles   ????????????????????????????????????-?????-????????
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Olpogastra_lugubris   ????????????????????????????????????-?????-????????
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Misagria_parana   ????????????????????????????????????-?????-????????
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Unaligned_Outgroups   ????????????????????????????????????-?????-????????
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Ephemerella_sp______________ UGGCGUAUNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNN-NGAUCUGUGUAUCGGA-CGGUCGGUUCGCCGCUCG-CGGUGUUU-GACUG-
ACCG--GUUCGGACGUCAUGCCG-GUGGGACC???????GGUUCC?????????????GAUGUUCUUAACCGAGUGGU-CGGUGGG-CCGGCACGUUUACUUUGAACAAAUUUGAGUGC
UCAAAGCAGGCCUUAUGUUGCCUGGAAAC-UGUGUGCAUGGAAUAAUGAAAGAGGACCUUGGUUCU-AUUUGGGGGGCUUU--CUGAACU--CGAGGUAAUGAUUAACA
GGGACAGACGGGGGCAUUCGUUUUGCGACGUUAGAGGUGAAAUUCUUGGACCGUCCCAAGACGGACCGAUGCGAAAGCGUUUGCCAAGAAUGUUUUCGCUAAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUUAGAUACCGCCCUAGUUCUAACCAUAAACGAUGUCAGCCAGCGAUGCGCCGAUGUUCCUCCGAUGACACGGCGCGCAACUUCCGGGAAACCA-AAGCU-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Paraleptophlebia_sp_________ UUGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-GGGUU-GGAUCUGUGUAUCGGA-CGGUCGGUUCGCCGCUCG-CGGUGUUU-AACUG-
ACCG--GUUCGGACGUCAUGCCG-GUGGGCCC???????GGACCC?????????????GCUGCUCUUAACCGAGUGGUUCGGUGGG-CCGGCACGUUUACUUUGAACAAAUUUGAGUGC
UCAAAGCAGGCCUUAUGUUGCCUGGAAAC-UGUGUGCAUGGAAUAAUGAAAGAGGACCUUGGUUCU-AUUUUGUUGGCUUU--CUGAACU--UGAGGUAAUGAUUAACA
GGGACAGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGGACCGAUGCGAAAGCGUUUGCCAAGAAUGUUUUCGCUAAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUUAGAUACCGCCCUAGUUCUAACCAUAAACGAUGUCAGCCAGCGAUGCGCCGAUGUUCCUCCGAUGACACGGCGCGCAACUUCCGGGAAACCA-AAGCU-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Anthopotamus_sp_____________ UGGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUU-GGAUCUGUGUAUCGGA-CGGUCGGUUCGCCGCUCG-CGGCGUCU-AACUG-
ACCG--GUCCGGACGUCCUGCCG-GUGGGCNG???????GGGCCC?????????????GCUGCUCUUAACCGAGUGGUUCGGUGGG-CCGGCACGUUUACUUUGAACAAAUUUGAGUGC
UCAAAGCAGGCCACACGUCGCCUGAAAAC-UGUGUGCAUGGAAUAAUGGAAUAGGGCCUCGGUUCU-AUUUUGUUGGCUUUUUCUGAACU--CGAGGUAAUGAUUAAUA
GGGACAGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGGACCGAUGCGAAAGCGUUUGCCAAGAAUGUUUUCGCUAAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCCAGCGAUGCGCCGAAGUUCCUCCGAUGACUCGGCGCGCAGCUUCCGGGAAACCA-AAGCU-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Caenis_luctuosa_____________ UGGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUU-GGAUCUGUGUAUCGGA-CGGUCGGUUCGCCGCUCG-CGGCGUA--AACUG-
ACCG--GUCCGAACGUCCUGCCG-GUGGGCUG???????GUGCCC?????????????GCUGCUCUUAACCGAGUGGUUCGGUGGG-CCGGCACGUUUACUUUGAACAAAUUUGAGUGC
UCAAAGCAGGCCGAUUGUUGCCUGAAAAU-UGUGUGCAUGGAAUAAUGGAACAGGACCUUGGUUCU-AUUUUGUUGGCUUUU-CUGAACU--CGAGGUAAUGAUUAACA
GGGACAGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCGUUUGCCAAGAAUGUUUUCGCUAAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCCAGCGAUGCGCCGAAGUUCCUCCGAUGACUCGGCGCGCAGCUUCCGGGAAACCA-AAGCU-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Ephemera_sp_________________ UGGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUU-GGAUCUGUGUCCCGGA-UGGUCGGUGCGCCGCUCG-CGGUGUUU-CACUG-
ACUC--UUCCGGACGUCCUGCCC-GUGGACCG???????CGGCCC?????????????GCUGCUCUUAACCGAGCGGUUCGGUGGG-CCGGCAAGUUUACUUUGAACAAAUUUGAGUGC
UCAAAGCAGGCGGCAAGUCGCCUGAAAAC-UGUGUGCAUGGAAUAAUGGAAUAGGACUUCGGUUCU-AUUUUGUUGGCUUUU-CUGAACC--CGAAGUAAUGAUUAAUA
GGGACAGACGGGGGCAUUCGUAUUGAGGCGUUAGAGGUGAAAUUCUUGGAUCGCCUCAAGACGGACGGAUGCGAAAGCGUUUGCCAAGAAUGUUUUCGCUAAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCCAGCGAUGCGCCCGAGUUCCUCCGAUGACUGGGCGCGCAGCUUCCGGGAAACCA-AAGCU-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-   ]
Callibaetis_sp_AY749925_____ ????????????????????????????????????-?????-????????
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Callibaetis_ferrugine_______ UGGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUU-GGAUCUGUGUAUCGGA-CGGCCGGUUCGCCGCUCG-CGGCGUUC-AACUG-
GUCG--GUCCGGACGUCCUGCCG-GUGGGCGU???????GCGUCC?????????????GCUGCUCUUAACCGGGUGGCUCGGUGGG-CCGGCACGUUUACUUUGAACAAAUUUGAGUGC
UCAAAGCAGGCCUUUGGUCGCCUGAAAAC-UGUGUGCAUGGAAUAAUGGAAUAGGGCCUCGGUUCU-AUUUUGUUGGCUUUU-CUGAACU--CGAGGUAAUGAUUAAUA
GGGACAGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACGGAUGCGAAAGCGUUUGCCAAGAAUGUUUUCGCUAAUCAAGAACGAAA

GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCCAGCGAUGCGCCGAAGUUCCUCCGAUGACUCGGCGCGCAGCUUCCGGGAAACCA-AAGCU-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Baetis_buceratus____________ UGGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUU-GGAUCUGUGUAUCGGA-CGGCCGGUUCGCUGCUCG-CAGCGUUC-AACUG-
GUCG--GUCCGGACGUCCUGCCG-GUGGGCGU???????GCGUCC?????????????GCUGCUCUUAACCGGGUGGCCCGGUGGG-CCGGCACGUUUACUUUGAACAAAUUUGAGUGC
UCAAAGCAGGCCUUUGGUCGCCUGAAAAC-UGUGUGCAUGGAAUAAUGGAAUAGGGCCUCGGUUCU-AUUUUGUUGGCUUUU-CUGAACU--UGAGGUAAUGAUUAAUA
GGGACAGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGN--AANGGAUGCGAAAGC-UUUGCCAAGAAUGUUUUCGCUAAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCCAGCGAUGCGCCGAAGUUCCUCCGAUGACUCGGCGCGCACGUUCCGGGAAACCA-AAGCU-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Hexagenia_rigida____________ UGGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUU-GGAUCUGUGUCCCGGA-CGGCCGGUGCGCCGCUCG-CGGCGUUC-CACUG-
ACCG--GUCCGGACGUCCUGCCG-GUGGGCUU???????GAGCCC?????????????GCUGCUCUUAACCGAGCGGUUCGGUGGG-CCGGCAAGUUUACUUUGAACAAAUUUGAGUGC
UCAAAGCAGGCGACAAGUCGCCUGAAAAC-UGUGUGCAUGGAAUAAUGGAAUAGGACUUCGGUUCU-AUUUUGUUGGCUUUU-CUGAACC--CGAAGUAAUGAUUAAUA
GGGACAGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGGACGGAUGCGAAAGCGUUUGCCAAGAAUGUUUUCGCUAAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCCAGCGAUGCGCCCGAGUUCCUCCGAUGACUGGGCGCGCAGCUUCCGGGAAACCA-AAGCU-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Cloeon______________________ UGGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUU-GGAUCUGUGUAUCGGA-CGGCCGGUUCGCCGCUCG-CGGCGUUC-AACUG-
GUCG--GUCCGGACGUCCUGCCG-GUGGGCGU???????GCGCCC?????????????GCUGCUCUUAACCGGGUGGCCCGGUGGG-CCGGCACGUUUACUUUGAACAAAUUUGAGUGC
UCAAAGCAGGCCAUCGGUCGCCUGAAAAC-UGUGUGCAUGGAAUAAUGGAAUAGGGCCUCGGUUCU-AUUUUGUUGGCUUUU-CUGAACU--UGAGGUAAUGAUUAAUA
GGGACAGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACGGAUGCGAAAGCGUUUGCCAAGAAUGUUUUCGCUAAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCCAGCGAUGCGCCGAAGUUCCUCCGAUGACUCGGCGCGCACGUUCCGGGAAACCA-AAGCU-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Leucrocuta_aphrodite________ UGGCGUAUAUUAAAGUUGUUGCGGNUAAAAAGCUCG-UAGUU-GGAUCUGUGUAUCGGA-CGGUCGGUUCGCCGCUCG-CGGUGUUU-GACUG-
ACCG--GUCCGGACGUCAUGCCG-GUGGGGCU???????AGCUCC?????????????GCUGCUCUUAACCGAGUGGUUCGGUGGG-CCGGCACGUUUACUUUGAACAAAUUUGAGUGC
UCAAAGCAGGCCUUAUGUUGCCUGAAAAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUUGGUUCU-AUUUUGUUGGCUUU--CUGAACU--UGAGGUAAUGAUUAACA
GGGACAGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGGACCGAUGCGAAAGCGUUUGCCAAGAAUGUUUUCGCUAAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUUAGAUACCGCCCUAGUUCUAACCAUAAACGAUGUCAGCCAGCGAUGCGCCGAUGUUCCUCCGAUGACACGGCGCGCAACUUCCGGGAAACCA-AAGCU-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Centroptilum_luteolum_______ UGGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUU-GGAUCUGUGUAUCGGA-CGGCCGGUUCGCCGCUCG-CGGCGUUA-UACUG-
GUCG--GUUCGGACGUCCUGCCG-GUGGGCGU???????GCGCCC?????????????GCUGCUCUUAACCGGGUGGCUCGGUGGG-CCGGCACGUUUACUUUGAACAAAUUUGAGUGC
UCAAAGCAGGCCUUUGGUCGCCUGAAAAC-UGUGUGCAUGGAAUAAUGGAAUAGGGCCUCGGUUCU-AUUUUGUUGGCUUUU-CUGAACU--UGAGGUAAUGAUUAAUA
GGGACAGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACGGAUGCGAAAGCGUUUGCCAAGAAUGUUUUCGCUAAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCCAGCGAUGCGCCGAAGUUCCUCCGAUGACUCGGCGCGCAGCUUCCGGGAAACCA-AAGCU-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Stenonema_sp________________ UGGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUU-GGAUCUGUGUAUCGGA-CGGUCGGUUCGCCGCUCG-CGGUGUUU-GACUG-
ACCG--GUUCGGACGUCAUGCCG-GUGGGACC???????GGUUCC?????????????GCUGCUCUUAACCGAGUGGUUCGGUGGG-CCGGCACGUUUACUUUGAACAAAUUUGAGUGC
UCAAAGCAGGCCUUAUGUUGCCUGGAAAC-UGUGUGCAUGGAAUAAUGAAAGAGGACCUUGGUUCU-AUUUUGUUGGCUUU--CUGAACU--CGAGGUAAUGAUUAACA
GGGACAGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGGACCGAUGCGAAAGCGUUUGCCAAGAAUGUUUUCGCUAAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUUAGAUACCGCCCUAGUUCUAACCAUAAACGAUGUCAGCCAGCGAUGCGCCGAUGUUCCUCCGAUGACACGGCGCGCAACUUCCGGGAAACCA-AAGCU-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Trigoniopthalmus_altern_____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAGAAGCUCG-UAGUU-GGAUCUGGGUCGCGGG-CAGUCGGUUCACUU---GCCGGUGUA--CACUG-
ACUG--GCCCGGACGUCCUGUCG-GU?????????????????????????????????GGUGCUCUUCACUGAGUGUCUUGGGUGG-CCGACACGUUUACUUUGAACAAAUUAGAGUGC
UUAAAGCAGGC????????GCCUGAAUGU-UCGGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCU-AUUUUGUUGGUUUU--CGGAACU--UGAGGUAAUGAUUAACA
GAAACAGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGACCGUCGCAAGACGGGCUAGUGCGAAAGCAUUUGCCAAGAAUGUUUUCAUUAAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCCAGCGAUCCGCCGAAGUUCCUCCAAUGACUCGGCGGGCGGCUUCCGGGAAACCA-AAGCU-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]
Allomachilis_froggart_______ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUU-GAGCCUGUGUCGCGGGACGGUCGGUUCGCUC---GCCGGCGUA--CACUG-
ACCG??UCCCGCACGUCCUGCCG-GC?????????????????????????????????GGUGCUCUUCGCUGAGCGUCUUGGGUGGCCCGGCACGUUCACUUUGACCAAACUAGAGUGC
UCAAAGCAGGC????????GCCUGAAUAA-C-GGUGCAUGGAAUGAUGGAAGAGGACCUCGGUUCU-AUUUUGUUGGUUUU--CGGAACC--CGAGGUAAUGAUUAAGA
GGUACGGACGGGGGCAUCCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGGUCGAAAGCGAAAGCAUUUGCCAAGAACGCUUUCAUUAAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCGUAAACGAUGCCAGCCGGCGAUCCGCCGCAGUCCAUUGGAUGACUCGGCGGGCAGCCUCCGGGAAACCA-AAGCC-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-]

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EF199981_Machilis_hrabei____ ????????????????????????????????????-?????-????????
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Dilta_littoralis____________ UAGCGUAUACUUGAGUUGCUGCGGUUAAAAAGCUCG-UAGUU-GGACUUGGGCCGCGGC-CAGUCGGUUCACCU---GCCGGUGCA--CACUG-
ACUG??CCGCGGACGUCCUGCCG-GU????????????????????????????????GGUGCUCUUCACUGAGUGUCUCGGGUGG-CCGGCACAUUCACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGC????????GCCUGAAUAC-A-UGUGCAUAGAAUGAUUGAAGAGGACCUCGGUUCC-AGUCUGUUGGU-CU--CGGAACU--CGAGGUAAUGAUGAGUG
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACAGAGGCAAAUGCAUUUGCCAAGAAUGUCCCCGUCAAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCCAGGUAUCCGCCGUAGUUACUUGGAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGAACCACCAGGAGUG[-                ]
Ctenolepisma_longicaudata????????????????????????????????????-?????-??????????????????????????????????????????????????????-
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Lepisma_sp__________________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUU-GGAUCUGGGUNUCGGA-CGGUCGGUUCGCCGC---CCGGCGUUU-AACUG-
ACCG--GUCCGGACGUCCUGCCG-GU????????????????????????????????GGUGCUCUUCAUUGAGUGUCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGC????????GCCUGAAUGC-UCGGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCU-AUUUUGUUGGUUCU--CUGGACU--CGAGGUAAUGAUUAAUA
GGGACAGACGGGGGCAUUAAUAUUGCGACGUUAGAAGUGAAAUUCUUGGAUCGUCGCAAGACUAACUNNNNNNNNNNNNNNNNNNNNGAUGUUUUCAUUAAUCAAGAACAAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCCAGCGAUCCGCCGAAGUUCCUCCAAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                ]
EU376048_Lepisma_saccharin????????????????????????????????????-?????-????????
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Thermobia_domestica_________ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUU-GGAUCUGGGUCUCGGA-CGGUCGGUUCGCCGC---CCGGCGUUU-AACUG-
ACCG--GUCCGGACGUCCUGCCG-GU???????????????????????????????????????????????????????????G-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGC????????GCCUGAAUGU-UCGGUGCAUGGAAUAAUAGAAUAGGACCUCGGUUCU-AUUUUGUUGGUUUU--CAGAACU--UGAGGUAAUGAUUAACA
GGGACAGUCGGGGGCAUUAGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACUAACCGAUGCGAAAGCAUUUGCCAAGAAUGUUUUCAUUAAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAUCUAGCGAUCCGCCGAAGUUCCUCCAAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGAU-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                ]
Tricholepidion_gertschi_____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUU-GGAUCUGUGUCUCGGA-CGGUUGGUUCAAUU-GUCAAAUUGUUUUAACUG-
ACCG??-UCCGGACGUCCUGUCGCGU????????????????????????????????GGUGCUCUUGAUUGAGUGUCUUGAUCGG-CCGACAAGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGU????????GUCUGUAUAU-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCUCAUUUUGUUGGUUUU-CAAGAACU--UGAGGUAAUGAUUAAAA
GGGACAGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGUUGCGAAAGCAUUUGCCAAGAAUGUUUUCAUUAAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACUAUGCCAGCCAGCGAUCCGCCGAAGUUACUCCUAUGACUCGGCGGGCAGCUUCCGGGAAACCACAAGCU-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAUCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                ]
Gromph_laevigata_AY210820UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGACUUGUGUCACACG-CUGCCGGUUCACCGCCCGUCGGUGUC-UAACUG-
GCAU??GUGCUGACGUCCUGCCG-GU????????????????????????????????GGUGCUCUUAACCGAGUGUCUCGAUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UUAAAGCAGGC????????GCCUGAAUAC-UGAGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCU-AUUUUGUUGGUUUU--CGGAAUCCCCGAGGUAAUGAUCAAUA
GGGACAGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGGACCGAAGCGAAAGCAUUUGCCAAGAAUGUUUUCUCUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCCAGCAAUCCGCCGAAGUUCCUCCGAUGACUCGGCGGGCGGCUUCCGGGAAACCA-AAGCU-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                ]
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Isoperla_davisi_AY121148____ UAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUU-GGACUUGUGUCCCACG-CCGUCGGUUCGUCGCCCGUCGACGU---
AACCGCACGG??AGUGGGACGUCCAGCCG-GU????????????????????????????????GGUGCUCUUAAUCGAGUGUCUUGACGGG-CCGGCUCGUUUACUUUGAACAAAUUAGA
GUGCUUAAAGCAGGCCAAUUGCCGCCUGAAUACUUGUGUGCAUGGAAUAAUGGAAUAGGAUCUCGGUUCU-AUUUUGUUGGUUUU--CUGAACC--AGAGAUAAUGAUUAAUA
GAGACUGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACAUAAGCGAAAGCAUUUGCCAAGAAAGCUUUCAUUAAUCAAGAACGAAA
GUUAGAGGUUCGAAGGCGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAACUAGCGAUCCGCCGGUGUUCCUCCGAUGACCCGGCGGGCAGCUUCCGGGAAACCA-AAGUG-
UUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUGAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                 ]
EU414717_Isoperla_sp________ ????????????????????????????????????-?????-????????
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AY859546_Gomphocerinae______ ????????????????????????????????????-?????-????????
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[
Anisopleura_comes_FN356038   AAGCGUAUAUUAAAGUUGUUGCGGUUAAAAAGCUCG-UAGUC-GGAGGUGUGUCUCGGA-CGGUCGGUUCGCCGCUUGCCGGUGCUC-AACUG-
GCCG--GUCCGGACGUCCUGCCG-GUGGAGCCGC-GA--GGCUCCGUUAUCCUUCUUUGGUCCUCUUCACCGCGUGCCUUGGUGGG-CCGGCACGUUUACUUUGAACAAAUUAGAGUGC
UCAAAGCAGGCCGUUGGUCGCUUGAAUAC-UGUGUGCAUGGAAUAAUGGAAUAGGACCUCGGUUCC-AUUUUGUUGGUUUU--CAGAACU--CGAGGUAAUGAUUAAUA
GGGACGGACGGGGGCAUUCGUAUUGCGACGUUAGAGGUGAAAUUCUUGGAUCGUCGCAAGACGAACCGAUGCGAAAGCAUUUGCCAAGACCGUUUUCGUUGAUCAAGAACGAAA
GUUAGAGGUUCGAAGGAGAUCAGAUACCGCCCUAGUUCUAACCAUAAACGAUGCCAGCUAGCCAUCCGCCGAAGUUCCUUCUAUGACUCGGCGGGCAGCUUCCGGGAAACCA-AAGCU-
CUUGGGUUCCGGGGGAAGUAUGGUUGCAAAGCUCAAACUUAAAGGAAUUGACGGAAGGGCACCACCAGGAGUG[-                 ]
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39      40                      39â€šÃ„Ã´        42                  43V7                                                          44
42â€šÃ„Ã´       38â€šÃ„Ã´                 36â€šÃ„Ã´          34â€šÃ„Ã´                                 46
47                      33â€šÃ„Ã´              48                          32â€šÃ„Ã´
49                ]
Unaligned___________________   ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Unaligned_Zygoptera   ???????????????????????????????-???-?????-????
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Protosticta_sp_A_ZPA________ ???????????????????????????????-???-?????-????
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ZPCs_Protosticta_curiosa____ ???????????????????????????????-???-?????-????
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Protosticta_sanguinostigm___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UAUAACAGC-
GGCGGCGCCGGUGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUU-AGAGGAAGUAAAAGUCGUAAC[-   ]
ZSOg_Sinosticta_ogatai______ ???????????????????????????????-???-?????-????
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Palaemnema_paulicoba________ ???????????????????????????????-???-?????-????
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Palaemnema_domina_ZPDm______ ???????????????????????????????-???-?????-????
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Palaemnema_melanostigma_6___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCUAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACGGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Isosticta_robustior_666_____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU

GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGCGUGCGGAGCUC-GCCG-UUUAACCGC-
GGCGGCCCCGCCGCU--UGGGAA-GAUGGCCAAACU?GAUCAUU?A????????????????????[-   ]
Rhadinosticta_simplex_612___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGCGUGCGGAGCUC-GCCG-UUUAACCGC-
GGCGGCCCCGCCGCU--UGGGAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Amphisticta_silvarum________   ???????????????????????????????-???-?????-????
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Labidiosticta_vallisi_AY7___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGCGUGCGGAGCUC-GCCG-UUUAACCGC-
GGCGGCCCCGCCGCU--UGGGAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Orosticta_filiciola_________   ???????????????????????????????-???-?????-????
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Platycnemis_pennipes________   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Copera_annulata____________   ???????????????????????????????-???-?????-????
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Copera_vittata_6585198______   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUUACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAA????????????????????????????????[-   ]
Copera_marsouipes___________   ???????????????????????????????-???-?????-????
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Coeliccia_albicauda__________ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GUCG-UUUAACCGC-
GACGGCGCCGCCGCUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Coeliccia_cyanomelas_636_____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GUCG-UUUAACCGC-
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Calicnemia_miles_____________ ?????????????????????????????????-??-?????-????
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Prodasineura_vitatta_________ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGUGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Chlorocnemis_abboti__________ ?????????????????????????????????-??-?????-????
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Nososticta_solida_61451______ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGUGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Phylloneura_westermanni_6____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGUGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UCUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAAAGAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGU???[-]
Onychargia_atrocyana_ZOA_____ ?????????????????????????????????-??-?????-????
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Argia_moesta_________________ ?????????????????????????????????-??-?????-????
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Argia_nahuana_6815221_______   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UCUAACCGC-
GGUGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Argiocnemis_rubescens_ZAR___   ???????????????????????????????-???-?????-????
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Mortonagrion_binocellata____   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------
UCUUAUUACACUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUA
CACUGAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAGCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Agriocnemis_pygmea_6095_____   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAGCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Austroagrion_watsoni________   ???????????????????????????????-???-?????-????
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Archibasis_viola_ZAV________   ???????????????????????????????-???-?????-????
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C_puella_AJ488546___________   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAGCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
FN356069_C_resolutum   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAGCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]

Pseudagrion_cingillum_______ ???????????????????????????????-???-?????-????
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Pseudagrion_aureofrons_61___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAGCCG-U-GAAC-GC-
GGCGGCGCCGCCGUUGCCGAAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Pseudagrion_ignifer_________ ???????????????????????????????-???-?????-????
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Erythromma_najas_1238_______ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAAC-AGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAACCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUU?????????????????????[-   ]
Cercion_plagiosum_AJ488552__ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAGCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Cercion_lindenii_AJ488550___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAGCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Paracercion_calamorum_______ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAGCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Acanthagrion_quadratum______ ???????????????????????????????-???-?????-????
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ZLV_Leptobasis_vacillans____ ???????????????????????????????-???-?????-????
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Amphiagrion_saucium_________ ???????????????????????????????-???-?????-????
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Amphiagrion_abbreviatum_6___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAGCCG-UUUAACCGC-
GGCGGCGCCGCCGUU????????-???[-   ]
Xiphiagrion_cyanomelas_ZXC__ ???????????????????????????????-???-?????-????
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Hesperagrion_sp_AY749911____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAGCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Ischnura_elegans_1239_______ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAAC-AGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAGCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GA???????????????????????????????????????[-   ]
Ishnura_barberi_5965136_____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAGCCG-UUUAA????-
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Ischnura_graellsi_AJ488545__ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAGCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Anomalagrion_hastatum_______ ???????????????????????????????-???-????-?????
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Enallagma_parvum_AJ420939___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAGCCG-UCUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Enallagma_granti_AJ420937___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUUAGCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
E_nigridorsumAJ420938_______   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAGCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Enallagma_cyathigerum_0110__   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAAC-AGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAGCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUA???????????[-   ]
Enallagma_sp_6005140________   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAGCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
E_aspersum_DQ087506_________   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAGCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Aciagrion_pallidum__________   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCAGCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Aciagrion_borneence_ZAB   ???????????????????????????????-???-?????-????
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Protoneura_capillaris_644___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGUCGAAAGACCCGGGUAACCCGC-UCAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-G???-?????????-
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Protoneura_cara_ZPC__________ ???????????????????????????????-???-?????-????
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FN356189_Psaironeura_remis__ GAGCCUGCGGCUUAA UUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAGGCUCGUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACAG-GCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UCAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACCGC-
GGCGGCACCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Elattoneura_analis__________ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGUGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UCUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Neoneura_aaroni_____________ ???????????????????????????????-???-?????-????
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Neaneura_amelia_ZNA__________ ???????????????????????????????-???-?????-????
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Neoneura_maria_6425182_______ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCCAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UCAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUCGGCGU-CUAAUCCGC-
GCCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Ceriagrion_aeruginosum______ ???????????????????????????????-???-?????-????
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Telebasis_salva_6325172_____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU

GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGAGUUC-GCUG-UUUAACCGC-
AGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Leptagrion_elongatum________ ???????????????????????????????-???-?????-????
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Leptagrion_sp   ???????????????????????????????-???-?????-????
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Metaleptobasis_manicaria____ ???????????????????????????????-???-?????-????
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Diceratobasis_sp_A_ZDA______ ???????????????????????????????-???-?????-????
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Pyrrhosoma_nymphula_1202____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAAC-AGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAA?????????[-   ]
Chromagrion_conditum________ ???????????????????????????????-???-?????-????
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Teinobasis_alluaudi_________ ???????????????????????????????-???-?????-????
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Nehalenia_gracilis__________ ???????????????????????????????-???-?????-????
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Coryphagrion_grandis________ ???????????????????????????????-???-?????-????
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Microstigma_rotunda_________ ???????????????????????????????-???-?????-????
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Microstigma_anomalum_672____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUAGUACGCGGCGCUC-GCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Mecistogaster_ornataFN356130GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGACCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAAUCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Mecistogaster_linearis_67___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAAUCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Megaloprepus_caerulatus_____ ???????????????????????????????-???-?????-????
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Haplostigma_modesta_ZHM_____ ???????????????????????????????-???-?????-????
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Pseudostigma_aberans________ ???????????????????????????????-???-?????-????
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Rhinagrion_mima_____________ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCUAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU

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GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACGGC-
GGCGGCACCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-      ]
Sciotropis_cyclanthorum_6____   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCGCUC-GUCG-UUUAACCGC-
GGCGGCGCCGCCGUUACUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-      ]
Heteragrion_mitratum________   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAAUCGC-
GGUGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-      ]
Heteragrion_sp_6735213______   GAGCCUGCGGCUUAA UUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------U
CU-AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAAUCGC-
GGUGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-      ]
Oxystigma_cyanifrons_ZOC____   ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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ZDP_Dimeragrion_percubital__   ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Tatocnemis_malgassica_ZTMa__   ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Philogenia_cassandra________   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACCGC-
GACGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-      ]
ZPT_Philogenia_terraba______   ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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ZPBn_Philogenia_bernice_____    ????????????????????????????????-?????????????????????????????????????????????????????????-?????-????
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Teinopodagrion_venale_676___    GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCAGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGAGCUCUGCGCUC-GACG-UUUAACCGC-
GUCGGCGCCGAUGUCACCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-      ]
Teinopodagrion_lepidum_ZTL__    ????????????????????????????????-?????????????????????????????????????????????????????????-?????-????
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Amanipodagrion_gilliesi_____    ????????????????????????????????-?????????????????????????????????????????????????????????-?????-????
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Nesolestes_elizabethae_ZNE__    ????????????????????????????????-?????????????????????????????????????????????????????????-?????-????
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Protolestes_kerckhoffaeZPK__    ????????????????????????????????-?????????????????????????????????????????????????????????-?????-????
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Argiolestes_ochrostomasZAO__    ????????????????????????????????-?????????????????????????????????????????????????????????-?????-????
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Argiolestes_sidonia_605_____    GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCUGACGUAGAUGUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAAUCGC-
GGUGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-      ]
Caledopteryx_maculata_669___    GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
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GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUUACCGC-
GGUGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUC?????[-   ]
Trineuragroin_percostale____   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-CUUCACCGC-
GGUGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUU-AGAGGAAGUAAAAGUCGUAAC[-   ]
Caledargiolestes_uniserie___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUCAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUCACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Podopteryx_roseonotata_ZPR__   ???????????????????????????????-???-?????-????
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Austroargiolestes_icterom___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACCGC-
GGUGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Griseargiolestes_albescens__   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCCCUUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUG???-
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Griseagriolestes_eboracus___   ???????????????????????????????-???-?????-????
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Miniargiolestes_minimusZMM__   ???????????????????????????????-???-?????-????
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Lestomima_flavostigma_OPB___   ???????????????????????????????-???-?????-????
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Rhipidolestes_hiraoi_ORH____ ???????????????????????????????-???-?????-????
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Rhipidolestes_aculeata_63___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUU??????????????????????[-   ]
Paraphlebia_zoe_____________ ???????????????????????????????-???-?????-????
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Thaumatoneura_inopinata_____ ???????????????????????????????-???-?????-????
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Hypolestes_clara_HYP________ ???????????????????????????????-???-?????-????
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Hypolestes_sp_EU055183______ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAAGCUCACCAGGCCCAGACACCAGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUU-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGACCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Agriomorpha_fusca_ZAF6______ ???????????????????????????????-???-?????-????
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Sinocnemis_yangbingi_ZSY____ ???????????????????????????????-???-?????-????
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Miocora_peraltica_ZMP_______ ???????????????????????????????-???-?????-????
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Cora_marina_POL_OCMr________  ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Cora_cyane_677__5217________  ??????GCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGAGCUC-GUCG-UUUAACCGC-
GACGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-     ]
Polythore_spZ                 ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Polythore_boliviana_EU055225GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGAGCUC-GUCG-UCUAACCGC-
GACGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-     ]
Euthore_fasciata_678521_____  GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGAGCUC-GUCG-UUUAACCGC-
GACGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUU??????????????????????[-     ]
Rimanella_arcana____________  GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAGCGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCAGACUGAAACGCGGCGCUC-GCCG-UUAUACCGC-
GGUGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-     ]
Pentaphlebia_stahli_________  ??????GCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCUAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGAGCGCGGCGCUC-GCCG-UUUAACCGC-
GGCGGCGCCGCCGCUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-     ]
Devadatta_podolestoides_6___  GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAAGCUCACCGGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-     ]
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Amphipteryx_longicaudata____ ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Pseudolestes_mirabilis_68___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCAGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUU-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUCACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-     ]
Philoganga_vetusta__________ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-     ]
Philoganga_robusta_PGN______ ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Lestoidea_conjuncta_664_____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-     ]
Diphlebia_lestoides_________ ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Diphlebia_coerulescen_AY7___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-     ]
Bayadera_melanopteryx_______ ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Bayadera_brevicauda_638_____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
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AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCUGCGCUC-GCCG-UUUAACCGC-
GGUGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Dysphaea_gloriosa___________ ??????GCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCUGCGCUC-GCCG-UUUAACCGC-
GACGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Euphaea_formosa_6375177_____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCUGCGCUC-GCCG-UUUAACCGC-
GACGGCGCCGCCGUUGCCGGAAA-GAUGGCCAA?C?????????????????????????????????[-   ]
Euphaea_decorata____________ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCUGCGCUC-GCCG-UUUAACCGC-
GACGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Anisopleura_sp_A____________ ??????????????????????????????????-???-?????-????
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Disparocypha_biedermanni____ ??????????????????????????????????-???-?????-????
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Libellago_semiopaca_657_____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCUGCGCUC-GCCG-UGUAACAGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Heliocypha_biseriata_650____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCUGCGCUC-GCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Platycypha_caligata_________ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA

AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCUGCGCUC-GCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Chlorocypha_curta_CHL_______ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCUGCGCUC-GCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Sundacypha_petiolata_CHL____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCUGCGCUC-GCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Rhinocypha_fenestrella_CHL__ ???????????????????????????????-???-?????-????
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Rhinocypha_tincta_60351_____ ??????GCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCUGCGCUC-ACCG-UUUAACCGC-
GGUGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Heliocharis_amazona_________ ??????GCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUACGCUUCCGACGUAGCUAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUCACCGC-
GGUGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Hetaerina_americana_________ ??????GCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCUAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCGCCUCAACACC-
GGUGGCGCCGAUGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Calaphaea_confusa___________ ??????GCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCAGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACCGC-
GGUGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Noguchiphaea_yoshikoae______ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACCGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]

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Vestalis_beryllae_66252_____   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACGGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-      ]
Matrona_basilaris_64151_____   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GUCG-UGUAACAGC-
GACGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-      ]
Atrocalopteryx_atrata          GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GUCG-UGUAACAGC-
GACGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-      ]
Echo_modesta_6545194________   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACAGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-      ]
Neurobasis_ianthinipennis___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAACCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GUCG-UGUAACAGC-
GACGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-      ]
Sapho_orichalcea____________   ??????GCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAAC GAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
UCUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GCCG-UUUAACAGC-
GGCGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-      ]
Calopteryx_amata____________   ??????GCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GUCG-UGUAACAGC-
GACGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-      ]
AJ459186Calopteryx_splend___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GUCG-UGUAACAGC-
GACGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-      ]
Calopteryx_aequabiliAY338716GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
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GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUC-GUCG-UGUAACAGC-
GACGGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGG----------------[-   ]
Iridictyon_myersi___________ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGAAGCGCGGCGCUC-GCCG-UUUAACGGC-
GGCGGCGCCGCUGCUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Iridictyon_trebbaui   ???????????????????????????????-???-?????-????
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Unaligned_lestoid   ???????????????????????????????-???-?????-????
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Nubiolestes_diotima_________ ???????????????????????????????-???-?????-????
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Perilestes_kahli_683522_____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUA----CUCCUAGUCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUU-GCCG-UUUAACCGC-
GGUUGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Perissolestes_remotus_682___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUA----CUCCUAGUCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUU-GCCG-UUUUACCGC-
GGUUGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Perissolestes_magellenae____ ???????????????????????????????-???-?????-????
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Chlorolestes_umbrata________ ???????????????????????????????-???-?????-????
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Euchlorolestes_tessellata___ ???????????????????????????????-???-?????-????
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Phylolestes_ethelae_________ ???????????????????????????????-???-?????-????
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Synlestes_weyersii_6265_____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUA----CUCCUAGUCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-A???-
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Synlestes_tropicus__________ ???????????????????????????????-???-?????-????
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Chorismagrion_risi_6655_____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUA----CUCCUAGUCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUU-GCCG-UUUAACCGC-
GGUUGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Episynlestes_cristatus______ ???????????????????????????????-???-?????-????
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Episynlestes_albicauda_61___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUA----CUCCUAGUCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUU-GCCG-UUUAACCGC-
GGUUGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Megalestes_micans___________ ???????????????????????????????-??
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Megalestes_kurahashii_______ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCACAGACACCGGUAGGAUUG-CAGAAUAAGAG-CUCUUUCUUAAAUUCAGGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGANCGAUUUGUCUGGUUAAUUCCGAUACCGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AAUAUGCUUUCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU

GAAGGAAUCAGCGUGUA----CUCCUAGUCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUU-GCCG-UUUAACCGC-
GGUUGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Orolestes_octomaculatus_____ ???????????????????????????????-???-?????-????
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Austrolestes_annulosus_61___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUA----CUCCUAGUCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUU-GC-G-UGUAACAGC-
GAAAGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Sympecma_paedisca_65151_____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUA----CUCCUAGUCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUU-GC-G-UGUAACAUC-
GGAAGCGCCUCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Sympecma_fusca______________ ??????GCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUA----CUCCUAGUCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCGCUU-GC-G-UGUAACAUC-
GGAAGCGCCUCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
EU055157_Austrolestes_ann___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUA----CUCCUAGUCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUU-GC-G-UGUAACAGC-
GAAAGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Indolestes_peregrinus_______ ???????????????????????????????-???-?????-????
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Indolestes_cyaneus_DIC GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUA----CUCCUAGUCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUU-GC-G-UGUAACAGC-
GAAAGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC
Chalcolestes_viridis________ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUA----CUCCUAGUCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA

AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUU-GC-G-UGUAACAGC-
GAAAGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Archilestes_grandis_645_____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUA----CUCCUAGUCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUU-GC-G-UGUAACAGC-
GAAAGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Lestes_rectangularis_OLR____ ???????????????????????????????-???-?????-????
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Lestes_eurinus______________ ???????????????????????????????-???-?????-????
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FN356183Hemiphlebia_________ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UCU-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CCCCUAGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGUUGCGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGAAAGUAA??????????[-   ]
Unaligned_Anisoptera   ???????????????????????????????-???-?????-????
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Epiophlebia_superstes_______ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAAC?AGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Epiopblebia_laidlawi   ???????????????????????????????-???-?????-????
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Unaligned_Aeshnids   ???????????????????????????????-???-?????-????
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Archipetalia_aur_FN356039___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAU?GACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAAUCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Austropetalia_victoria______ ???????????????????????????????-???-?????-????
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Hypopetalia_pestilens_______ ???????????????????????????????-???-?????-????
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FJ596639_Phyllopetalia_api__ ???????????????????????????????-???-?????-????
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Phyllopetalia_apollo_684____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAAUCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GA??[-   ]
Eurypetalia_altarensis______ ???????????????????????????????-???-?????-????
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Ophiopetalia_diana__________ ???????????????????????????????-???-?????-????
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Gomphaeschna_furcilata______ ???????????????????????????????-???-?????-????
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Oligoaeschna_pryeri_________ ???????????????????????????????-???-?????-????
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Austroaeschna_parvistigma___  ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Telephlebia_tillyardi_______  ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Boyeria_vinosa_OBV__________  ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Boyeria_irene_FN356042______  GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGCCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-     ]
Brachytron_pratense_EU055___  GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAA?[-     ]
Epiaeschna_heros____________  ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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DQ008197_Caliaeschna_micro__  GAGCCUGCGGCUUAAUUUGACUCAACACNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNN-NNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGU????????????[-     ]
DQ008199_Anaciaeschna_iso___  GAGCCUGCGGCUUAAUUUGACUCAACACNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNN-NNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUA????????????????????????????????????????????????????????????????????????
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GQ118262_Oplonaeschna_sp____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUWAGAGGAAGUAAAAGUCGUAAC[-   ]
Aeshna_canadensis_OAC_______ ???????????????????????????????-??-?????-????
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EU055147_Rhionaeschna_mult__ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Aeshna_cyanea_1203__________ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAAC?AGGCGU----UGGAA------UCU-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUA????????????????????[-]
FJ596630_Aeshna_grandis_____ ???????????????????????????????-??-?????-????
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FN356092_Gynacantha_bulla___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAAUCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Austrogynacantha_heteroge___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------
UCAACUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUA
CACUGAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAAUCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
FN356093_Hemianax_ephippig__ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUA??[-   ]
Anax_junius_AY749908________ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU

GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUWAGAGGAAGUAAAAGUCGUAAC[-   ]
FN356035_Anax_imperator_____   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Unaligned_gomphid   ???????????????????????????????-???-?????-????
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Sinogomphidia_kruegeri______   ???????????????????????????????-???-?????-????
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Ictinogomphus_australis_6___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGC----UGGAA------UCU-
UUUAUGCUUCCAACGUAAUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCCG-UCUAACCGC-
GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Ictinogomphus_sp____________   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-A
AACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUA
ACGAACGAGACUCUGGCCUGCUAACUAGGCGC----UGGAA------UCU-UUUAUGCUUCCAACGUAAUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAU
AACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACUGAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAU
UGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUAAGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-
AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCCG-UCUAACCGC-GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC
Lindenia_tetraph_FN356120___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUG?CCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAUUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-ACCG-UCUAACCGC-
GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Phyllogomphoides_stigmatus__   ???????????????????????????????-???-?????-????
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Progomphus_obscurus_________   ??????GCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGCCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAAUCAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCCG-UCUAACCGC-
GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]

Progomphus_borealis_633_____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGCCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAAUCAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCCG-UCUAACCGC-
GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Hagenius_sp_5975137_________ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGGA------UCU-
UUUAUGCUUCCAACGUAG?CAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCCG-UCUCAUCGC-
GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Lanthus_vernalis____________ ???????????????????????????????-???-?????-????
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Davidius_nanus_DQ010047_____ ???????????????????????????????-???-?????-????
????????????????CGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGUGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Neogomphus_edenticulatus____ ???????????????????????????????-???-?????-????
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Armagomphus_armiger_613_____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAAUCAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCCG-UCUAACCGC-
GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Hemigomphus_comitans_AHC____ ???????????????????????????????-???-?????-????
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FJ596622_Hemigomphus_heter__ ???????????????????????????????-???-?????-????
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Hemigomphus_magela_5935_____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAAUCAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU

GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCCG-UCUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Trigomphus_sp_FN356176______ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAAUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGUCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUU-GCCG-UUUAACCGC-
GGUGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
FJ596615_Lanthus_albistylu__ ???????????????????????????????-??-?????-????
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FJ712325_Stylogomphus_shir__ ???????????????????????????????-??-?????-????
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Davidioides_martini_648_____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-ACACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAAUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAACCAGCGUGUC----UUCCCUGGCCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCAGACUGGCACGCGGCAGUC-GCCG-UCUAACCGC-
GGUGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCA????????????????????????[-]
Burmagomphus_collaris_______ ???????????????????????????????-??-?????-????
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Cyclogomphus_heterostylus___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGUCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCUG-UUUAACCGC-
GGCGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Anisogomphus_pinr_FN356037__ GAGCCUGCGGCUUAAUUUGACUCAACACGGGGAAACCU--CCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUANCGA?CGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGUCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACCGGUACGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Dromogomphus_spinosus_______ GAGCCUGCGGCUUAAUUUGACUCAACACNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNN-NNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGUCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCCG-UUUCACCGC-
GGCGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGU????????????[-   ]

Arigomphus_villosipes_______ ??????GCGGCUUAAUUUGACUCAACACNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNN-NNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACAUGGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGUCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCCG-UUUCACCGC-
GGCGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGU????????????[-   ]
Arigomphus_cornu_DQ008188___ GAGCCUGCGGCUUAAUUUGACUCAACACNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
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UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACAUGGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGUCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCCG-UUUCACCGC-
GGCGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGU????????????[-   ]
Stylurus_intricatus_DQ008185GAGCCUGCGGCUUAAUUUGACUCAACACNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNN-NNNN
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UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACAUGGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGUCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCCG-UUUCACCGC-
GGCGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGU------------[-   ]
Stylurus_amnicola___________ GAGCCUGCGGCUUAAUUUGACUCAACACNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNN-NNNN
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UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGUCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCCG-UUUCACCGC-
GGCGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGU????????????[-   ]
FJ596610_Stylurus_nagoyanu__ ???????????????????????????????-???-?????-????
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DQ008184_Gomphus_externus___ GAGCCUGCGGCUUAAUUUGACUCAACACNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
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UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACAUGGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGUCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCCG-UUUCACCGC-
GGCGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGU????????????[-   ]
Asiagomphus_hainanensis_____ ???????????????????????????????-???-?????-????
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DQ008187_Gomphus_exilis_____ GAGCCUGCGGCUUAAUUUGACUCAACACNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
UUUANGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGUCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCCG-UUUCACCGC-
GGCGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGU????????????[-   ]
Gomphus_Phanogomphus_grasl__ ???????????????????????????????-???-?????-????
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Gomphus_adelphus____________ ??????GCGGCUUAAUUUGACUCAACACNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNN-NNNN
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UUUANGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGUCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCCG-UUUCACCGC-
GGCGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGU????????????[-   ]
FN356091_Gomphus_vulgatis___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGUCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCCG-UUUCACCGC-
GGCGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
FN356132_Megalogomphus_sp___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-ACACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGC----UGGAA------UCU-
UUUAUGCUUCCAACGUACUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCAGUC-GCCG-UCUAACCGC-
GGUGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Onychogomphus_uncatus_______ ???????????????????????????????-???-?????-????
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Onychogomphus_for_FN356138__ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-ACACCUCACCAG?CCCAGACACCGGUAGGAUUGACAGAAUAAGAG-?UCUU?CUU-GAYYC-?GUG
GGUGGUGGNNCAAGGCCGUCCU?ANUUGGUGGAGC?A?UUGUYYGGU?AAUUCCGAUAACGAACGACACUCUGRCCUGCUAACUAGGCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCAGUC-GCCG-UCUAACCGC-
GGUGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
A_FJ712322_Onychogomphus_s__ ???????????????????????????????-???-?????-????
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Ophiogomphus_carolus________ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-ACACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAAC?AGGCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCAGUC-GCCG-UCUAACCGC-
GGUGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUA????????????????????[-]
FJ596618_Ophiogomphus_sev___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-ACACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCAGUC-GCCG-UCUAACCGC-
GGUGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUA????????????????????[-   ]

FN356139_Ophiogomphus_caec__ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-ACACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCAGUC-GCCG-UCUAACCGC-
GGUGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Leptogomphus_elegans________ ???????????????????????????????-???-?????-????
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FJ596609_Leptogomphus_saut__ ???????????????????????????????-???-?????-????
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Epigomphus_compactus________ ???????????????????????????????-???-?????-????
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FJ712323_Microgomphus_chel__ ???????????????????????????????-???-?????-????
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Heliogomphus_retroflexus____ ???????????????????????????????-???-?????-????
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FN356121_Macrogomphus_para__ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGUCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGUGGCACUU-GCCG-UUUAACCGC-
GGUGGUGCCUCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Ceratogomphus_pictus _______ ???????????????????????????????-???-?????-????
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Lestinogomphus_angustus_____ ???????????????????????????????-???-?????-????
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Austrogomphus_guerini_______   ???????????????????????????????-???-?????-????
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Austrogomphus_amphiclitus___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCCG-UUUCACCGC-
GGUGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Antipodogomphus_acolythus___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
UUUAUGCUUCCAACGUAAUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCACUC-GCCG-UUUAACCGC-
GGUGGUGCCGCCGUUGCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Unaligned_Petaluridae   ???????????????????????????????-???-?????-????
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Tanypteryx_hageni_EU05517___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
FN356174_Tanypteryx_sp______   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAACGAUUUGUCUGGUUAAUUCCGAUANCGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
FJ712330_Tanypteryx_pryeri__   ???????????????????????????????-???-?????-????
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Tachopteryx_thor_FN356173___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAU?GACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA

AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Phenes_raptor_aY338720______ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCUAGGCCGAAAGGCCUGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACAGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACU?GAUCAUU?AGAG?AAG?AAA?????????[-]
Phenes_centralis_OPR________ ???????????????????????????????-???-?????-????
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Uropetalura_carvori_________ ???????????????????????????????-???-?????-????
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Petalura_hesperia___________ ???????????????????????????????-???-?????-????
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Petalura_gigantea_EU05515___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCUAGGCCGAAAGGCCUGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Petalura_litolae____________ ???????????????????????????????-???-?????-????
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Petalura_ingentissima_______ ???????????????????????????????-???-?????-????
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Zoraena_bilineata___________ ???????????????????????????????-???-?????-????
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Taeniogaster_obliqua________ ???????????????????????????????-???-?????-????
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Kalyptogaster_erronea_______ ???????????????????????????????-???-?????-????
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??CGA?UGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
FJ712317_Cordulegaster_mac__ ???????????????????????????????-??
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GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
EU055179_Cordulegaster_dor__ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCAGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUA???????????????????[-   ]
Cordulegaster_bol_FN356072__ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAU?GACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCAGGCCGAAAGGCCCGGGUARCCCGC-UGAACCUCCUUCGUGCUARGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
DQ008198_Cordulegaster_pic__ GAGCCUGCGGCUUAAUUUGACUCAACACNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCAGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGU???????????[-   ]
FJ596638_Anotogaster_siebo__ ???????????????????????????????-???-?????-????
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Neopetalia_punctata_________ ???????????????????????????????-???-?????-????
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Chloropetalia_soarer________ ???????????????????????????????-???-?????-????
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Sinorogomphus_nasutus_______ ???????????????????????????????-???-?????-????
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Chlorogomphus_brunneus_EU___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCAGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUU?AGAGGAAG?????????????[-]
FN356060_Chlorogomphus_sp___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCAGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCACUC-GCCG-UUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Synthemis_eustalacta________ ???????????????????????????????-???-?????-????
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Synthemis_marcrostigma_EU___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-UUUAAUCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Archaeosynthemis_leachii____ ???????????????????????????????-???-?????-????
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Eusynthemis_brevistyla______ ???????????????????????????????-???-?????-????
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FJ596573_Eusynthemis_gutta__ ???????????????????????????????-???-?????-????
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Eusynthemis_nigra_EU05516___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-UUUAAUCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Choristhemis_flavotermina___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-UUUAAUCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Synthemiopsis_gomphomac_____ ???????????????????????????????-???-?????-????
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Gomphomacromia_chilensis____ ???????????????????????????????-???-?????-????
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FJ712318_Gomphomacromia_p___ ???????????????????????????????-???-?????-????
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Syncordulia_serendipator____ ???????????????????????????????-???-?????-????
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Syncordulia_venator_________ ???????????????????????????????-???-?????-????
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Idionyx_imbricata_EU05518___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUUACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-UUUCACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]

Idionyx_selysi_____________ ???????????????????????????????-???-?????-????
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FN356129_Macromidia_rapi____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------
UCUAAUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUA
CACUGAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-UUUAAUCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
FN356186_Oxygastra_curtis___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUACGCUUCCAACGUAACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-UUUAAUCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Cordulephya_pygmaeaEU0551___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC
-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-UUUAAUCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Pseudocordulia_circularis___ ???????????????????????????????-???-?????-????
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Hesperocordulia_berthoudi___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-UUUAAUCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Lathrocordulia_metallica____ ???????????????????????????????-???-?????-????
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Micromidia_convergens_EU0___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-UUUAAUCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Micromidia_atrifrons________ ???????????????????????????????-???-?????-????
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Austrophya_mystica__________ ???????????????????????????????-???-?????-????
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Austrocordulia_refracta_____ ???????????????????????????????-???-?????-????
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Archaeophya_magnifica_______ ???????????????????????????????-???-?????-????
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Epophthalmia_elegans________ ???????????????????????????????-???-?????-????
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FN356079_Didymops_transve___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-ACACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUAUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-UCUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
FN356124_Macromia_illinoie__ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-ACACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUAUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-UCUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Macromia_amphigena_FN356127   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-ACACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUAUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-UCUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Macromia_eurynome_EU05519___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-ACACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUAUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUC???-
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Macromia_magnifica__________  ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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FN356128_Macromia_splende___  GAGCCUGCGGCUUAAUUUGACUCAACACGGG-ACACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUAUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-UCUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-     ]
FN356146_Phyllomacromia_ny__  GAGCCUGCGGCUUAAUUUGACUCAACACGGG-ACACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUAUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-UCUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-     ]
Idomacromia_proavita________  ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Aeschnosoma_forcipula_______  ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Pentathemis_membranulata____  ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Tetragoneuria_cynosure______  ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Tetragoneuria_costalis______  ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Tetragoneuria_canis_________  ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Epicordulia_princeps________ ???????????????????????????????-???-?????-????
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Epitheca_marginata__________ ???????????????????????????????-???-?????-????
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FN356087_Epitheca_bimacul___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-CUUAACCGU-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Rialla_villosa______________ ???????????????????????????????-???-?????-????
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FN356074_Cordulia_aenea_____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-CUUAACCGU-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Cordulia_shurtleffii_EU05___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
ACUAUGCUUCCAACGUAACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-CUUAACCGU-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Somatochlora_alpe_FN356163_ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGA?CGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAACUAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-CUUAACCGU-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Somatochlora_flavomac_1242__ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAAC?AGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAACUAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-CUUAACCGU-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUA????????????????????[-]

Somatochlora_metallica______ ???????????????????????????????-???-?????-????
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FJ010028_Somatochlora_tene__ ???????????????????????????????-??
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A_FJ596562_Hemicordulia_mi__ ???????????????????????????????-???-?????-????
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Hemicordulia_australEU055168GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-CUUAACCGU-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Procordulia_jacksoniensis___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUC-GCCG-CUUAACCGU-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUU??????????????????????[-]
Unaligned_Libellulid   ???????????????????????????????-???-?????-????
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FJ596583_Notiothemis_rober__ ???????????????????????????????-???-?????-????
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FJ596578_Tetrathemis_irreg__ ???????????????????????????????-???-?????-????
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Tetrathemis_polleni_________ ???????????????????????????????-???-?????-????
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FJ596587_Urothemis_signata__   ???????????????????????????????-???-?????-????
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Urothemis_assignata_________   ???????????????????????????????-???-?????-????
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Macrodiplax_cora____________   ???????????????????????????????-???-?????-????
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Macrodiplax_balteata_EU05___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCCG-CUUCAUCGC-
GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Zyxomma_elgneri_____________   ???????????????????????????????-???-?????-????
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Zyxomma_petiolatum   ???????????????????????????????-???-?????-????
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FN356181_Zygonyx_ida________   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUACGCUUCCAACGUUACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCCG-CAUCACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Nannophlebia_sp_EU055138____   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------
UCUUAUUACGCUUCCAACGUUACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUA
CACUGAAGGAAUCAGCGUGUC----CCCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA

AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCGG-CUUAAUCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Bironides_sp________________ ???????????????????????????????-???-?????-????
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Huonia_epinephela___________ ???????????????????????????????-???-?????-????
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Huonia_oreophila____________ ???????????????????????????????-???-?????-????
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Onychothemis_testacea_______ ???????????????????????????????-???-?????-????
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FJ596582_Rhyothemis_varieg__ ???????????????????????????????-???-?????-????
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FJ712327_Rhyothemis_fuligi__ ???????????????? ????????????????-???-?????-????
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Miathyria_marcella__________ ???????????????????????????????-???-?????-????
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Miathyria_simplex   ???????????????????????????????-???-?????-????
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FJ596577_Tholymis_citrina___  ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Tholymis_tillarga___________  ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Pantala_flavesce_EF680326___  GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUCCUUAGUUGGUGGAGC???????????????????????????????????????
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Tramea_lacerata_EU055171____  GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUACGCUUCCAACGUAACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCCG-CUUCACCGU-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-     ]
Tramea_calverti_____________  ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Sympetrum_Kalosympetrum_ja__  ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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EF636437_Sympetrum_obtrusu__  ???????????????????????????????-??????????????????????????????????????????????????????????????????
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AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCUG-C--AACUGU-GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-     ]
DQ008201Sympetrum_vulgatum__  GAGCCUGCGGCUUAAUUUGACUCAACACNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUUACAUUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGNGAGGCCUUCGGACUGGUACGCGGCUCUC-GCUG-C--AACUGU-
GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGU????????????[-     ]
FN356171_Sympetrum_pedemon__  GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
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AUUAUGCUUCCAACGUUACAUUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCUG-C--AACUGU-
GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Sympetrum_Nesogonia_blackb__   ???????????????????????????????-???-?????-????
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Sympetrum_sanguineum________   ??????GCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAAC-AGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUUACAUUCUUCUUAGAGGGACA-AGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGC?GCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCUG-C--AACUGU-
GGUGGUGCCG?????????????-??[-]
Sympetrum_corruptum_EU055___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAAACUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAUAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
UAUGUGCUUCCAACGUUACAUUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCUG-C--AUCUGU-
GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAA??????????????[-]
Sympetrum_fonscolomb_Y12900_GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGUGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUUACUUUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCAG??CGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CCCCCUGGCCGAAAGGC?CGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCUG-C--
AACCCCGGGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Sympetrum_Tarnetrum_illotu__   ???????????????????????????????-???-?????-????
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Sympetrum_Tarnetrum_infusc__   ???????????????????????????????-???-?????-????
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AF461243_Sympetrum_danae   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUUACAUUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCUG-C--AACUGU-
GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUA????????????????????[-   ]
Sympetrum_m   ???????????????????????????????-???-?????-????
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Leucorrhinia_pectoral_0610__ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAAC-AGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUUACAUUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCCG-C--AAUAGU-
GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUU?????????????????????[-]
Leucorrhinia_glacialis______ ???????????????????????????????-???-?????-????
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FJ010031_Celithemis_elisa___ ???????????????????????????????-??
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Celithemis_eponina_1233_____ ??????GCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAAC-AGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUUACAUUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCUG-C--AAUAGU-
GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAA?????????[-]
Brachymesia_gravida_________ ???????????????????????????????-???-?????-????
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Brachymesia_herbida ???????????????????????????????-???-?????-????
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Brachythemis_leucosticta____ ???????????????????????????????-???-?????-????
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Brachythemis_contaminata____ ???????????????????????????????-???-?????-????
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Deielia_phaon_______________ ???????????????????????????????-???-?????-????
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Pachydiplax_longipennis_____ ???????????????????????????????-???-?????-????
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Erythemis_sp_aY749910_______ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUUACAUUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GACG-CUUCAUCGC-
GUCGGUGCCGCCG??GCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
FN356030_Acisoma_panorpoi___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGSSAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUUACAUUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCCG-CUUCAUCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Erythrodiplax_minuscula_E___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUUACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCAG-CUUCAUCGC-
UGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Erythrodiplax_basalis_______ ???????????????????????????????-???-?????-????
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Crocothemis_servilia________ ???????????????????????????????-???-?????-????
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DQ008200_Crocothemis_eryt___ GAGCCUGCGGCUUAAUUUGACUCAACACNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUUACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GACG-CUUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGU????????????[-   ]
FJ596590_Rhodothemis_rufa___ ???????????????????????????????-???-?????-????
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Neurothemis_fulvi_FN356136___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUUA??AUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCCG-CUUCACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Neurothemis_ramburii   ???????????????????????????????-???-?????-????
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Diplacodes_lefebv_FN356080___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUUACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCCG-CUAUAU?GC-
GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Diplacodes_trivialis   ???????????????????????????????-???-?????-????
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Bradinopyga_strachani_______   ???????????????????????????????-???-?????-????
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Brachydiplax_denticauda_E___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUUACUUUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCCG-CCUAACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
FJ596585_Brachydiplax_chal__   ???????????????????????????????-???-?????-????
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FN356059_Chalcostephia_fl___   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUUACUUUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCCG-CUUCACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]

Micrathyria_aequalis________ ????????????????????????????????-??-?????-????
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Micrathyria_atra_____________ ????????????????????????????????-??-?????-????
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Micrathyria_didyma   ????????????????????????????????-??-?????-????
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Uracis_imbuta_______________ ????????????????????????????????-??-?????-????
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Uracis_infumata_____________ ????????????????????????????????-??-?????-????
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FJ596589_Nannophya_pygmaea__ ????????????????????????????????-??-?????-????
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Nannothemis_bella___________ ????????????????????????????????-??-?????-????
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Paltothemis_lineatipes______ ????????????????????????????????-??-?????-????
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Brechmorhoga_mendax_________ ????????????????????????????????-??-?????-????
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Brechmorhoga_praedatrix   ???????????????????????????????-???-?????-????
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Dythemis_fugax_____________   ???????????????????????????????-???-?????-????
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Trithemis_aurora_EU055203___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUACGCUUCCAACGUUACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCCG-UUUCACCGC-
GGCGGUGCC??????????????-??[-]
Trithemis_africana__________ ???????????????????????????????-???-?????-????
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Urithemis_arterio_FN356177__ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUG?CUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUACGCUUCCAACGUUACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCCG-UUUCACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
Perithemis_tenera___________ ???????????????????????????????-???-?????-????
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Perithemis_intensa_EU0551___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------
UCUUAUUACGCUUCCAACGUUACAUUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUA
CACUGAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUUACCCG-CUUCACCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Perithemis_lais_GU196362   ???????????????????????????????-???-?????-????
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Palpopleura_sp_FN356143_____   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUUACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UCCCCAGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCUG-CUUCAU?GU-
AGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-]
FJ596579_Diastatops_pullat__   ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Zenithoptera_fasciata_______   ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Neodythemis_afra_pauli______   ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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FN356162_Selysiothemis_nig__   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUAACAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCCG-CUUCAUCGC-
GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-     ]
FN356179_Urithetrum_navasi__   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGUCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUUACUUUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----GUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUGCGCGGCUCUUACCCG-CUUCAUCGC-
GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-     ]
Porpax_risi_________________   ???????????????????????????????-???????????????????????????????????????????????????????-?????-????
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Micromacromia_cam_FN356133__   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUCCAUUUCUUCUUAGAGGGACA-GGCGACCCCU-AGUCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCAG-CUUCAUCGC-
UGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAANA????????[-]
Allorrhizucha_preussFN356034GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-CGUG
GGUGGUGGUNCNUGGCCGnnnUUANnUGGUGGAGCGANUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUCCAUUUCUUCUUAGAGGGACA-GGCGACCCCU-AGUCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
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GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCAG-CUUCAUCGC-
UGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Neodythemis_klingi__________ ???????????????????????????????-???-?????-????
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FJ596575_Hadrothemis_infes__ ???????????????????????????????-???-?????-????
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FJ596595_Thermorthemis_mad__ ???????????????????????????????-???-?????-????
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FJ596599_Agrionoptera_insi__ ???????????????????????????????-???-?????-????
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FJ596593_Cratilla_metallic__ ???????????????????????????????-???-?????-????
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Pseudoleon_superbus_________ ???????????????????????????????-???-?????-????
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FJ596597_Orthemis_cultrifo__ ???????????????????????????????-???-?????-????
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Orthemis_ferruginea_________ ???????????????????????????????-???-?????-????
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DQ008203_Orthetrum_albi_____ GAGCCUGCGGCUUAAUUUGACUCAACACNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-UGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUCCAUUUCUUCUUAGAGGGACA-GGCGACCCCU-AGUCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCAG-CCUCACCGU-
UGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGU???????????[-   ]
Orthetrum_pruinosum_________ ???????????????????????????????-??-?????-????
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Orthetrum_coerulescens______ ???????????????????????????????-??-?????-????
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FJ596600_Lyriothemis_elega__ ???????????????????????????????-??-?????-????
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DQ008205_Ladona_fulva_______ GAGCCUGCGGCUUAAUUUGACUCAACACNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUCCAUUUCUUCUUAGAGGGACA-GGCGACCCCU-AGUCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUG
GUACGCGGCUCUC-GCAG-CUUCAUCGC-UGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGU???????????[-   ]
Ladona_julia________________ ???????????????????????????????-???
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Platetrum_depressa_DQ008204_GAGCCUGCGGCUUAAUUUGACUCAACACNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNNNNNNUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUCCAUUUCUUCUUAGAGGGACA-GGCGACCCCU-AGUCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUA----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCAG-CUUCAUCGC-
UGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGU???????????[-]
Plathemis_subornata_________ ???????????????????????????????-??-?????-????
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Plathemis_lydia_____________ ???????????????????????????????-??-?????-????
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FN356119_Libellula_quadrim__ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUCCAUUUCUUCUUAGAGGGACA-GGCGACCCCU-AGUCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCAG-CUUCAUCGC-
UGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Libellula_Syntetrum_angeli__ ???????????????????????????????-???-?????-????
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Libellula_Eolibellula_semi__ ???????????????????????????????-???-?????-????
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Libellula_saturat_aY338717__ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UCU-
AUUAUGCUUCCAACGUCCAUUUCUUCUUAGAGGGACA-GGCGACCCCU-AGUCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUC----UUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCC?AUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCAG-CUUCAUCGC-
UGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAAC???????????????????????????????[-]
Libellula_Eotainia_composi__ ???????????????????????????????-???-?????-????
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Libellula_pulchella_U65109   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUUACCAGGCCCAGACACCGGUAGGAUUGAC-GAUUGAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGG-GCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUC--
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Libellula_Holotania_comanc__ ???????????????????????????????-???-?????-????
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Libellula_Holotania_auripe__ ???????????????????????????????-???-?????-????
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Libellula_Holotania_axilen__ ???????????????????????????????-???-?????-????
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Libellula_Holotania_luctuo__ ???????????????????????????????-???-?????-????
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Aethriamanta_rezia_GU196369   ???????????????????????????????-???-?????-????
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Tetrathemis_corduliformis   ???????????????????????????????-???-?????-????
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Diplacina_ismene_GU196366   ???????????????????????????????-???-?????-????
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Erythemis_vesiculosa   ???????????????????????????????-???-?????-????
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Nannophyopsis_clara   ???????????????????????????????-???-?????-????
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Oligoclada_amphinome   ???????????????????????????????-???-?????-????
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Idiataphe_sp_HOL_2010   ???????????????????????????????-???-?????-????
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Atoconeura_sp_HOL_2010   ???????????????????????????????-???-?????-????
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Elga_leptostyla   ???????????????????????????????-???-?????-????
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Fylgia_amazonica   ???????????????????????????????-???-?????-????
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Hemistigma_albipunctatum   ???????????????????????????????-???-?????-????
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Porpacithemis_sp   ???????????????????????????????-???-?????-????
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Thermochoria_equivocata   ???????????????????????????????-???-?????-????
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Malgassophlebia_bispina   ???????????????????????????????-???-?????-????
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Micromacromia_zygoptera   ???????????????????????????????-???-?????-????
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Argyrothemis_argentea   ???????????????????????????????-???-?????-????
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Pseudothemis_zonata   ???????????????????????????????-???-?????-????
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Oxythemis_phoenicosceles   ???????????????????????????????-???-?????-????
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Olpogastra_lugubris   ???????????????????????????????-???-?????-????
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Misagria_parana   ???????????????????????????????-???-?????-????
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Unaligned_Outgroups   ???????????????????????????????-???-?????-????
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Ephemerella_sp______________ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCGGACAUCGGAAGGUUUGACAGAUUGAGAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGCGCGA?????????????????????????????????????
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Paraleptophlebia_sp_________ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCGGACAUUGGAAGGAUUGACAGAUUGAUAG-CUCUUUCUU-GAUUC-AAUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUUACCUGCUAAA-AGACGU----CUGGA------UCU-U-
UAUGCUCCAGGCGGACAAAUCUUCUUAGAGGGACA-AGCGGCUUCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCUUGUC----UUCCCUUGCCGAAAGGCACGGGUAACCCGC-UGAACCUCCUUCGUGCUUGGGAUUGGGGCUUGCAAUUGUUCCCCAUGAACGAGGAAUUCCCAGUA

AGCACGAGUCAUAAGCUCGUGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGGG??????????-????-?????????-
??????????????CUCUGAAAA-GAUGGCCAAACUUGAUCAUUUA????????????????????[-   ]
Anthopotamus_sp_____________   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCGGACAUCGGAAGGAUUGACAGAUUGAGAG-CUCUUUCUU-GAUUC-GAUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUAACCUGCUAAC-AGGCGC----CGGGA------UCU-U-
CACGCUCCCGGCGUAGUCAUCUUCUUAGAGGGACA-GGCGGCUUCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUG----CUCCCUGGCCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUUGGGAUUGGGGCUUGCAAUUGUUCCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAACGAUUU-AGUGAGGUCUUCGGACUUAAC?????????????????????????-
??????????????GUCGGGAAA-GAUGACCAAACUUGAUCGUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Caenis_luctuosa_____________   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCGGACAUUGGAAGGAUUGACAGAUUGAGAG-CUCUUUCUU-GAUUC-AAUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUAACCUGCUAAC-AGGCGC----CCGGA------UCC-
UUCGUGCUCUGGGCGUAGUUAUCUUCUUAGAGGGACA-AACGGCACUU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAACCAGCGUGUG----CUCCCUGGCCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUUGGGAUUGGGGCUUGCAAUUGUUCCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGUCUUCGGACUGGGC??????????-??????????????-
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Ephemera_sp_________________   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCGGACAUCGGAAGGAUUGACAGAUUGAGAG-CUCUUUCUU-GAUUC-GAUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUAACCUGCUAAC-CGGCGC----CGAGA------UCC-U- UGUGCUCUCGGCGCU-
UACUCGUCUUAGAGGGACA-AGCGGCUUCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU GAAGGAAUCAGCGUGUUUCU-
CUCCCUGGCCGAAAGGCCCGGGUAACCCGC-UGAACCUCCUUCGUGCUUGGGAUCGGGGCUUGCAAUUGCUCCCCGUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAACGAUUU-AGUGAGGUCUUCGGACCGGGG?????????????????????????-
??????????????CUCCGGAAA-GAUGACCGAACUUGAUCGUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Callibaetis_sp_AY749925_____   ????????????????????????????????-??-?????-????
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Callibaetis_ferrugine_______   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCGGACAUCGGAAGGAUUGACAGAUUGAGAG-CUCUUUCUU-GAUUC-GAUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUAACCUGCUAAAUAGGCGC----GGGGA------UCU-U-
UACGCUCCCCGCGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUUCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUG----CUCCCUGUCCGAGAGGACCGGGUAACCCGC-UGAACCUCCUUCGUGCUUGGGAUUGGGGCUUGCAAUUGUUCCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGUCUUCGGACUGGUU?????????????????????????-
??????????????GACCGGAAA-GAUGACCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Baetis_buceratus____________   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCGGACAUCGGCAGGAUUGACAGAUUGAGAG-CUCUUUCUU-GAUUC-GAUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUAGCCUGCUAAAUAGGCGC----CGUCA------UCU-U-
UACGCUAGCGGCGUAGCAAUCUUCUUAGAGGGACC-GGCGGCUUCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUG----CUCCCUGCCCGAAAGGGCCGGGUAACCCGC-UGAACCUCCUUCGUGCUUGGGAUUGGGGCUUGCAAUUGUUCCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGUCUUCGGACUGGUC??????????-????-?????????-
???????????????????????-???[-   ]
Hexagenia_rigida____________   GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCGGACAUCGGGAGGAUUGACAGAUUGAGAG-CUCUUUCUU-GAUUC-GAUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUAACCUGCUAACUCGGCGC----CGGGA------UCC-U- CGCGCUCCCGGCGCU-
UACUCGUCUUAGAGGGACA-AGCGGCUUCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU GAAGGAAUCAGCGUGUCUCU-
CUCCCUGGCCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUUGGGAUCGGGGCUUGCAAUUGCUCCCCGUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAACGAUUU-AGUGAGGUCUUCGGACCGGGG??????????-????-?????????-
??????????????CUCCGGAAA-GAUGACCGAACUUGAUCGUUU?????????????????????[-   ]
Cloeon______________________   GAGCCUGCG?CUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCGGACAUCGGAGGAUUGACAGAUUGAGAG-CUCUUUCUU-GAUUC-GAUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUAACCUGCUAAAUAGGCGC----GGGGA------UCU-U-
UACGCUCCCCGCGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUUCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUG----CUCCCUGCCCGAGAGGGCCGGGUAACCCGC-UGAACCUCCUUCGUGCUUGGGAUUGGGGCUUGCAAUUGUUCCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGUCUUCGGACU??????????????-????-?????????-
???????????????????????-???[-   ]
Leucrocuta_aphrodite____

____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCGGACAUCGGAAGGAUUGACAGAUUGAUAG-CUCUUUCUU-GAUUC-GAUGGGUGGUGGUGCAUGGCCGUU CUUA
GUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUCACCUGCUAACUAGACGC----CUGGA------UCU-U-UACGCUCCAGGUGGAAAAAUCUUCUUAGAGGG ACA-
AGCGGCUUCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACUGAAGGAAUCAGCGUGUC----
GUCCCUGGCCGAAAGGCUCGGGUAACCCGU-UGAACCUCCUUCGUGCUUGGGAUUGGGGCUUGCAAUUGUUCCCCAUGAACGAGGAAUUCCCAGUAAGCGCGAGUCAUAAGCUCGCGUU
GAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGGG??????????-??????????????-??????????????UCCCGGAAA-
GAUGGCCAAACUUGAUCAUUU?????????????????????[-   ]
Centroptilum_luteolum_______ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCGGACAUCGGAAGGAUUGACAGAUUGAGAG-CUCUUUCUU-GAUUC-GAUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUAACCUGCUAAAUAGG-GC----GGGGA------UCU-U-
UACGCUCCCCGCGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUUCU-AGCCGCCGGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUG----CUCCCUGCCCGAGAGGGCCGGGUAACCCGC-UGAACCUCCUUCGUGCUUGGGAUUGGGGCUUGCAAUUCUUCCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGUCUUCGGACUGGCA?????????????????????????-
??????????????GGCCGGAAA-GAUGACCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Stenonema_sp________________ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCGGACAUCGGAAGGAUUGACAGAUUGAGAG-CUCUUUCUU-GAUUC-GAUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUUACCUGCUAACUAGACGU----CUGGA------UCU-U-
AAUGCUCCAGGCGGACAAAUCUUCUUAGAGGGACA-AGCGGCUUCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUG----UUCCCUGGCCGAAAGGUCCGGGUAACCCGU-UGAACCUCCUUCGUGCUUGGGAUUGGGGCUUGCAAUUGUUCCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGGG??????????-????-?????????-
??????????????UCCUGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAA?????????[-   ]
Trigonioptalmus_altern______ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCGGACACUGGAAGGAUUGACAGAUUGAGAG-CUCUUUCUU-GAUUC-AGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUC???????????????????----?????------???-
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Allomachilis_froggart_______ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCGGACACUGGAAUGAUUGACAGAUUGAGAG-CCCUCUCUU-AAUUC-AGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGUGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUAUUAACUAGAAGCG---CGGAUCCCG--CUU-
CACGCGAGUCUCGAC??????UCUUCUUAGAGGGACA-GGCGACGUCU-AGUCGCACGAGAGGGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUCCUGGGCCGCACGCGCGCUACAAU
GGGGGAGUCAGCGUGUGU--UCGCCCUGUCCGAGAGGACCGGGUAAC-CACUUGAAACUCGCCCGUGAUAGGGAUUGGGGAUUGCAAUUGUUUCCCACGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUGAGCUGGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGGUUU-AGUGAGGCCUUCGGACUGGCG?????????????????????????-
??????????????UGCCGGGAA-GAUGGCCGAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
EF199981_Machilis_hrabei____ ???????????????????????????????-??-?????-????
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Dilta_littoralis____________ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-GAACCUCACCAGGCCAGGACACUGGUAUGAUUGACAGAUUGAGAG-CUCUCUCCU-GAUUC-AGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGUUAACGAGCGAGACUCUGGCCUGCUAACUAGACGU----CGGAU------CUC-
UACACGAGUCCGGCG??????UCUUCUUAGAGGGACA-GGCGGCGUCC-AGUCGCAUGAGAGUGAGCGAUAACAGGUCUGUGAUGCCCUUAGAUGUCCUGGGCCGCACGCGCGCUACACU
GAAGGAGACAGCGUGUGU--GUCCCCUGUCCGAAAGGACCGGGUAACCCGC-UGAACCUCCUUCGUGCUGGGGAUUGGGGAUUGCAAUUCUUCCCCAUGAACGAGGAAUUCCCAGUA
AGCGCCGGUCAACAGCUGGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGGUUU-AGUGAGGCCUUCGGACUGGGG?????????????????????????-
??????????????CCCCGGGAA-GAUGUCCGAACUUGACCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Ctenolepisma_longicaudata___ ???????????????????????????????-??-?????-????
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Lepisma_sp__________________ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCGGACAUUGGAAGGAUUGACAGAUUGAGAG-CUCUUUCUU-GAUUC-AAUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUCGUGGAGUGAUCUGUCUGGUUUAUUCCGAUAACGAACGAGACUCUAACCUACUAACUAGGCGU----UGGAA------UCU-
UUCAUGCUUCCAACG??????UCUUCUUAGAGGGACA-GGCUGCUUCU-AGCAGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU

GAAGGAAUCAGCGUGUN----UUCCCUGUCCGAAAGGACCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUGUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGCUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGAUA?????????????????????????-
??????????????UGUCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
EU376048_Lepisma_saccharin__ ???????????????????????????????-???-?????-????
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Thermobia_domestica_________ GAUCCUGCGGCUUAACUUGACUCAACACGGG-AAAACUUACCAGGCCCAGACACUGGAAGGAUUGACAGAUUGAGAG-CUCUUUCUU-GAUUC-AGUG
GGUGGUGGUGCAUGGCCGUUUUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUAGCCUGUUAACUAGGCGU----UGGAA------UCU-
UUCAUGCUUCCAACG??????UCUUCUUAGAGGGACA-GGCUGCUU-UUAGCAGCACGAGAUUGAGCAAAAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGAUACAAU
GAAGGAAUCAGCGUGUC----UUCCCUGACCGAAAGGUCCGGGUAACCCGU-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUAUGUCCCAUGAACGAGGAAUUCCCAGUA
AGCGCAAGUCAUUAGCUUGCGUUGAUUACGUCCCUGCCC-UUUGUCCACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGAUG?????????????????????????-
??????????????UAUCGGAAA-GAUGGCCAAACUUGAUUAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Tricholepidion_gertschi_____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCAGACACUGGAAGGAUUGACAGAUUGAGAG-CUCUUUCUU-GAUUC-AGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAACGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUAGCCUGCUAACUAGGCAU?????????????--???-
??????????????????????CUUCUUAGAGGGACA-GGCGGUUUCUUAGCCGCACGAGAUUGAGCAAUAACAGGUUUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACAAU
GAAGGAAUCAGCGUGUGUUUUCUCCGUGGCCGAAAGGUCCGGGUAACCCGU-UGAACCUCCUUCUUACUAGGGAUUGGGGAUUGCAAUUCUUCCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUUGGACUGAUG?????????????????????????-
??????????????UAUCGGGAA-GAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Gromph_laevigata_AY210820___ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCGGACACCGGGAGGAUUGACAGAUUGAUAG-CUCUUUCUU-GAUUC-GGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUAGCCUGCUAACUAGUCGC----UUCUAGCA--UCCU-
UUUGCGCUGCUGGCG??????UCUUCUUAGAGGGACA-GGCGGCUUCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAGGAAUCAGCGUGUA----CUCCCUGGCCGAAAGGUCCGGGUAACCCGC-UGAACCUCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUGUUCCCCAUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGUCUUCGGACCGGUG?????????????????????????-
??????????????CACCGGGAA-GAUGCCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAAC[-   ]
Isoperla_davisi_AY121148____ GAGCCUGCGGCUUAAUUUGACUCAACACGGG-AAACCUCACCAGGCCCGGACACUGGAAGGAUUGACAGAUUGAUAG-CUCUUUCUU-GAUUC-AGUG
GGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGUUAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGUCGCACAUUGACGACAUCCGCA-
UUCGUGCUGUCGGCG??????UCUUCUUAGAGGGACA-GGCGGCUUCU-AGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGAUGUUCUGGGCCGCACGCGCGCUACACU
GAAUGGUUCAACGUGUGUCU-UCCCUUGACCGAGAGGUCCGGGUAACCCGC-UGAAAUCCAUUCGUGCUAGGGAUCGGGGCUUGUAAUUAUUCCCCGUGAACGAGGAAUUCCCAGUA
AGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCC-UUUGUACACACC-GCCCGUCGCUACUACCGAUUGAAUGAUUU-AGUGAGGUCUUCGGACAGUCG?????????????????????????-
??????????????CAACUGGAA-GAUGAUCAAACUUGAUUAUUUA????????????????????[-   ]
EU414717_Isoperla_sp________ ???????????????????????????????-???-?????-????
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AY859546_Gomphocerinae______ ???????????????????????????????-???-?????-????
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Anisopleura_comes_FN356038
GAGCCUGCGGCUUAAUUUGACUCAACACGGGAAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAUAGCUCUUUCUUGAUUCGGUGGGUGGUGGUGCAUGGCCG----------------------
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UUCUUAGCUGGUGGAACGAUUUGUCUGGUUAAUUCCGAUUACGAACGAGACUCUGGCCUGAUAAUUAGGCGUCUGAAUCUAUUACGCUUCCGACGUAGCAAUCUUCUUAGAAAGACA-
GGCGGCUCCUAGCCGCACGAGAUUGAGCAAUAACAGGUCUGUGAUGCCCUUAGACGUUCUUGGCCGCACGCGCGCUACACUGAAGUAAUCAGCGUGUCCUCCCUGGCCGAAAGGCACGGGUAACCCGCUGAACC
UCCUUCGUGCUAGGGAUUGGGGCUUGCAAUUUUUUCCCAUGAACGAGGAAUUCCCAGUAAGCGCGAGUCAUAAGCUCGCGUUGAUUACGUCCCUGCCCUUUGUACACACCGCCCGUCGCUACUACCGAUUGAAU
GAUUUAGUGAGGCCUUCGGACUGGUACGCUGCGCUCGCCGUUUAACCGCGACGGCGCCGCCGUUACCGGAAAAAUGGCCAAACUUGAUCAUUUAGAGGAAGUAAAAGUCGUAACAAGGUUUCCGUAGGUGAACC
UGCGGAAGGAUCUUUA[-   ]
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End;
[5.8S]
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          Formatdatatype=rnasymbols="0123456789"gap=-;
          Matrix]
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5â€šÃ„Ã´          8                 9               10                  28S                 10â€šÃ„Ã´]
Unaligned___________________ 555555555?????????????????????????????????????????????????????????????
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Unaligned_Zygoptera          ??????????????????????????????????????????????????????????????????????
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Protosticta_sp_A_ZPA________ ??????????????????????????????????????????????????????????????????????
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ZPCs_Protosticta_curiosa____ ??????????????????????????????????????????????????????????????????????
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Protosticta_sanguinostigm??????????????????????????????????????????????????????????????????????
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ZSOg_Sinosticta_ogatai______ ??????????????????????????????????????????????????????????????????????
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Palaemnema_paulicoba________ ??????????????????????????????????????????????????????????????????????
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Palaemnema_domina_ZPDm______ ??????????????????????????????????????????????????????????????????????
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Palaemnema_melanostigma_FN356142               --------------CCCAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCGAGGAGCCCCC[-            ]??????????????
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Isosticta_robustior_666_____ ??????????????????????????????????????????????????????????????????????
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Rhadinosticta_simplex_612??????????????????????????????????????????????????????????????????????
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Amphisticta_silvarum________ ?????????????????????????????????????????????????????????????????????
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Labidiosticta_vallisi_AY7?????????????????????????????????????????????????????????????????????
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Orosticta_filiciola_________ ?????????????????????????????????????????????????????????????????????
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Platycnemis_pennipes________----AAAAACGAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-            ]UUUCUUUGCGCCGA
CCUCAGAGCAGGUG???????
Copera_annulata_AB706556                       --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-            ]??????????????
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Copera_vittata_6585198______ ?????????????????????????????????????????????????????????????????????
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Copera_marsouipes___________ ?????????????????????????????????????????????????????????????????????
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Coeliccia_albicauda_________-GAAAAAUAUAUAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGCGUCGAAUUGUGA-
CUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-            ]-UUCGAUUCGCCGACCUCAGAGCAGGUG
AGACCAC
Coeliccia_cyanomelas_636____ ?????????????????????????????????????????????????????????????????????
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Calicnemia_miles____________ ?????????????????????????????????????????????????????????????????????
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Prodasineura_vitatta________--AAGGAAACGAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-            ]UUUCUUUGCGCCGA
CCUCAGAGCAUGUG???????
Chlorocnemis_abboti_________ ?????????????????????????????????????????????????????????????????????
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Nososticta_solida_61451 ?????????????????????????????????????????????????????????????????????
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Phylloneura_westermanni_6?????????????????????????????????????????????????????????????????????
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Onychargia_atrocyana_ZOA____ ?????????????????????????????????????????????????????????????????????
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Argia_moesta________________ ?????????????????????????????????????????????????????????????????????
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Argia_nahuana_6815221_______ ?????????????????????????????????????????????????????????????????????
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Argiocnemis_rubescens_ZAR???
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Mortonagrion_binocellata____ ???
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Agriocnemis_pygmaea_AB706568   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAAAUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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Austroagrion_watsoni________ ???
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Archibasis_viola_ZAV________ ???
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C_puella_AJ488546___________ UUGAAAAAACAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]UCAUUGAACGCCGA
CCU------------------
FN356069_C_resolutum   -UGAAAA--CAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGUAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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Pseudagrion_cingillum_______ ???
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Pseudagrion_aureofrons_61???
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Pseudagrion_ignifer_________ AAAGACUUUCAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]AA-CUGAGACCCGA
CCUCAGAGCAGGUGAGACCAC
Erythromma_najas_1238_______ UAACGAAAACAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGUAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]---UCUUGCGCCGA
CCU??????????????????
Cercion_plagiosum_AJ488552-AUGAAAAACAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]AAUCUUUGCAACGA
CCU------------------
Cercion_lindenii_AJ488550AAACGAAAACAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]AAUCUUUGCGCCGA
CCU------------------
Paracercion_calamorum_AB706627   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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Acanthagrion_quadratum______ AAUGAAAAACAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGUAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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ZLV_Leptobasis_vacillans____ ???
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Amphiagrion_saucium_________ ???
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Amphiagrion_abbreviatum_6???
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Xiphiagrion_cyanomelas_ZXC???
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WHH_Hesperagrion_heterodox???
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Ischnura_elegans_AB706611   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGUAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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Ishnura_barberi_5965136???
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Ischnura_graellsi_AJ488545AAUGAAAAACAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGUAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]AAUUUUCACGCCGA
CCU------------------
Anomalagrion_hastatum_______ ???
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Enallagma_parvum_AJ420939AUGACAAAAAAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGUAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]CUUACACGCGCCGA
CCUCAGAGCAGGUGAGAUCAC
Enallagma_granti_AJ420937-ACGAAAGAGAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGUAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]ACGAUUCAGACCGA
CCUCAGAGCAGGUGAGAUCAC
E_nigridorsumAJ420938_______ GAAAAAAAACAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGUAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]AUCGCAAACGCCGA
CCUCAGAGCAGGUGAGAUCAC
Enallagma_cyathigerum_0110UAACGAAAACAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGUAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]UCUCAAAACGCCGA
CCUCAGAGCAGGUGAGAUCAC
Enallagma_sp_6005140________ ???
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E_aspersum_DQ087506_________---
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Aciagrion_pallidum__________ ??GCGAAAAGAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGUAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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Aciagrion_borneence_ZAB   ???
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Protoneura_capillaris_644???
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Protoneura_cara_ZPC_________ ???
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FN356189_Psaironeura_remis???
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Elattoneura_analis__________ ???????????AAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUG-CUGAGGGCCGGC[-   ]????????CGCCGA
CCUCAGAGCAGGUGAGACCAC
Neoneura_aaroni_____________ ???
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Neaneura_amelia_ZNA_________ ???
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Neoneura_maria_6425182______ ???
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Ceriagrion_aeruginosum______ ???
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Telebasis_salva_6325172???
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Leptagrion_elongatum________ ???
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Leptagrion_sp   ???
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Metaleptobasis_manicaria____ ???
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Diceratobasis_sp_A_ZDA______ ???
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Pyrrhosoma_nymphula_1202____---UGAAAACAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGG?[-   ]??????????????
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Chromagrion_conditum________ ???
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Teinobasis_alluaudi_________ ???
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Nehalenia_gracilis__________ ???
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Coryphagrion_grandis________ ???
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Microstigma_rotunda_________ ???
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Microstigma_anomalum_672____ ?????????????????????????????????????????????????????????????????????
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Mecistogaster_ornata_FN356130                  --------------CCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-            ]??????????????
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Mecistogaster_linearis_67?????????????????????????????????????????????????????????????????????
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Megaloprepus_caerulatus_____ ?????????????????????????????????????????????????????????????????????
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Haplostigma_modesta_ZHM_____ ?????????????????????????????????????????????????????????????????????
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Pseudostigma_aberans________ ?????????????????????????????????????????????????????????????????????
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Rhinagrion_mima_____________ ??GGAAGAACGAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACUCCUGGCUGAGGGCCGGC[-            ]??????????????
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Sciotropis_cyclanthorum_6???????????????????????????????????????????????????? ????????????????
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Heteragrion_mitratum________ ???????????AAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-            ]????????CGCCGA
CCUCAGAGCAGGUGAGACCAC
Heteragrion_sp_6735213______ ?????????????????????????????????????????????????????????????????????
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Oxystigma_cyanifrons_ZOC____ ?????????????????????????????????????????????????????????????????????
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ZDP_Dimeragrion_percubital?????????????????????????????????????????????????????????????????????
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Tatocnemis_malgassica_ZTMa?????????????????????????????????????????????????????????????????????
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Philogenia_cassandra________ ???????????AAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCUCAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-            ]????????CGCCGA
CCUCAGAGCAAGUG-------
ZPT_Philogenia_terraba______ ?????????????????????????????????????????????????????????????????????
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ZPBn_Philogenia_bernice_____ ?????????????????????????????????????????????????????????????????????
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Teinopodagrion_venale_FN356175                 --------------CCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-            ]??????????????
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Teinopodagrion_lepidum_ZTL?????????????????????????????????????????????????????????????????????
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Amanipodagrion_gilliesi_____ ?????????????????????????????????????????????????????????????????????
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Nesolestes_elizabethae_ZNE?????????????????????????????????????????????????????????????????????
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Protolestes_kerckhoffaeZPK?????????????????????????????????????????????????????????????????????
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Argiolestes_ochrostomasZAO?????????????????????????????????????????????????????????????????????
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Argiolestes_sidonia_605_____ ?????????????????????????????????????????????????????????????????????
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Caledopteryx_maculata_669?????????????????????????????????????????????????????????????????????
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Trineuragroin_percostale____ ?????????????????????????????????????????????????????????????????????
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Caledargiolestes_uniserie?????????????????????????????????????????????????????????????????????
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Podopteryx_roseonotata_ZPR?????????????????????????????????????????????????????????????????????
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Austroargiolestes_icterom?????????????????????????????????????????????????????????????????????
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Griseargiolestes_albescens?????????????????????????????????????????????????????????????????????
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Griseagriolestes_eboracus?????????????????????????????????????????????????????????????????????
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Miniargiolestes_minimusZMM?????????????????????????????????????????????????????????????????????
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Lestomima_flavostigma_OPB?????????????????????????????????????????????????????????????????????
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Rhipidolestes_hiraoi_AB706494                  --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-            ]??????????????
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Rhipidolestes_aculeatus_AB706474               --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-            ]??????????????
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Paraphlebia_zoe_____________ ???
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Thaumatoneura_inopinata_____ ???
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Hypolestes_clara_HYP________ ???
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Hypolestes_sp_EU055183______ ???
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Agriomorpha_fusca_ZAF6______ ???
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Sinocnemis_yangbingi_ZSY____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Miocora_peraltica_ZMP_______ ???
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Cora_marina_POL_OCMr________ ?? ???????????????
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Cora_cyane_6775217__________--AAAGAAAGAAAUUCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCUAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCAGCCCUCGGAUU-UUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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Polythore_spZ   ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Polythore_boliviana_BPB_____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Euthore_fasciata_AJ746325   --------------CCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUC-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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Rimanella_arcana____________-GAAAGAAAGAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]--UCUUUUCGCCGA
CCUCAGAGCAGGUG???????
Pentaphlebia_stahli_AJ746324   --------------CCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
Devadatta_podolestoides_FN356078   --------------CCUAAACGGGGGAUCACUCGGUUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUUGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGUUGAGGGCCGGN[-   ]??????????????
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Amphipteryx_longicaudata____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Pseudolestes_mirabilis_68???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Philoganga_vetusta__________ UAAAGGAAAUGAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]--UCCGAACGCCGA
CCUCAGAGCAGGUG???????
Philoganga_robusta_PGN______ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Lestoidea_conjuncta_664_____ ???
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Diphlebia_lestoides_________ AAAUUAAAAGAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
Diphlebia_coerulescen_AY7???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
?????????????????????
Bayadera_melanopteryx_______ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Bayadera_brevicauda_638_____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
?????????????????????
Dysphaea_gloriosa___________ ???????????AAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]????????CCCCGA
CCUCAG???????????????
Euphaea_formosa_EU603676   --------------CCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCUCAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
Anisophaea_decorata_________ AAAUAUAUCCAAAUUCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCUCAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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Anisopleura_sp_A____________ ???
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Disparocypha_biedermanni____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Libellago_semiopaca_657_____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Heliocypha_biseriata_650____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Platycypha_caligata_________ ??CAAAAAUCGAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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Chlorocypha_curta_CHL_______ AAAUGAGAUCGAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-   ]GAUCGCUACGCCGA
CCUCAGAGUAGGUGAGACCAC
Sundacypha_petiolata_CHL____ ???
???-?????????????????????-?????????????????????????????????[-   ]-CUCGAGACGCCGA
CCUCAGAGUAGGUGAGACCAC

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Rhinocypha_fenestrella_CHL?????????????????????????????????????????????????????????????????????
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Rhinocypha_tincta_60351 AUCGCAUGAAAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGG?[-            ]??????????????
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Heliocharis_amazona_AJ746326                     --------------CCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-            ]??????????????
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Hetaerina_americana_________--AAAGACAGAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-            ]UUCAUUUGGGCCGA
CCUCAGAGCAGGUG???????
Calaphaea_confusa___________-GAACGAAAGAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-            ]UUUCUAUGCGCCGA
CCUCAGAGCAGGUG???????
Noguchiphaea_yoshikoae______ ???????????AAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-            ]????????CGCCGA
CCUCAGAGCAGGUG-------
Vestalis_beryllae_JQ341027                       ----------------UAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCUUGGCUGAGGGCCGGC[-            ]??????????????
?????????????????????
Matrona_basilarisAB706437                        --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGUUACGCCUGGCUGAGGGCCGGC[-            ]??????????????
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Atrocalopteryx_AtrAtA        --UG-GAUAGAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCUCAUUGCAGCCCACGGAUU-CUGUUCCCGGGUUACGCCUGGCUGAGGGCCGGC[-            ]UUUCUUUACGCCGA
CCUCAGAGCAGGUG???????
Echo_modesta_AJ458984                            --------------CCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-            ]??????????????
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Neurobasis_ianthinipennis?????????????????????????????????????????????????????????????????????
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Sapho_orichalcea____________--UGAGACAGAUAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGUUACGCCUGGCUGAGGGCCGGC[-            ]UUUCAAAGCGCCGA
CCUCAGAGCAAGUG???????
Calopteryx_amata_AJ308361                        --------------CCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGUUACGCCUGGCUGAGGGCCGGC[-            ]??????????????
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AJ459186Calopteryx_splend??UGAGACAGAUAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGUUACGCCUGGCUGAGGGCCGGC[-            ]UUUCUUUACGCCGA
CCUCAGAGCAGGUG???????
Calopteryx_aequabilis_______--UGAGACAGAUAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGUUACGCCUGGCUGAGGGCCGGC[-            ]UUUCUUUACGCCGA
CCUCAGAGCAGGUGAGGGUA?
Iridictyon_myersi___________ ???AAGGCAGAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCUCAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-            ]UUU-GUUGCGCCGA
C????????????????????
Iridictyon_trebbaui          ?????????????????????????????????????????????????????????????????????
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Unaligned_lestoid ???
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Nubiolestes_diotima_________ ???
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Perilestes_kahli_683522???
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Perissolestes_remotus_682???
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Perissolestes_magellenae____ ???
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Chlorolestes_umbrata________ ???
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Euchlorolestes_tessellata???
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Phylolestes_ethelae_________ ???
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Synlestes_weyersii_6265 ???
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Synlestes_tropicus__________ ???
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Chorismagrion_risi_6655 ???
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Episynlestes_cristatus______ ???
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Episynlestes_albicauda_61???
???-????????????????????-?????????????????????????????????[-   ]??????????????
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Megalestes_micans___________ ???
???-????????????????????-?????????????????????????????????[-   ]??????????????
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Megalestes_kurahashii_______ ???
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Orolestes_octomaculatus_____ ???
???-????????????????????-?????????????????????????????????[-   ]??????????????
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Austrolestes_annulosus_61???
???-????????????????????-?????????????????????????????????[-   ]??????????????
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Sympecma_paediscaAB706425 --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGUAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-]??????????????
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Sympecma_fusca______________ ???
???-?????????????????????-?????????????????????????????????[-]??????????????
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Austrolestes_analis_AB706402 --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-]??????????????
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Indolestes_peregrinus_AB706406 --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-]??????????????
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Indolestes_cyaneus_DIC AUGAAAAAACGUAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-]??????????????
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Chalcolestes_viridis________-----AAAACGUAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAUUGUGAACUGCAGGACACAUGAACAUCGACGCUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCUACGCCUGGCUGAGGGCCGGC[-]?UUCAUUUUGCCGA
CCUCAGAGCAGU?????????
Archilestes_grandis_645_____ ???
???-?????????????????????-?????????????????????????????????[-]??????????????
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Lestes_rectangularis_OLR____ ???
???-?????????????????????-?????????????????????????????????[-]??????????????
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Lestes_eurinus______________???
???-?????????????????????-?????????????????????????????????[-]??????????????
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FN356183Hemiphlebia_________ ???
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Unaligned_Anisoptera ???
???-?????????????????????-?????????????????????????????????[-]??????????????
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Epiophlebia_superstes_AB706667 --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUU-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-]??????????????
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Epiophlebia_laidlawi ???
???-?????????????????????-?????????????????????????????????[-]??????????????
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Unaligned_Aeshnids ???
???-?????????????????????-?????????????????????????????????[-]??????????????
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FN356039Archipetalia_aur____ ??ACGAAAAAAUAUCCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUU-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-]??????????????
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Austropetalia_victoria______ ???
???-?????????????????????-?????????????????????????????????[-]??????????????
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Hypopetalia_pestilens_______ ???
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FJ596639_Phyllopetalia_api???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Phyllopetalia_apollo_684____ ??
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??????[-   ]???????????????????????????????????
Eurypetalia_altarensis______ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Ophiopetalia_diana__________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Gomphaeschna_furcilata______ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Oligoaeschna_pryeri_________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Austroaeschna_parvistigma???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Telephlebia_tillyardi_______ ???
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Boyeria_vinosa_OBV_________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Boyeria_irene_FN356042______ ??AGAAAGCAAUAUCCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAAAUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCCCAUUGCGGCCCACGGAUU-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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Brachytron_pratense_FN356043   --------------CCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAAAUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCCCAUUGCGGCCCACGGAUU-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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Epiaeschna_heros____________ ???
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DQ008197_Caliaeschna_micro???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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DQ008199_Anaciaeschna_iso???
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GQ118262_Oplonaeschna_sp____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Aeshna_canadensis_OAC_______ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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EU055147_Rhionaeschna_mult???
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Aeshna_cyanea_FN356031                             --------------CCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAA CGCAGCAAAAUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCCCAUUGCGGCCCACGGAUU-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-            ]??????????????
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FJ596630_Aeshna_grandis_____ ?????????????????????????????????????????????????????????????????????
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FN356092_Gynacantha_bulla??UUCGAGCANUUUCCUAGACGGNGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCANCAANAUGCGC
GUCGAAGNGUGAACUGCNGGACACAUGAACAUCGACGUUUCNAAC-GCCCAUUGCGGCCCACNGAUU-CUGUUCCCGGGCCACGCCUGGCUGAGGNCCGGC[-            ]??????????????
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Austrogynacantha_heteroge?????????????????????????????????????????????????????????????????????
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FN356093_Hemianax_ephippig??CUAGAGCAAUUUCCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAG-AAAAUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCCCAUUGCAGCCCACGGAUU-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-            ]??????????????
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Anax_junius_AB706705                               --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAAAUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCCCAUUGCGGCCCACGGAUU-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-            ]??????????????
?????????????????????
FN356035_Anax_imperator_____ ?-AUCGAGCAAUUUCCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAAAUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCCCAUUGCGGCCCACGGAUU-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-            ]??????????????
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Unaligned_gomphid            ?????????????????????????????????????????????????????????????????????
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Sinogomphidia_kruegeri______ ?????????????????????????????????????????????????????????????????????
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Ictinogomphus_australis_6_?????????????????????????????????????????????????????????????????????
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Ictinogomphus_sp____________ ??AUAAGAAAUUAUCCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUC-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-            ]??????????????
?????????????????????
FN356120_Lindenia_tetraph??CUAAAAAAUUAUCCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUC-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-            ]??????????????
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Phyllogomphoides_stigmatus?????????????????????????????????????????????????????????????????????
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Progomphus_obscurus_________ ?????????????????????????????????????????????????????????????????????
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Progomphus_borealis_633_____ ?????????????????????????????????????????????????????????????????????
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Hagenius_brevistylus_OHB____ ?????????????????????????????????????????????????????????????????????
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Lanthus_vernalis____________ ?????????????????????????????????????????????????????????????????????
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Davidius_nanus_DQ010047_____ ????????????????????????????CACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUC-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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Neogomphus_edenticulatus____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Armagomphus_armiger_613_____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Hemigomphus_comitans_AHC____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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FJ596622_Hemigomphus_heter???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Hemigomphus_magela_5935 ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Trigomphus_sp_FN356176______ ??UUAAAAAUAUAUCCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUC-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGG?[-   ]??????????????
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FJ596615_Lanthus_albistylu???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Stylogomphus_shirozui_AB706862   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUC-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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Davidioides_martini_648_____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Burmagomphus_collaris_______ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Cyclogomphus_heterostylus???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Anisogomphus_pinr_FN356037??UGAAAGACGUAUCCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUC-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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Dromogomphus_spinosus_______ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Arigomphus_villosipes_______ ???
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Arigomphus_cornu_DQ008188???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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FJ712319_Stylurus_intricat???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Stylurus_amnicola___________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Stylurus_nagoyanus_AB706873   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUC-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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DQ008184_Gomphus_externus???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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GomphusAsiagomphus_melaenops?????aaaacauauccuagacgguggaucacucggcucguggaucgaugaaggacgcagcaaacugcgc
gucgaagugugaacugcaggacacaugaacaucgacguuucgaac-gcacauugcggcccacggauc-cuguucccgggccacgccuggcugagggccggc[-   ]??????????????
?????????????????????
DQ008187_Gomphus_exilis_____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Gomphus_Phanogomphus_grasl???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Gomphus_adelphus____________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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FN356091_Gomphus_vulgatis??GAAAAAAAAUAUCCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUC-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
FN356132_Megalogomphus_sp??UAAAAAAAAUAUCCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUC-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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Onychogomphus_uncatus_______ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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FN356138_Onychogomphus_for??UAUAAAAAUUAUCCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUC-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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A_FJ712322_Onychogomphus_s???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Ophiogomphus_carolus________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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FJ596618_Ophiogomphus_sev???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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FN356139_Ophiogomphus_caec??UGUUAAAAAUAUCCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUC-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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Leptogomphus_elegans________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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FJ596609_Leptogomphus_saut???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Epigomphus_compactus________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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FJ712323_Microgomphus_chel???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Heliogomphus_retroflexus____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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FN356121_Macrogomphus_para??AUGGAUGUCUAUCCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCAAAGUGUGAACUGCAGGACACAUGAACAUUGAUGUUUCGAAC-GCACAUUGCGGCCCACGGAUC-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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Ceratogomphus_pictus _______ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Lestinogomphus_angustus_____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Austrogomphus_guerini_______ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Austrogomphus_amphiclitus???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Antipodogomphus_acolythus???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Unaligned_Petaluridae   ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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FN356174_Tanypteryx_sp______ ??AACGAAAAAUAUCCUUGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUU-CUGUUCCCGGGCCA CGGCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
FN356174_Tanypteryx_sp______ ??AACGAAAAAUAUCCUUGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUU-CUGUUCCCGGGCCACGGCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
Tanypteryx_pryeri_AB706906   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUU-CUGUUCCCGGGCCACGGCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
FN356173_Tachopteryx_thor??AAGAAAAAAUAUCCUUGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUU-CUGUUCCCGGGCCACGGCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
Phenes_raptor_AY338720______ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Phenes_centralis_OPR________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Uropetalura_carvori_________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Petalura_hesperia___________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Petalura_gigantea_EU05515???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Petalura_litolae____________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Petalura_ingentissima_______ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Zoraena_bilineata___________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Taeniogaster_obliqua________ ?? ??????????????
???-?????????????????????-?????????????????????????????????[-   ]??????????????
?????????????????????
Kalyptogaster_erronea_______ ???????????????????ACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC GUCGAAGUGUGAACUGCAGGACACUUGA-
UAUCG???????????-?????????????????????-?????????????????????????????????[-   ]??????????????
?????????????????????
FJ712317_Cordulegaster_mac???????????????????ACUGUGGAUCACUCGGCUCGUGGAUCGAUGANNAACGCAUNANACUGCNC
GUNNAANUNUGAACUGNAUGACACUUG??????????????????-?????????????????????-?????????????????????????????????[-   ]??????????????
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EU055179_Cordulegaster_dor???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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FN356072_Cordulegaster_bol??UGAAAAACAUAUCCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUU-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
DQ008198_Cordulegaster_pic???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Anotogaster_sieboldii_AB706941   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUU-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
Neopetalia_punctata_________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Chloropetalia_soarer________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Sinorogomphus_nasutus_______ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Chlorogomphus_brunneus_EU???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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FN356060_Chlorogomphus_sp??GAAAAAUAAUAUCCUAGACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUU-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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Synthemis_eustalacta________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Synthemis_marcrostigma_EU???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Archaeosynthemis_leachii____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Eusynthemis_brevistyla______ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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FJ596573_Eusynthemis_gutta???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Eusynthemis_nigra_EU05516???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Choristhemis_flavotermina???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Synthemiopsis_gomphomac_____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Gomphomacromia_chilensis____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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FJ712318_Gomphomacromia_p???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Syncordulia_serendipator____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Syncordulia_venator_________ ???
???-?????????????????????-?????????????? ???????????????????[-   ]??????????????
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Idionyx_imbricata_EU05518???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Idionyx_selysi______________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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FN356129_Macromidia_rapi____ ??GAAAAAUCAUAUCCUAUACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUU-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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FN356186_Oxygastra_curtis???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Cordulephya_pygmaeaEU0551???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Pseudocordulia_circularis???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Hesperocordulia_berthoudi???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Lathrocordulia_metallica____ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Micromidia_convergens_EU0???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Micromidia_atrifrons________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Austrophya_mystica__________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
?????????????????????
Austrocordulia_refracta_____ ???????????????
???-?????????
????????????-?????????????????????????????????[-   ]????????????????????????????????????
Archaeophya_magnifica_______ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Epophthalmia_elegans_AB706979   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCAAGGAAUCCCAUUCCCGGGCCACGUCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
FN356079_Didymops_transve??UUGAAGCAUUAUCCUAUACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAAUCCCAUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
FN356124_Macromia_illinoie??GAAGCGCAUUAUUCUAUACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCAAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAAUCCCAUUCCCGGGCCACGCCUGUCUGAGGCCCGGC[-   ]??????????????
?????????????????????
Macromia_amphigena_AB706986   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAAUCCCAUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
Macromia_eurynome_EU05519???
???-???[-   ]??????????????
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Macromia_magnifica_FN356125   --------------CCUAUCCGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGACCAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGANUCCCAUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
FN356128_Macromia_splende??UUUAAGCAUUAUCCUAUACGGUGGAUCACUUGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAAUCCCAUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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FN356146_Phyllomacromia_ny??UUUGAAAUUUAUCCUAUACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAAUCCCAUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
Idomacromia_proavita________ ???
???-???[-   ]??????????????
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Aeschnosoma_forcipula_______ ???
???-???[-   ]??????????????
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Pentathemis_membranulata____ ???
???-???[-   ]??????????????
?????????????????????
Tetragoneuria_cynosure______ ???
???-???[-   ]??????????????
?????????????????????
Tetragoneuria_costalis______ ???
???-???[-   ]??????????????
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Tetragoneuria_canis_________ ???
???-???[-   ]??????????????
?????????????????????
Epicordulia_princeps________ ???
???-???[-   ]??????????????
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Epitheca_marginata_AB707006   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUU-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
FN356087_Epitheca_bimacul??GGCAAAUUGCAUCCUAUAUGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCUCGGAUU-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
Rialla_villosa______________ ???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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FN356074_Cordulia_aenea_____ ??UAAAAAUCGCAUCCUAUACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUU-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
Cordulia_shurtleffii_EU05???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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FN356163_Somatochlora_alpe??CUAAAAUUGCAUCCUAUACGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCAAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUU-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
Somatochlora_flavomac_1242???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Somatochlora_metallica_AB707038   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCAAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGCCCACGGAUU-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
?????????????????????
FJ010028_Somatochlora_tene???
???-?????????????????????-?????????????????????????????????[-   ]??????????????
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Hemicordulia_mindana_AB707008   --------------------CGGUGGAUCACUUGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCAGCCCACGGAUU-CUGUUCCCGGGCCACGCCUGGCUGAGGGCCGGC[-   ]??????????????
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Hemicordulia_australiae_E???
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Procordulia_jacksoniensis???
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Unaligned_Libellulid   ???
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FJ596583_Notiothemis_rober???
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FJ596578_Tetrathemis_irreg???
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Tetrathemis_polleni_________ ???
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FJ596587_Urothemis_signata???
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Urothemis_assignata_________ ???
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Macrodiplax_cora_AB707101   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-   ]??????????????
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Macrodiplax_balteata_EU05???
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Zyxomma_elgneri_____________ ???
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Zyxomma_petiolatum_AB707346   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-   ]??????????????
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FN356181_Zygonyx_ida________ ??GAAAAAUCCUAUCCUAUGCGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGCGUCGAAGGU-GAACUGCAG-
ACACAUGAACAUUGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-   ]???????????????????????????????????
Nannophlebia_sp_EU055138____ ???
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Bironides_sp________________ ???
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Huonia_epinephela___________ ???
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Huonia_oreophila____________ ???
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Onychothemis_testacea_______ ???
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Rhyothemis_variegata_AB707219   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGG-[-   ]??????????????
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Rhyothemis_fuliginosa_AB707215   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-   ]??????????????
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Miathyria_marcella__________ ???
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Miathyria_simplex   ???
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FJ596577_Tholymis_citrina???
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Tholymis_tillargaAB707302   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-   ]??????????????
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Pantala_flavescens_GU323034   --------------CCUAUGCGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-   ]??????????????
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Tramea_lacerata_AB707308   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-   ]??????????????
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Tramea_calverti_____________ ???
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EF636452_Sympetrum_jAneAe   ????????????????????CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCAAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGG?????[-   ]??????????????
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EF636437_Sympetrum_obtrusu?????????????-??????CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCAAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGG?????[-   ]??????????????
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DQ008201Sympetrum_vulgatum?????????????-??????CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCAAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGG?????[-   ]??????????????
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FN356171_Sympetrum_pedemon?UAAAAAUCCUAU-CCUAUGCGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCAAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-   ]??????????????
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Sympetrum_Nesogonia_blackb?????????????-???
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Sympetrum_sanguineum_JQ772565   --------------------------AUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCAAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGG-----[-   ]??????????????
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Sympetrum_corruptum_JQ772548   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGG-----[-   ]??????????????
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Sympetrum_fonscolombiiJQ772554   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGG-----[-   ]??????????????
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Sympetrum_illotum_iJQ772556                    --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCC-------------------------[-            ]??????????????
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Sympetrum_infuscatum_JQ772557                  --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAARAACGCAGCAAACUGCGC
GUCAAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGG-----[-            ]??????????????
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EU743621_Sympetrum_danae     ?????????????-??????CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCAAAGUGUGAACUGCA???????????????????????????-?????????????????????-?????????????????????????????????[-            ]??????????????
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Sympetrum_meridionale_JQ772561                 --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCAAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGG-----[-            ]??????????????
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Leucorrhinia_pectoral_0610------AUCCUAU-CCUAUGCGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGCGUCGAAG-
GUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-            ]-----?---GCCUA
CCUCAGAGCAGGCGAGAUCAC
Leucorrhinia_glacialis_AF549574                --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCA----------------------------------------[-            ]??????????????
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AF549602_Celithemis_elisa            --------------------CGGUGGAUCACUCGGCUCGUGGCUCGAUGAAAAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCA----------------------------------------[-            ]??????????????
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Celithemis_eponina_AF549603          --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCA----------------------------------------[-            ]??????????????
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Brachymesia_gravida_________ ?????????????-???????????????????????????????????????????????????????
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Brachymesia_herbida          ?????????????????????????????????????????????????????????????????????
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Brachythemis_leucosticta____ ?????????????-???????????????????????????????????????????????????????
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Brachythemis_contaminata_AB707056              --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-            ]??????????????
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Deielia_phaon_AB707069                         --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-            ]??????????????
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Pachydiplax_longipennis_____ ?????????????-???????????????????????????????????????????????????????
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AY750042_Erythemis_sp_coll?????????????-???????????????????????????????????????????????????????
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FN356030_Acisoma_panorpoi?AGAAAAUCCUAU-CCUAUGCGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-            ]??????????????
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Erythrodiplax_minuscula_E?????????????-???????????????????????????????????????????????????????
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Erythrodiplax_basalis_______ ?????????????-???????????????????????????????????????????????????????
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Crocothemis_servilia_AB711399                  --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-            ]??????????????
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DQ008200_Crocothemis_eryt?????????????-???????????????????????????????????????????????????????
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FJ596590_Rhodothemis_rufa?????????????-???????????????????????????????????????????????????????
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FN356136_Neurothemis_fulvi?AGAAAAUCCUAU-CCUAUGCGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-            ]??????????????
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Neurothemis_ramburii_AB707114                  --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-            ]??????????????
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FN356080_Diplacodes_lefebv?AGAAAAUCCUAU-CCUAUGCGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-            ]??????????????
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Diplacodes_trivialis_AB707073                  --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-            ]??????????????
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Bradinopyga_strachani_______ ?????????????-???????????????????????????????????????????????????????
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Brachydiplax_denticauda_E?????????????-???????????????????????????????????????????????????????
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Brachydiplax_chalybea_AB707054                 --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-            ]??????????????
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FN356059_Chalcostephia_fl?UAAAAAUCCUAU-CCUAUGCGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-            ]??????????????
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Micrathyria_aequalis________?????????????-???????????????????????????????????????????????????????
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Micrathyria_atra____________ ?????????????-???????????????????????????????????????????????????????
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Micrathyria_didyma           ?????????????????????????????????????????????????????????????????????
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Uracis_imbuta_______________ ?????????????-???????????????????????????????????????????????????????
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Uracis_infumata_____________ ?????????????-???????????????????????????????????????????????????????
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Nannophya_pygmaea_AB707108   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGGACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-   ]??????????????
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Nannothemis_bella___________ ?????????????-???
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Paltothemis_lineatipes______ ?????????????-???
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Brechmorhoga_mendax_________ ?????????????-???
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Brechmorhoga_praedatrix   ???
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Dythemis_fugax______________ ?????????????-???
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Trithemis_aurora_EU055203?????????????-???
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Trithemis_africana__________ ?????????????-???
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FN356177_Urithemis_arterio?AGAAAAUCCUAU-CCUGUGCGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-   ]??????????????
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Perithemis_tenera___________--------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCA??????-?????????????????????????????????[-   ]??????????????
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Perithemis_intensa_EU0551?????????????-???
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Perithemis_lais_GU196362   ???
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FN356143Palpopleura_sp______ ?AGAAAAUCCUAU-CCUAUGCGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-   ]??????????????
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FJ596579_Diastatops_pullat?????????????-???
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Zenithoptera_fasciata_______ ?????????????-???
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Neodythemis_afra_pauli?????????????-???
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FN356162_Selysiothemis_nig?AGUAAAUCCUAU-CCUAUGCGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-   ]??????????????
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FN356179_Urithetrum_navasi?AGAAAAUCCUAU-CCUAUGCGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAACGGCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-   ]??????????????
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Porpax_risi_________________ ?????????????-???
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FN356133_Micromacromia_cam?AGAAAAUCCUAU-CCUAUGCGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-   ]??????????????
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Allorrhizucha_preussi_FN356034   --------------CCUAUGCGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-   ]??????????????
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Neodythemis_klingi__________ ?????????????-???
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FJ596575_Hadrothemis_infes?????????????-???
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FJ596595_Thermorthemis_mad?????????????-???
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Agrionoptera_insignis_AB707047   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-   ]??????????????
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FJ596593_Cratilla_metallic?????????????-???
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Pseudoleon_superbus_________ ?????????????-???
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FJ596597_Orthemis_cultrifo?????????????-???
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Orthemis_ferruginea_________ ?????????????-???
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DQ008203_Orthetrum_albi_____ ?????????????-???
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Orthetrum_pruinosum_AB781489   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-   ]??????????????
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Orthetrum_coerulescens______ ?????????????-???
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FJ596600_Lyriothemis_elega?????????????-???
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DQ008205_Ladona_fulva_______ ?????????????-???
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Ladona_julia________________ ?????????????-???
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DQ008204_Ladona_depressa____ ?????????????-???
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Plathemis_subornata_________ ?????????????-???
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Plathemis_lydia_____________ ?????????????-???
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FN356119_Libellula_quadrim?AGAAAAUCCUAU-CCUAUGCGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-   ]??????????????
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Libellula_angelina_AB707090   --------------------CGGUGGAUCACUCGGCUCGUGGAUCGAUGAAGAACGCAGCAAACUGCGC
GUCGAAGUGUGAACUGCAGGACACAUGAACAUCGACGUUUCUAAC-GCACAUUGCGGCCCAAGGAUC-CCAUUCCCGGGCCACGCCUGGCUGAGGGCAGGC[-   ]??????????????
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Libellula_Eolibellula_semi???
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AY338717_Libellula_saturat???
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Libellula_Eotainia_composi???
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LPU65109_Libellula_pulchel???
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Libellula_Holotania_comanc???
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Libellula_Holotania_auripe???
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Libellula_Holotania_axilen???
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Libellula_Holotania_luctuo???
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Aethriamanta_rezia_GU196369???
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Tetrathemis_corduliformis   ???
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Diplacina_ismene_GU196366   ???
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Erythemis_vesiculosa         ?????????????????????????????????????????????????????????????????????
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Nannophyopsis_clara          ?????????????????????????????????????????????????????????????????????
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Oligoclada_amphinome         ?????????????????????????????????????????????????????????????????????
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Idiataphe_sp_HOL_2010        ?????????????????????????????????????????????????????????????????????
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Atoconeura_sp_HOL_2010       ?????????????????????????????????????????????????????????????????????
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Elga_leptostyla              ?????????????????????????????????????????????????????????????????????
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Fylgia_amazonica             ?????????????????????????????????????????????????????????????????????
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Hemistigma_albipunctatum     ?????????????????????????????????????????????????????????????????????
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Porpacithemis_sp_            ?????????????????????????????????????????????????????????????????????
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Thermochoria_equivocata      ?????????????????????????????????????????????????????????????????????
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Malgassophlebia_bispina      ?????????????????????????????????????????????????????????????????????
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Micromacromia_zygoptera      ?????????????????????????????????????????????????????????????????????
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Argyrothemis_argentea        ?????????????????????????????????????????????????????????????????????
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Pseudothemis_zonata          ?????????????????????????????????????????????????????????????????????
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Oxythemis_phoenicosceles     ?????????????????????????????????????????????????????????????????????
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Olpogastra_lugubris          ?????????????????????????????????????????????????????????????????????
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Misagria_parana              ?????????????????????????????????????????????????????????????????????
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Unaligned_Outgroups ???
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Ephemerella_readeri_JN089186 --------------UCUCAGCAACGGAUAUCUUGGCUCUUGCAACGAUGAAGAACGCAGCGAAAUGCGA
UACGUAGUGUGAAUUGCAGnnnnnnUGAnnAUCGAGUUUUUGAAC-GCAAGUUGCGCCCGAGG-----CUCGUCCGAGGGCAUUCCUGCCAGAGCGUCAUC[-   ]??????????????
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Paraleptophlebia_sp_________ ???
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Anthopotamus_sp_____________ ???
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Caenis_luctuosa_____________ ???
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Ephemera_sp_________________ ???
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Callibaetis_sp_AY749925_____ ???
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Callibaetis_ferrugine_______-------GCACAACCCCGAACGGUGGAUCACUUGGCACGUGGGUCGAUGAAGAACGCCGCAAACUGCGC
GUCGGCAUGUGAACUGCAGGACACAUGAACAUCGACAUUUC GAAC-GCACAUUGCGGGUUUCGGAUC-CCGUCCGUAACCCACGCCUGGCCGAGGGUCGCA[-   ]?????????CGCGA
CCUCGGAUCAGGCGAGACUAC
Baetis_buceratus____________ ???
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Hexagenia_rigida____________ ???
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Cloeon______________________ ???
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Leucrocuta_aphrodite________ ???
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Centroptilum_luteolum_______ ???
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Stenonema_sp________________ ???
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Trigoniopthalmus_altern_____ ???
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Allomachilis_froggart_______ ???
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EF199981_Machilis_hrabei____ ???
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Dilta_littoralis____________ ??????????????????????????????????????????????????????????????????????
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Ctenolepisma_longicaudata-------ACACAACCCUGAACGGUGGAUCACUUGGCUCGUGGGUCGAUGAAGAACGCAGCUAGCUGCGU
GACUAUAUGUGAACUGCAGGACACAUGAACAUCGUCGUUUCGAAC-GCACAUUGCGACUCA-GGAUC-CUUUUCCUGGGUCACACCUGUCUGAGGGUCGGC[-            ]---------CGCGA
CCUCAGAUUAGGUGAGAUUAC
Lepisma_sp__________________ ??????????????????????????????????????????????????????????????????????
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EU376048_Lepisma_saccharin??????????????????????????????????????????????????????????????????????
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Thermobia_domestica_AJ577259         --------------CAAUUCUCUAGCCUGGGCCGGCGCAAGGCUGGCUGGCGAACAAGGUAAU-UGGGC
CUCUGAGUUUUGUACACAnnnnnnnnnnnnUCGAAGCAUUCAGG-CCGAACGAGGGUUUUUGGAGUUCAAUUCUCUAGCCUGGGCCGGCGCAAGGCUGGC[-            ]??????????????
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Tricholepidion_gertschi_____ ??????????????????????????????????????????????????????????????????????
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Gromph_laevigata_AY210820??????????????????????????????????????????????????????????????????????
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CCUCAGAUCAGGCGCGACUAC
Isoperla_davisi_AY121148____ ??????????????????????????????????????????????????????????????????????
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EU414717_Isoperla_sp________ ??????????????????????????????????????????????????????????????????????
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Gomphocerinae_sp_AY859546                      --------------CCAGGACGGUGGAUCACUCGGCUCGUGGGUCGAUGAAGAACGCAGCAAAUUGCGC
GUCGACAUGUGAACUGCAGGACACAUGAACAUCGACGUUUCGAAC-GCACAUUGCGGUCCAUGGAUU-CCGUUCCCGGGCCACGUCUGGCUGAGGGUCGGC[-            ]??????????????
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Unaligned___________________ 0000000000000000000000000000000000000000000[-    ]
Unaligned_Zygoptera          ????????????????????????????????????????-??[-    ]
Protosticta_sp_A_ZPA         ????????????????????????????????????????-??[-    ]
ZPCs_Protosticta_curiosa     ????????????????????????????????????????-??[-    ]
Protosticta_sanguinostigm    ????????????????????????????????????????-??[-    ]
ZSOg_Sinosticta_ogatai       ????????????????????????????????????????-??[-    ]
Palaemnema_paulicoba         ????????????????????????????????????????-??[-    ]
Palaemnema_domina_ZPDm       ????????????????????????????????????????-??[-    ]
Palaemnema_melanostigma_6    ????????????????????????????????????????-??[-    ]
Isosticta_robustior_666Rhadi ????????????????????????????????????????-??[-    ]
nosticta_simplex_612         ????????????????????????????????????????-??[-    ]
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Amphisticta_silvarum            ????????????????????????????????????????-??[-    ]
Labidiosticta_vallisi_AY7       ????????????????????????????????????????-??[-    ]
Orosticta_filiciola             ????????????????????????????????????????-??[-    ]
Platycnemis_pennipes            ????????????????????????????????????????-??[-    ]
Copera_annulata                 ????????????????????????????????????????-??[-    ]
Copera_vittata_6585198          ????????????????????????????????????????-??[-    ]
Copera_marsouipes               ????????????????????????????????????????-??[-    ]
Coeliccia_albicauda             CCGCUGAAUUUAAGCAUAUUAAUAAGCGGAGGAAAAGAAA-UU[-    ]
Coeliccia_cyanomelas_636        ????????????????????????????????????????-??[-    ]
Calicnemia_miles                ????????????????????????????????????????-??[-    ]
Prodasineura_vitatta            ????????????????????????????????????????-??[-    ]
Chlorocnemis_abboti             ????????????????????????????????????????-??[-    ]
Nososticta_solida_61451         ????????????????????????????????????????-??[-    ]
Phylloneura_westermanni_6       ????????????????????????????????????????-??[-    ]
Onychargia_atrocyana_ZOA        ????????????????????????????????????????-??[-    ]
Argia_moestaArgia_nahuana_68    ????????????????????????????????????????-??[-    ]
15221                           ????????????????????????????????????????-??[-    ]
Argiocnemis_rubescens_ZAR       ????????????????????????????????????????-??[-    ]
Mortonagrion_binocellata        ????????????????????????????????????????-??[-    ]
Agriocnemis_pygmea_6095         ????????????????????????????????????????-??[-    ]
Austroagrion_watsoni            ????????????????????????????????????????-??[-    ]
Archibasis_viola_ZAVC_puella    ????????????????????????????????????????-??[-    ]
_AJ488546                       -------------------------------------------[-    ]
Coenagrion_resolutum            ????????????????????????????????????????-??[-    ]
Pseudagrion_cingillum           ????????????????????????????????????????-??[- ]
Pseudagrion_aureofrons_61       ????????????????????????????????????????-??[- ]
Pseudagrion_ignifer             ????????????????????????????????????????-??[- ]
Erythromma_najas_1238           ????????????????????????????????????????-??[- ]
Cercion_plagiosum_AJ488552      -------------------------------------------[- ]
Cercion_lindenii_AJ488550       -------------------------------------------[- ]
Paracercion_calamorum           ????????????????????????????????????????-??[- ]
Acanthagrion_quadratum          ????????????????????????????????????????-??[- ]
ZLV_Leptobasis_vacillans        ????????????????????????????????????????-??[- ]
Amphiagrion_saucium             ????????????????????????????????????????-??[- ]
Amphiagrion_abbreviatum_6       ????????????????????????????????????????-??[- ]
Xiphiagrion_cyanomelas_ZXC      ????????????????????????????????????????-??[- ]
WHH_Hesperagrion_heterodox      ????????????????????????????????????????-??[- ]
Ischnura_elegans_1239           ????????????????????????????????????????-??[- ]
Ishnura_barberi_5965136         ????????????????????????????????????????-??[- ]
Ischnura_graellsi_AJ488545      -------------------------------------------[- ]
Anomalagrion_hastatum           ????????????????????????????????????????-??[-     ]
Enallagma_parvum_AJ420939       CCGCUGAAUUUAAGCAUAUUAAUAAGCGGAGGAAAAGAAA-CU[-     ]
Enallagma_granti_AJ420937       CCGCUGAAUUUA-------------------------------[-     ]
E_nigridorsumAJ420938           CCGCUGAAUUUAA------------------------------[-     ]
Enallagma_cyathigerum_0110      CCGCUGAAUUUAAGCAUAUUAAUAAGCGGAGGAAAAUAAA-CU[- ]
Enallagma_sp_6005140            ????????????????????????????????????????-??[- ]
E_aspersum_DQ087506Aciagrion    -------------------------------------------[- ]
_pallidum                       ???????????????????????????????????????????[- ]
Aciagrion_borneence_ZAB         ????????????????????????????????????????-??[-    ]
Protoneura_capillaris_644       ????????????????????????????????????????-??[-    ]
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Protoneura_cara_ZPC
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FN356189_Psaironeura_remis     ????????????????????????????????????????-??[-    ]
Elattoneura_analis             GCGCUGAAUU---------------------------------[-    ]
Neoneura_aaroni                ????????????????????????????????????????-??[-    ]
Neaneura_amelia_ZNA            ????????????????????????????????????????-??[-    ]
Neoneura_maria_6425182         ????????????????????????????????????????-??[-    ]
Ceriagrion_aeruginosum         ????????????????????????????????????????-??[-    ]
Telebasis_salva_6325172Lepta   ????????????????????????????????????????-??[-    ]
grion_elongatum                ????????????????????????????????????????-??[-    ]
Leptagrion_sp                  ????????????????????????????????????????-??[-    ]
Metaleptobasis_manicaria       ????????????????????????????????????????-??[-    ]
Diceratobasis_sp_A_ZDA         ????????????????????????????????????????-??[-    ]
Pyrrhosoma_nymphula_1202       ????????????????????????????????????????-??[-    ]
Chromagrion_conditum           ????????????????????????????????????????-??[-    ]
Teinobasis_alluaudi            ????????????????????????????????????????-??[-    ]
Nehalenia_gracilis             ????????????????????????????????????????-??[-    ]
Coryphagrion_grandis           ????????????????????????????????????????-??[-    ]
Microstigma_rotunda            ????????????????????????????????????????-??[-    ]
Microstigma_anomalum_672       ????????????????????????????????????????-??[-    ]
Mecistogaster_ornata           ????????????????????????????????????????-??[-    ]
Mecistogaster_linearis_67      ????????????????????????????????????????-??[-    ]
Megaloprepus_caerulatus        ????????????????????????????????????????-??[-    ]
Haplostigma_modesta_ZHM        ????????????????????????????????????????-??[-    ]
Pseudostigma_aberans           ????????????????????????????????????????-??[-    ]
Rhinagrion_mima                ???????????????????????????GGAGGAAAAGAAA-CU[-    ]
Sciotropis_cyclanthorum_6      ????????????????????????????????????????-??[-    ]
Heteragrion_mitratum           CCGCUGAAUU---------------------------------[-    ]
Heteragrion_sp_6735213         ????????????????????????????????????????-??[-    ]
Oxystigma_cyanifrons_ZOC       ????????????????????????????????????????-??[-    ]
ZDP_Dimeragrion_percubital     ????????????????????????????????????????-??[-    ]
Tatocnemis_malgassica_ZTMa     ????????????????????????????????????????-??[-    ]
Philogenia_cassandra           -------------------------------------------[-    ]
ZPT_Philogenia_terraba         ????????????????????????????????????????-??[-    ]
ZPBn_Philogenia_bernice        ????????????????????????????????????????-??[-    ]
Teinopodagrion_venale_676      ????????????????????????????????????????-??[-    ]
Teinopodagrion_lepidum_ZTL     ????????????????????????????????????????-??[-    ]
Amanipodagrion_gilliesi        ????????????????????????????????????????-??[-    ]
Nesolestes_elizabethae_ZNE     ????????????????????????????????????????-??[-    ]
Protolestes_kerckhoffaeZPK     ????????????????????????????????????????-??[-    ]
Argiolestes_ochrostomasZAO     ????????????????????????????????????????-??[-    ]
Argiolestes_sidonia_605        ????????????????????????????????????????-??[-    ]
Caledopteryx_maculata_669      ????????????????????????????????????????-??[-    ]
Trineuragroin_percostale       ????????????????????????????????????????-??[-    ]
Caledargiolestes_uniserie_     ????????????????????????????????????????-??[-    ]
Podopteryx_roseonotata_ZPR     ????????????????????????????????????????-??[-    ]
Austroargiolestes_icterom      ????????????????????????????????????????-??[-    ]
Griseargiolestes_albescens     ??????????????????????????CGGAGGAAAAGAAAACU[-    ]
Griseagriolestes_eboracus      ????????????????????????????????????????-??[-    ]
Miniargiolestes_minimusZMM     ????????????????????????????????????????-??[-    ]
Lestomima_flavostigma_OPB      ????????????????????????????????????????-??[-    ]
Rhipidolestes_hiraoi_ORHRhip   ????????????????????????????????????????-??[-    ]
idolestes_aculeata_63          ????????????????????????????????????????-??[-    ]
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Paraphlebia_zoe                 ????????????????????????????????????????-??[-     ]
Thaumatoneura_inopinata         ????????????????????????????????????????-??[-     ]
Hypolestes_clara_HYP            ????????????????????????????????????????-??[-     ]
Hypolestes_sp_EU055183          ????????????????????????????????????????-??[-     ]
Agriomorpha_fusca_ZAF6          ????????????????????????????????????????-??[-     ]
Sinocnemis_yangbingi_ZSY        ????????????????????????????????????????-??[-     ]
Miocora_peraltica_ZMP           ????????????????????????????????????????-??[-     ]
Cora_marina_POL_OCMrCora_cya    ????????????????????????????????????????-??[-     ]
ne_677__5217                    ????????????????????????????????????????-??[-     ]
Polythore_spZ                   ????????????????????????????????????????-??[-     ]
Polythore_boliviana_BPB         ????????????????????????????????????????-??[- ]
Euthore_fasciata_678521         ????????????????????????????????????????-??[- ]
Rimanella_arcana                ????????????????????????????????????????-??[- ]
Pentaphlebia_stahli             ????????????????????????????????????????-??[- ]
Devadatta_podolestoides_6       ????????????????????????????????????????-??[- ]
Amphipteryx_longicaudata        ????????????????????????????????????????-??[- ]
Pseudolestes_mirabilis_68_      ????????????????????????????????????????-??[- ]
Philoganga_vetusta              ????????????????????????????????????????-??[- ]
Philoganga_robusta_PGN          ????????????????????????????????????????-??[- ]
Lestoidea_conjuncta_664         ????????????????????????????????????????-??[- ]
Diphlebia_lestoides             ????????????????????????????????????????-??[- ]
Diphlebia_coerulescen_AY7       ????????????????????????????????????????-??[- ]
Bayadera_melanopteryx           ????????????????????????????????????????-??[- ]
Bayadera_brevicauda_638         ????????????????????????????????????????-??[- ]
Dysphaea_gloriosa               ????????????????????????????????????????-??[- ]
Euphaea_formosa_6375177         ????????????????????????????????????????-??[-      ]
Euphaea_decorata                CCGCUGAAUUUAAGCAUAUUAAUAAGCGGAGGAAAAGA??-??[- ]
Anisopleura_sp_A                ????????????????????????????????????????-??[- ]
Disparocypha_biedermanni        ????????????????????????????????????????-??[- ]
Libellago_semiopaca_657         ????????????????????????????????????????-??[- ]
Heliocypha_biseriata_650        ????????????????????????????????????????-??[- ]
Platycypha_caligata             ????????????????????????????????????????-??[-      ]
Chlorocypha_curta_CHL           CCGCUGAAUUUAAGCAUAUUAAUAAGCGGAGGAAAAGAAA-CU[-      ]
Sundacypha_petiolata_CHL        CCGCUGAAUUUAAGCAUAUUAAUAAGCGGAGGAAAAGAAA-UU[- ]
Rhinocypha_fenestrella_CHL      ????????????????????????????????????????-??[- ]
Rhinocypha_tincta_60351         ????????????????????????????????????????-??[- ]
Heliocharis_amazona             ????????????????????????????????????????-??[- ]
Hetaerina_americana             ????????????????????????????????????????-??[- ]
Calaphaea_confusa               ????????????????????????????????????????-??[- ]
Noguchiphaea_yoshikoae          -------------------------------------------[- ]
Vestalis_beryllae_66252Matro    ????????????????????????????????????????-??[- ]
na_basilaris_64151              ????????????????????????????????????????-??[- ]
Atrocalopteryx_atrata           ????????????????????????????????????????-??[-     ]
Echo_modesta_6545194________    ????????????????????????????????????????-??[-     ]
Neurobasis_ianthinipennis       ????????????????????????????????????????-??[-     ]
________________________Saph    CCGCUGAAUUUAAGCAUAUUAAUAAGCGGAGGAAAAUAAA-CU[-     ]
o_puella                        ????????????????????????????????????????-??[-     ]
________________________Calo    ????????????????????????????????????????-??[-     ]
pteryx_amata________________    ????????????????????????????????????????-??[-     ]
AJ459186Calopteryx_splend___    ????????????????????????????????????????-??[-     ]
Calopteryx_aequabilis___
________________________Irid
ictyon_myersi_______________
Iridictyon_trebbaui             ????????????????????????????????????????-??[-     ]
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Unaligned_lestoid              ????????????????????????????????????????-??[-    ]
Nubiolestes_diotima            ????????????????????????????????????????-??[-    ]
Perilestes_kahli_683522        ????????????????????????????????????????-??[-    ]
Perissolestes_remotus_682      ????????????????????????????????????????-??[-    ]
Perissolestes_magellenae       ????????????????????????????????????????-??[-    ]
Chlorolestes_umbrata           ????????????????????????????????????????-??[-    ]
Euchlorolestes_tessellataPhy   ????????????????????????????????????????-??[-    ]
lolestes_ethelae               ????
????????????????????????????????????-??[-    ]
Synlestes_weyersii_6265_____   ????????????????????????????????????????-??[-    ]
Synlestes_tropicus__________   ????????????????????????????????????????-??[-    ]
Chorismagrion_risi_6655_____   ????????????????????????????????????????-??[-    ]
Episynlestes_cristatus______   ????????????????????????????????????????-??[-    ]
Episynlestes_albicauda_61___   ????????????????????????????????????????-??[-    ]
Megalestes_micans_             ????????????????????????????????????????-??[-    ]
Megalestes_kurahashii_______   ????????????????????????????????????????-??[-    ]
Orolestes_octomaculatus_____   ????????????????????????????????????????-??[-    ]
Austrolestes_annulosus_61___   ????????????????????????????????????????-??[-    ]
Sympecma_paedisca_65151_____   ????????????????????????????????????????-??[-    ]
Sympecma_fusca______________   ????????????????????????????????????????-??[-    ]
EU055157_Austrolestes_ann___   ????????????????????????????????????????-??[-    ]
Indolestes_peregrinus_______   ????????????????????????????????????????-??[-    ]
Indolestes________             ????????????????????????????????????????-??[-    ]
Chalcolestes_viridis________   ????????????????????????????????????????-??[-    ]
Archilestes_grandis_645_____   ????????????????????????????????????????-??[-    ]
Lestes_rectangularis_OLR____   ????????????????????????????????????????-??[-    ]
Lestes_eurinus____             ????????????????????????????????????????-??[-    ]
__________________FN356183He   ????????????????????????????????????????-??[-    ]
miphlebia_________
Unaligned_Anisoptera           ????????????????????????????????????????-??[-    ]
Epiophlebia_superstes          ????????????????????????????????????????-??[-    ]
___________________________E   ????????????????????????????????????????-??[-    ]
piophlebia_laidlawi________
Unaligned_Aeshnids             ????????????????????????????????????????-??[-    ]
FN356039Archipetalia_aur       ????????????????????????????????????????-??[-    ]
Austropetalia_victoria         ????????????????????????????????????????-??[-    ]
Hypopetalia_pestilens          ????????????????????????????????????????-??[-    ]
FJ596639_Phyllopetalia_api     ????????????????????????????????????????-??[-    ]
Phyllopetalia_apollo_684       ????????????????????????????????????????-??[-    ]
Eurypetalia_altarensis         ????????????????????????????????????????-??[-    ]
Ophiopetalia_diana             ????????????????????????????????????????-??[-    ]
Gomphaeschna_furcilata         ????????????????????????????????????????-??[-    ]
Oligoaeschna_pryeri            ????????????????????????????????????????-??[-    ]
Austroaeschna_parvistigma      ????????????????????????????????????????-??[-    ]
Telephlebia_tillyardi          ????????????????????????????????????????-??[-    ]
Boyeria_vinosa_OBV             ????????????????????????????????????????-??[-    ]
Boyeria_irene_FN356042         ????????????????????????????????????????-??[-    ]
Brachytron_pratense_EU055      ????????????????????????????????????????-??[-    ]
Epiaeschna_heros               ????????????????????????????????????????-??[-    ]
DQ008197_Caliaeschna_micro     ????????????????????????????????????????-??[-    ]
DQ008199_Anaciaeschna_iso      ????????????????????????????????????????-??[-    ]
GQ118262_Oplonaeschna_spAesh   ????????????????????????????????????????-??[-    ]
na_canadensis_OAC              ????????????????????????????????????????-??[-    ]
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EU055147_Rhionaeschna_mult__  ????????????????????????????????????????-??[-    ]
Aeshna_cyanea_1203__________  ????????????????????????????????????????-??[-    ]
FJ596630_Aeshna_grandis_____  ????????????????????????????????????????-??[-    ]
FN356092_Gynacantha_bulla___  ????????????????????????????????????????-??[-    ]
Austrogynacantha_heteroge___  ????????????????????????????????????????-??[-    ]
FN356093_Hemianax_ephippig__  ????????????????????????????????????????-??[-    ]
Anax_junius_AY749908________  ????????????????????????????????????????-??[-    ]
FN356035_Anax_imperator_____  ????????????????????????????????????????-??[-    ]
Unaligned_gomphid_____        ????????????????????????????????????????-??[-    ]
Sinogomphidia_kruegeri______  ????????????????????????????????????????-??[-    ]
                              ????????????????????????????????????????-??[-    ]
______________________
Ictinogomphus_australis_6___  ????????????????????????????????????????-??[-    ]
Ictinogomphus_sp____________  ????????????????????????????????????????-??[-    ]
FN356120_Lindenia_tetraph___  ????????????????????????????????????????-??[-    ]
Phyllogomphoides_stigmatus__  ????????????????????????????????????????-??[-    ]
Progomphus_obscurus_________  ????????????????????????????????????????-??[-    ]
Progomphus_borealis_633_____  ????????????????????????????????????????-??[-    ]
Hagenius_brevistylus_OHB____  ????????????????????????????????????????-??[-    ]
Lanthus_vernalis____________  ????????????????????????????????????????-??[-    ]
Davidius_nanus_DQ010047_____  ????????????????????????????????????????-??[-    ]
Neogomphus_edenticulatus____  ????????????????????????????????????????-??[-    ]
Armagomphus_armiger_613_____  ????????????????????????????????????????-??[-    ]
Hemigomphus_comitans_AHC____  ????????????????????????????????????????-??[-    ]
FJ596622_Hemigomphus_heter__  ????????????????????????????????????????-??[-    ]
Hemigomphus_magela_5935_____  ????????????????????????????????????????-??[-    ]
Trigomphus_sp_FN356176______  ????????????????????????????????????????-??[-    ]
FJ596615_Lanthus_albistylu__  ????????????????????????????????????????-??[-    ]
FJ712325_Stylogomphus_shir__  ????????????????????????????????????????-??[-    ]
Davidioides_martini_648_____  ????????????????????????????????????????-??[-    ]
Burmagomphus_collaris_        ????????????????????????????????????????-??[-    ]
Cyclogomphus_heterostylus___  ????????????????????????????????????????-??[-    ]
Anisogomphus_pinr_FN356037__  ????????????????????????????????????????-??[-    ]
Dromogomphus_spinosus_        ????????????????????????????????????????-??[-    ]
Arigomphus_villosipes_        ????????????????????????????????????????-??[-    ]
Arigomphus_cornu_DQ008188___  ????????????????????????????????????????-??[-    ]
FJ712319_Stylurus_intricat__  ????????????????????????????????????????-??[-    ]
Stylurus_amnicola___________  ????????????????????????????????????????-??[-    ]
FJ596610_Stylurus_nagoyanu__  ????????????????????????????????????????-??[-    ]
DQ008184_Gomphus_externus___  ????????????????????????????????????????-??[-    ]
Asiagomphus_hainanensis_____  ????????????????????????????????????????-??[-    ]
DQ008187_Gomphus_exilis_____  ????????????????????????????????????????-??[-    ]
Gomphus_Phanogomphus_grasl__  ????????????????????????????????????????-??[-    ]
Gomphus_adelphus____________  ????????????????????????????????????????-??[-    ]
FN356091_Gomphus_vulgatis___  ????????????????????????????????????????-??[-    ]
FN356132_Megalogomphus_sp___  ????????????????????????????????????????-??[-    ]
Onychogomphus_uncatus_        ????????????????????????????????????????-??[-    ]
FN356138_Onychogomphus_for__  ????????????????????????????????????????-??[-    ]
A_FJ712322_Onychogomphus_s__  ????????????????????????????????????????-??[-    ]
Ophiogomphus_carolus________  ????????????????????????????????????????-??[-    ]
FJ596618_Ophiogomphus_sev___  ????????????????????????????????????????-??[-    ]
FN356139_Ophiogomphus_caec    ????????????????????????????????????????-??[-    ]
______________________Leptog
omphus_elegans______________
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FJ596609_Leptogomphus_saut__ ??-??[-   ]
Epigomphus_compactus________ ??-??[-   ]
FJ712323_Microgomphus_chel__ ??-??[-   ]
Heliogomphus_retroflexus____ ??-??[-   ]
FN356121_Macrogomphus_para__ ??-??[-   ]
Ceratogomphus_pictus _______ ??-??[-   ]
Lestinogomphus_angustus_____ ??-??[-   ]
Austrogomphus_guerini_______ ??-??[-   ]
Austrogomphus_amphiclitus_ ??-??[-   ]
Antipodogomphus_acolythus_ ??-??[-   ]
Unaligned_Petaluridae_____ ??-??[-   ]
Tanypteryx_hageni_EU05517_ ??-??[-   ]
FN356174_Tanypteryx_sp______ ??-??[-   ]
FJ712330_Tanypteryx_pryeri__ ??-??[-   ]
FN356173_Tachopteryx_thor_ ??-??[-   ]
Phenes_raptor_AY338720______ ??-??[-   ]
Phenes_centralis_OPR________ ??-??[-   ]
Uropetalura_carvori_________ ??-??[-   ]
Petalura_hesperia___________ ??-??[-   ]
Petalura_gigantea_EU05515_ ??-??[-   ]
Petalura_litolae____________ ??-??[-   ]
Petalura_ingentissima_______ ??-??[-   ]
Zoraena_bilineata___________ ??-??[-   ]
Taeniogaster_obliqua________ ??-??[-   ]
Kalyptogaster_erronea_______ ??-??[-   ]
FJ712317_Cordulegaster_mac__ ??-??[-   ]
EU055179_Cordulegaster_dor__ ??-??[-   ]
FN356072_Cordulegaster_bol__ ??-??[-   ]
DQ008198_Cordulegaster_pic__ ??-??[-   ]
FJ596638_Anotogaster_siebo__ ??-??[-   ]
Neopetalia_punctata_________ ??-??[-   ]
Chloropetalia_soarer________ ??-??[-   ]
Sinorogomphus_nasutus_______ ??-??[-   ]
Chlorogomphus_brunneus_EU_ ??-??[-   ]
FN356060_Chlorogomphus_sp_ ??-??[-   ]
Synthemis_eustalacta________ ??-??[-   ]
Synthemis_marcrostigma_EU_ ??-??[-   ]
Archaeosynthemis_leachii____ ??-??[-   ]
Eusynthemis_brevistyla______ ??-??[-   ]
FJ596573_Eusynthemis_gutta__ ??-??[-   ]
Eusynthemis_nigra_EU05516_ ??-??[-   ]
Choristhemis_flavotermina_ ??-??[-   ]
Synthemiopsis_gomphomac_____ ??-??[-   ]
Gomphomacromia_chilensis____ ??-??[-   ]
FJ712318_Gomphomacromia_p_ ??-??[-   ]
Syncordulia_serendipator____ ??-??[-   ]
Syncordulia_venator_________ ??-??[-   ]
Idionyx_imbricata_EU05518_ ??-??[-   ]
Idionyx_selysi_____________ ??-??[-   ]
FN356129_Macromidia_rapi__ ??-??[-   ]
__________________________FN ??-??[-   ]
356186_Oxygastra_curtis___

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Cordulephya_pygmaeaEU0551___   ????????????????????????????????????????-??[-    ]
Pseudocordulia_circularis___   ????????????????????????????????????????-??[-    ]
Hesperocordulia_berthoudi___   ????????????????????????????????????????-??[-    ]
Lathrocordulia_metallica_      ????????????????????????????????????????-??[-    ]
Micromidia_convergens_EU0___   ????????????????????????????????????????-??[-    ]
Micromidia_atrifrons________   ????????????????????????????????????????-??[-    ]
Austrophya_mystica__________   ????????????????????????????????????????-??[-    ]
Austrocordulia_refracta_____   ????????????????????????????????????????-??[-    ]
Archaeophya_magnifica_______   ????????????????????????????????????????-??[-    ]
Epophthalmia_elegans________   ????????????????????????????????????????-??[-    ]
FN356079_Didymops_transve___   ????????????????????????????????????????-??[-    ]
FN356124_Macromia_illinoie__   ????????????????????????????????????????-??[-    ]
Macromia_amphigena__________   ????????????????????????????????????????-??[-    ]
Macromia_eurynome_EU05519___   ????????????????????????????????????????-??[-    ]
Macromia_magnifica__________   ????????????????????????????????????????-??[-    ]
FN356128_Macromia_splende___   ????????????????????????????????????????-??[-    ]
FN356146_Phyllomacromia_ny__   ????????????????????????????????????????-??[-    ]
Idomacromia_proavita________   ????????????????????????????????????????-??[-    ]
Aeschnosoma_forcipula_______   ????????????????????????????????????????-??[-    ]
Pentathemis_membranulata_      ????????????????????????????????????????-??[-    ]
Tetragoneuria_cynosure______   ????????????????????????????????????????-??[-    ]
Tetragoneuria_costalis______   ????????????????????????????????????????-??[-    ]
Tetragoneuria_canis_________   ????????????????????????????????????????-??[-    ]
Epicordulia_princeps________   ????????????????????????????????????????-??[-    ]
Epitheca_marginata__________   ????????????????????????????????????????-??[-    ]
FN356087_Epitheca_bimacul___   ????????????????????????????????????????-??[-    ]
Rialla_villosa______________   ????????????????????????????????????????-??[-    ]
FN356074_Cordulia_aenea_____   ????????????????????????????????????????-??[-    ]
Cordulia_shurtleffii_EU05___   ????????????????????????????????????????-??[-    ]
FN356163_Somatochlora_alpe__   ????????????????????????????????????????-??[-    ]
Somatochlora_flavomac_1242__   ????????????????????????????????????????-??[-    ]
Somatochlora_metallica______   ????????????????????????????????????????-??[-    ]
FJ010028_Somatochlora_tene__   ????????????????????????????????????????-??[-    ]
A_FJ596562_Hemicordulia_mi__   ????????????????????????????????????????-??[-    ]
Hemicordulia_australiae_E___   ????????????????????????????????????????-??[-    ]
Procordulia_jacksoniensis___   ????????????????????????????????????????-??[-    ]
Unaligned_Libellulid_____      ????????????????????????????????????????-??[-    ]
FJ596583_Notiothemis_rober__   ????????????????????????????????????????-??[-    ]
FJ596578_Tetrathemis_irreg__   ????????????????????????????????????????-??[-    ]
Tetrathemis_polleni_________   ????????????????????????????????????????-??[-    ]
FJ596587_Urothemis_signata__   ????????????????????????????????????????-??[-    ]
Urothemis_assignata_________   ????????????????????????????????????????-??[-    ]
Macrodiplax_cora____________   ????????????????????????????????????????-??[-    ]
Macrodiplax_balteata_EU05      ????????????????????????????????????????-??[-    ]
_________________________Zyx   ????????????????????????????????????????-??[-    ]
omma_elgneri________________
Zyxomma_petiolatum             ????????????????????????????????????????-??[-    ]
FN356181_Zygonyx_ida           ????????????????????????????????????????-??[-    ]
Nannophlebia_sp_EU055138       ????????????????????????????????????????-??[-    ]
Bironides_sp                   ????????????????????????????????????????-??[-    ]
Huonia_epinephelaHuonia_oreo   ????????????????????????????????????????-??[-    ]
phila                          ????????????????????????????????????????-??[-    ]
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Onychothemis_testacea          ????????????????????????????????????????-??[-    ]
FJ596582_Rhyothemis_varieg     ????????????????????????????????????????-??[-    ]
FJ712327_Rhyothemis_fuligiMi   ????????????????????????????????????????-??[-    ]
athyria_marcella               ????????????????????????????????????????-??[-    ]
Miathyria_simplex              ????????????????????????????????????????-??[-    ]
FJ596577_Tholymis_citrina      ????????????????????????????????????????-??[-    ]
Tholymis_tillarga              ????????????????????????????????????????-??[-    ]
EF680326_Pantala_flavesce      ????????????????????????????????????????-??[-    ]
Tramea_lacerata_EU055171Tram   ????????????????????????????????????????-??[-    ]
ea_calverti                    ????????????????????????????????????????-??[-    ]
Sympetrum_Kalosympetrum_ja__????????????????????????????????????????-??[-      ]
EF636437_Sympetrum_obtrusu     ????????????????????????????????????????-??[-    ]
DQ008201Sympetrum_vulgatum     ????????????????????????????????????????-??[-    ]
FN356171_Sympetrum_pedemon     ????????????????????????????????????????-??[-    ]
Sympetrum_Nesogonia_blackb     ????????????????????????????????????????-??[-    ]
Sympetrum_sanguineum           ????????????????????????????????????????-??[-    ]
Sympetrum_corruptum_EU055      ????????????????????????????????????????-??[-    ]
Y12900Sympetrum_fonscolomb     ????????????????????????????????????????-??[-    ]
Sympetrum_Tarnetrum_illotuSy   ????????????????????????????????????????-??[-    ]
mpetrum_Tarnetrum_infusc       ????????????????????????????????????????-??[-    ]
Sympetrum_d                    ????????????????????????????????????????-??[-    ]
Sympetrum_m                    ????????????????????????????????????????-??[-    ]
Leucorrhinia_pectoral_0610     CCGCUGAAUUUAAGCAUAUUAAUAAGCGGAGGAAAAGAAA-CU[-    ]
Leucorrhinia_glacialis         ????????????????????????????????????????-??[-    ]
FJ010031_Celithemis_elisa      ????????????????????????????????????????-??[-    ]
Celithemis_eponina_1233Brach   ????????????????????????????????????????-??[-    ]
ymesia_gravida                 ????????????????????????????????????????-??[-    ]
Brachymesia_herbida            ????????????????????????????????????????-??[-    ]
Brachythemis_leucosticta       ????????????????????????????????????????-??[-    ]
Brachythemis_contaminata       ????????????????????????????????????????-??[-    ]
Deielia_phaon                  ????????????????????????????????????????-??[-    ]
Pachydiplax_longipennis        ????????????????????????????????????????-??[-    ]
AY750042_Erythemis_sp_coll     ????????????????????????????????????????-??[-    ]
FN356030_Acisoma_panorpoi      ????????????????????????????????????????-??[-    ]
Erythrodiplax_minuscula_E      ????????????????????????????????????????-??[-    ]
Erythrodiplax_basalis          ????????????????????????????????????????-??[-    ]
Crocothemis_servilia           ????????????????????????????????????????-??[-    ]
DQ008200_Crocothemis_eryt      ????????????????????????????????????????-??[-    ]
FJ596590_Rhodothemis_rufaFN3   ????????????????????????????????????????-??[-    ]
56136_Neurothemis_fulvi        ????????????????????????????????????????-??[-    ]
Neurothemis_ramburii           ????????????????????????????????????????-??[-    ]
FN356080_Diplacodes_lefebv__   ????????????????????????????????????????-??[-    ]
Diplacodes_trivialis           ????????????????????????????????????????-??[-    ]
Bradinopyga_strachani          ????????????????????????????????????????-??[-    ]
Brachydiplax_denticauda_E      ????????????????????????????????????????-??[-    ]
FJ596585_Brachydiplax_chal     ????????????????????????????????????????-??[-    ]
FN356059_Chalcostephia_fl      ????????????????????????????????????????-??[-    ]
Micrathyria_aequalisMicrathy   ????????????????????????????????????????-??[-    ]
ria_atra                       ????????????????????????????????????????-??[-    ]
Micrathyria_didyma             ????????????????????????????????????????-??[-    ]
Uracis_imbuta_______________   ????????????????????????????????????????-??[-    ]
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Uracis_infumata ??-??[-]
FJ596589_Nannophya_pygmaea ??-??[-]
Nannothemis_bella ??-??[-]
Paltothemis_lineatipesBrechm ??-??[-]
orhoga_mendax ??-??[-]
Brechmorhoga_praedatrix ??-??[-]
Dythemis_fugax ??-??[-]
Trithemis_aurora_EU055203Tri ??-??[-]
themis_africana ??-??[-]
FN356177_Urithemis_arterio__??-??[-]
Perithemis_tenera ??-??[-]
____________________________ ??-??[-]
Perithemis_intensa_EU0551___
Perithemis_lais_GU196362 ??-??[-]
FN356143Palpopleura_sp ??-??[-]
FJ596579_Diastatops_pullat ??-??[-]
Zenithoptera_fasciata ??-??[-]
Neodythemis_afra_pauli ??-??[-]
FN356162_Selysiothemis_nig ??-??[-]
FN356179_Urithetrum_navasi ??-??[-]
Porpax_risi ??-??[-]
FN356133_Micromacromia_cam ??-??[-]
FJ596594_Neodythemis_preu ??-??[-]
Neodythemis_klingi ??-??[-]
FJ596575_Hadrothemis_infes ??-??[-]
FJ596595_Thermorthemis_mad ??-??[-]
FJ596599_Agrionoptera_insi ??-??[-]
FJ596593_Cratilla_metallic ??-??[-]
Pseudoleon_superbus ??-??[-]
FJ596597_Orthemis_cultrifo ??-??[-]
Orthemis_ferruginea ??-??[-]
DQ008203_Orthetrum_albi ??-??[-]
Orthetrum_pruinosum ??-??[-]
Orthetrum_coerulescens ??-??[-]
FJ596600_Lyriothemis_elega ??-??[-]
DQ008205_Ladona_fulva ??-??[-]
Ladona_julia ??-??[-]
DQ008204_Ladona_depressa ??-??[-]
Plathemis_subornata ??-??[-]
Plathemis_lydia_ ??-??[-]
FN356119_Libellula_quadrim ??-??[-]
Libellula_Syntetrum_angeli ??-??[-]
Libellula_Eolibellula_semi ??-??[-]
AY338717_Libellula_saturat ??-??[-]
Libellula_Eotainia_composi ??-??[-]
LPU65109_Libellula_pulchel ???[-]
Libellula_Holotania_comanc ??-??[-]
Libellula_Holotania_auripe ??-??[-]
Libellula_Holotania_axilenLi ??-??[-]
bellula_Holotania_luctuo ??-??[-]
Aethriamanta_rezia_GU196369 ???[-]
Tetrathemis_corduliformis ??-??[-]

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Diplacina_ismene_GU196366       ????????????????????????????????????????-??[-   ]
Erythemis_vesiculosa             ???????????????????????????????????????????[-  ]
Nannophyopsis_clara              ????????????????????????????????????????-??[-  ]
Oligoclada_amphinome             ????????????????????????????????????????-??[-  ]
Idiataphe_sp_HOL_2010            ????????????????????????????????????????-??[-  ]
Atoconeura_sp_HOL_2010           ????????????????????????????????????????-??[-  ]
Elga_leptostyla                  ???????????????????????????????????????????[-  ]
Fylgia_amazonica                 ????????????????????????????????????????-??[-  ]
Hemistigma_albipunctatum     ????????????????????????????????????????-??[-      ]
Porpacithemis_sp                 ????????????????????????????????????????-??[-  ]
Thermochoria_equivocata         ????????????????????????????????????????-??[-  ]
Malgassophlebia_bispina     ???????????????????????????????????????????[-      ]
Micromacromia_zygoptera          ????????????????????????????????????????-??[- ]
Argyrothemis_argentea            ????????????????????????????????????????-??[-  ]
Pseudothemis_zonata              ????????????????????????????????????????-??[-  ]
Oxythemis_phoenicosceles        ????????????????????????????????????????-??[-  ]
Olpogastra_lugubris              ???????????????????????????????????????????[-  ]
Misagria_parana                  ????????????????????????????????????????-??[-  ]
Unaligned_Outgroups         ????????????????????????????????????????-??[- ]
Ephemerella_sp               ????????????????????????????????????????-??[-    ]
Paraleptophlebia_sp          ????????????????????????????????????????-??[-    ]
Anthopotamus_spCaenis_luctuo ????????????????????????????????????????-??[-    ]
saEphemera_spCallibaetis_sp_ ????????????????????????????????????????-??[-    ]
AY749925                     ????????????????????????????????????????-??[-    ]
Callibaetis_ferrugine        ????????????????????????????????????????-??[-    ]
Baetis_buceratus             CCGCCGAAUUUAAGCAUAUUAGUAAGCGGAGGAAAAGAAA-CU[-    ]
Hexagenia_rigida             ????????????????????????????????????????-??[-    ]
CloeonLeucrocuta_aphrodite   ????????????????????????????????????????-??[-    ]
Centroptilum_luteolum        ????????????????????????????????????????-??[-    ]
Stenonema_sp                 ????????????????????????????????????????-??[-    ]
Trigoniopthalmus_altern      ????????????????????????????????????????-??[-    ]
Allomachilis_froggart        ????????????????????????????????????????-??[-    ]
EF199981_Machilis_hrabei     ????????????????????????????????????????-??[-    ]
Dilta_littoralis             ????????????????????????????????????????-??[-    ]
Ctenolepisma_longicaudata    ????????????????????????????????????????-??[-    ]
Lepisma_spEU376048_Lepisma_s ????????????????????????????????????????-??[-    ]
accharin  Thermobia_domestica CCGCUAAAUUUAAGCAUAUUAAUAAGCGGAGGAAAAGAAA-CU[-    ]
Tricholepidion_gertschi      ????????????????????????????????????????-??[-    ]
Gromph_laevigata_AY210820    ????????????????????????????????????????-??[-    ]
Isoperla_davisi_AY121148     ????????????????????????????????????????-??[-    ]
EU414717_Isoperla_spAY859546 ????????????????????????????????????????-??[-    ]
_Gomphocerinae               CCGCUGAAUUUAAGCAUAUUAAUAGGCGGAGGAAAAGAAA-CU[-    ]
                             ????????????????????????????????????????-??[-    ]
                             ????????????????????????????????????????-??[-    ]
                             ????????????????????????????????????????-??[-    ]

[          ;
End;]

[28SD1]
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Unaligned                    ------------------------------------------------??????????????????????????????????????????????????-
?????????????????????????????????????????????????????????????????????????????-???????????????-?????????????????????????????????
?????????????????-???????????---?????-????????????-?????????????????????????????????????????-?????????????????? Unaligned_Zygoptera
                                       ------------------------------------------------?????????????????????????????????????????
???????-????????????????????????????????????????????????????????????????????????-???????????????-???????????????????????????
??????????????????????-???????????---?????-????????????-?????????????????????????????????????????-??????????????????
Protosticta_sp_A_ZPA                             ---------------------------------------------aaccaggauucccucaguaaCGGCGAGCGAACAGGGA
UCCACUCCAGAGCC-GAAGCUCGCGCCCCCAGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGCCCGCCUUCCCGUGG-GAUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGgugguaaacuccacc [-     ]
ZPCs_Protosticta_curiosa_[Protoneura?]           ---------------------------------------------???????????????????????????????????????
??????????????-??????????????????--??????????????????????????????????????????????????????????????????-?????????????????????????
?????????????????????????-???????????---????????????????????????????????????????????????????????????????-??????????????????
Protosticta_sanguinostigma_BPS                   ---------------------------------------------aaccaggAUUCCCUCaGUAACGGCGAGCGAACAGGGA
UCCACUCCAGAGCC-GAAGCUCGCGCCCCCAGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGUGG-GGCGUCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGCAGAGGGUGCCAGGCCCGUGC-GACCUCCGAUC---GCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGgguugcuugagagugcagcccaaag-?cggugguaaacuccacc [-     ]
ZSOg_Sinosticta_ogatai_[x]             ---------------------------------------------?????????????????????????????????????????????
???????-??????????????????--????????????????????????????????????????????????????????????????-???????????????????????????
??????????????????????-???????????---????????????????????????????????????????????????????????????????-??????????????????
Palaemnema_paulicoba_ZPP                         ---------------------------------------------aaccaggauucccucaguaacggcGAGCGAACAGGGA
UCCACUCCAGAGCC-GAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGUCUUCCCGUGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCAcc [-     ]
Palaemnema_domina_ZPDm                           ---------------------------------------------aaccaggauucccucaguaacggcgAGCGAACAGGGA
UCCACUCCAGAGCC-GAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCCCUGUGGCGUUCGGGAGCGCCCGCCUUCCCGUGG-GGUGCCGGAGAGUCC-AAgucccucuugaacggggccacgg
cccggagagggugccaggcccgugc-gaccuccgagc---ccgcc-ccccgggagggg-cgcuccucagagucggguugcuugagagugcagcccaaag-ccgguggu aaacuccacc [-     ]
Palaemnema_melanostigma_BPM            ----------------------------------------------------AUUCCCUCAGUAACGGCGAGCGAACAGGGAUCCACUC
CAGAGCC-GAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGUGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Isosticta_robustior_[Frank's?]                   ---------------------------------------------aaccaggAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UCAAAUCCAGAGCC-AAAGCUCGCGACCCCCGC--GGGGCGCCGAGCCAUGUGGCGUUCGGGAGCGUCCGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-  ]

Rhadinosticta_simplex_ZRS[BRS]                   ---------------------------------------------aaccaggAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UCAAAUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCCAUGUGGCGUUUGGGAGCGCCCGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-     ]
Amphisticta_silvarum_ISO_ZAS           ------------------------------------------------CAGGAUUCCCUCAGUAACGGCGAGCGAACAGGGAUCAAAUC
CAGAGCC-AAAGCUCGCGACCCCCGC--GGGGCGCCGAGCGAUGUGGCGUUUGGGAGCGUCCGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGagagugcagcccaaag-ucgggugguaaacuccacc
Labidosticta_vallisi_OLVa                        ------------------------------------------------caggauucccucaguaacggcgagcgaacaggga
ucaaauccagagcc-aaagcucgcgacccccgc--gggGCGCCGAGCCAUGUGGCGUUCGGGAGCGUCCGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---UCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Orosticta_filiciola_ISO_ZOF                      ------------------------------------------------caggauucccucaguaacggCGAGCGAACAGGGA
UCAAAUCCAGAGCC-AAAGCUCGCGACCCCCGC--GGGGCGCCGAGCCAUGUGGCGUUCGGGAGCGUCCGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGA-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUccacc
Platycnemis_pennipes_OPPp                        ---------------------------------------------aacCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UCGACUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
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CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCAcc
[-]
Copera_annulata_OCAn[identicaltoOCAl] ---aacCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAUCGACUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-]
Copera_vittata_BCV ---AUUCC-UUAGUAACGGCGAGCGAACAGGGAUCGACUC
CAGAGCC-AAAGCUCGCGCUCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC Copera_marsouipes_ZCM
---aacCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UCGACUCCAGAGCC-AAAGCUCGCGCUCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-]
Coeliccia_albicauda_OCAL ---aacCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UCGACUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-]
Coeliccia_cyanomelas_BCC ---AUUCC-UUAGUAACGGCGAGCGAACAGGGAUCGACUC
CAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC Calicnemia_miles_OCMi
---aacCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UCGACUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-]
Prodasineura_vitatta_OPV_PRN --CAGGAUUCCCUCAGUAACGGCGAGCGAACAGGGA
UCGACUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGAUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Chlorocnemis_abboti_ZCAb ---?????????????????????????????????????
??????????????-??????????????????--??-?????????????????????????
??????????????????????????-???????????---??-?????????aacuccacc
[-]
Nososticta_solida_PRN_ZNSo --caggauucccuuaguaacggcgagCGAACAGGGA
UCGACUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Phylloneura_westermanni_BYB ---AUUCCCUUAGUAACGGCGAGCGAACAGGGAUCGACUC
CAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCCCGGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Onychargia_atrocyana_ZOA ---aaccaggauuCCCUUAGUAACGGCGAGCGAACAGGGA
UCGACUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-]
Argia_moesta_COE --CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UCAAAUCCAGAGCC-AAAGCUCGCGCCCCCAGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Argia_nahuana_BAN --CCUUAGUAACGGCGAGCGAACAGGGAUCAAAUC
CAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCCCGGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Argiocnemis_rubescens_ZAR ---aaccaggauucccuuaguaACGGCGAGCGAACGGGGA
UCGGAUCCAGAGCC-AAAGCUCGUGCCCCCCGC--GGGGUGCCGAGCGAUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GAUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGUC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-]

Mortonagrion_binocellata_BMP   --AUUCCCUUAGUAACGGCGAGCGAACGGGGA
UCGGAUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGAUGUGGCGUUCGGGAGCGUCCGCCUUCCCGCGG-GAUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGUC-UCGCGGGAGGGG-CGCUCCUCAGAGUCGNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNN
Agriocnemis_pygmaea_COE_OAP   ---aaccagGAUUCCCUUAGUAACGGCGAGCGAACGGGGA
UCGGAUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGAUGUGGCGUUCGGGAGCGUCCGCUUUCCCGAGG-GAUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGC------CGUC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Austroagrion_watsoni_COE_OAW   ---aacCAGGAUUCCCUUAGUAACGGCGAGCGAACGGGGA
UCGGAUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGAUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Archibasis_viola_ZAV[x]   ---??
???????-??????????????????--???-??????????????????????????
???????????????????????-???????????---???-??????????????????
Coenagrion_puella_AJ488546_[x]   ---?????????????????????????????????????
??????????????-??????????????????--??-?????????????????????????
?????????????????????????-???????????---???-??????????????????
Coenagrion_resolutum_JQ966593   ---???????????CCUUAGUAACGGCGAGCGAACGGGGA
UCGGAUCCAGAGCC-AAAGCUCGCGCCCCCUGC--GGGGCGCCGAGCGAUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUUU-AAGUCCCUCUUGAACGGGGCCAGCG
CCCGGAGAGGGUGAUAGGCCCGUAG-AACCUCCGUGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Pseudagrion_cingillum_COE[OAAL]   --cAGGAUUCCCUUAGUAACGGCGAGCGAACGGGGA
UCGGAUCCAGAGCC-AAAGCUCGCGGCCCCCGC--GGGCUGCCGAGCGAUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GAUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCG-----CGAC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Pseudagrion_aureofrons_BPA   --??????????????????????????????GGGAUCGGAUC
CAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGUGCCGAGCGAUGUGGCGUUCGGGAGCGUCCGCUUUCCCGAGG-GACGGCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCCCGAAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCG-----CGAC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Pseudagrion_ignifer_COE_OPi   ---aacCAGGAUUCCCUUAGUAACGGCGAGCGAACGGGGA
UCGGAUCCAGAGCC-AAAGCUCGCGGCCCCCGC--GGGCUGCCGAGCGAUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GAUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCG-----CGAC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Erythromma_najas_EU055009   ---?????????
????????????????????????????????AUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGUGCCGAGCGAUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GAUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGUGC---CCGUC-CUUCGGGAGGGG-CGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-   ]
Cercion_plagiosum_AJ488552[x]   ---?????????????????????????????????????
??????????????-??????????????????--??-?????????????????????????
?????????????????????????-???????????---???-??????????????????
Cercion_lindenii_AJ488550[x]   ---?????????????????????????????????????
??????????????-??????????????????--??-?????????????????????????
?????????????????????????-???????????---???-??????????????????
Paracercion_hieroglyphicum_AJ488551[x]   ---?????????
???-??????????????????--???
??-??-???????????---?????????????????????????????????
??????????????????????????-??????????????????
Acanthagrion_quadratum_ZAQ   ---aaccaggauucccuuaguaacggcgagcgaaCGGGGA
UCGGAUCCAGAGCC-AAAGCUCGGGCCCCCCGC--GGGGUGCCGAGCGAUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GAUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGUC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-   ]
ZLV_Leptobasis_vacillans[x]   ---??
???????-??????????????????--???-??????????????????????????
???????????????????????-???????????---???-??????????????????
Amphiagrion_saucium_OAS   ---aaccaggauucccuuaguaacggcgagcgaaCGGGGA
UCGGAUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGAUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GAUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG

CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGUC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAaag-ucggugguaaacuccacc
[-   ]
Amphiagrion_abbreviatum_BAAb   --AUUCCCUUAGUAACGGCGAGCGAACGGGGA
UCGGAUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGAUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GAUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGUC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Xiphiagrion_cyanomelas_ZXC   ---aaccaggau
ucccuuaguaacGGCGAGCGAACGGGGAUCGGAUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGAUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GAUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGUC-CCCCGGGAGGGG-CGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-   ]
rion_sp_AY750043   --CAGGAUUCCCUUAGUAACGGCGAGCGAACGGGGAUCGGAUC
CAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGAUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GAUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGUC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Ishnura_elegans_1239[x]   ---??
???????-??????????????????--??-???????????????????????????
???????????????????????-???????????---???-??????????????????
Ishnura_barberi_BIB   --????AUUCCCUUAGUAACGGCGAGCGAACGGGGAUCGGAUC
CAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGAUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GAUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGUC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Ischnura_graellsi_AJ488545[x]   ---?????????????????????????????????????
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?????????????????????????-???????????---???-??????????????????
Anomalagrion_hastatum_COE_OAH   ---aaccaggauucccuuaguaacggcgagcgaaCGGGGA
UCGGAUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGAUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GAUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGUC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Amphiallagma_parvum_AJ420939[x]   ---?????????????????????????????????????
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Azuragrion_granti_AJ420937[x]   ---?????????????????????????????????????
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Azuragrion_nigridorsum_AJ420938[x]   ---?????????????????????????????????????
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Enallagma_cyathigerum_0110[x]   ---?????????????????????????????????????
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?????????????????????????-???????????---???-??????????????????
Enallagma_sp_BES   --????AUUCCCUUAGUAACGGCGAGCGAACGGGGAUCGGAUC
CAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGAUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GAUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGUC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNN
E_aspersum_DQ087506[x]   ---??
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???????????????????????-???????????---???-?????????????????? Aciagrion ------
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ZAB_Aciagrion_borneense[x]   ---??
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???????????????????????-???????????---???-??????????????????
Protoneura_capillaris_BPCp   --????AUUCCCUUAGUAACGGCGAGCGAACAGGGAUCAAAUC
CAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCUGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CGCAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNN

ZPC_Protoneura_cara[x] ---??
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???????????????????????-???????????---???-??????????????????
ZPRm_Psaironeura_remissa[x] ---??
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???????????????????????-???????????---???-??????????????????
Elattoneura_analis_glauca[x] ---?????????????????????????????????????
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?????????????????????????-???????????---???-??????????????????
Neoneura_aaroni_PRN_ONA --CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAUCAAAUC
CAGAGCC-AAAGCUCGCGUUCCCCGC--GGGGCGCCGAGCGAUGUGGCGUUUGGGAGCGCCUGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CGCAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGAGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
ZNA_Neoneura_amelia[x] ---??
???????-??????????????????--??-???????????????????????????
???????????????????????-???????????---???-??????????????????
Neoneura_maria_BYB --????????????????????????????????????AAUUC
CAGAGCC-AAAGCUCGCGUUCCCCGC--GGGGCGCCGAGCGAUGUGGCGUUUGGGAGCGCCUGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGCAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGAGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
ZCAe_Ceriagrion_aeruginosum[x] ---?????????????????????????????????????
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?????????????????????????-???????????---???-??????????????????
Telebasis_salva_ZTS ---aaccaggauucccunaguaacggcgagcgaACAGGGA
UCAAAUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-]
Leptagrion_elongatum_ZLE ---aaccaggauucccuuaguaACGGCGAGCGAACAGGGA
UCAAAUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-]
Leptagrion_sp ---??
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ZMMr_Metaleptobasis_manicaria[x] ---?????????????????????????????????????
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?????????????????????????-???????????---???-??????????????????
Diceratobasis_sp_A_ZDA ---aaccaggauucccuuaguaacggcGAGCGAACAGGGAUCAAAUC
CAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC[-
]
FJ596559_Pyrrhosoma_nymphula -----------UUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAUCAAAUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-]
Chromagrion_conditum_COE_OCCn --CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UCAAAUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
ZTA2_Teinobasis_alluaudi[x] ---??
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Nehalennia_gracilis_COE_ONG   --CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UCAAAUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCCCUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAUGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
ZCG_Coryphagrion_grandis[x]   ---??
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???????????????????????-???????????---??-??????????????????
Microstigma_rotundatum_PST_OMRt   --CAGGAUUCCCUCAGUAACGGCGAGCGAACAGGGA
UCAAAUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACc
Microstigma_anomalum_BMA   --AUUCCCUCAGUAACGGCGAGCGAACAGGGAUCAAAUC
CAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
ZMO_Mecistogaster_ornata_[xDoyouhavethisFrank?]   ---?????????
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??????????????????????????-??????????????????
Mecistogaster_linearis_BML   --AUUCC-UUAGUAACGGCGAGCGAACAGGGAUCAAAUC
CAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGAAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Megaloprepus_coerulatus_PST_ZMC   --caggauucccucaguaacggcgagcgaacaggga
ucaaauccagagcc-aaagcucgcgcccccccgc--ggggcgccgagcGCUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCuugagagugcagcccaaag-ucggugguaaacuccacc
ZHM_Haplostigma_modesta[nobody_recog_genus][x]   ---??????
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??????????????????????????-??????????????????
Pseudostigma_aberrans_OPA   --aaCCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UCAAAUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-   ]
Rhinagrion_mima_ZRM   ---aaccAGGAUUCCCUCAGUAACGGCGAGCGAACAGGGA
UCAAAUCCAGAGCC-AAAGCUCGCGUCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGc---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-   ]
Sciotropis_cyclanthorum_BYB   --AUUCCCUCAGUAACGGCGAGCGAACAGGGAACAAAUC
CAGAGCC-AAAGCUCGCGUCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CAGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Heteragrion_mitratum_ZHMt   ---aaccaggAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UCAAAUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCUGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-   ]
Heteragrion_sp_BYB   --AUUCCCUUAGUAACGGCGAGCGAACAGGGAUCAAAUC
CAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCUGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Oxystigma_cyanifrons_ZOC   ---aaccaggauucccuuaguaACGGCGAGCGAACAGGGA
UCAAAUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGUGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCUGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-]
ZDP_Dimeragrion_percubitale[x]   ------------------------ua-ggggag-gaaaagaaacuaaccaggauucccucaguaacggcgagcgaacaggga
ucaacuccagagcc-aaagcucgcgcccccccgc--ggggcgccgagcgcuguggcguucaggagcguccaccuucccgagg-ggugccugagagucc-aagucccucuugaacggggccacgg
cccggagagggugccaggcccgugc-gaccuccgcgc---ccgcc-cccugggagggg-cgcuccucagagucggguugcuugagagugcagcccaaag-ccggugguaaacuccacc

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Tatocnemis_malgassica_ZTMa                      --------------------------------------------aaccAGGAUUCCCUCAGUAACGGCGAGCGAACAGGGA
UCAACUCCAGAGCC-AAAGCUCGCUCCCCCCGC--GGGGCGCCGAGCUCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-     ]
Philogenia_cassandra_BPCs              ----------------------------------
-----------aaccaggAUUCCCUCAGUAACGGCGAGCGAACAGGGAUCACAUCCAGAGCC-GAAGCUCGCGCCCCCCGC--GGGGCGCCGAGUGCUGUGGCUUUCGGGAGCGUCCGCCU UCCCGAGG-
GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCU
CAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
ZPT_Philogenia_terraba[x]              -----------------------------------------------cAGGAUUCCCUCAGUAACGGCGAGCGAACAGGGAUCACAUC
CAGAGCC-GAAACUCGCGCCCCCCGC--GGGGCGCCGAGUGCUGUGGCUUUCGGGAGCGUCCGcCUUCCCGAgG-GGUGCCGGAgAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAgAGUCGGGUUGCUUGAGAGUGCAgCCCAAAG-UCGGUGGUAAACUCCACC
ZPBn_Philogenia_bernice[x]             --------------------------------------------????????????????????????????????????????????
???????-??????????????????--?????????????????????????????????????????????????????????????????-???????????????????????????
???????????????????????-???????????---???????????????????????????????????????????????????cagcccaaag-ucggugguaaacuccacc
Teinopodagrion_venale_ZMV                       --------------------------------------------aaccaggAUUCCCUCAGUAACGGCGAGCGAACAGGGA
UCAACUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGAUGUGGCGUUCCGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGACAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGCAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-     ]
Teinopodagrion_lepidum_ZTL                               --------------------------------------------aaccaggau
ucccucaguaacggcgagcgaacagggaucaacuccagagcC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGAUGUGGCGUUCCGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCGCAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-                                 ]
Amanipodagrion_gilliesi_ZAG                     --------------------------------------------aacCAGGAUUCCCUCAGUAACGGCGAGCGAACGGGGA
UCAAAUCCAGAGCC-GAAGCUCGCGCCCCCCCC--GGGGUGCCGAGCGCUGUGGCGUUUUGGAGCGUCCGCCUUCCCGAGG-GGCGCCGGAGAGUCA-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCGCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Nesolestes_elizabethae_ZNE                      --------------------------------------------aaccaggauucccucaguaacggcgagcgaacaggga
ucaacuccagagcc-aaagcucgcgcccccccgc--ggggcgccgagcgcuguggcguucgggagcguccgccuucccgagg-ggugccggagagucc-aagucccucuugaacggggccACGG
CCCGCAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGcuccucagagucggguugcuugagagugcagcccaaag-ucggugguaaacuccacc [-     ]
Protolestes_kerckhoffae_ZPKc                             --------------------------------------------aaccaggau
ucccucaguaacggcgagcgaacagggaucaacuccagagcc-aaagcucgcgCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-                                 ]
Argiolestes_ochrostomas_ZAOc                    --------------------------------------------aaccaggauucccuCAGUAACGGCGAGCGAACAGGGA
UCAACUCCAGGGCC-AAAGCUCGCGCCCCCCGC--GGAGCGCCGAGCUCUGUGGCGUUCGGGAGCGUCCGAUUUCCCGUGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-     ]
Argiolestes_sidonia_BAS                --------------------------------------------aaccaggauucccUCAGUAACGGCGAGCGAACAGGGAUCAACUC
CAGGGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCUUUCCCGUGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGAAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Caledopteryx_maculata_BCM              --------------------------------------------aaccaggAUUCCCUCAGUAACGGCGAGCGAACAGGGAUCAACUC
CAGGCCC-GAAGUUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGAAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNN
Trineuragrion_percostale_BTP                    --------------------------------------------aaccaggauucccu?aguaacggcgagcgaacagggA
UCAACUCCAGGGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUUCGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGCAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGUAGCCCAAAG-UCGGUGGUAAACUCCACC [-  ]
Caledargiolestes_uniseries_BCU                  --------------------------------------------aaccaggAUUCCCUCAGUAACGGCGAGCGAACGGGGA
CCAACUCCAGGCCC-GAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCACGGGAGGGG-CGCUCCUCAGAGUCGNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNN
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Podopteryx_roseonotata_ZPR --aaccaggauucccucaGUAACGGCGAGCGAACAGGGA
UCAACUCCAGGGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-]
Austroargiolestes_icteromelas_OAIc --aacCAGGAUUCCCUCAGUAACGGCGAGCGAACAGGGA
UCAACUCCAGGGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Griseargiolestes_albescens_BGA ---CAGGAUUCCCUCAGUAACGGCGAGCGAACAGGGG
UCAACUCCAGGGCCCAAAGCUCGCGCCCCCCGC--GGGGUGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Grisagriolestes_eboracus_ZGE_BGA[yoursorBybee's] --aaccaggAU
UCCCUCAGUAACGGCGAGCGAACAGGGAUCAACUCCAGGGCC-AAAGCUCGCGCCCCCCGC--GGGGUGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCUUUCCCGAGG-GGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
CCGGUGGUAAACUCCACC[-]
Miniargiolestes_minimus_ZMMn --aaccaggauucccuCAGUAACGGCGAGCGAACGGGGA
UCAACUCCAGGGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-]
Lestomima_flavostigma_OPBc3 --??
???????-??????????????????--??-??????????????????-?????????????????????????????
??????????????????????-???????????---?????-????????????-??-??????????????????[-
]
Rhipidolestes_hiraoi_ORH --aacCAGGAUUCCCUCAGUAACGGCGAGCGAACAGGGAUCAAAUC
CAGAGCC-AAAGCUCGCGGCCCCCGC--GGGGCGCCGAGCCAUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Rhipidolestes_aculeata_BRA --aacCAGGAUUCCCUCAGUAACGGCGAGCGAACAGGGAUCAAAUC
CAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCCAUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Paraphlebia_zoe_THA_OPZ --aaccaggauucccucaguaacggcgagcgaacaggga
ucaACUCCAGAGCC-AAAGCUCGCGACCCCCGC--GGGGCGCCGAGCCAUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Thaumatoneura_inopinata_THA_OTI --aaccAGGAUUCCCUCAGUAACGGCGAGCGAACAGGGA
UCAAAUCCAGAGCC-AAAGCUCGCGACCCCCGC--GGGGCGCCGAGCCAUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Hypolestes_clara_HYP --aACCAGGAuuCCCuuAGuAACGGCGAGCGAACAGGGA
UCAACUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CUGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGGGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Hypolestes_sp_BYB ---AUUCCCUCAGUAACGGCGAGCGAACAGGGAUCAACUC
CAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCCCGGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CUGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGGGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC Agriomorpha_fusca_ZAF6
--aacCAGGAUUCCCUCAGUAACGGCGAGCGAACAGGGA UCAAAUCCAGAGCC-AAAGCUCGCGAUCCCCGC--
GGAGCGCCGAGCCCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---
CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-]
Sinocnemis_yangbingi_ZSY --????????????????????????????????????
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[-]
Miocora_peraltica_ZMP --aaccaggauucccucaGUAACGGCGAGCGAACAGGGA
UCAACUCCAGAGCC-AAAGCUCGCGUCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGA-GUUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG

CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---UCGAC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-]
Cora_marina_POL_OCMr --aacCAGGAUUCCCUCAGUAACGGCGAGCGAACAGGGA
UCAACUCCAGAGCC-AAAGCUCGCGUCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGA-GUUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---UCGAU-UCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC Cora_cyane_BCC
--aaccaggAUUCCCUCAGUAACGGCGAGCGAACAGGGAUCAAAUC
CAGAGCC-AAAGCUCGCGUCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GUUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGAAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGAC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC Polythore_sp_Z_ZPZ
--?????????????????????????????????????
??????????????-??????????????????--???-??????????????????-??????????????????????????
?????????????????????????-???????????---?????-????????????-??????????????????ugcuugagagugcagcccaaag-ucggugguaaacuccacc
[-]
Polythore_boliviana_BPB ---AUUCCCUCAGUAACGGCGAGCGAACAGGGAUCAACUC
CAGAGCC-AAAGCUCGCGUCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GUUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGAC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Euthore_fasciata_ZEF3_[yoursofBybee's?] --aaccaggAU
UCCCUCAGUAACGGCGAGCGAACAGGGAUCAACUCCAGAGCC-AAAGCUCGCGUCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GUUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGAC-CCCCGGGAGGGG-CGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-]
Rimanella_arcana_AMP_ORA --aacCAGGAUUCCCUCAGUAACGGCGAGCGAACAGGGA
UCGACUCCAGAGCC-AAAGUUCGCGCCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Pentaphlebia_stahli_AMP_OPSt --aacCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UCAACUCCAGAGCC-AAAGCUCGCGCCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
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Devadatta_podolestoides_BDP --aaccaggAUUCCCUCAGUAACGGCGAGCGAACAGGGAUCAAAUC
CAGAGCC-AAAGCUCGCGCCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCCCGGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Amphipteryx_longicaudata_ZAL5 --aaccagGauUCCCUCAGUAACGGCGAGCGAACAGGGA
UCAACUCCAGAGCC-AAAGCUCGCGCCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC [-]
Pseudolestes_mirabilis_PLE_OPMb[yoursofBybee's?] --aaccaggau
ucccucaguaacggcgagcgaaCGGGGAUCAACUCCAGAGCC-AAAGCUCGCACCCCCCCGC--GGGGUGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCUUUCCCGAGG-GGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCGAAGAGGGUNCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCUGGGAgggg-cgcuccucagaguc ggguugcuugagagugcagcccaaag-
ucggugguaaacuccacc
Philoganga_vetusta_OPVt2 --aaccaggauucccuuaguaacggcgagcgaaCGGGGA
UCAACUCCAGAGCC-AAAGCUCGCACCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Philoganga_robusta_PGN[OPRb] --aaccaggauucccuuaguaacggcgagcGAACAGGGA
UCAACUCCAGAGCC-AAAGCUCGCGCCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Lestoidea_conjuncta_LST_ZLC[yoursofBybee's?] --aaccaggauucccucaguaacggcGAGCGAACGGGGA UCA
ACUCCAGAGCC-GAAGCUCGCGCCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Diphlebia_lestoides_DIP_ZDL --aaccaggauucccuuaguaacggcGAGCGAACGGGGA
UCAACUCCAGAGCC-GAAGCUCGCGCCCCCCCGC--GGGGCGCCGAGCGAUGUGGCGUUCUGGAGCGUCCGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGgugguaaacuccacc

Diphlebia_coerlescens_DIP_ODC   --aacCAGGAUUCCCUCAGUAACGGCGAGCGAACGGGGA
UCAACUCCAGAGCC-GAAGCUCGCGCCCCCCGC--GGGGUGCCGAGCGAUGUGGCGUUCUGGAGCGUCCGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Bayadera_melanopteryx_EUP_ZBM   --aacCAGGAUUCCCUCAGUAACGGCGAGCGAACGGGGA
UCAACUCCAGAGCC-GAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Bayadera_brevicauda_BBB   ---??????????????????????????????GGGAUCAACUC
CAGAGCC-GAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCCCGAAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC Dysphaea_gloriosa_ODG
--aacCAGGAUUCCAUCAGUAACGGCGAGCGAACGGGGA
UCGACUCCAGAGCC-GAAGCUCGCGUCCCCCGC--GGGGCGCGGAGCACUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Euphaea_formosa_BEFm   --aaccaggAUUCCCUUAGUAACGGCGAGCGAACGGGGAUCAACUC
CAGAGCC-AAAGCUCGCGACCCCCGC--GGGGCGCCGAGCCAUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Anisophaea_decorata_ZAD_OED   --aaccaggauuccaucaguaacggcgagcgaacgggga
ucgACUCACGAGCC-AAAGCUCGCGGCCCCCGC--GGGGCGCCGAGCCAUGUGGCGUUCGGGAGCGUCCGCUUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGggccacgg
cccgaagagggugccaggcccgugc-gaccuccgcgc---ccgcc-ccccgggagggg-cgcuccucagagucggguugcuugagagugcagcccaaag-ucggugguaaacuccacc [-   ]
Anisopleura_sp_A_EUP_ZAA   --aacCAGGAUUCCCUCAGUAACGGCGAGCGAACGGGGA
UCGAACCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGUGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGUGC---UCGCC-UCCCGGGAGGGG-CGCUCCUCGGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Disparocypha_biedermanni_ZDB   --aaccaggauucccucaguaacggcgAGCGAACAGGGA
UCCACUCCAGCGCC-GAAGCUCGCGCUCCCCAC--GGGGCGCCGAGCGAUGUGGCGUUCGGGAGCGUCCGCCUUCCCGGAG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGCAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-   ]
Libellago_semiopaca_BLS   --aaccaggAUUCCCUCAGUAACGGCGAGCGAACAGGGAUCCACUC
CAGCGUC-GAAGCUCGCGCCCUCUCC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGCAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Heliocypha_biseriata_BHB   --aaccaggAUUCCCUCAGUAACGGCGAGCGAACAGGGAUCCACUC
CAGCGCC-GAAGCUCGCGCCCCCUCC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGCAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGUUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Platycypha_caligata_CHL_OPC   --aacCAGGAUUCCCUCAGUAACGGCGAGCGAACAGGGA
UCCACUCCAGCGCC-GAAUCUCGCGCCCCCUAC--GGGGCGCCGAGCGAUGUGGCGUUCGGGAGCGUCCGCUUUCCCGGAG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGCAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Chlorocypha_curta_AJ746319_ZCCt[Yours?ZCCorZCCt?]   --?????????
??-??????????????????--????????????????????????GGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-   ]
Sundacypha_petiolata[x]   --??
???????-??????????????????--??-???????????????????????????
????????????????????????-???????????---??-??????????????????
Rhinocypha_fenestrella_CHL_ORF   --aacCAGGAUUCCCUCAGUAACGGCGAGCGAACAGGGA
UCCACUCCAGCGCC-GAAGCUCGCGCCCUCUCC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGUUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Rhinocypha_tincta_BRT   ---????AUUCCCUCAGUAACGGCGAGCGAACAGGGAUCCGAUC
CAGCGCC-GAAGCUCGCGCCCCCUCC--GGGGCGCCGAGCGAUGUGGCGUUCGGGAGCGUCCGCCUUCCCGAGG-GGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CGCAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Heliocharis_amazona_ZHAz   --aaccaggauucccucaguaacggcgagcgaacaggga
auaauuccagagcc-aaagcucgcgccccccgc--ggggcgccgagcgcuguggcGUUCGGGAGCGUCCGCCUUCCCGUGG-AGCACCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG

CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGU---UCACU-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-   ]
Hetaerina_americana_OHA2   ---aacCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UCGACUCCAGGGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCAAUUUCCCGAGG-GGCGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---UUGCC-UCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-   ]
Caliphaea_confusa_CAL_ZCC   ---aaccaggauucccuuaguaacggcgagcgaacaggga
ucgaCUCCAGGGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGGGCGCUGUGGCGUUCGGGAGCGUCCGAUUUCCCGAGG-GGCGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGUGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Noguchiphaea_yoshikoae_AJ459228[x]   ---?????????????????????????????????????
??????????????-??????????????????--??-?????????????????????????
?????????????????????????-???????????---???-??????????????????
Vestalis_beryllae_BVB   --????AUUCCCUCAGUAACGGCGAGCGAACAGGGAUCGACUC
CAGGGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCUCUGUGGCGUUCGGGAGCGUCCGAUUUCCCGAGG-GGCGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Matrona_basilaris_BMB   --????AUUCCCUUAGUAACGGCGAGCGAACAGGGAUCGCCUC
CAGGGCC-AAAGUUCGCGCUCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGAUUUCCCGAGG-GGCGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGUGC---CCGCC-CUCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ596560_Atrocalopteryx_atrata   --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAUCGCCUCCAGGGCC-AAAGUUCGCGCUCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGAUUUCCCGAGG-GGCGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-UGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-   ]
Echo_modesta_BEM   --????AUUCCCUUAGUAACGGCGAGCGAACAGGGAUCGACUC
CAGGGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGAUUUCCCGAGG-GGCGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGAAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Neurobasis_ianthinipennis_BNI   --??????????UUAGUAACGGCGAGCGAACAGGGA
UCGCCUCCAGGGCC-AAAGUUCGUGUCCCCUGC--GGGACGCCGAGCGAUGUGGCGUUUGGGAGCGUCCGAUUUCCCGAGG-GGCGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGUGC---CCGCC-CUCCGGGAGGGG-CGCUCCUUAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Sapho_orichalcea_CAL_OSO   ---aacCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UCGACUCCAGGGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUCGGGAGCGUCCGAUUUCCCGAGG-GGCGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Calopteryx_amata_CAL_OCAm   ---AACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UCGCCUCCAGGGCC-AAAGUUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCAUCCGAUUUCCCGAGG-GGCGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-UGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
DCS_Calopteryx_splendens[Whatisthis?X]   ---?????????????????????????????????????
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Calopteryx_aequabilis_CAL   --??????????????????????????????????
??????????????-??-??????????????????-??????????????????GCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-UGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC   Iridictyon
                                       ---??
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???????????????????????-???????????---???-??????????????????
Iridictyon_trebbaui_ZIT   ---aaccaggauucccuuaguaacugCGAGCGAACAGGGA
UCGGCUCCAGGGCC-AAAGCUCGCGCCCCCCGC--GGGACGCCGAGCUCUGUGGCGUUCGGGAGCGUCCGAUUUCCCUAGG-GGCGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCAGGGAGGGG-UGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC [-   ]
Unaligned_lestoid   --???
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Nubiolestes_diotima_PER_OND[IdenticaltoChlorolestes]   ---aacCAGGAU
UCCCUCAGUAACGGCGAGCGAACAGGGAUCAACUCCAGAGCC-GAAGCUCGCGUCCCCUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGAUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUUAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
CCGGUGGUAAACUCCACc
Perilestes_kahli_ZPK2   ---aaccaggAUUCCCUUAGUAACGGCGAGCGAACAGGGAUCAACUC
CAGAGCC-GAAGCUCGCGUCCCCUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGAUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGAAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAgucggguugcuugagagugcagcccaaag-ncggugguaaacuccacc[-
]
Perissolestes_remotus_BYB   ---

--GGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Perissolestes_magdalenae_OPMg   --?????????????????????????????????????
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?????????????????????????-???????????---?????-????????????-?????????????????????????gagugcagcccaaag-ccggugguaaacuccacc
[-   ]
Chlorolestes_umbrata_SLE_OCU   --aacCAGGAUUCCCUCAGUAACGGCGAGCGAACAGGGA
UCAACUCCAGAGCC-GAAGCUCGCGUCCCCUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGAUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUUAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Euchlorolestes_tessellata_SLE_OET   --aacCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UCAACUCCAGAGCC-GAAGCUCGCGUCCCCUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGAUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUUAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Phylolestes_ethelae_SLE_OPE   ---aaccaggauucccuuaguaacggcgagcgaacagggAUCAACUC
CAGAGCC-GAAGCUCGCGUCCCCUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGAUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGAAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAgcccaaag-ccggugguaaacuccacc
Synlestes_weyersii_SLE_ZSW   --CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAUCAACUC
CAGAGCC-GAAGCUCGCGUCCCCUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGAUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGAAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CAGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Synlestes_tropicus_SLE_ZST   --aaccaggauucccucaguaacggcgagcgaacaggga
ucaacuccagagcc-gaagcucgcguccccugc--ggggcgccgagcgcuguggcguuugggagcguccgauuucccg-ggaggugccggagagucc-aagucccucuugaacggggccacgg
cccgaagagggugccaggcccgugc-gaccuccgcgc---cagcc-ccccgggagggg-cgcuccucagagucggguugcuugagagugcagcccaaag-ccggugguaaacuccacc
Chorismagrion_risi_SLE_ZCRi   ------------------------------
----------------aaccaggauucccuuaguaacgGCGAGCGAACAGGGAUCAACUCCAGAGCC-GAAGCUCGCGUCCCCUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCC
GAUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-
CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Episynlestes_cristatus_SLE_ZEC   --aacCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UCAACUCCAGAGCC-GAAGCUCGCGUCCCCUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGAUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCccaaag-ccggugguaaacuccacc
Episynlestes_albicaudus_BEA   ---aaccaggAUUCCCUUAGUAACGGCGAGCGAACAGGGAUCAACUC
CAGAGCC-GAAGCUCGCGUCCCCUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGAUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Megalestes_micans_ZMMc   --aacCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UCAACUCCAGAGCC-GAAGCUCGCGUCCCCUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGAUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUugagagugcagcccaaag-ccggugguaaacuccacc [-   ]
Megalestes_kurahashii   ---??
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Orolestes_octomaculatus_LES_ZOO   --aaccaggAUUCCCUCAGUAACGGCGAGCGAACAGGGA
UCAACUCCAGCGCC-GAAGCUCGCGUCCCCUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGAUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACc

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Austrolestes_annulosus_BAA                      --------------------------------------------aacCAGGAUUCCCCUAGUAACGGCGAGCGAACAGGGA
UCAACUCCAGCGCC-GAAGCUCGCGUCCCCUGC--GGGGCGCCGAGCCAUGUGGCGUUUGGGAGCGUCCGAUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Sympecma_paedisca_BSP                           --------------------------------------------aaccaggAUUCCcUUAGUAACGGCGAGCGAACAGGGA
UCAACUCCAGCGCC-GAAGCUCGCGUCCCCUGC--GGGGCGCCGAGCGAUGUGGCGUUUGGGAGCGUCCGAUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-     ]
ZSF_Sympecma_fusca[x]                 --------------------------------------------????????????????????????????????????????????
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Austrolestes_analis_LES_OAAn                    --------------------------------------------aACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UCAACUCCAGCGCC-GAAGCUCGCGUCCCCUGC--GGGGCGCCGAGCCAUGUGGCGUUUGGGAGCGUCCGAUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Indolestes_peregrinus_OIP             --------------------------------------------aacCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAUCAACUC
CAGCGCC-GAAGCUCGCGUCCCCUGC--GGGGCGCCGAGCCAUGUGGCGUUUGGGAGCGUCCGAUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Indolestes_cyaneus                                          --------------------------------------------?????????
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Chalcolestes_viridis_ZCV                        --------------------------------------------aaccaggauucccucaguaACGGCGAGCGAACAGGGA
UCAACUCCAGCGCC-GAAGCUCGCGUCCCCUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGAUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC [-     ]
Archilestes_grandis_OAG               --------------------------------------------aacCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAUCAACUC
CAGCGCC-GAAGCUCGCGUCCCCUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGAUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGAAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Lestes_rectangularis_OLR                        --------------------------------------------aacCAGGAuuCCCuuAGuAACGGCGAGCGAACAGGGA
UCAACUCCAGCGCC-GAAGCUCGCGUCCCCUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGAUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC [-  ]
Lestes_eurinus_OLE                    --------------------------------------------aacCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAUCAACUC
CAGCGCC-GAAGCUCGCGUCCCCUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGAUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CGAAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCC-CCCCGGGAGGGG-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Hemiphlebia_mirabilis_OHM                       --------------------------------------------aaccaggauucccucaguaACGGCGAGCGACCAGGGA
UCAACUCCAGAGCC-AAAGCUCGCAUUCCUUGC--GGGGUGCCGAGCGAUGUGGCGUUUUGGAGCGUCCGCUCUCCCG-AGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCU-CGGGAUGGA-CGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-  ]
Unaligned_Anisoptera                  -----------------------------------------------?????????????????????????????????????????
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Epiophlebia_superstes_OES                       -------------------------------------------u-accaggauucccuuaguaaCGGCGAGCGAACAGGGA
UGAAUUCCAGCGCC-GAAGCUCGCAUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-     ]
Epiophlebia_laidlawi                                        -----------------------------------------------??????
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Unaligned_Aeshnoid --??
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Archipetalia_auriculata_AUS_AAAu --caggauucccuuaguaacggcgagCGAACAGGGA
UGAAUUCCAGCGCC-GAAGCUCGCAUGCCCUAC--GGCGUGCCGGGCUAUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCAcc
Austropetalia_victoria_AAV_AUS --caggauucccuuaguaacggCGAGCGAACAGGGA
UGAAUUCCAGCGCC-GAAGCUCGCAUGCCCUAC--GGCGUGCCGGGCUAUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUccacc
Hypopetalia_pestilens_OHPe --CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAUGAAUUC
CAGCGCC-GAAGCUCGCAUGCCCUAC--GGCGUGCCGGGCUAUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCCCAGAG A
GGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ596639_Phyllopetalia_apicalis --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UGAAUUCCAGCGCC-GAAGCUCGCAUGCCCUAC--GGCGUGCCGGGCUAUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
EU055322_Phyllopetalia_apollo --
-----------CC-GAAGCUCGCAUGCCCUAC--GGCGUGCCGGGCUAUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Eurypetalia_altarensis_OEA_AUS --caggauucccuuagUAACGGCGAGCGAACAGGGA
UGAAUUCCAGCGCC-GAAGCUCGCAUGCCCUAC--GGCGUGCCGGGCUAUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG CCCAGAGA
GGGUGCCAGGCCCGUGC-GACCUCCgcgc---ccgccccc-cggga-gggacgcuccucagagucggguugcuugagagugcagcccaaag-ucggugguaaacuccacc Ophiopetalia_diana_OOD
---AACCAGGAuuCCCuuAGuAACGGCGAGCGAACAGGGA UGAAUUCCAGCGCC-GAAGCUCGCAUGCCCUAC--
GGCGUGCCGGGCUAUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---
CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-]
Gomphaeschna_furcillata_OGF[listedonlyasgenus] --CAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAAGAAUUCCAGCGCG-GAAGCCCGCAUGCCCUAC--GGCGUGCCGGGCCCUGUUGCGUUUGGGAGCGCCCGUUUUACCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCAAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC
Oligoaeschna_pryeri[x] ---???
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???????????????????????-???????????---???-??????????????????
Austroaeschna_parvistigma_AAPs --caggauucccuuaguaacggcgagcgaacaggga
gaaauuccagagcc-gaagcccgcauGCCCUAC--GGCGUGCCGGGCUCUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Telephlebia_tillyardi_ATT[x] ---?????????????????????????????????????
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Boyeria_vinosa_OBV --CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GAAAUUCCAGAGCC-AAAGCCCGCAUGCCCUAC--GGCGUGCCGGGCCCUGUGGCGUUUGGGAGCGCCCGUUUUACCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCACC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ596627_Boyeria_irene --------AAUUUAAGCAUAUUAAUAAGCGGUG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GAAAUUCCAGAGCC-GAAGCCCGCAUGCCCUAC--GGCGUGCCGGGCCCUGUGGCGUUUGGGAGCGCCCGUUUUACCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCACC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
EU424323_Brachytron_pratense --------AAUUUAAGCAUAUUAAUAAGCGGUG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GAAAUUCCAGAGCC-GAAGCCCGCAUGUCCUAC--GGCGUGCCGGGCCCUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Epiaeschna_heros_OEH --CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAGAAAUUC
CAGAGCC-GAAGCCCGCAUGUCCUAC--GGCGUGCCGGGCCCUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC

FJ596626_Caliaeschna_microstigma ---------AUUUAAGCAUAUUAAUAAGCGGUG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GAAAUUCCAGAGCC-GAAGCCCGCAUGCCCUAC--GGCGUGCCGGGCCCUGUGGCGUUUGGGAGCGCCCGUUUUACCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ596628_Anaciaeschna_isoceles -------------AGCAUAUUAAUAAGCGGUG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GAAAUUCCAGAGUC-AAAGCUCGCAUGCCCUAC--GGCGUGCCGGGCCCUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGGAGAGGGUGCCAGGCCCGUGC-GAACUCCGCGC---CCGCCACC-CGGGA-GGGACGCUCCUCGGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
GQ118298_Oplonaeschna_sp ---

Aeshna_canadensis_OAC --???
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????????????????????????-???????????---????????-?????-??????????????????????????????????agugcagcccaaag-ucggugguaaacUCCACC
EU055242_Rhionaeschna_multicolor ---AUUCCCUUAGUAACGGCGAGCGAACAGGGA
GAAAUUCCAGAGUC-AAAGCUCGCAUGCCCUAC--GGCGUGCCGGGCCCUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GAACUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCGGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
AF461203_Aeshna_cyanea ------------------------------------NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNN---NNNNNNNN-NNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
FJ596630_Aeshna_grandis --------AAUUUAAGCAUAUUAAUAAGCGGUG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GAAAUUCCAGAGUC-AAAGCUCGCAUGCCCUAC--GGCGUGCCGGGCCCUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GAACUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCGGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ712316_Gynacantha_japonica_bullata --------AAUUUAAGCAUAUUAAUAAGCGGUG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GAAAUUCCAGAGCC-AAAGCUCGCAUGCCCUAC--GGCGUGCCGGGCCCUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GAACUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCGGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Austrogynacantha_heterogena_AAH ---caggAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GAAAUUCCAGAGUC-AAAGCUCGCAUGCCCUAC--GGCGUGCCGAGCCCUGUGGCGUUUGGGAGCGCCCAUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GAACUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCGGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Hemianax_ephippiger[x] ---???
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--CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAGAAAUUC
CAGAGUC-AAAGCCCGCAUGCCUUAC--GGCGUGCCGGGCCCUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CAGAGAGGGUGCCAGGCCCGUGC-GAACUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCGGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ596632_Anax_imperator --------AAUUUAAGCAUAUUAAUAAGCGGUG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAGAAAUUC
CAGAGUC-AAAGCCCGCAUGCCUUAC--GGCGUGCCGGGCCCUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CAGAGAGGGUGCCAGGCCCGUGC-GAACUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCGGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Unaligned_gomphid --???
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Sinogomphidia_kruegeri_ASK ---uaggauucccuuaguaacggcgagcgaacaggga
ggaauuccagaacc-aaagcucgcauuccuugc--ggggUGCCGAGCGCUGUGGAGUUUGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCUGUGC----CGCCUUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
EU055258_Ictinogomphus_australis[Dowehaveyours?] --AU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGAUCC-AAAGCUCGCAUUCUUUGC--GGGGUGCCGAGCUCUGUGGAGUUUGGAGCGCCCGCUUUCCCG-GGAGGUUCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCUGUGA----UGCCUUC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC
Ictinogomphus_sp[x] ---???
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A_FJ712322_Onychogomphus_sp_mistake ---?????????
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Phyllogomphoides_stigmatus_APS ------------------------------ggag-gaaaagaaacuaaccaggauucccCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCUCC-GAAGCUCGCAUUCCUUGC--GGGGUGCCGAGCGCUGUGGAGUUUAGGAGCGCCCACUUUCCCG-GGAGGUGCCAGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGUGC----CGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Progomphus_Neaprogomphus_obscurus_OPO ---CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCUCC-GAAGCUCGCAUUCCUUGC--GGGGUGCCGAGCGAUGUGGAGUUUAGGAGCGCCCAAUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCUCGC----UGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
EU055271_Progomphus_Neaprogomphus_borealis ---AU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCUCC-AAAGCUCGCAUUCCUUGC--GGGGUGCCGAGCGAUGUGGAGUUUAGGAGCGCCCAAUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC----UGCCCUC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC
Hagenius_brevistylus_OHB ---UAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUC
CAGCUCC-GAAGCUCGCAUUCCUUGC--GGGGUGCCGAGCGCUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGCGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CAGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC----CGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC Lanthus_vernalis_OLV
---CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCUCC-GAAGCUCGCAUUCCUUGC--GGGGUGCCGAGCGCUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC----CGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Davidius_nanus[x] --???
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Neogomphus_edenticulatus_ONE ---CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUC
CAGCUCC-GAAGCUCGCAUUCCUUGC--GGGGUGCCGAGCGCUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CAGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC----GGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Armagomphus_armiger_AAAr ---caggauucccuuaguaaCGGCGAGCGAACAGGGA
GGAAUUCCAGCUCC-GAAGCUCGCAUUCCUUGC--GGGGUGCCGAGCGCUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC----CGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACuccacc
Hemigomphus_comitans_AHC[x] --???
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FJ596622_Hemigomphus_heteroclytus --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCUCC-GAAGCUCGCAUUCCUUGC--GGGGUGCCGAGCGCUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC----CGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
EU055228_Hemigomphus_magela ---AUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCUCC-GAAGCUCACAUUCCUUGC--GGGGUGCCGAGCGCUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC----CGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Trigomphus_sp[x] --???
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FJ596615_Stylogomphus_albistylus --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCUCC-GAAGCUCGCAUUCCUUGC--GGGGUGCCGAGCGCUGUGGAGUUUAGGAGCGCCCACUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC----CGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ712325_Stylogomphus_shirizui -----------------UAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCUCC-GAAGCUCGCAUUCCUUGC--GGGGUGCCGAGCGCUGUGGAGUUUAGGAGCGCCCACUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC----CGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
EU055286_Davidioides_martini ---AUUCCCUUAGUAACGGCGAGCGAACAGGGA
AUAAUUCCAGCUCC-GAAGCUCGCACUCCUUGC--GGGGUGCCGAGCGCUGUGGAGUUUAGGAGCGCCCAAUUUCCCG-GGAGGUGCCUGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCAGCGC----UGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Burmagomphus_collaris_GOM_ABC ---cagGAUUCCCUCAGUUACGGCGAGCGAACAGGGA
GGAAUUCCAGCUCC-GAAGCUCGCGCUCCUUGC--GGGGUGCCGAGCGCUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCCGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCGGUGA----CGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC

EU055285_Cyclogomphus_heterostylus --AUUCC-UCAGUAACGGCGAGCGAACAGGGA
GAAAUUCCAGCUCC-GAAGCUCGUGCUCCUUGC--GGGGCGCCGAGCACUGUGGAGUUUAGGAGCGCCCGCUUUCCUG-GGAGGCGCCCGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GAUCUCGGUGA----UGCCCUC-UAGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Anisogomphus_pinratani_not_pinratanai[x] ---?????????????????????????????????????
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Dromogomphus_spinosus_GOM ---?????????????????GGCGAGCGAACAGGGA
GGAAUUCCAGCUCC-GAAGCUCGCGCUCCUUGC--GGGGCGCCGAGCGCUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCCGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGc-gaccUcggcga----cgcccUc-cggga-gggacgcUccUcagagUcgggUUgcUUgagagUgcagcccaaag-UcggUggUaaacUccacc
Arigomphus_villosipes_OAV ---CAGGAU UCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCUCC-GAAGCUCGCGCUCCUUGC--GGGGCGCCGAGCGAUGUGGAGUUUAGGAGCGCCCACUUUCCCG-GGAGGUGCCCGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCGGUGA----CGCCCUC-UGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Arigomphus_cornutus[x] ---??
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FJ712319_Stylurus_intricatus --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCUCC-GAAGCUCGCGGUCCUUGC--GGGUCGCCGAGCGCUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCCGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCGGCGA----CGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Stylurus_amnicola[x] ---??
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FJ596610_Stylurus_nagoyanus ------------------UAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCUCC-GAAGCUCGCGAUCCUUGC--GGGUCGCCGAGCGCUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCCGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCGGCGA----CGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ596612_Gomphurus_Gomphus_externus ------------------UAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCUCC-GAAGCUCGCGCUCCUUGC--GGGGCGCCGAGCGCUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCCGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCGGCGA----CGCCCUC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC
FJ596611_Asiagomphus_melaenops --------UAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCUCC-GAAGCUCGCGCUCCUUGC--GGGGCGCCGAGCGCUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCCGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCGGCGA----CGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ596614_Phanogomphus_Gomphus_exilis ------------------UAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCUCC-GAAGCUCGCGCUCCUUGC--GGGGCGCCGAGCGCUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCCGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCGGCGA----CGCCCUC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC
Gomphus_Gomphus_graslini[x] ---?????????????????????????????????????
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Gomphus_Hylogomphus_adelphus_OGA ---CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCUCC-GAAGCUCGMGCUCCUUGC--GGGGCGCCGAGCGCUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCCGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCGGCGA----CGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ712320_Gomphus_Gomphus_vulgatissimus ------------------UAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGG
CGAGCGAACAGGGAGGAAUUCCAGCUCC-GAAGCUCGCGCUCCUUGC--GGGGCGCCGAGCGCUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCCGAGAGUCC-
AAGUCCCUCUUGAACGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCGGCGA----CGCCCUC-CGGGA-GGGACGCUCCUCAGAGUC
GGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Megalogomphus_sp[x] ---??
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Onychogomphus_uncatus_FJ712321 ------------------UAUUAAUAAGCGGAG-GAAAAGAAACUAACUAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGUAAUUCCAGCUCC-GAAGCUCGCAUUCCUUGC--GGGAUGCCGAGCACUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCUGAGAGU

CC-AAGUCCCUCUUGAACGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCAGUGC----UGCCCUC-CGGGA-GGGACGCUCCUCAGAGUC
GGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCAUC[-]
FJ596620_Onychogomphus_forcipatus_unguiculatus-----------------UAUUAAUAAGCGGAG-GAAAAGAAACUAACUAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GUAAUUCCAGCUCC-GAAGCUCGCAUUCCUUGC--GGGAUGCCGAGCACUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCUGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCAGUGC----UGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCAUC
FJ596617_Lindenia_tetraphylla_mistake --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGAUCC-AAAGCUCGCAUUCUUUGC--GGGGUGCCGAGCGCUGUGGAGUUUUGGAGCGCCCGCUUUCCUG-GGAGGCACCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCUGUGU----CGCCUUC-CGGGA-GGGACGUUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCAYC
Ophiogomphus_Ophionurus_carolus_OOC ---UAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GUAAUUCCAGCUCC-GAAGCUCGCAUUCCUUGC--GGGAUGCCGAGCACUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCUGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCAGUGC----UGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCAUC
FJ596618_Ophiogomphus_Ophiogomphus_severus -----------------UAUUAAUAAGCGGAG-GAAAAGAAACUAACUAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGUAAUUCCAGCUCC-GAAGCUCGCAUUCCUUGC--GGGAUGCCGAGCACUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCUGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCAGUGC----UGCCCUC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCAUC
Ophiogomphus_Ophiogomphus_caecilia[x] --????????????????????????????????????
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Leptogomphus_elegans_OLEg[x] --????????????????????????????????????
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FJ596609_Leptogomphus_sauteri --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCCAAGUAACGGCGAGCGAACAGGGA
GUAAUUCCAGCUCC-GAAGCUUGCAUUCCUUGC--GGGAUGCCAAGCUCUGUGGAGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCUGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCACGC----UGCCCUC-UGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Epigomphus_compactus_AEC[x] --???
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????????????????????????-???????????---???-??????????????????
FJ712323_Microgomphus_chelifer --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAAUCCAGCUCC-GAAGCUCGCAUUCCUUGC--GGGGUGCUGAGCGCUGUGGAGUUUAGGAGCGCCCACUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGUUU----CGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Heliogomphus_retroflexus[x] --???
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Macrogomphus_parallelogramma[x] --????????????????????????????????????
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Ceratogomphus_pictus_OCH ---CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCUCC-AAAGUUCGCAUUCCUUGC--GGGAUGCCGAACGCUGUGGAGUUUAGGAGCGCCCGAUUUCCCG-AGAGGUGUCUGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCAGCAC----UGCCUCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCAUC
Lestinogomphus_angustus_ALA[x] --????????????????????????????????????
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Austrogomphus_guerini_AAG_GOM ---caggauucccuuaguaacggcgaGCGAACAGGGA
GGAAUUCCAGCUCC-GAAGCUCGCAUUCCUUGC--GGGGUGCCGAGCGCUGUGGAGUUUAGGAGCGUCCGAUUUCCCG-GAAGGUGCCUGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCAGUGC----CGCCCUC-CGGGA-GGGGCGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACc
EU055267_Austrogomphus_amphiclitus ---

---GGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
EU055261_Antipodogomphus_acolythus ---AUUCCCUUAGUAACGGCGAGCGAACAGGGA
UGAAAUCCAGCUCU-GAAGCUCGCACUCCUUGC--GGGGUGCCGAGCGCUGUGGUGUUUAGGAGCGUCUGAUUUCCCG-GGAGGUGCCUGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCAGUGC----CGCCCUC-CGGGA-GGGGCGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UAGGUGGUAAACUCCACC

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Unaligned_Petalurid                   -----------------------------------------------?????????????????????????????????????????
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Tanypteryx_hageni_OTH                 ------------------------------------------------AGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAUGAAUUC
CAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Tanypteryx_sp[x]                      --------------------------------------------????????????????????????????????????????????
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FJ712330_Tanypteryx_pryeri            --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAUGAAUUC
CAGCGCC-GAAGCUCGCAUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CAGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Tachopteryx_thoreyi_OTT               -----------------------------------------------CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAAGAAUUC
CAGCGCC-GAAGCUCGCAUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CAGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ596624_Phenes_raptor                ---------AUUUAAGCAUAUUAAUAAGCGGAG--AAAAGAAACUAACAGGGAUUCCCCUAGUAACGGCGAGCGAACAGGGAUGAAUUC
CAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CAGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC Phenes_centralis_OPR
                                               ------------------------------------aaagaaacuaaccaGGAUUCCCCUAGUAACGGCGAGCGAACAGGGA
UGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Uropetalura_carvori_AUC                       -----------------------------------------------??????????????????????????????????
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Petalura_hesperia_PET_APH             -----------------------------------------------caggauucccuuaguaaCGGCGAGCGAACAGGGAUGAAUUC
CAGCGCC-GAAGCUCGCAUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CAGAGAGGGUGCCAGG CCCGUGC-GACCUCCGCGC---CCGCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Petalura_gigantea_BYB                 -----------------------------------------------?????????????????????????????????????????
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???????????????????????-???????????---????????-?????-???????????????GUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Petalura_litolae_PET_OPG              -----------------------------------------------cAGGAUUCCCCUAGUAACGGCGAGCGAACAGGGAUGAAUUC
CAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CAGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCC-CGGGA-GGGACGCUCCUCAGAnnnnGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Petalura_ingentissima_API                      -----------------------------------------------caggauucccuuaguaacGGCGAGCGAACAGGGA
UGAAUUCCAGCGCC-GAAGCUCGCAUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Zoraena_bilineata_OZB               -----------------------------------------------CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAUGAAUUC
CAGCGCC-GAAGCUCGCAUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCC-CGGGA-GGGACGCUCCUCAGA?????????????????????????????-??????????????????
Taeniogaster_obliqua_OTO                       -----------------------------------------------caggauucccUUAGUAACGGCGAGCGAACAGGGA
UGAAUUCCAGCGCC-GAAGCUCGCAUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Kalyptogaster_erronea_OKE             -----------------------------------------------CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAUGAAUUC
CAGCGCC-GAAGCUCGCAUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCC-CGGGA-GGGACGCUCCUCAGA?????????????????????????????-??????????????????
FJ712317_Pangaeagaster_Cordulegaster_maculata   ----------UUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UGAAUUCCAGCGCC-GAAGCUCGCAUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
EU055277_Laurogaster_Cordulegaster_dorsalis     ---------------------------------------------------AUUCCCUUAGUAACGGCGAGCGAACAGGGA
UGAAUUCCAGCGCC-GAAGCUCGCAUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
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FJ596634_Cordulegaster_boltonii ------------UAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UGAAUUCCAGCGCC-GAAGCUCGCAUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ596637_Cordulegaster_picta --CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UGAAUUCCAGCGCC-GAAGCUCGCAUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ596638_Anotogaster_sieboldii --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UGAAUUCCAGCGCC-GAAGCUCGCAUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Neopetalia_punctata_ONP --CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UGAAAUCCAGCGCC-GAAGCUCGCAUCUCCUAC--GGGGUGCCGAGCCCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Chloropetalia_soarer_OCSr --caggauucccuuaguaacggcgagCGAACAGGGAUGAAUUC
CAGCGCC-GAAGCUCGCAUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CAGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Sinorogomphus_nasutus_OSN --CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAUGAAUUC
CAGCGCC-GAAGCUCGCAUUCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CAGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ596635_Chlorogomphus_brunneus --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UGAAUUCCAGCGCC-GAAGCUCGCAUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Chlorogomphus_sp[x] --???
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Synthemis_eustalacta_OSE3 --CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUC
CAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCUUCC-CGGGA-GGGACGCUCUUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
EU055259_Synthemis_marcrostigma[Archaeosynthemis] --AU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCUUCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC
Archaeosynthemis_leachii[x] --???
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Eusynthemis_brevistyla_OEB --???
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???????????????????????-???????????---????????-?????-??????????????????????????????????cagcccaang-ucggugguanncuccacc
FJ596573_Eusynthemis_guttata --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCUUCC-CGGGA-GGGACGCUCCUCAGAGUCGGGKUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
EU055262_Eusynthemis_nigra ---r
rrrAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCUUCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
EU055263_Choristhemis_flavoterminata ---CCCUUAGUAACGGCGAGCGAACAGGGA
rrrAUUCCAGCGCC-GAAGCUCGCGUCCCCAUC--GGGGCGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCUUCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Synthemiopsis_gomphomacromioides_ASG --????????CCUUAGUA-CGGCGAGCGA-CAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCUUCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC

Gomphomacromia_chilensis_OGP   ---CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUC
CAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CAGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCUUCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ712318_Gomphomacromia_paradoxa   --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCUUCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Syncordulia_serendipator[x]   --??
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Syncordulia_venator[x]   --??
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EU055287_Idionyx_imbricata   --AUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAAUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUUUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCAGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCUGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Idionyx_selysi[x]   --??
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Macromidia_rapida_OMR[x]   --??
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EU424325_Oxygastra_curtisii   ----CGUUAAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCACUGUGGCGUUUAGGAGCGCCCGCU-UCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
EU055244_Cordulephya_pygmaea   --AUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Pseudocordulia_circularis[x]   ---?????????????????????????????????????
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?????????????????????????-???????????---???-??????????????????
Hesperocordulia_berthoudi_BYB   --????AUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Lathrocordulia_metallica[x]   --??
???????-??????????????????--??-???????????????????????????
???????????????????????-???????????---???-??????????????????
Micromidia_convergens_BYB   ---????AUUCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUC
CAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Micromidia_atrifrons[x]   --??
???????-??????????????????--??-???????????????????????????
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Austrophya_mystica[x]   --??
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Austrocordulia_refracta[x]   --??
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???????????????????????-???????????---???-??????????????????
Archaeophya_magnifica[x]   --??
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Epophthalmia_elegans[x]                 --------------------------------------------?????????????????????????????????????????????
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Didymops_transversa_ODT                           -----------------------------------------------CAGGAUUCCMUUAGUAACGGCSAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCCAC--GGGGGGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCCUUCCCG-GGUGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Macromia_illinoiensis_OMi               -----------------------------------------------CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAGGAAAUC
CAGCGCC-GAAGCUCGCGUCCCCCAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCCUUCCCG-GGUGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCCCAGAG
AGGGUGCCAGGCCCGUGC-GGCCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-ACGGUGGUAAACUCCACC
FJ596570_Macromia_amphigena                             --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAAUCCAGCGCC-GAAGCUCGCGUCCCCCAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCCUUCCCG-GGUGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GGCCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-                                  ]
Macromia_eurynome_BYB                   -----------------------------------------------????AUUCCCUUAGUAACGGCGAGCGAAGAGGGAGGAAAUC
CAGCGCC-GAAGCCCGCGUCCCCCAC--GGGGCGCCGGGCGCUGUGGCGUUUGGGAGCGCCCGCCUUCCCG-GGUGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-ACGGUGGUAAACUCCACC
Macromia_magnifica[x]                   --------------------------------------------?????????????????????????????????????????????
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FJ712329_Macromia_splendens                             -----------UUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAAUCCAGCGCC-GAAGCUCGCGUCCCCCAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCCUUCCCG-GGUGGUGCAGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GGCCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-                                  ]
Phyllomacromia_bifasciata_sp_nyanzana[x]          -----------UAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAAUCCAGCGCC-GAAGCUCGCGUCCCCCAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCUUCUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC [-     ]
FJ596572_Idomacromia_proavita                           --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUAGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-                                  ]
Aeschnosoma_forcipula[x]                --------------------------------------------?????????????????????????????????????????????
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Pentathemis_membranulata[x]             --------------------------------------------?????????????????????????????????????????????
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Tetragoneuria_cynosure                  -----------------------------------------------CAGGAUUCCCUUAGUAAUGGCGAACGAAGAGGGAGAAAAUC
CAGCGCC-GAAGCUCGCGUCCCCCGC--GGGGCGCAGAGCGUUGUGGCGUUUGGGAGCGCCCGCUUUCCGG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CAGAGAGGGUGCAAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CCGGA-GGGUCGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Tetragoneuria_costalis[x]               --------------------------------------------?????????????????????????????????????????????
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FJ596567_Tetragoneuria_canis                            --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAAUGGCGAACGAAGAGGGAGAAAAUCCAGCGCC-GAAGCUCGSGUCCCCCGC--GGGGCGCAGARCGUUGUGGCGUUUGGGAGCGCCCGCUUUUCCGGGGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCAGAGAGGGUGCAAGGCCCGUGC-GACCUCCG
 CGC---CCGCCCCC-CCGGA-GGGUCGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC[-            ]
FJ596565_Epitheca_princeps              --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAAUGGCGAACGAAGAGGGAGAAAUUC
CAGCGCC-GAAGCCCGCGUCCCCCGC--GGGGCGCAGAGCGUUGUGGCGUUUGGGAGCGCCCGCUUUCCGG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CAGAGAGGGUGCAAGGCCCGUGC-GACCUCCGCGC---CCGCCCCU-CCGGA-GGGUCGUUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
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FJ596561_Epitheca_marginata ----------UUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAAUGGCGAACGAAGAGGGAGGAAAUCCAGCGCC-GAAGCUCGCGUCCCCCGC--GGGGCGCAGAGCGUUGUGGCGUUUAGGAGCGCCCGUUUUCCGG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCAGAGAGGGUGCAAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CUGGA-GGGUCGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
ACGGUGGUAAACUCCACC[-]
FJ596564_Epitheca_bimaculata --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAAUGGCGAACGAAGAGGGAGAAAUUCCAGCGCC-GAAGCCCGCGUCCCCCGC--GGGGCGCAGAGCGUUGUGGCGUUUGGGAGCGCCCGCUUUCCGG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCAGAGAGGGUGCAAGGCCCGUGC-GACCUCCGCGC---CCGCCCCU-CCGGA-GGGUCGUUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-]
Rialla_villosa[x] --??
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Cordulia_aenea[x] --??
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Cordulia_shurtleffii_BYB ---????AUUCC-UUAGUAAUGGCGAACGAACAGGGAGGAAAUC
CAGCGCC-GAAGCUCGCGUCCCCCGC--GGGGCGCAGAGCGUUGUGGCGUUUGGGAGCGCCCGUUUUCCGG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CAGAGAGGGUGCAAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CCGGA-GGGUCGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ596568_Somatochlora_alpestris --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAAUGGCGAACGAACAGGGAGGAAAUCCAGCGCC-GAAGCUCGCGUCCCCCGC--GGGGCGCAGAGCGUUGUGGCGUUUGGGAGCGCCCAUUUUCCGG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCAGAGAGGGUGCAAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CCGGA-GGGUCGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-]
Somatochlora_flavomaculata[x] --?????????????????????????????????????
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FJ596569_Somatochlora_metallica --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAAUGGCGAACGAACAGGGAGGAAAUCCAGCGCC-GAAGCUCGCGUCCCCCGC--GGGGCGCAGAGCGUUGUGGCGUUUGGGAGCGCCCGUUUUCCGG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCAGAGAGGGUGCAAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CCGGA-GGGUCGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-]
Somatochlora_tenebrosa_OSTn ---CAGGAUUCCCUUAGUAAUGGCGAACGAACAGGGA
GGAAAUCCAGCGCC-GAAGCUCGCGUCCCCCGC--GGGGCGCAGAGCGUUGUGGCGUUUGGGAGCGCCCGUUUUCCGG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCAAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CCGGA-GGGUCGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
A_FJ596562_Hemicordulia_min_nipponica --------AAUUUAAGCAUAUUAAUAAGCGAAG-GAAAAGAAACUAACAAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAAUCCAGCGCC-GAAGAUCGCGCUCCCAGC--GGGGUGCAGAGCGUUGUGGCGUUUGGGAGCGCCCGUUUUCCGG-GGAGGCGCCGGGGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCAAGGCCCGUGC-GACCUCCGCGC---CCGCCCCU-CCGGA-GGGUCGCUCCUUAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
A_EU055266_Hemicordulia_australiae ---AUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAAUCCAGCGCC-GAAGCUCUCGUUCCCAGC--GGGGUGCAGAGCGUUGUGGCGUUUGGGAGCGCCCGUUUUCCGG-GGAGGCGCCGGGGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCAAGGCCCGUGC-GACCCCCGCGC---CCGCCCCU-CCGGA-GGGUCGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
EU055254_Procordulia_jacksoniensis --
----------GCC-GAAGCUCGCGUUCCCCGCCCGGGAUGCAGAGCGUUGUGGCGUUUGGGAGCGCCCGCUUUCCGG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG CC
CAGAGAGGGUGCAAGGCCCGUGC-GACCUCCGCGC---CCGCCCCU-CCGGA-GGGUCGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Unaligned_Libellulid ---???
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FJ596583_Notiothemis_robertsi --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGACGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGUUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ596578_Tetrathemis_irregularis ---GGCGAGCGAACAGGGA
GGAAAUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGUUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC

Tetrathemis_polleni[x]   --??
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FJ596587_Urothemis_signata   --------------------------------------AGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUGC--GGGUCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGCCGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Urothemis_assignata[x]   --??
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FJ596588_Macrodiplax_cora   --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUC
CAGCGCC-GAAGCUCGCGUCCCCUAC--GGGUCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGGCC CAGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGCCGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
EU055229_Macrodiplax_balteata   --AUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGUCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGCCGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Zyxomma_elgneri[x]   --??
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Zyxomma_petiolatum_GU196340   --CCGGGUAAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACKGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGUCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UC
GGUGGUAAACUCCACC[-   ]
FJ596576_Zygonyx_torridus_or_ida   ----------------CAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCNUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGGCCCCUGC--GGGCCGCCGAGCGCUGUGGCGUUUGGGAGCGACCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
EU055233_Nannophlebia_sp_or_risi   --AUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGGCCCCUGC--GGGCCGCCGAGCGCUGUGGCGUUUGGGAGCGACCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Bironides_sp_HOL_2010_GU196365   ----------UUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACAAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGGCCCCUAC--GGGCAGCCGAGCGAUGUGGCGUUCGGGAGCGACCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACUGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
ACGGUGGUAAACUCCACC[-   ]
Huonia_epinephela_GU196370   -----------UUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGGCCCCUAC--GGGCCGCCGAGCGCUGUGGCGUUCGGGAGCGACCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCUUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UC
GGUGGUAAACUCCACC[-   ]
Huonia_oreophila[x]   --??
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Onychothemis_testacea[x]   --??
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FJ596582_Rhyothemis_variegata_imperatrix_variegata   -----------------AUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGCGCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
CCGGUGGUAAACUCCACC
Rhyothemis_fuliginosa_GU196333   --CUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
CCGGUGGUAAACUCCACC[-   ]

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Miathyria_marcella[x]                 ---------------------------------------------???????????????????????????????????????????
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Miathyria_simplex_GU196345                      ---------AUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGAUGUGGCGUUUGGGAGCGCUCGCCUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAACGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CC
GGUGGUAAACUCCACC[-    ]
FJ596577_Tholymis_citrina                       -------------AAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAAAAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGGCCCCUGC--GGGUCGCCGAGCGCUGUGGCGUUCGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-GCGGUGGUAAACUCCACC
Tholymis_tillarga[x]                  ---------------------------------------------???????????????????????????????????????????
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AB127417_Pantala_flavescens                     NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
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Tramea_lacerata_OTL                   ------------------------------------------------CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUC
CAGCGCC-GAAGCUCGCGUUCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
FJ596586_Tramea_calverti                                 --------UAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGUUCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGAUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
CCGGUGGUAAACUCCACC[-                                  ]
Sympetrum_Kalosympetrum_janeae_OSJ              ------------------------------------------------CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GAAAUUCCAGCGCC-GAAGCUCGCGUCCCUUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCAUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Sympetrum_Kalosympetrum_obtrusum[x]             ---------------------------------------------?????????????????????????????????????
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FJ596606_Sympetrum_Sympetrum_vulgatum           ------------------------------------AAAGAAACUAACUAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GAAAUUCCAGCGCC-GAAGCUCGCGUCCCUUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
AB127406_Sympetrum_Sympetrum_pedemontanum       ------------------------NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
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Sympetrum_Nesogonia_blackburni[x]               ---------------------------------------------?????????????????????????????????????
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FJ596607_Sympetrum_Sympetrum_sanguineum                  --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACUAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGAAAUUCCAGCGCC-GAAGCUCGCGUCCCUUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC
EU055230_Sympetrum_Tarnetrum_corruptum                   ----------------------------------------------------AU
UCCCUUAGUAACGGCGAGCGAACAGGGAGAAAUUCCAGCGCC-GAAGCUCGCGUCCCUUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC
Sympetrum_Tarnetrum_fonscolombii_GU196359       --CCGGGUUAUUUAAGCAUAUUAAUAAGCGGAGAGAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCUUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UC
GGUGGUAAACUCCACC[-    ]
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Sympetrum_Tarnetrum_illotum[x]   ---?????????????????????????????????????
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Sympetrum_Tarnetrum_infuscatum[x]   ---?????????????????????????????????????
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EU424330_Sympetrum_danae   -------------AAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACUAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGAAAUUCCAGCGCC-GAAGCUCGCGUCCCUUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-   ]
Sympetrum_meridionale_GU196334   ---------------GCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGAAAUUCCAGCGCC-GAAGCUCGCGUCCCUUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-   ]
FJ596605_Leucorrhinia_pectoralis   --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Leucorrhinia_glacialis[x]   ---??
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Celithemis_elisa_OCE   ---CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAGAAAUUC
CAGCGCC-GAAGCUCGCGUUCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGGCC CAGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Celithemis_eponina_1233   --??????????????????????????????????
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Brachymesia_gravida[x]   ---??
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Brachymesia_herbida_GU196344   ------------UAAGCAUAUUAAUAAGCGGAG-GAAAAGCAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAAAAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGGMCCCUAC--GGGUCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCUCG-GGAGGUGCCGKAGAGUCC-AAGUCCCUCUUGAAUGGGACCACGG
CCCAGRGAGGGUGCCWGGCCCGUGC-GACCUMCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CC
GGUGGUAAACUCYACC[-   ]
Brachythemis_leucosticta[new_spwill_confuse_idlocality]---?????????
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Brachythemis_contaminata[x]   ---??
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Deielia_phaon_GU196343   -------UAAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGGCCCCUAC--GGGCCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CC
GGUGGUAAACUCCACC[-   ]
Pachydiplax_longipennis[x]   ---??
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AY750042_Erythemis_sp_collocata_simplicicollis--------------------------------------GAAAACUAACCAGGAUUCCCuuAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCUUCCCCUAC--GGGGAGCCGAGCGCUGUGGCGUUUGGGAGCGCUCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCUUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-ACGGUGGUAAACUCCACC

FJ596592_Acisoma_panorpoides --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCACUGUGGCGUUUGGGAGCGCUCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCUUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
EU055239_Erythrodiplax_minuscula ---UAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCUCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCUUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Erythrodiplax_basalis[x] --???
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Crocothemis_servilia[x] --???
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Crocothemis_erythraea_GU196335 nnnnnnnnAAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGUCCCMUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCUCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCUUC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-]
FJ596590_Rhodothemis_rufa ---------------------------------------GAAACUAACUAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCACUGUGGCGUUUGGGAGCGCUCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCUUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Neurothemis_fulvia_ --???
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Neurothemis_ramburii_GU196339 --CCGGGUAAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCUCGUUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCUUC-CGGGA-GGGASGSUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-]
Diplacodes_lefebvrii[x] --???
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Diplacodes_trivialis_GU196342 ----------UUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCACUGUGGCGUUUGGGAGCGCUCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCUUC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-]
Bradinopyga_strachani[x] --???
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Brachydiplax_denticauda_BYB --???????????????????????????????????????AUUC
CAGCGCC-GAAGCUCGCGUCCCCCGC--GGGACGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGGCC CAGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ596585_Brachydiplax_chalybea_flavovittata --------UAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCCGC--GGGACGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ596584_Chalcostephia_flavifrons --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Micrathyria_aequalis[x] --???
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Micrathyria_atra[x] --???
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Micrathyria_didyma_GU196361 -CCCGGGUAAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CC
GGUGGUAAACUCCACC[-]
Uracis_imbuta_GU196363 ------------UAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCUCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCUUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CC
GGUGGUAAACUCCACC[-]
Uracis_infumata[x] --???
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FJ596589_Nannophya_pygmaea ------------------------------------AAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCUCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCUUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Nannothemis_bella_LIc --?????
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Paltothemis_lineatipes[x] --???
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Brechmorhoga_mendax[x] --???
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Brechmorhoga_praedatrix_GU196346 -----------UUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-]
Dythemis_fugax[x] --???
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FJ596580_Trithemis_aurora --------------------------------------GAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGGCCCCUAC--GGGCCGCCGAGCGCUGUGGCGUUUGGGAGCGACCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
FJ596581_Trithemis_africana --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGGUCCCUAC--GGGCCGCCGAGCGCUGUGGCGUUUGGGAGCGACCGUUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-]
Trithemis_arteriosa[x] --???
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Perithemis_tenera_OPT ---CAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUC
CAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGGCC CAAAG
AGGGUGCCAGGCCCGUGA-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
EU055236_Perithemis_intensa --AUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGUGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAAAGAGGGUGCCAGGCCCGUGA-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Perithemis_lais_GU196362 ------------UAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCUCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAAAGAGGGUGCCAGGCCCGUGA-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UC
GGUGGUAAACUCCACC[-]

Palpopleura_lucia_GU196337 ------------UAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGCUCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCUCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCUUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UC
GGUGGUAAACUCCACC[-]
FJ596579_Diastatops_pullata ----------UUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCUCGUAC--GAGUCGCCGAGCGCUGUGGCGUUUGGGAGCGCUCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCUUC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UCGGUGGUAAACUCCACC
Zenithoptera_fasciata_GU196364 ------------UAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
CCGGUGGUAAACUCCACC[-]
Neodythemis_afra_pauliani[x] ---?????????????????????????????????????
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Selysiothemis_nigra[x] ---???
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Trithetrum_navasi[x] ---???
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Micromacromia_camerunica_GU196367 -----------UUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGACCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGUACGUUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
CCGGUGGUAAACUCCACC[-]
FJ596594_Neodythemis_preussi -----------------------UAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGACCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGUACGUUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Neodythemis_klingi ---???
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FJ596575_Hadrothemis_infesta --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGGGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCCCUUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
FJ596595_Thermorthemis_madagasc --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGACCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGUACGUUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
FJ596599_Agrionoptera_insignis ------------UAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCUC-CGGGA-GGGUCGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
FJ596593_Cratilla_metallica ---CUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Pseudoleon_superbus[x] ---???
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FJ596597_Orthemis_cultriformis --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC

Orthemis_ferruginea[x] --??
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FJ596601_Orthetrum_albistylum ------------UAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGACCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGUACGUUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Orthetrum_pruinosum[x] --??
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Orthetrum_coerulescens[x] --??
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FJ596600_Lyriothemis_elegantissima --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGACCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGUACGUUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
FJ596602_Ladona_fulva ----------UUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCNUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGACCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGUACGUUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC Ladona_julia
---??????????????????????????aacaggga ggaauuc-
agcGCC-GAAGCUCGCGUCCCGUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGACCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGUACGUUCCUCAGAGUCGGGUUGCUUGAGAGUGCAgcccaaag-ccggugguaaacuccacc
FJ596598_Platetrum_depressa --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GAAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGACCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGUACGUUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Plathemis_subornata[x] --??
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Plathemis_lydia[x] --??
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Libellula_quadrimaculata_GU196332 --CCGGGUAAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGACCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGUACGUUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
CCGGUGGUAAACUCCACC[-]
Libellula_Syntetrum_angelina[x] --?????????????????????????????????????
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Libellula_Eolibellula_semifasciata[x] --?????????????????????????????????????
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Libellula_Belonia_saturata ---???
???????-???-??????????????????-??????????????????GCCACGGCC CAGAG
AGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGUACGUUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC
Libellula_Eotainia_composita[x] --?????????????????????????????????????
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Libellula_Neotetrum_pulchella_OLP ---CAGGAUUCCYUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGACCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGUACGUUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CCGGUGGUAAACUCCACC

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Libellula_Holotania_comanche[x]                --------------------------------------------?????????????????????????????????????
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Libellula_Holotania_auripennis[x]              --------------------------------------------?????????????????????????????????????
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Libellula_Holotania_axilena[x]                 --------------------------------------------?????????????????????????????????????
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Libellula_Holotania_luctuosa[x]                --------------------------------------------?????????????????????????????????????
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Aethriamanta_rezia_GU196369                         ----------------------AAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCNUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGACCCCUGC--GGGUCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGCCGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CC
GGUGGUAAACUCCACC[-    ]
Tetrathemis_corduliformis_GU196368                       ---------AUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGUUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-                                ]
Diplacina_ismene_GU196366                           -------UAAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAnnGCAGCCCAAAG-CC
GGUGGUAAACUCCnnC[-    ]
Erythemis_vesiculosa_GU196360                            ------------UAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCCCCCCCUGC--GGGGGGCCGAGCGCUGUGGCGUUUGGGAGCGCUCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCUUC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
ACGGUGGUAAACUCCACC[-                                ]
Nannophyopsis_clara_GU196358                        ------------UAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCUGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GGCCUCCACGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UC
GGUGGUAAACUCCACC[-    ]
Oligoclada_amphinome_GU196357                            ------------UAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGUCUCGUAC--GAGUCGCCGAGCGAUGUGGCGUUUGGGAGCGCUCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCUUC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
CCGGUGGUAAACUCCACC[-                                ]
Idiataphe_sp_HOL_2010_GU196356                           ------------UAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
CCGGUGGUAAACUCCACC[-                                ]
Atoconeura_sp_HOL_2010_GU196355                          ------------UAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGGCCCCUAC--GGGCCGCCGAGCGCUGUGGCGUUUGGGAGCGACCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-                                ]
Elga_leptostyla_GU196354                            -CCCGGGUAAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
UGAAAUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UC
GGUGGUAAACUCCACC[-    ]
Fylgia_amazonica_GU196353                      -----------UUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGUUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCUCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
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CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CC
GGUGGUAAACUCCACC[-]
Hemistigma_albipunctatum_GU196352 ---------------------------------------GAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCUCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCUUC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-]
Porpacithemis_sp_GU196351 -----------UUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGGCCCCUAC--GGGCCGCCGAGCGCUGUGGCGUUUGGGAGCGACCGUUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UC
GGUGGUAAACUCCACC[-]
Thermochoria_equivocata_GU196350 -------UAAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCUCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCUCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUUC-GACCUCCGCGC---CCGCCUUC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-]
Malgassophlebia_bispina_GU196349 ------------UAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGGCCCCUGC--GGGCCGCCGAGCGCUGUGGCGUUUGGGAGCGACCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
CCGGUGGUAAACUCCACC[-]
Micromacromia_zygoptera_GU196348 ---GAUUCCCUUAGUA-CGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGACCGCUUUUCCCGGGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGUACGUUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CC
GGUGGUAAACUCCACC[-]
Argyrothemis_argentea_GU196347 ------------UAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGCCCCCUGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
CCGGUGGUAAACUCCACC[-]
Pseudothemis_zonata_GU196341 -----------UUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGUCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CC
GGUGGUAAACUCCACC[-]
Oxythemis_phoenicosceles_GU196338 ---------AUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAACUCCAGCGCC-GAAGCUCGCGUUCCCUGC--GGGGCGCAGAGCCCUGUGGCGUUUGGGAGCGCUCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCACAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCUUC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-]
Olpogastra_lugubris_GU196336 ----------UUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GUAAAUCCAGCGCC-GAAGCUCGCGGGCCUUAC--GGGCCGCCGAGCGCUGCAGCGUUUGGUAGCGACCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---UCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UC
GGUGGUAAACUCCACC[-]
Misagria_parana_GU196331 ----------------------------CGGAG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
GGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-CC
GGUGGUAAACUCCACC[-]
Unaligned ---??-
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Ephemerella_sp_AY749918 ---------------------UAGUAAGCGGAG-GAAAAGAAACUAACAAGGAUUUCCCGAGUAACGGCGAGCGAA-AGGGAAAGAGCC
CAGCGCU-GAAUCCCCCGGCCC-UGCA-GGGUCGGCGGGAAAUGUAGCGUAUAGGAGGGUCGCUUCUCCCGAGGUGCGG-CGGCCGGUCG-AAGUCCCUCUUGAACGGGGCCACGGUC CUUAG
AUGGUGCCAGGCCAGUGG-GACGGUUG-------CUGCCUU-CGGGA-AGGCCUCUCCUUGGAGUCGGGUUGCUUGAGAGUGCAGCCCUAAG-CAGGUGGUAAACUCCAUC
Paraleptophlebia_vaciva_AY749922 --????AUUCCCCGAGUAACGGCGAGCGAAAAGGGA
A-GAGCCCAGCGCU-GAAUCCCCCGGUC-CUGCAGAGGCCGGCGGGAAAUGUAGCGUAUAGGAGGGUCGCUUCUCCCGGGGUACCG-CGGCCGGUCC-AAGUCCCUCUUGAACGGGGCCACGG
UCCUUAGAAGGUGCCAGGCCUGUGG-GAUGGUUG-------CGGUUCC-CGGGA-AGACCUCUCCUUGGAGUCGGGUUGCUUGAGAGUGCAGCCCUAAG-CAGGUGGUAAACUCCAUC

Anthopotamus_sp ---??????????????????????????????????
??????????????-??????????????????-??-??????????????????GCCACGG
UCCUUAGAAGGUGCCAGGCCUGUGG-GAUGGUUGC------GGU-CGC-CGGGA-AGGCCUCUCCUUGGAGUCGGGUUGCUUGAGAGUGCAGCCCUAAG-CAGGUGGUAAACUCCAUC Caenis_luctuosa
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??????????????-??????????????????-??-??????????????????GCCAUGG
UCCUUAGAAGGUGCCAGGCCUGUGG-GAUGGUUGC??-?--???????-?GAGA-AGACCUCUCCUGGGAGUCGGGUUGCUUGAGAGUGCAGCCCUAAGACAGGUGGUAAACUCCAUC Ephemera_sp
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Callibaetis_sp_AY749925 ---CAGGAUUCCCCGAGUAACGGCGAGCGAAAGGGGAA-GAGCC
CAGCGCG-CAGUCCCCGGGUCUCUGC---GGCCCGCGGGAGAUUCCGCGUUUGGGAGGGUCGCUCCUCCCGGGGCGCGG-CGGCCGGUCC-AAGUCCCUCUUGAACGGGGCCACGGUC CUUAG
AAGGUGCCAGGCCUGUGG-GAUGGUUG-------CCGCCUC-CGGGA-AGGCCUCUCCCUAGAGUCGGGUUGCUUGAGAGUGCAGCCCUAAG-CUGGUGGUAAACUCCAUC
Callibaetis_ferrugineus_AY859557 ACCCGCCGAAUUUAAGCAUAUUAGUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCCGAGUAACGGCGAGCGAAAGGGGA
A-GAGCCCAGCGCG-CAGUCCCCGGGUCUCUGC---GGCCCGCGGGAGAUUCCGCGUUUGGGAGGGUCGCUCCUCCCGGGGCGCGG-CGGCCGGUCC-AAGUCCCUCUUGAACGGGGCCACGG
UCCUUAGAAGGUGCCAGGCCUGUGG-GAUGGUUG-------CCGCCUC-CGGGA-AGGCCUCUCCCUAGAGUCGGGUUGCUUGAGAGUGCAGCCCUAAG-CUGGUGGUAAACUCCAUC Baetis_sp
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???????-??????????????????-???-??????????????????GCCACGGCC
CUGAGAAGGUGCCAGGCCUGUGG-GAUGGUUGC------CGC-UUC-CGGGA-AGGCCUCUCCCUAGAGUCGGGUUGCUUGAGAGUGCAGCCCUAAG-CUGGUGGUAAACUCCAUC
Hexagenia_sp_AY125276 ---AAGGAUUCCCCGAGUAACGGCGAGCGAAAGGAGAG-GAGCC
CAGCGCU-GAAUCCUCCGGUGC-UGCA-GUGCCGGCGGGAAAUGUAGCGUAUAGGAGGGUCGCCUCUCCCGGUGUGUCG-CGGCUGGUUC-AAAUCCCUCUUGAAGGGGGUCACGGUC
CCGAGAGGGUGCCAGGCCUGUGG-AACGGUUG-------CGACUUC-CGGGA-AGACCUCUCCUGUGAGUCGGGUUGCUUGAGAGUGCAGCCCUAAG-ACAGUGGUAAACUCCAUC
Cloeon_dipterum_AF461220 ---???
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Leucrocuta_maculipennis_AY749959 ---?GGAAUUCCCCGAGUAACGGCGAGCGAAAGGGGA
G-GAGCCCAGCGCA-UAAUCCCCCAGUCC-UGCA-GGGCUGGCGGGAAAUGUUGCGUAUAGGAGGGUCGAUUCUCCCG-GGCGUCG-CGGCCUGUCC-AAGUCCCUCUUGAACGGGGCCAUGG
UCCUUAGAAGGUGCCAGGCCUGUGG-GAUGGUUG-------CGAUGUU-CGGGA-CGACCUCUCCUUGGAGUCGGGUUGCUUGAGAGUGCAGCCCUAAG-CAGGUGGUAAACUCCAUC
Centroptilum_luteolum_AY749935 -CCCGCGUAAUUUAGGCAUAUUAGUAAGCGGAG-GAAAAGAAACUAACAAGGAUUCCUCGAGUAACGGCGAGCGAAAGAGGA
U-UAGCCCAGCGCG-CAGUCCCCGGGUCCCUGC---GGCCCGCGGGAGAUUCCGCGUUUGGGAGGGUCGUCUCUCUCGGU-UGCGG-CGGCCGGUCC-AAGUCCCUCUUGAAUGGGGCCACGG
CCCUGAGAAGGUGCCAGGCCUGUGG-GAUGGUUG-------CCGCUUC-CGGGA-AGACCUCUCCCUAGAGUCGGGUUGCUUGAGAGUGCAGCCCUAAG-CUGGUGGUAAACUCCAUC
Stenonema_sp_AY749928 ---???
???????-?????CCCCAGUUCCUGCA-GGGCUGGCGGGAAAUGUUGCGUAUAGGAGGGUCGAUUCUCCCGGGCAUCCG-CGGCCGGUCC-AAGUCCCUCUUGAACGGGGCCACGGUC CCUAG
AAGGUGCCAGGCCUGUGG-GAUGGUUG-------CGGUGUC-CGGGA-CGACCUCUCCUUGGAGUCGGGUUGCUUGAGAGUGCAGCCCUAAG-CAGGUGGUAAACUCCAUC
Trigoniopthalmus_altern ---??????????????????????????????????
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Allomachilis_froggart ---??????????????????????????????????
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EF199981_Machilis_hrabei ACCCGCUAAAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACAAGGAUUCCCUGAGUAACGGCGAGCGAAAAGGGAA-AAGCC
CAGCACC-GAAUCUCGUACC--GUGCA---GGUGCCGAGAAAUGUGGUGUUUGGGAGUGUCA-CU-UCCCAAGGUGCGG-CGGUGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC CAUAG
AAGGUGCCAGGCCUGUGC-GACCACCGU------CCGC-CCGUGGGA-UGGCAUCUCCUCAGAGUCGGGUUCUUUGAAAGUAGAGCCCUAAG-CGGGUGGUAAACUCCAUC
Dilta_littoralis_AY859570 ---AAGGAUUCCCCCAGUAGCUGCGAGCGAAAAGGGAG-AAGCC
CAGCACC-GAAUCUCGCAUCCCGUGA--GGGGUGCGAUGACAUGUGGUGUUAGGGAGGGUCA-CU-UCCCUAGGUGCG--CGGCGAGUCC-AAGUCCCUCUUGAACAUGGCCACGGCC CAGAG
AUGGUGCCAGGCCCGUAG-GACUGCCGACUUAUC-CGCGCCCUGGGA-UGGCCUCUCCUCAGAGUCGGGUUCUUUGAAAGUAGAACCCUAAG-UGGGUGGUAAACUCCAUC
Ctenolepisma_longicaudataAY210810 ACCCGCUAAAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACUAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
A-AAGCCCAGCACC-GAAUCUCGCAGUCUGUGC--CGGCUGUUGAGAAAUGUGGUGUUAGGGAGGGUCGAUUCUCCCGAG-UUCUG-GGGUGAGUCU-AAGUCUCUCUUGAAUGGAGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGA-GACCGUCU-------CAGUUCU-CGGGA-AGACCUCUCCUCAGAGUCGGGUUGCUUGAAAGUGCAGCCCUAAG-UGGGUGGUAAACUCCACC

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Lepisma_sp_X93390                               -----------------------------------------------??????????????????????????AACAGGGA
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CCCAUAGAGGGUGCUAGGCCCGUGC-GACUAUUCU------GGGUUCU-CGGGA-AGGCCUCUCCUUAGAGUCGGGUUGCUUGAAAAUGCAGCCCUAAG-UGGGUGGUAAACUCCAUC
EU376048_Lepisma_saccharina                    ACCCGCACGAUUUAAGCAUAUCAAUAUGCGGAG-GAAAAGAAAAUAACAAUGAUUCCCUCGGUAGCCGCGAGCGAAAAGGGA
G-AAGCCCGCCACC-CAAGCCU????????????-????????GGGCGAUUUGGUGGAAGGGAGCGUCC??????????????????GGAGG?????-AAGUGUAACUUGAAAGGACCAACAU
CCCACAGAGGGUGCUAGGCCCGUGC-GAACCUCC???----?????????????-???CCUUCCCAAGGAUUCGGGAUGCUCUGGAAUGCAUCCCUAAG-UGGGAGGUAGAUUCCUCC
Thermobia_domestica                            -----------------------------------------------UAGGAUUCCCUUAGUAACUGCGAGCGAACAGGGA
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CCCAUAGAGGGUGCUAGGCCCGUGC-GACUAUUCU------GGGUUCU-CGGGA-AGGCCUCUCCUUAGAGUCGGGUUGCUUGAAAAUGCAGCCCUAAG-UGGGUGGUAAACUCCAUC
Tricholepidion_gertschi                        -----------------------------------------------??????????????????????????????????
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CCCAUAGAGGGUGGUAGGCCCGUGG-GACCGUUGA??-?--???????-?GGGA-AGGCUUCUCCUUAGAGUCGGGUUGCUUGGUAAUGCAGCCCCAAG-UGGGUGGUAAACUCCAUC
Gromphadorhina_laevigata_AY210819              -----------------------------------------------GAGGAUUCCCCAAGUAGCGGCGAGCGAACAGGGA
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CCCGCAGUGGGUGCCAGGCCCGUAGAGACCGCGG-------CCGCUCC-CGGGA-GGAGCUCUCCUCAGAGUCGUGUUCCUUGAGAGUGGAGCACCAAG-UGGGUGGUAAACUCCAUC
Isoperla_davisi_AY125288               -----------------------------------------------AAGGAUUCCCUUAGUAGCUGCGAGCGAACAGGGAG-GAGCC
CAGCACU-GAAUCCUGCGCGCAAAGC---ACGCGUCUGGAAAUGUAGUGUUUGGGAGGGCCCGUUUAUCUCGCC-GGUGGGCGCCCGUCC-AAGUCCGUCUUGAAAGCGGCCACAGCC
CGUAGAGGGUGCCAGGCCCGUAU-GACGGCGCAUACAAACACC-GG-CGAAA-GGGUCUCUCCUUAGAGUCGGGUUGCUUGAGAAUGCAGCUCUAAG-CGGGUGGUAAACUCCAUC
EU414717_Isoperla_sp                   -----------------------------------------------???????CCCUUAGUAGCUGCGAUCGAACAGGGAG-GAGCC
CAGCACU-GAAUCCUGCGCGCA-AGC---ACGCGUCUGGAAAUGUAGUGUUUGGGAGGGCCCGUUUAUCUCGCC-GGUGGGCGCCCGUCC-AAGUCCGUCUUGAAAGCGGCCACAGCC
CGUAGAGGGUGCCAGGCCCGUAU-GACGGCGCAUACACACACC-GG-CGAAA-GGGUCUCUCCUUAGAGUCAGGUUGCUUGAGAAUGCAGCUCUAAG-UGGGUGGUAAACUCCAUC
AY859546_Gomphocerinae                 ACCCGCUGAAUUUAAGCAUAUUACUAAGCGGAG-GAAAAGAAACUAACAAGGAUUCCCCCAGUAGCGGCGAGCGAACAGGGAA-GAGUC
CAGCACC-GAACCCCGCAGGC--UGC--CGCCUGUCGUGGCAUGUGGUGUUUGGGAGGGUCCACUACCCCACGC-CUCG-CGCCGAGUCC-AAGUCCAACUUGAAUGAGGCCACGGCC
CGUAGAGGGUGCCAGGCCCGUAGCGGCCGGUG-------CGAGCGU-CGGCG-GGACCUCUCCUUCGAGUCGGGUUGCUUGAGAGUGCAGCUCCAAG-UGGGUGGUAAACUCCAUC


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Neogomphus_edenticulatus_FJ712324                           --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
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AAGUCCCUCUUGAACGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---G-GCCCUC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-                                 ]
Aeshna_mixta_FJ712315                                  --------AAUUUAAGCAUAUUAAUAAGCGGUG-GAAAAGAAACUAACCAGGAUUCCCUUAGUAACGGCGAGCGAACAGGGA
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CCCAGAGAGGGUGCCAGGCCCGUGC-GAACUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCGGAGUCGGGUUGCUUGAGAGUGCAGCCCAAAG-UC
GGUGGUAAACUCCACC[-    ]
Gomphaeschna_furcillata_FJ712314                            --------AAUUUAAGCAUAUUAAUAAGCGGUG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAAGAAUUCCAGCGCG-GAAGCCCGCAUGCCCUAC--GGCGUGCCGGGCCCUGUUGCGUUUGGGAGCGCCCGUUUUACCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCAAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-                                 ]
1111_JQ966603_1_Teinobasis_fortis_OD203                       -------------------------------------------------------
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AAGUCCCUCUUGAACGGGGCCACGGCCCGGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-UGGGA-GGGGCGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-                                 ]
1106_JQ966598_1_Mecistogaster_modestaOD198                    -------------------------------------------------------
CCUUAGUAACGGCGAGCGAACAGGGAUCAAAUCCAGAGCC-AAAGCUCGCGCCCCCCGC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGUCCGCCUUCCCG-AGGGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAACGGGGCCACGGCCCGAAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-UGGGA-GGGGCGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-                                 ]
1100_JQ966592_1_Anomisma_abnormeOD193                         ----------------------------------------------------------------------
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--------------[-    ]
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814_AF461204_1_Lestes_sponsa --

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559_FJ596596_1_Orthemis_discolor --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
UCCCUUAGUAACGGCGAGCGAACAGGGAGGAAUUCCAGCGCC-GAAGCUCGCGUCCCCUAC--GGGGCGCCGAGCGCUGUGGCGUUUGGGAGCGCCCGCUUUCCCG-GGAGGUGCCGGAGAGU CC-
AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
CCGGUGGUAAACUCCACC[-]
567_FJ596604_1_Leucorrhinia_dubia --------AAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACCAGGAU
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AAGUCCCUCUUGAAUGGGGCCACGGCCCAGAGAGGGUGCCAGGCCCGUGC-GACCUCCGCGC---CCGCCCCC-CGGGA-GGGACGCUCCUCAGAGUC GGGUUGCUUGAGAGUGCAGCCCAAAG-
UCGGUGGUAAACUCCACC[-]
]

[--14------------
--------------15----------------------------18a------------18b-----------18c---
--------------------18câ€šÃ„Ã´-----------18bâ€šÃ„Ã´-----------18aâ€šÃ„Ã´---
----
Unaligned_Orders --???
???????-???????????????????-??-???????????????-???????????????????????????
???????????????????????-???????????---?????-????????????-??-??????????????????
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AUGGUGCCAGGCCAGUGG-GACGGUUG-------CUGCCUU-CGGGA-AGGCCUCUCCUUGGAGUCGGGUUGCUUGAGAGUGCAGCCCUAAG-CAGGUGGUAAACUCCAUC
Paraleptophlebia_vaciva_AY749922 --????AUUCCCCGAGUAACGGCGAGCGAAAAGGGA
A-GAGCCCAGCGCU-GAAUCCCCCGGUC-CUGCAGAGGCCGGCGGGAAAUGUAGCGUAUAGGAGGGUCGCUUCUCCCGGGGUACCG-CGGCCGGUCC-AAGUCCCUCUUGAACGGGGCCACGG
UCCUUAGAAGGUGCCAGGCCUGUGG-GAUGGUUG-------CGGUUCC-CGGGA-AGACCUCUCCUUGGAGUCGGGUUGCUUGAGAGUGCAGCCCUAAG-CAGGUGGUAAACUCCAUC
Callibaetis_sp_AY749925 --CAGGAUUCCCCGAGUAACGGCGAGCGAAAGGGGAA-GAGCC
CAGCGCG-CAGUCCCCGGGUCUCUGC---GGCCCGCGGGAGAUUCCGCGUUUGGGAGGGUCGCUCCUCCCGGGGCGCGG-CGGCCGGUCC-AAGUCCCUCUUGAACGGGGCCACGGUC CUUAG
AAGGUGCCAGGCCUGUGG-GAUGGUUG-------CCGCCUC-CGGGA-AGGCCUCUCCCUAGAGUCGGGUUGCUUGAGAGUGCAGCCCUAAG-CUGGUGGUAAACUCCAUC
Callibaetis_ferrugineus_AY859557 ACCCGCCGAAUUUAAGCAUAUUAGUAAGCGGAG-GAAAAGAAACUAACCAGGAUUCCCCGAGUAACGGCGAGCGAAAGGGGA
A-GAGCCCAGCGCG-CAGUCCCCGGGUCUCUGC---GGCCCGCGGGAGAUUCCGCGUUUGGGAGGGUCGCUCCUCCCGGGGCGCGG-CGGCCGGUCC-AAGUCCCUCUUGAACGGGGCCACGG
UCCUUAGAAGGUGCCAGGCCUGUGG-GAUGGUUG-------CCGCCUC-CGGGA-AGGCCUCUCCCUAGAGUCGGGUUGCUUGAGAGUGCAGCCCUAAG-CUGGUGGUAAACUCCAUC
Hexagenia_sp_AY125276 --AAGGAUUCCCCGAGUAACGGCGAGCGAAAGGAGAG-GAGCC
CAGCGCU-GAAUCCUCCGGUGC-UGCA-GUGCCGGCGGGAAAUGUAGCGUAUAGGAGGGUCGCCUCUCCCGGUGUGUCG-CGGCUGGUUC-AAAUCCCUCUUGAAGGGGGUCACGGUC CCGAG
AGGGUGCCAGGCCUGUGG-AACGGUUG-------CGACUUC-CGGGA-AGACCUCUCCUGUGAGUCGGGUUGCUUGAGAGUGCAGCCCUAAG-ACAGUGGUAAACUCCAUC
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Centroptilum_luteolum_AY749935 -CCCGCGUAAUUUAGGCAUAUUAGUAAGCGGAG-GAAAAGAAACUAACAAGGAUUCCUCGAGUAACGGCGAGCGAAAGAGGA
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???????-?????CCCCAGUUCCUGCA-GGGCUGGCGGGAAAUGUUGCGUAUAGGAGGGUCGAUUCUCCCGGGCAUCCG-CGGCCGGUCC-AAGUCCCUCUUGAACGGGGCCACGGUC
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EF199981_Machilis_hrabei ACCCGCUAAAUUUAAGCAUAUUAAUAAGCGGAG-GAAAAGAAACUAACAAGGAUUCCCUGAGUAACGGCGAGCGAAAAGGGAA-AAGCC
CAGCACC-GAAUCUCGUACC--GUGCA---GGUGCCGAGAAAUGUGGUGUUUGGGAGUGUCA-CU-UCCCAAGGUGCGG-CGGUGAGUCC-AAGUCCCUCUUGAACGGGGCCACGGCC
CAUAGAAGGUGCCAGGCCUGUGC-GACCACCGU------CCGC-CCGUGGGA-UGGCAUCUCCUCAGAGUCGGGUUCUUUGAAAGUAGAGCCCUAAG-CGGGUGGUAAACUCCAUC
Dilta_littoralis_AY859570 --AAGGAUUCCCCCAGUAGCUGCGAGCGAAAAGGGAG-AAGCC
CAGCACC-GAAUCUCGCAUCCCGUGA--GGGGUGCGAUGACAUGUGGUGUUAGGGAGGGUCA-CU-UCCCUAGGUGCG--CGGCGAGUCC-AAGUCCCUCUUGAACAUGGCCACGGCC
CAGAGAUGGUGCCAGGCCCGUAG-GACUGCCGACUUAUC-CGCGCCCUGGGA-UGGCCUCUCCUCAGAGUCGGGUUCUUUGAAAGUAGAACCCUAAG-UGGGUGGUAAACUCCAUC

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A-AAGCCCAGCACC-GAAUCUCGCAGUCUGUGC--CGGCUGUUGAGAAAUGUGGUGUUAGGGAGGGUCGAUUCUCCCGAG-UUCUG-GGGUGAGUCU-AAGUCUCUCUUGAAUGGAGCCACGG
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EU376048_Lepisma_saccharina ACCCGCACGAUUUAAGCAUAUCAAUAUGCGGAG-GAAAAGAAAAUAACAAUGAUUCCCUCGGUAGCCGCGAGCGAAAAGGGA
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Thermobia_domestica --UAGGAUUCCCUUAGUAACUGCGAGCGAACAGGGA
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Isoperla_davisi_AY125288 --AAGGAUUCCCUUAGUAGUGCUGCGAGCGAACAGGGAG-GAGCC
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EU414717_Isoperla_sp --???????CCCUUAGUAGUGCUGCGAUCGAACAGGGAG-GAGCC
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AY859546_Gomphocerinae ACCCGCUGAAUUUAAGCAUAUUACUAAGCGGAG-GAAAAGAAACUAACAAGGAUUCCCCCAGUAGCGGCGAGCGAACAGGGAA-GAGUC
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CACAG-A-GGGUGCUA-GG-CCC-GUGC-GAA-CCUCC---GCCUUGCCGAGUCGGGCUGGGCGCCUUCCCAAGGAUUC
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[13 14 15
18A 18B 18C 19 20 18Câ€šÃ„Ã´ 18B
18Aâ€šÃ„Ã´]
[

Ephemerella_sp_AY749918 --
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Paraleptophlebia_vaciva_AY749922 --
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Anthopotamus_sp --
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Caenis_luctuosa --
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Ephemera_sp ---
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Callibaetis_ferrugineus_AY859557 ---
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UCCUUAGAAGGUGCCAGGCCUGUGG-GAUGGUUGC??-????????-?GGGA
Baetis_sp --
-?????-??-??????????????????-??????????????????GCCACGGCCCUGAG A
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Cloeon_dipterum_AF461220 --
-?????-??-??????????????????-????????????????????????????????
??????????????????-???????????-????????-?????
Leucrocuta_maculipennis_AY749959 ---
----------GCGCA-UAAUCCCCCAGUCCUG-CAGGGCUGGCGGGAAAUGUUGCGUAUAGGAGGGUCGAUUCUCCCG-GG-CGUCGCGGCCUGUCC-AAGUCCCUCUUGAACGGGGCCAUGG
UCCUUAGAAGGUGCCAGGCCUGUGG-GAUGGUUGC??-????????-?GGGA
Centroptilum_luteolum_AY749935 ---
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Stenonema_sp_AY749928 --
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Trigoniopthalmus_altern ---
----------?????-??-??????????????????-?????????????????????????
?????????????????????????-???????????-????????-?????
Allomachilis_froggart ---
----------?????-??-??????????????????-?????????????????????????
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EF199981_Machilis_hrabei --
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Dilta_littoralis_AY859570 --
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UGGUGCCAGGCCCGUAG-GACUGCCGA??-????????-?GGGA
Ctenolepisma_longicaudataAY210810 ---
----------GCACC-GAAUCUCGCAGUCUGU-GCCGGCUGUUGAGAAAUGUGGUGUUAGGGAGGGUCGAUUCUCCCG-AGU-UCUGGGGUGAGUCU-AAGUCUCUCUUGAAUGGAGCCACGG
CCCAGAGAGGGUGCCAGGCCCGUGA-GACCGUCUC??-????????-?GGGA
Lepisma_sp_X93390 ---
----------GCACC-GAAUCUCGCAGUCUGUUGCCGGCUGCAGAGACAUGUGGUGUUCGGGAGGGUCUAAUCUCCCC-GCGUUCCUGGGAUAGUUU-AAGUCUAACUUGAAUGGAGCCAUGG
CCCAUAGAGGGUGCUAGGCCCGUGC-GACUAUUCU??-????????-?GGGA
EU376048_Lepisma_saccharina ---
----------CCACC-CAAGCCU????????????????????GGGCGAUUUGGUGGAAGGGAGCGUCC?????????-????????GGAGG?????-AAGUGUAACUUGAAAGGACCAACAU
CCCACAGAGGGUGCUAGGCCCGUGC-GAACCUCC???-????????-?????
Thermobia_domestica ---
----------GCACC-GAAUCUCGCAGUCUGUUGCCGGCUGCAGAGACAUGUGGUGUUCGGGAGGGUCUAAUCUCCCC-GCGUUCCUGGGAUAGUUU-AAGUCUAACUUGAAUGGAGCCAUGG
CCCAUAGAGGGUGCUAGGCCCGUGC-GACUAUUCU??-????????-?GGGA

Tricholepidion_gertschi ---
----------?????-??-??????????????????-?????????????????GCCACGG
CCCAUAGAGGGUGGUAGGCCCGUGG-GACCGUUGA??-????????-?GGGA
Gromphadorhina_laevigata_AY210819 ---
----------GCACG-GAAUCCCGCGCG-----GAGACGCGCAGGGAGAUGUCGUGUGUGGGAGGUUCCAUCGUGCCG-GGGGUCGGCUGCGAGUCC-AAGUCUCCCUUGAACGGGGCCACAG
CCCGCAGUGGGUGCCAGGCCCGUAGAGACCGCGGC??-????????-?GGGA
Isoperla_davisi_AY125288 --
-GCACU-GAAUCCUGCGCGCAA--AGCACGCGUCUGGAAAUGUAGUGUUUGGGAGGGCCCGUUUAUCUC-GCCGGUGGGCGCCCGUCC-AAGUCCGUCUUGAAAGCGGCCACAGCCCGUAG A
GGGUGCCAGGCCCGUAU-GACGGCGCA??-????????-?????
EU414717_Isoperla_sp --
-GCACU-GAAUCCUGCGCGCA---AGCACGCGUCUGGAAAUGUAGUGUUUGGGAGGGCCCGUUUAUCUC-GCCGGUGGGCGCCCGUCC-AAGUCCGUCUUGAAAGCGGCCACAGCCCGUAG A
GGGUGCCAGGCCCGUAU-GACGGCGCAUACAC-ACACCGGCGAAA
AY859546_Gomphocerinae --
-GCACC-GAACCCCGCAGGCU---GCCGCCUGUCGUGGCAUGUGGUGUUUGGGAGGGUCCACUACCCCGACGCCUCG-CGCCGAGUCC-AAGUCCAACUUGAAUGAGGCCACGGCCCGUAG A
GGGUGCCAGGCCCGUAGCGGCCGGUG-----CGAGCGU-CGGCG
]

[ZPA_Protosticta_sp_AcomesoutwithPseudagrionaureofrons
Dimeragrion_percubitale_ZDPgroupswithCalopterigids,buthasonlyfirsthalf:ReplacedwithnewD1poorread
Teinopodagrion_venale_ZMV_BTVgroupswithCora
Rhipidolestes_hiraoi_ORHhasalotofunbelievabledifferencesfromBybee's
Austrogynacantha_heterogenwehavefromBybee:doyouhaveyours?
IcheckedFJ596620_Onychogomphus_Onych_forcipatusandLindeniaonGenBank,andtheyareidentical
CheckthatFJ712322_Onychogomphus_spisthesamespeciesthroughout
Ophiogomphus_severus_AY125283fromWhitingisdifferentfromOseverusFJ596618fromLetsch
FJ596576_Zygonyx_torridusfromMisofisquitedifferentfromours,butoursisfulloflowercaseletters,soIusedMisof's]

[D2]
Unaligned D2-?????????????????-??-???-??????????????????-???
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Unaligned_Zygoptera D2-?????????????????-??-???-??????????????????-???
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ZPA_Protosticta_sp_A ????????????????????-??-???-??????????????????-???
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Protosticta_curiosa_ZPCs_BPCp ????????????????????-??-???-??????????????????-?????????????????????????????????
????????????????AAACCGU-U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCCACGGGCGAAGG--UCGCUUCG-GU GGAUGGCGCGCC--GGC-
GGUC-G-GGGG--GCAA---CUCCCG-UCC---CGG-GCGCGUCACCCGGCG-AUCU-CCG-AUU--G--ACCGAGGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GUG-----UCGGCCA-GGAGG-ACCCGGGAG-GAGAC-CGC-GCUGCUC-----U-C------------GAGCGGC---GCGC-GAC CUCGGG AU-U-CCCGGC--CGAGUGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCC----------GCAA---------GGCGU---CCGGCCUUCCGCGA-GCACCC GCGGGGGUG UGGGUU---U--CGGACC-UGGUCCGAUCCCGCUCCC-ACCGA-
GGGGCUGUC-CGCG-U-U----UGGAG-GUGUUCUCGGACAGCGUC-GAAU---------CCUUCUCCAGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Protosticta_sanguinostigma NNNNNNNNNNNNNNNNNNNN-NN-NNN-NNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNNNNNNNN-
N-NNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNN-NNNNN-NNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNN--NNN- NNNN-N-NNNN--NNNN---
NNNNNN-NNN---NNN-NNNNNNNNNNNNNNN-NNNN-NNN-NNN--N-NNNNNNNNNNNNN-NNNNN-NNNNNNNNN--NNN-NNNNNNNNNNNNNN NNNNNNNNN-NNN-----NNNNNNN-NNNNN-
NNNNNNNNN-NNNNN-NNN-NNNNNNN-----N------------NNNNNNNN---NNNN-NNNNNNNNNNN-N-NNNNNN--NNN NNNN-NNNNNNNNNNNNN-N-NNN-NNNN---NNNNNNNNNN---
-------NNNN---------NNNNN---NNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNN---N--NNNNNN- NNNNNNNNNNNNNNNNNN-NNNNN-NNNNNNNNN-NNNNNN-N---NNNNNN-
NNNNNNNNNNNNNNNNNN-NNNN-NNN-NNNNNNNNNNNNNNNNN-NNNNNNN-NN-NNNNNNNNNNNN-N NNNNNNN--NNNNNNNNN-NNNNNNNNN
ZSOg_Sinosticta_ogatai[x] ?????????????????????-??-???-??????????????????-???
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ZPP_Palaemnema_paulicoba[x]?????????????????????-??-???-??????????????????-???
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Palaemnema_domina_ZPDm uaagacugaacacggccacg-ag-acc-gauagcgaacaaguaccg-ug??????????????????????????????
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Palaemnema_melanostigma_BPM UAAGACUGAACACGACCACG-AG-ACC-GAUAGAGAAUAAGUACC?-?????????????????????????????????
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Isosticta_robustior_BIR UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGUCGGGCGAGGG--UCGAUACG--CGGAUGGUGUGCC--GGC- GGUC-G-GGGG--GUAA---
CUCCCG-UCC---CAA-GCGCGCCACCCGGCG-GCCC-UCG-UUU--U-UUCCGUCCCCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCA-CGAGG-
GCCCGGGUG-GAGAC-CGU-GCCGCUC-----U-C------------GAGCGGC---ACGC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-A-CGA-GAAG---UCGACGCGCC---
-------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCCGCGGGGGUUCGGGUU---C--CGGACC-

CGGUCCGAUCCCGUUCCC-ACCGC-GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAA-UGC-UCAAAGUUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U
CCACCCG--ACCCGUCUU-GAAACACGG
Rhadinosticta_simplex_ZRS UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGGGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GUGUCGGGCGAGGG--UCGAUU-G-GC GGAUGGUGUGCC--GGC-
GGUC-G-GGGG--GUAA---CCUCCG-UCC---CAA-GCGCGCCACCCGGCG-GCCC-UCG--UU--U-UUCCGCCCACGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCA-CGAGG-GCCCGGGUG-GAGAC-CGU-GCCGCUU-----C-C------------GAGCGGC---GCGC-GAC CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAGGAA-A-
CGA-GAAG---UCGACGCGCC----------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCC GCGGGGGUU CGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGA-
GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAC-UGC----------UCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG-------UCUU-GAAGCACGG
Amphisticta_silvarum_ZAS uaagacugaauacGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGAACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GUGUCGGGCGAGGG--UCGAUU-G-GCGGAUGGUGUGCC--GGC- GGUC-G-GGGG--GUAA---
CCUCCG-UCC---CAA-GCGCGCCACCCGGCG-GCCC-UCG-UUU--C-UUCCGUCGCCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCA-CGAGG-
GCCCGGGUG-GAGAC-CGC-GCCGCUC-----U-C------------GAGCGGC---UCGU-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-A-CGA-GAAG---UCGACGCGCC---
-------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCCGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGA-GGGGCUGUC-CGCGAU-C---AUGGAG-
GUGUCCUCGGACGGCGUC-GAAA-CGC-----UUCUUUCCGGUCA-GCGACGC-UA-CGGCUUGGAUGG-U CCAcccg--acccgucuu-gaAACACGG
Labidosticta_vallisi_OLVa UAAGACugaauacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG
UGAAACCGU-C-GGGGAGU-AAACGGGUGGAACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGUCGGGCGAGGG--UCGAUU-G-GCGGAUGGCGCGCC--GGC- GGGC-G-GGGG--
GUAA---CCUCCG-UCC---CAA-GCGCGCCACCCGGCG-GCCC-UCG---U--C-UUCCGUCCCCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCA-
CGAGG-GCCCGGGUG-GAGAC-CGC-GCCGCUC-----U-C------------GAGCGGC---UCGC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-A-CGA-GAAG---
UCGACGCGCC----------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCCGCGGGGGUUAGGGUU---C--CGGACC- Cgguccgaucccguuccc-accga-ggggcuguc-cgcgau-
c---auggag-guguccucggacggcguc-gaga-agc-----uucucuccgguca-gcgacgc-ua-cggcuuggaugg-u ccacccg--acccgucuu-gaaacacgg
Orosticta_filicicola_ZOF uaagacugaauacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguuga????????????????????????????????
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Platycnemis_pennipes_OPPp uaagacugaauaCGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGAGAG--UCGCUUCG-GUGGAUGGCGCGCC--GGC- GGUC-G-GGGG--GCAA---
CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCUC-CCG-AUU--G--ACCGGCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCA-CGAGG-
GCCCGGGUG-GAGAC-CGC-GCCGCUC-----U-C------------GAGCGGC---UCGU-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GAAG---UCGACGCGCC---
-------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCCGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGA-GGGGCUGUC-CGCGAU-C---AUGGAG-
GUGUCCUCGGACGGCGUC-GAAg------------ucuccggucc-gcgacgc-ua-cnnnnnggaugg-u ccacccg--acccgucuu-GAAACACGG
Copera_annulata_OCAn UAAGACUGAAUACGGCCACG-Ag-acc-gauagcgaacaaguaccg-ugagggaaaguuga????????????????????????????????
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Copera_vittata_BCV UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCC-CGCCG-GCGUCGGGCGAGGG--UCGCUUCG-GUGGAUGGCGCGCC--GGC- GGUC-G-GGGG--GCAA---
CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCCC-CCG-UCU--G--ACCGGCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCA-CGAGG-
GCCCGGGUG-GAGAC-CGC-GCCGCUC-----U-C------------GAGCGGC---UCGU-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GACG---UCGACGCGCC---
-------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCCGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGA-GGGGCUGUC-CGCGAU-C---AUGGAG-
GUGUCCUCGGACGGCGUC-GAAG-----------GUCUCCGGUCC-GCGACGC-UA-CCGAUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAGCACGG

Copera_marsouipes UAAGACugaauacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguuga???????????????????????????????
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Coeliccia_albicauda_OCAL UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGAGAG--UCGCUUCG-GUGGAUGGCGCGCU--GGC- GGGC-G-GGGG--GCGA---
CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCUU-UCG-AUU--G--ACCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCC-UCAGG-
GCCCGGGUG-GAGAC-CGC-GCCGCUC-----U-C-----------GAGCGGC---UCGU-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GAAG---UCGACGCGCC---
-------GAAA---------GGCGU---CCGGCCCUCCGCGA-GCACCCGCGGGGGUUCGGGUU---U--CGGACC- CGGUCCGUUCCCGUUCCC-ACCGA-GGGGCUGUC-CGCGAU-C---AUGGAG-
GUGUCCUCGGACGGCGUC-GAAG-----------UCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
Coeliccia_cyanomelas_BCC UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG
UGAAACCGU-U-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGAGAG--UCGCUUCG-GUGGAUGGCGCGCC--GGC- GGGC-G-GGGG--
GCGA---CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCUU-UCG-AUU--G--ACCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCC-
UCAGG-GCCCGGGUG-GAGAC-CGC-GCCGCUC-----U-C-----------GAGCGGC---UCGU-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GAAG---
UCGACGCGCC----------GAAA---------GGCGU---CCGGCCCUCCGCGA-GCACCCGCGGGGGUUCGGGUU---U--CGGACC- CGGUCCGUUCCCGUUCCC-ACCGA-GGGGCUGUC-CGCGAU-
C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAG-----------UCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
Calicnemia_miles_OCMi UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGAGAG--UCGCUUCG-GUGGAUGGCGCGCC--GGC- GGGC-G-GGGG--GCAA---
CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCUC-CCG-AUU--G--ACCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCC-UGAGG-
GCCCGGGUG-GAGAC-CGU-GCCGCUC-----U-C-----------GAGCGGC---UCGU-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GAAG---UCGACGCGCC---
-------GAAA---------GGCGU---CCGGCCCUCCGCGA-GCACCCGCGGGGGUUCGGGUU---U--CGGACC- CGGUCCGUUCCCGUUCCC-ACCGA-GGGGCUGUC-CGCGAU-C---AUGGAG-
GUGUCCUCGGACGGCGUC-GGAG-----------UCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
Prodasineura_vitatta_OPV UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGACGGGCGAGGG--UCGCUUGG-UCGGAUGGCGCGCC--GGC- GGUC-G-GGGG--GCAA---
CCCCCG-UCC---CGG-GCGCGUCACUCGGCG-GCCU-UCG-AUU--G--ACCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCA-CGAGG-
GCCCGGGUG-GAGAC-CGA-AUCGCUC-----U-C-----------GAGCGGC---UCGC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GAUG---UCGACGCGCC---
-------GAAA---------GGCGU---CCGGCCCUCCGCGA-GCACCAGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGA-GGGGCUGUC-CGCGAU-C---AUGGAG-
GUGUCCUCGGACGGCGUC-GAA------------UCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
Chlorocnemis_abboti_ZCAb uaagacugaauaCGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGACGGGCGAGGG--UCGCU-CG-UCGGAUGGCGCGCC--GGC- GGUC-G-GGGG--GCAA---
CCCCCG-UCC---CGG-GCGCGUCACUCGGCG-GCCU-UCG-AAU--G--ACCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCA-CGAGG-
GCCCGGGUG-GAGAC-CGA-AUCGCUC-----U-C-----------GAGCGGC---UCGC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GAUG---UCGACGCGCCU--
UU-----GA-----------GGCGU---CCGGCCCUCCGCGA-GCACCAGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGA-GGGGCUGUC-CGCGAU-C---AUGGAG-
GUGUCCUCGGACGGCGUCCGAAA-----------UCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCAcccg--acccgucuu-GAAACACGG
Nososticta_solida_ZNSo UAAGACugaauacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguugaaaagaacuuugaagagagaguucaagaguacg ugaaaccgu-
u-ggggagu-aaacggguggcacccgaaauuucgaaa-ggggagauucAAGUCU-CGCCG-UCGACGGGCGAGAG--UCGCUUCU-GUGGAUGGCGCGCC--GGC- GGUC-G-GGGG--GCGA---
CCCCCG-UCC---CGG-GCGCGUCACCAGGCG-UCUC-CCG-AUU--G--ACCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCA-CGAGG-
GCCCGGGUG-GAGUC-CUC-GCCUCUC--CCUUUC-----------GAGAGGC---GCGC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GAAG---UCGACGCGCC---
-------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCCGCGGGGGUUCGgguu---c--cggacc- cgguccguucccguuccc-accga-ggggcuguc-cgcgau-c---auggag-
gugaccucggacggcguc-gaag-----------ucuccggucc-gcgacgc-uu-ccgauuggaugg-u ccacccg--acccgucuu-gaaacacgg
Phylloneura_westermanni_BPW UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-U-GGGGAGU-AAACGGGUGGCACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-UCGACGGGCGAGAG--UCGCUUCG-GU

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GGAUGGCGCGCC--GGC-GGUC-G-GGGG--GCGA---CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCUC-CCG-AUU--G--ACCGCCGUCGGU-GUGAC-GCACUUCUC-- CCC -
GAGUAGGACGUCGCGACCCGUCGA-GCG-----CCGGCCA-CGAGG-GCCCGGGUG-GAGAC-CGC-GCCGCUC---UCU-C------------GAGAGGC---GCGC-GAC CCCGGG AU-C-CCCGGC--
CGGGUGC-CCGACGGUAGGAA-G-CGA-GAAG---UCGACGCGCC----------GAAA---------GGCGU---CCGGUCCUCCGCGA-GCACCC GCGGGGGUU CGGGUU---C--CGGACC-
CGGUCCGAUCCCGUUCCC-ACCGA-GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAG------------UCUCCGGUCC- GCGACGC-UU-CCGAUUGGAUGG-UCCACCCG--
ACCCGUCUU-GAAACACGG
Onychargia_atrocyana_ZOA              UAAGACUGAAUACGGCCACG-AG-ACC-gauagcgaacaaguacc?-????????????????????????????????
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Argia_moesta_OAM             UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGACGGGCGAGGG--UCGCUUCG-GUGGAUGGCGCGUC--GGC- GGUC-G-GGGG--GCGA---
CCCCCG-GCC---CGG-GCGCGUCACCCGGCG-ACUC-CCG-CCU--G--ACCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCA-CGAGG-
GCCCGGGUG-GAGAC-CGC-GCCGCUC-----U-C------------GAGUGGC---GCGU-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GAAG---UCGACGCGCC---
-------GAAA---------GGCGU---CCGGCCCUCCGCGA-GCGCCCGCGGGGGAGCGGGUU---A--CGGACC- CCGUCCGAUCCCGUUCCA-ACCGA-GGGGCUGUC-CGCGAUAC---AUGGAG-
GUGUCCUCGGACGGCGUC-GAAUUU-------UUUUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACnnnnnnn-nnnnnnnnG
Argia_nahuana_BAN            UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGACGGGCGAGGG--UCGCUUCG-GUGGAUGGCGCGUC--GGC- GGUC-G-GGGG--GCGA---
CCCCCG-GCC---CGG-GCGCGUCACCCGGCG-AUCC-ACG-CCU--G--ACCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCA-CGAGG-
GCCCGGGUG-GAGAC-CGU-GCCGCUC-----U-C------------GAGCGGC---GCGC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GAAG---UCGACGCGCC---
-------GAAA---------GGCGU---CCGGCCCUCCGCGA-GCGCCCGCGGGGGAGCGGGUU---A--CGGACC- CCGUCCGAUCCCGUUCCA-ACCGA-GGGGCUGUC-CGCGAU-UC---UGGAG-
GUGUCCUCGGACGGCGUC-GAAU---------CCUUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
Argiocnemis_rubescens_ZAR             CAAGACUGAAuacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguuga?????????????????
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Mortonagrion_binocellata_BMB          NNNNNNNNNNNNNNNNNNN-NN-NNN-NNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNAAACCGU-U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GAGGAGAUUCAAGUCU-CGCCGGAGG-CGGGCGAGGG--GCGCUCAG-AC GGAUGGCGCGUC--GGC-
GGGC-G-GGGG--GUAA---CCCCCGUUCC---UCC-GCGCGUCACCCGGCG-UCUC-CCG-CUU--G--ACCGCCCUCGGU-GUGAC-GCACUUCUC-- CUC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----CCGGCCU-CGAGG-GCCCGGGUG-GAGCC-CGC-GCCGCUU-------C------------GCGCGGC---GCGC-GAC CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-
CGA-GAAG---UCGACGCGCC----------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCC GCGGGGGUU CGGGAC---A--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGA-
GGGGCUGUC-CGCGCU-UA-CAUGGAG-GUGUCCUCGGACGGCGUC-GUUA---------CUCUCUCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Agriocnemis_pygmaea_OAP      UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GAGGCGGGCGAGGG--GCGCUCAG-AUGGAUGGCGCGUC--GAC- GGGC-G-GGGG--GCAA---
CUCCCGUUCC---GCC-GCGCGUCACCCGGCG-UCUC-CCG-CUU--G--ACCGCCCUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGUCUUCGAGG-
ACCCGGGUG-GAGCC-CGC-GCCGCUU-------C------------GCGCGGC---GCGC-GACCCCGGGAU-U-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GAAG---UCGACGCGCC---
-------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCGCCCGCGGGGGUUCGGGAC---A--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGA-GGGGCUGUC-CGCGCUAAA--AUGGAG-
GUGUCCUCGGACGGCGUC-GU-----------CUCUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--Acccgucuu-gaaacacgg
Austroagrion_watsoni_ZAW     UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACA???????-???????????????????????????????????????????????
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Archibasis_viola_ZAV ????????????????????-??-???-??????????????????-???
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Coenagrion_puella_AJ488546 ????????????????????-??-???-??????????????????-????????????????????????????????
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Coenagrion_resolutum_JQ966593 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGGUGGGUGCGGG--GCGUC-AG-AC GGAUGGCGUGUC--GGU-
GGGC-G-GGGG--GUAA---CCCUCGUUCC---UCC-GCACGUCACCCGGCG-UCCC-GUG-CAU--G--ACCGCAGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
ACG-----CCGGCCU-CGAGG-ACCCGGGUG-GAGCC-CUC-GCCGCUU-------C------------GUGCGGC---GAGC-GAC CCCGGG AU-U-CCCGGC--CGGGUGU-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCC----------GAAA---------GGCGU---CCGGCCCUCCGCGA-GCACCC GCGGGGGUU CGGGUU---A--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGA-
GGGGCUGUC-CGCGAUUCGAAUCGGAG-GUGUCCUCGGACGGCGUC-GAAU-------CUUUUUCUCCGGUCC- GCGACGC-UG-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Pseudagrion_cingillum_OAAL UAAGACUGAAUAUGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGGCGGGCGAGGG--GCGAUCAG-AA GGAUGGCGCGUC--GGC-
GGGC-G-GGGG--GUGA---CCCCCGUUCC---UCC-GCGCGUUACCCGGCG-UCCC-CCG-CUU--G--ACCGCAGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCU-CGAGG-GCCCGGGUG-GAGCC-CGC-GCCGCUU-------C------------GCGCGGC---GCGC-GAC CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-
CGA-GAAG---UCGACGCGCC----------GAAA---------GGCGU---CCGGCCCUCCGCGA-GCGCCC GCGGGGGUU CGGGUU---A--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGA-
GGGGCUGUC-CGCGAU-CGAAAUGGAG-GUGUUCUCGGACGGCGUC-GAAU---------UUUUCUCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCguCUU-GAAACACGG
Pseudagrion_aureofrons_BPA UAAGACUGAAUAUGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGGUGGGCGAGGG--GCGAUCAG-AA GGAUGGCGCGUC--GGC-
GGGC-G-GGGG--GUGA---CCCCCGUUCC---UCC-GCGCGUUACCCGGCG-UCCC-CCG-CAU--G--ACCGCAGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCUU-CGAGG-GCCCGGGUG-GAGCC-CGC-GCCGCUU-------C------------GCGCGGC---GCGC-GAC CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-
CGA-GAAG---UCGACGCGCC----------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCGCCC GCGGGGGUU CGGGUU---A--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGA-
GGGGCUGUC-CGCGAU-CGA-AUGGAG-GUGUUCUCGGACGGCGUC-GAAU---------UUUUCUCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Pseudagrion_ignifer_OPi UAAGacugaauauggccacg-ag-acc-gauagcgaccaaguaccg-ugagggaaaguugaaaagaacuuugaagagagagaguucaagaguacg
ugaaaccgu-u-ugggagu-aaacggguggguacccgaaauuucgaaa-ggggagauucaggucu-cgccg-gCGGCGGGCGAGGG--GCGAUCAG-AAGGAUGGCGCGUC--GGC- GGGC-G-GGGG--
GUGA---CCCCCGUUCC---UCC-GCGCGUUACCCGGCG-UCCC-CCG-CUU--G--ACCGCAGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCU-
CGAGG-GCCCGGGUG-GAGCC-CGC-GCCGCUU-------C------------GCGCGGC---GCGC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAUGAA-G-CGA-GAAG---
UCGACGCGCC----------GAAA---------GGCGU---CCGGCCCuccgcga-gcgcccgcgggggguucggguu---a--cggacc- cgguccgaucccguuccc-accga-ggggcuguc-
cgcgaunaa--auggag-guguucucggacggcguc-gaau---------uuuucuccggucc-gcgacgc-ua-cggcuuggaugg-u ccacccg--acccgucuu-gaaacacgg
Erythromma_najas_EU055009 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGGCGGGCGAGGG--GCGCUCAG-AC GGAUGGCGCGUC--GGC-
GGGC-G-GGGG--GUGA---CCCCCGUUCC---UCC-GCGCGUCACCCGGCG-UCCC-CCG-UAU--G--ACCGCAGUCGGU-GUGAC-GCACUUCUC-- CCC-GAGUAGGACGUCGCGACCCGUCGG-
GCG-----CCGGCCU-CGAGG-GCCCGGGUG-GAGCC-CGC-GCCGCUU-------C------------GUGCGGC---GCGU-GAC CCCGGGAU-CC-CCGGC--CGGGUGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCC----------GAAA---------GGCGU---CCGGCCCUCCGCGA-GCGCCC

GCGGGUGUUCGGGUU---A--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGA-GGGGCUGUC-CGCGAUUCAAAAUGGAG-GUGUCCUCGGACGGCGUC-GAAU---------UUUUCUCCGGUC--
GCGACGC-UA-CGGCUUGGAAGG-UCCCCCCG--ACCCGUCUU-GAAACACGG
Cercion_plagiosum_AJ488552_????????????????????-??-???-??????????????????-???
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Cercion_lindenii_AJ488550 ????????????????????-??-???-??????????????????-???
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Paracercion_hieroglyphicum_AJ488551 ????????????????????-??-???-??????????????????-????????????????????????????????
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Acanthagrion_quadratum_ZAQ CAAgacugaauacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguug??????????????????
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ZLV_Leptobasis_vacillans_ ????????????????????-??-???-??????????????????-???
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Amphiagrion_saucium_OAS CAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAUGUCU-CGCCG-GCGGCGGGCGGGAG--GCACUCUG-GCGGAUGGCGCGUC--GGC- GGGC-G-GGGG--GUGA---
CCCUCGUUCC---UCC-GCGCGUCACCCGGUG-UCUU-CCG-CGU--G--ACCGUCGUCGGC-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GUG-----UCGGCCUUCGAGG-
GCCCGGGUG-GAGCC-CGC-GCCGCUU-------C------------GCGCGGC---GCGC-GACCCCGGGAU-C-CCCGGC--CGG CUGC-CCGACGGUAUGAA-A-CGU-GAAG---UCgacgcgccu--
-------cucg--------aggcgu---ccggcccuccgcga-gcgcccgcgggggguucggguc---a--cggacc- cgguccguucccguuccc-accga-ggggcuguc-cgcgau-u----uggag-
guguccucggacggcguc-gaau--------------uccggucc-gcgacgc-ua-cggcuuggaugg-u ccacccg--acccgucuu-gaaacacgg
Amphiagrion_abbreviatum_BAAb CAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAUGUCU-CGCCG-GCGGCGGGCGGGAG--GCACUCUG-GC GGAUGGCGCGUC--GGC-
GGGC-G-GGGG--GUGA---CCCUCGUUCC---UCC-GCGCGUCACCCGGUG-UCUU-CCG-CGU--G--ACCGUCGUCGGC-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GUG-----UCGGCCUUCGAGG-GCCCGGGUG-GAGCC-CGC-GCCGCUU-------C------------GCGCGGC---GCGC-GAC CCCGGG AU-C-CCCGGC--CGGCUGC-CCGACGGUAUGAA-A-
CGU-GAAG---UCGACGCGCCU---------CUCG--------AGGCGU---CCGGCCCUCCGCGA-GCGCCC GCGGGGGUU CGGGUC---A--CGGACC-CGGUCCGUUCCCGUUCCC-ACCGA-
GGGGCUGUC-CGCGAU-U----UGGAG-GUGUCCUCGGACGGCGUC-GAAU-------------UCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG

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Xiphiagrion_cyanomelas_ZXC            CAAGACugaauacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguug??????????????????
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Hesperagrion_sp_AY750043     CAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCA-UUCU-CGCCG-GCGGCGGGCGAGGG--GCGUUU-G-GCGGAUGGCGCGUC--GGU- GGGC-G-GGGG--GCAA---
CCCCCGUUCC---UCC-GCGCGUCACCCGGCG-UCCU-CCG-CGU--G--ACCGUCGUCGGC-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCUUCGAGG-
GCCCGGGUG-GAGCC-CGC-GCCGCUU-------C------------GCGCGGC---GCGC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GAAG---UCGACGCGCCU--
-------CUCG--------AGGCGU---CCGGCCCUCCGCGA-GCGCCCGCGGGGGUUCGGGUC---A--CGGACC- CGGUCCGUUCCCGUUCCC-ACCGA-GGGGCUGUC-CGCG-U-C---A-GGAG-
GUGUCCUCGGACGGCGUC-GAAU--------------UCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
Ischnura_elegans_1239_     ????????????????????-??-???-??????????????????-?????????????????????????????????????????????
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Ischnura_barberi_BIB                 CAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAUGUCU-CGCCG-GCGGCGGGCGGGGG--GCGCU-UG-GC GGAUGGCGCGUC--GGU-
GGGC-G-GGGG--GUAA---CCCCCGUUCC---UCC-GCGCGUCACCCGGCG-UCCU-CCG-CGU--G--ACCGUCGUCGGC-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCUUCGAGG-GCCCGGGUG-GAGCC-CGC-GCCGCUU-------C------------GCGCGGC---GCGC-GAC CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCCU---------CUCG--------AGGCGU---CCGGCCCUCCGCGA-GCGCCC GCGGGGGUU CGGGUC---A--CGGACC-CGGUCCGUUCCCGUUCCC-ACCGA-
GGGGCUGUCCCGCGAU-U-----GGAG-GUGUCCUCNNNNNNNNNN-NNNN---------NN--NNNNNNNNN- NNNNNNN-NN-NNNNNNNNNNNN-NNNNNNUG--ACCCGUCUU-GAAGCACGG
Ischnura_graellsi_AJ488545_????????????????????-??-???-??????????????????-?????????????????????????????????????????????
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Anomalagrion_hastatum_OAH    CAAGacugaauacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguuga????????????????????????????????
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Amphiallagma_parvum_AJ420939_         ????????????????????-??-???-??????????????????-?????????????????????????????????
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Azuragrion_granti_AJ420937   ????????????????????-??-???-??????????????????-???
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Azuragrion_nigridorsum_AJ420938_   ????????????????????-??-???-??????????????????-?????????????????????????????????
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Enallagma_cyathigerum_0110   ????????????????????-??-???-??????????????????-???
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Enallagma_sp_BES   NNNNNNNNNNNNNNNNNNNN-NN-NNN-NNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNAAACCGU-U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAAAUUCAUGUCU-CGCCG-GCGGCGGGCGGGGG--GCGCCCUG--U GGAUGGCGCGUC--GGG-
GGGC-G-GGGG--GUGA---CCCCCGUUCC---UCC-GCGCGUCACCCGGCG-UCCU-CCG-CGU--G--ACCGUCGUCGGC-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCUUCGAGG-GCCCGGGUG-GAGCC-CGC-GCCGCUU-------C------------GCGCGGC---GCGC-GAC CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCCU---------CUCG--------AGGCGU---CCGGCCCUCCGCGA-GCGCCC GCGGGGGUU CGGGUC---A--CGGACC-CGGUCCGUUCCCGUUCCC-ACCGA-
GGGGCUGUC-CGCGAU-A-----GGAG-GUGUCCUCGGACGGCGUC-GAAU--------------UCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
E_aspersum_DQ087506_   ????????????????????-??-???-??????????????????-???
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Aciagrion   ????????????????????-??-???-??????????????????-???
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ZAB_Aciagrion_borneense   ????????????????????-??-???-??????????????????-???
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Protoneura_capillaris_BPCp   NNNNNNNNNNNNNNNNNNNN-NN-NNN-NNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNAAACCGU-
U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCCACGGGCGAAGG--UCGCUUCG-GUGGAUGGCGCGCC--GGC-

GGUC-G-GGGG--GCAA---CUCCCG-UCC---CGG-GCGCGUCACCCGGCG-AUCU-CCG-AUU--G--ACCGAGGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-
GUG-----UCGGCCA-GGAGG-ACCCGGGAG-GAGAC-CGC-GCUGCUC-----U-C------------GAGCGGC---GCGC-GACCUCGGGAU-U-CCCGGC--CGA GUGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCC----------GCAA---------GGCGU---CCGGCCUUCCGCGA-GCACCCGCGGGGGUGUGGGUU---U--CGGACC- UGGUCCGAUCCCGCUCCC-ACCGA-
GGGGCUGUC-CGCGUU------UGGAG-GUGUUCUCGGACAGCGUC-GAAU---------CCUUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
ZPC_Protoneura_cara_ ????????????????????-??-???-??????????????????-???
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ZPRm_Psaironeura_remissa ????????????????????-??-???-??????????????????-???
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Elattoneura_analis_glauca ????????????????????-??-???-??????????????????-???
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Neoneura_aaroni_ONA UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCCACGGGCGAGGG--UCGCUUCG-GUGGAUGGCGCGCU--GGC- GGGC-G-GGUGU-GCAA---
CUCCCG-UCC---CGG-GCGCGUCACCCGGCG-AUCC-CCG-AUU--G--ACCGCGGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----UCGGCCA-CGAGG-
GCCCGGGUG-GAGAC-CGC-GCUGCUC-----U-C------------GAGCGGC---GCGC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GAUG---UCGACGCGCC---
-------GAAA---------GGCGU---CCGGCCCUCCGCGA-GCGCCCGCGGGGGUGCGGGUU---U--CGGGCC- CGGCCCGAUCCCGCUCCC-ACCGA-GGGGCUGUC-CGCG-U-C---AAGGAG-
GUGUCCUCGGACGGCGUC-GAUU----------CUUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-gAAACACGG
ZNA_Neoneura_amelia_ ????????????????????-??-???-??????????????????-???
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Neoneura_maria_BNM UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCCGCGGGCGAGGG--UCGCUUCG-GUGGAUGGCGCGCU--GGC- GGGC-G-GGUGU-GCAA---
CUCCCG-UCC---CGG-GCGCGUCACCCGGCG-AUCC-CCG-ACU--G--ACCGCGGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GUG-----UCGGCCA-CGAGG-
GCCCGGGUG-GAGAC-CGC-GCCGCUCUC-UCU-C------------GAGCGGC---GCGC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GAUG---UCGACGCGCC---
-------GAAA---------GGCGU---CCGGCCCUCCGCGA-GCGCCCGCGGGGGUGCGGGUU---U--CGGGCC- CGGCCCGAUCCCGCUCCC-ACCGA-GGGGCUGUC-CGCG-C-C---AAGGAG-
GUGUCCUCGGACGGCGUC-GAUU-------CCCAUUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
ZCAe_Ceriagrion_aeruginosum_????????????????????-??-???-??????????????????-???
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ZTS_BTS_Telebasis_salva ????????????????????-??-???-??????????????????-???
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Leptagrion_elongatum_ZLE UAAGACUGAAUacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguuga?????????????????
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Leptagrion_sp ????????????????????-??-???-??????????????????-???
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ZMMr_Metaleptobasis_manicaria ????????????????????-??-???-??????????????????-?????????????????????????????????
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Diceratobasis_sp_A_ZDA UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGAGGG--UCGCU-CGCGU GGAUGGCGCGCC--GGC-
GGGC-G-GGGG--GCAA---CCCUCG-UCC---CGG-GCGUGUCACCCGGCG-AUUC-UCG-AUU--G--ACCGCCGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCA-CGAGG-GCCCGGGUG-GAGUCAGGA-GCCGCUC-----U-C------------GAGUGGC---CCCU-GAC CCCGGG AU-C-CCCGGC--CGGGAGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCC----------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCC GCGGGGGAU CGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGA-
GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAU---------CCUUCUCCAGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
FJ596559_Pyrrhosoma_nymphula UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGAGGA--UCGCUUCG-AU GGAUGGCGCGCC--GGC-
GGGC-G-GGGG--GCAA---CCCUCG-UCC---CGG-GCGUGUCACCCGGCG-AUUC-UCG-AUU--G--ACUGCCGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCAC-GAGG-GCCCGGGUG-GAGUCACGA-GCCGCUC-----U-C------------GAGCGGC---CCGU-GAC CCCGGG AU-U-CCCGGC--CGGGAGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCC----------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCC GCGGGGGUU CGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCC--ACCGA-
GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAU---------CCUUCUCCAGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Chromagrion_conditum_OCCn UAAGACUGAAuacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguugaaaagaacuuugaagagagagaguucaagaguacg ugaaaccgu-
u-ugggagu-aaaCGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGAGGA--UCGCUUCG-AUGGAUGGCGCGCC--GGC- GGGC-G-GGGG--GCAA---
CCCUCG-UCC---CGG-GCGUGUCACCCGGCG-AUUC-UCG-AUU--G--ACUGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCA-CGAGG-
ACCCGGGUG-GAGUCACGA-ACCGCUC-----U-C------------GAGCGGC---CCGU-GACCCCGGGAU-U-CCCGGC--CGG GAGC-CCGACGGUAGGAA-G-CGA-GAAG---UCGACGCGCC---
-------GAAA---------GGCGU---CCGGCCCUCCGCGA-GCACCCGCGGgguucggguu---a--cggacc-

cgguccgaucccguucccc-accga-ggggcuguc-cgcgau-c---auggag-guguccucggacggcguc-gaau---------ccuucuc-agucc-gcgacgc-ua-cggcuuggaugg-u
ccacccg--acccgucuu-gaaacacgg
Teinobasis_alluaudi_ZTA2   ????acugaauacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguugaaaagaacuuugaagagagaguucaagaguacg ugaaaccgu-
c-gggggu-aaa?????????????????????????-????????????????-????????????????????--?????????????????????????????
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cggcuuggaugg-uccacccg--acccgucuu-gaaacacgg
Nehalennia_gracilis_ONG   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGAGGA--UCGCU-CACGCGGAUGACGCGCU--GGC- GGUC-G-GGGG--GCAA---
CCCUCG-UCC---CGG-GCGCGUCACCCGGCG-AUUC-UCG-AUU--G--ACUGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-ACG-----CCGGCCA-CGAGG-
GCCCGGGUG-GAGUCACGA-GCCGCUC-----U-C------------GAGUGGC---UCUU-GACCCCGGGAU-C-CCCGGC--CGG GAGU-CCGACGGUAGGAA-G-CGA-GAAG---UCGACGCGCC---
-------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCCGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGA-GGGGCUGUC-CGCGAU-C---AUGGAG-
GUGUUCUCGGACGGCGUC-GAAU---------CCUUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
Coryphagrion_grandis_ZCG   ????????????????????-??-???-??????????????????-??
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Microstigma_rotundatum_OMRtuaagacugaAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-U-
UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGAGGG--UCGCU-CGCGUGGAUGGCGCGCC--GGC- GGGC-G-GGGG--GCAA---CCCUCG-
UCC---CGG-GCGCGUCACCCGGCG-AUUC-UCG-ACU--G--ACCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCA-CGAGG-
GCCCGGGUG-GAGUCGAGA-GCCGCUC-----U-C------------GAGCGGC---CCCU-GACCCCGGGAU-C-CCCGGC--CGG GAGC-CCGACGGUAGGAA-G-CGA-GAAG---UAGACGCGCC---
-------GGGA---------GGCGU---CCGGCCCUCCGCGA-GCACCCGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGA-GGGGCUGUC-CGCGAU-C---AUGGAG-
GUGUCCUCGGACGGCGUc-gaaucuuu-----uuuucuccggucc-gcgacgc-ua-cggcu-gggugg-?
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Microstigma_anomalum_BMA   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGAGGG--UCGCU-CGCGU GGAUGGCGCGCC--GGC-
GGGC-G-GGGG--GCAA---CCCUCG-UCC---CGG-GCGCGUCACCCGGCG-AUUC-UCG-ACU--G--ACCGCCGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCA-CGAGG-GCCCGGGUG-GAGUCGAGA-GCCGCUC-----U-C------------GAGCGGC---UCCU-GAC CCCGGG AU-C-CCCGGC--CGGGAGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCC----------GCGA---------GGCGU---CCGGCCCUCCGCGA-GCACCC GCGGGGGUU CGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGA-
GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAUC--------UUUUCUCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Mecistogaster_ornata_ZMO   ????????????????????-??-???-??????????????????-??
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????????????-????????--acccgucuu-gaaacacgg
Mecistogaster_linearis_BML   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGAGGG--UCGCUUCU-GU GGAUGGCGCGUC--GGC-
GGGC-G-GGGG--GCAA---CCCUCG-UCC---CGG-GCGCGUCACCCGGCG-ACUC-UCG-AUU--G--ACCGCCGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCA-CGAGG-GCCCGGGUG-GAGUCAAGA-GCCGCUC-----U-C------------GAGCGGC---CCCU-GAC CCCGGG AU-C-CCCGGC--CGGGAGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCC----------GAAA---------GGCGU---CCGGCCCUCCGCGA-GCACCC GCGGGGGAU CGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGA-
GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAU---------CCUUCUCCAGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG

Megaloprepus_caerulatus_ZMC uaagacugaauacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguuga??????????????????
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??????????-????????????-????????--acccgucuu-gAAACACGG
Haplostigma_modesta_ZHM UAAGACUGAAcacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguu????????????????????
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Pseudostigma_aberrans_OPA UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGAGGG--UCGCU-UGUGCGGAUGGCGCGUC--GGC- GGGC-G-GGGG--GCAA---
CCCUCG-UCC---CGG-GCGCGUCACCCGGCG-ACUC-UCG-AUU--G--ACCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCA-CGAGG-
GCCCGGGUG-GAGUCAGGA-GCCGCUC-----U-C-----------GAGCGGC---CCCU-GACCCCGGGAU-C-CCCGGC--CGG GAGC-CCGACGGUAGGAA-G-CGA-GAAG---UCGACGCGCC---
-------GAAA---------GGCGU---CCGGCCCUCCGCGA-GCACCCGCGGGGGAUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGA-GGGGCUGUC-CGCGAU-C---AUGGAG-
GUGUCCUCGGACGGCGUC-GAAU---------CCUUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
Rhinagrion_mima_ZRM uaagacugaauacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguugaaaagaacuuUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGAGGG--UCGCU-CGUGUGGAUGGCGCGCC--GGC- GGGC-G-GGGG--GCAA---
CCCUCG-UCC---CGG-GCGUGUCACCCGGCG-AUUC-UCG-AUU--G--ACUGCCGUUGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCC--UGAGG-
GCCCGGGAG-GAGUCAAGA-GCCGCUC-----U-C-----------GAGUGGC---CCCU-GACCCCGGGAU-C-CCCAGC--CGG GAGC-CCGACGGUAAGAA-G-CGA-GAAG---UCGACGCGCC---
-------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCCGCGGGGGAUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGA-GGGGCUGUC-CGCGUU-A---AUGGAG-
GUGUCCUCGGACGGCGUC-Gaau---------ccuucuccagucc-gcgacgc-ua-cggcuuggaugg-u ccacccg--acccgucuu-gaaacacgg
Sciotropis_cyclanthorum_BSC UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-ACGUCGGGCGAGGG--UCGCUU-G-AU GGAUGGCGCGCC--
GGC-GGUC-G-G
GGG--GCAA---CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCCC-UCG-AUG--G-UUCCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGCGAC CCGUCGG-GCG-----
CCGGCCA-CGAGG-GCCCGGGUG-GAGAC-CGC-GCCGCUC-----U-C-----------GAGCGGC---UCGU-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CGGACGGUAGGAA-G-CGA-GAAG-
--UCGACGCGCCGACCCCCC--GCGAGGGGGGCGAGGCGU---CCGGCCCUCCGCGA-GCACCCGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGA-GGGGCUGUC-
CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAUUCGCC-AAAAGUUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
Heteragrion_mitratum_ZHMt UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-ACUUCGGGCGAGGG--UCGCUC-G-CU GGAUGGAGCGCC--GGC-
GGUC-G-GGGG--GCAA---CCCCCG-GCC---CGG-GCGAGUCACCCGGCG-GCCC-CCG-UUG--G-AUCCGAGGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----UCGGUCA-CGAGG-GCCCGGGUG-GAGCC-CGC-GCCGCUC-----U-C-----------GAGCGGC---GCGC-GAC CCCGGG AU-C-CCAGAC--CGGCUGU-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCCGUCCCCCC--GCGAGGGGGAGAGGCGU---CCGGCCCUCCGCGA-GCGCCC GCGGGGGUU CGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGC-
GGGGCUGUC-CGCGAU-C---AUGGAG-GAGUCCUCGGACGGCGUC-GAAAUCUUC-UGAACUUCUCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Heteragrion_sp_BH UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-ACUUCGGGCGAGGG--UCGCUC-G-CU GGAUGGAGCGCC--GGC-
GGUC-G-GGGG--GCAA---CCCCCG-GCC---CGG-GCGAGUCACCCGGCG-GCCC-CCG-UUG--G-AUCCGAGGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----UCGGUCA-CGAGG-GCCCGGGUG-GAGCC-CGC-GCCGCUC-----U-C-----------GAGCGGC---GCGC-GAC CCCGGG AU-C-CCAGAC--CGGCUGU-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCCGUCCCCCC--GCGAGGGGGAGAGGCGU---CCGGCCCUCCGCGA-GCGCCC GCGGGGGUU CGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGC-
GGGGCUGUC-CGCGAU-C---AUGGAG-GAGUCCUCGGACGGCGUC-GAAAUCUUC-UGAACUUCUCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG

Oxystigma_cyanifrons_ZOC uaagacugaauacggccacg-ag-acc-gauaucgaacaauuaccg-ugagggAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-ACUUCGGGCGAGGG--UCGCUC-G-CU GGAUGGCGCGCC--GGC-
GGUC-G-GGGG--GCAA---CCCCCG-GCC---CGG-GCGGGUCACUCGGCG-GCCC-CCG-UUG--G-AUCCGACGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----UCGGCCA-CGAGG-GCCCGGGUG-GAGUC-CGC-GCAGCUC-----U-C-----------GAGCGGC---GCGC-GAC CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCCGUCCCCCC--GCGAGGGGGGCGAGGCGU---CCGGCCCUCCGCGA-GCGCCC GCGGGGGUU CGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGC-
GGGGCUGUC-CGCGAU-C---AUGGAG-GAGUCCUCGGACGGCGUC-GAAACCUUC-UAAACUUCUCCGGUCC- GCGACGC-UA-CGGCUUGGAUGg-uccacccg--acccgucuu-gaaacacgg
Dimeragrion_percubitale_ZDP uaagACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGUCGGGCGAGGG--UCGCUC-G-GU GGAUGGCGCGCC--GGC-
GGGC-G-GGGG--GUAA---CCCUCG-UCC---CGG-GCGCGUCACCCGGCG-GCCC-UCG-AAU--G--UUCGCCGUUGGU-GUGAC-GCACUUCUC-- CCC-GAGUAGGACGUCGCGACCCGUCG?-
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Tatocnemis_malgassica_ZTMa UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAaguaccg-ugagggaaaguug??????????????????
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Philogenia_cassandra_BPCs UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-UCCGCGGGCGGGCG--UCGUUUCC-GCGGAUGGCGCGCC--GGC- GGUC-G-GGGG--GCGA---
CCCCCG-UCC---CGG-GCGCGUCACCCAGCG-GCGC-CCG-AUU--G-AACCGCGGGCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----UCGGCCA-CCAGG-
GCCCGGGCG-UAGAC-CGA-GCCGCUCC---CUUCG-------CGGGGAGCGGC---CCGC-GACCCCGGGAU-C-CCCGGC--CGG CUGU-UCGACGGUAGGAA-G-CGA-GAAG---
UCGACGCGCCGACCCCCC--GCGAGGGGGGCGAGGCGU---CCGGCCCUCCGCGA-GCGCCCGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGC-GGGGCUGUC-CGCGAU-
C---AUGGAG-GUGUCCUCGGACGGCGUC-GAGAUCUUC-CAAAGUUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCGNNACCCGUCUU-GAAACACGG
Philogenia_terraba_ZPBn_ZPT ????????????????????-??-???-??????????????????-?????????????????????????????????
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Philogenia_berennice_ZPBn UAAGAAUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-UCCACGGGCGGGCG--UCGUUUCC-GCGGAUGGCGCGCC--GGC- GGUC-G-GGGG--GCGA---
CCCCCG-UCC---CGG-GCGCGUCACCCAGCG-GCGC-CCG-AUU--G-AACCGCGGGCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----UCGGCCA-CCAGG-
GCCCGGGCG-UAGAC-CGA-GCCGCUCC---CUUCG-------CGGGGAGCGGC---CCGC-GACCCCGGGUU-C-CCCGGC--CGG CUGC-CCGACGGUAGGAA-G-CGA-GAAG---
UCGACGCGCCGACCCCCC--GCGAGGGGGGCGAGGCGU---CCGGCCCUCCGCGA-GCGCCCGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGC-GGGGCUGUC-CGCGAU-
C---AUGGAG-GUGUCCUCGGACGGCGUC-GAGAUCUUC-CAAAGUUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-u ccacccg--acccgucuu-gaaacacgg
Teinopodagrion_venale_BTV UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGUCGGGCGAGGG--UCGCU-CG-GC GGAUGGCGCGCC--GGU-
GGUC-G-GGGG--GCAACCCCUCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCCC-CCG-AUU--G-AUCCGCCGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----UCGGCCA-CGAGG-GCCCGGGUG-GAGAC-CGC-GCCGCUC-----C-C-----------GAGCGGC---GCGC-GAC CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCCAGCCCCCU--CUCCGGGGGGCGAGGCGU---CCGGCCCCCAGCGA-GCACCC UCGGGGGUU CGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGC-
GGGGCUGUC-CGCGAU-U---UUGGUG-GUGUCCUCGGACGGCGUC-GAACGACUC--AAAGUUCUCCGGUCA- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Teinopodagrion_lepidum_ZTL UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACACGUACCG-UGagggaaaguugaaaagaacuuugaagagag
aguucaagaguacgugaaaccgu-c-ggggagu-aaacggguggguacccgaaauuucgaaa-ggggagauucaggucu-cgccg-ucgucgggcgaggg--ucgcuu-g-gu

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ggauggcgugcc--ggc-gguc-g-gggg--gcaa---cccccg-ucc---cgg-gcgcgucacccggcg-gccc-ccg-auu--g-auccuccgucggu-gugac-gcacuucuc-- ccc -
gaguaggacgucgcgacccgucgg-gcg-----ucggcca-cgagg-gcccgggug-gagac-cgc-gccgcuc-----c-c------------gagcggc---gcgc-gac cccGGG AU-C-CCCGGC--
CGGGUGC-CCGACGGUAGGAA-G-CGA-GAAG---UCGACGCGCCggcccccu--cuccggggggcgaggcgu---ccggcccuccgcga-gcaccc gcgggggu cggguu---c--cggacc-
cgguccgaucccguuccc-accgc-ggggcuguc-cgcgau-c---auggag-guguccucggacggcguc-gaauuacuc-aaaaGuucuccggucc- gcgacgc-ua-cggcuuggaugg-uccacccg--
acccgucuu-gaaacacgg
Amanipodagrion_gilliesi_ZAGUAAGACugaauacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguugaaaagaacuuugaagagagaguucaagaguacg ugaaaccgu-c-
ggggagu-aaacggguggguacccgaaauuucgaaa-ggggagauucaggucu-cgccg-gcgucggu cgaggg--ucgcuu-g-gcggauggcgcgcc--ggc- gguc-g-gggg--gcga---cucccg-
ucc---cgg-gcgcgucacccggcg-gccc-ccg-gug--g-auccgccgucggu-gugac-gcacuucuc--ccc-gaguaggacgucgc gacccgucgg-gcg-----ccggcca-cgagg-
gcccgggug-gagac-cgagaccgcuc-----u-c------------gagcggc---ucgc-gaccccgggau-c-cccggc--cgg gugc-ccgacgguacgaa-g-cga-gaag---
ucgacccgccgaccccuc--gcaagggggggagaggcgu---ccggcccuccgcga-gcccccgcgugggguucggguu---s--cgrrcc- cuguccgaucccguucccC-ACCGC-GGGGCUGUC-CGCAUC-
C---AUGGAG-GUGUCCUcggacggcgu??-???????-?????????????????-??????????-????????????-?
??acccg--asssgucuu-GAAACACGG
Nesolestes_elizabethae_ZNE            uaagacugaauacggccacg-ag-acc-gauagc????????????-?????????????????????????????????
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Protolestes_kerckhoffae_ZPKc          UAAGAcugaauacggccacg-ag-acc-gauagcgaacaaguaccg-ugagg???????????????????????????
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Argiolestes_ochrostomas_ZAOc          uaagACUGAAUACGGCCAUG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-ACGUCGGGCGAGGG--UCGCUC-G-GU GGAUGGCGCGCC--GGC-
GGUC-G-GGGG--GUGA---CCCCCG-UCC---CGG-GCGCGUCACCCGGUG-GCCC-CCG-AUC--G-AUCCGCCGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----UCGGCCA-CGAGG-GCCCGGGUG-GAGUC-CGC-GCCGCUC-----U-C------------GAGCGGC---UCGU-GAC CCCGGG AU-C-CCCGGC--CGGGAGC-CCGACGGCAGGAA-G-
CGA-GAAG---UCGACGCGCCGACCCCCC--GCAAGGGGGGUGAGGCGU---CCGGCCCUCCGCGA-GCACCC GCGGGGGUU CGGGUU---A--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGC-
GGGGCUGUC-CGCGAU-C---AUGGAG-GAGUCCUCGGACGGCGUC-GAAUUCGUC-GAAAUUUCUCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Argiolestes_sidonia_BAS      UAAGACUGAAUACGGCCAUG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-UCGUCGGG CGAGGG--UCGCUU-G-GUGGAUGGCGUGCC--GGC- GGUC-G-GGGG--GCAA---
CCUCCG-UCC---CGG-GCGCGUCACCCGGUG-GCCC-CCG-CGU--G-UUCCGGCGUCGGU-GUGAC-GCAUUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----UCGGCCA-CGAGG-
GCCCGGGUG-GAGUC-CGC-GCCGCUC-----U-C------------GAGCGGC---UCGU-GACCCUGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GAAG---
UCGACGCGCCGACCCCCC--GCAAGGGGGGCGAGGCGU---CCGGCCCUCCGCGA-GCACUCGCGUGGGUGUGGGUU---A--CGGACC- CCGUCCGAUCCCGUUCCC-ACCGC-GGGGCUGUC-CGCGAU-
C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAACACUC--AAAUUUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
Caledopteryx_maculata_BCM             NNNNNNNNNNNNNNNNNNNN-NN-NNN-NNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-ACGUCGGGCGAGGG--UCGCU-CG-GC GGAUGGCGUGCC--GGC-
GGUC-G-GGGG--GCAA---CCCCCG-GCC---CGG-GCGCGUCACCCGGCG-GCCC-CCG-CGU--G-UUCCGCCGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----UCGGCCA-CGAGG-GCCCGGGUG-GAGUC-CGC-GCCGCUC-----U-C------------GAGCGGC---UCGC-GAC CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCCGGCCCCCC--GCGAGGGGGGCGAGGCGU---CCGGCCCUCCGCGA-GCACUC GCGUGGGUG UGGGCU---A--CGGACC-CCGUCCGUUCCCGUUCCC-ACCGC-
GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAUCACUC-G-AAGUUCUCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Trineuragrion_percostale_BTP          CAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
UGUUCAAGAGUACGUGAAUCCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-UCGUCGGGCGAGGG--UCGCUU-G-GC GGAUGGCGUGCC--GGC-
GGUC-G-GGGG--GCAA---CCCCCU-UCC---CGG-GCGCAUCACCCGGCG-GCCC-CCG-CGC--G-CUCCGGCGUCGGU-GUGAC-GCACUUCUC-- CCC-GAGUAGGACGUCGCGACCCGUCGG-
GCG-----UCGGCCA-CGAGG-GCACGGGUG-GAGUC-CGC-GCCGCCCC---CU-CA-------CG-GGGGCGGC---ACGC-GAC
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CCCGGGAU-C-CCCGGC--CGGGUGC-CCGACGGUAGGAA-G-CGA-GAAG---UCGACUCGCCGACCCCCC--GCGAGAGGGGCGAGGCGU---CCGGCCCUCCGCGA-GCACCC GCGCGGGCG UGGGUU-
--G--CUGACC-CCGUACGAUCCCGUGCCC-GCCGC-GGGGCUGUC-CGCGUU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAUCACUCAGAAAGUUCUCCGGUCC- GCGACGC-UA-CGGCU--GA--
--------------------U-GAAGCACGG
Caledargiolestes_uniseries_BCU ????????????????????-??-???-??????????????????-????????????????????????????????
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???-???????????CGCGACCCGUCGG-UCG-----UCGGCCA-CGAGG-GCCCGGGUG-GAGUC-CGC-GCCGCUC-----U-U--------------------------GAC CCCGGG AU-C-
CCCGGCCCCGGGUGC-CCGACGGUAGGAA-G-CGA-GAAG---UGGACGCGCCGGCCCCCCGGGCGAGGGGGGCGAGGCGU---CCGGCCCUCCGCGA-GCACCC GCGCGGGUG UGGGGC---A--
CGGACC-CCGUCCGAUCCCGUUCCC-ACCGC-GGGGCUGUC-CGCGAU-C---ACGGAG-GUGUCCUCGGACGGCGUU-GAACGACUC--AAAGUUCUCCGGUCC- GCGACGC-UA-CGGCUUGGAUGU-
UCCACCCCAGACCCGUCGU-UAAGCACGG
Podopteryx_roseonotata_ZPR UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-UCGUCGGGCGAGGG--UCGCUU-G-GU GGAUGGCGUGCC--GGC-
GGUC-G-GGGG--GUGA---CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCCC-CCG-CGC--U-UUCCGGCGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----UCGGCCA-CGAGG-GCCCGGGUG-GAGUC-CGG-ACCGCUC-----U-C------------GAGCGGC---UCGC-GAC CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCC----------GAAC--------AGGCGU---CCGGCCCUCCGCGA-GCGCCC GCGUGGGUG UGGGUU---A--CGGACC-CCGUCCGAUCCCGUUCCC-ACCGC-
GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAAUA---------UUCUCCGGUCC- GCGACGC-AA-CGGCUUGGAUGG-UCCACCCG--ACCcgucuu-gaaacacgg
Austroargiolestes_icteromelas_OAIc UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-UCGUCGGGCGAGGG--UCGCUU-G-GU GGAUGGCGUGCC--GGC-
GGUC-G-GGGG--GCAA---CCCCCG-UCC---CGG-GCGCGUCACCCGGUG-GCCC-CCG-CGU--G-UUCCGGCGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----UCGGCCA-CGAGG-GCCCGGGUG-GAGUC-CGC-GCCGCUC-----U-C------------GAGCGGC---UCGU-GAC CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCCGACCCCCC--GCAAGGGGGGCGAGGCGU---CCGGCCUUCCGCGA-GCGCCC GCGUGGGUG UGGGUU---A--CGGACC-CCGUCCGAUCCCGUUCCC-ACCGC-
GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAUCACUC--AAAGUUCUCCAGUCC- GCGACGC-AA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Griseargiolestes_albescens_BGA UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-ACGUCGGGCGAGGG--UCGCUU-G-GU GGAUGGCGUGCC--GGC-
GGUC-G-GGGG--GCAA---CUCCCG-GCC---CGG-GCGCGUCACCCGGUG-GCCC-CCG-CGU--G-UUCCGCCGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----UCGGCCA-CGAGG-GCCCGGGUG-GAGUC-CGC-GCCGCUC-----U-C------------GAGCGGC---UCGU-GAC CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCCGACCCCCC--GCAAGGGGGGCGAGGCGU---CCGGCCCUCCGCGA-GCAUCC GCGUGGGUG UGGGUU---A--CGGACC-CCGUCCGAUCCCGUUCCC-ACCGC-
GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAUCACUC--AAAGUUCUCCAGUUCC GCGACGC-UA-CGGCU--GAUG---CC?????--?????????-?????????
Grisagriolestes_eboracus_ZGE UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-ACGUCGGGCGAGGG--UCGCUU-G-GU GGAUGGCGUGCC--GGC-
GGUC-G-GGGG--GCAA---CUCCCG-GCC---CGG-GCGCGUCACCCGGUG-GCCC-CCG-CGU--G-UUCCGCCGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----UCGGCCA-CGAGG-GCCCGGGUG-GAGUC-CGC-GCCGCUC-----U-C------------GAGCGGC---UCGU-GAC CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCCGACCCCCC--GCAAGGGGGGCGAGGCGU---CCGGCCCUCCGCGA-GCAUCC GCGUGGGUG UGGGUU---A--CGGACC-CCGUCCGAUCCCGUUCCC-ACCGC-
GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAUCACUC--AAAGUUCUCCAGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Miniargiolestes_minimus_ZMMn2 uaagacugaauacggccacg-ag-acc-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-UCGUCGGGCGAGGG--UCGCUU-G-GU GGAUGGCGUGCC--GGC-
GGGC-G-GGGG--GCGA---CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCCC-CCG-CGU--G-CUCCGCCGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----UCGGCCA-CGAGG-GCCCGGGUG-GAGUC-CGC-GCCGCUC-----U-C------------GAGCGGC---UCGC-GAC CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAGAAA-G-
CGA-GAAG---UCGACGCGCCGACC-----------------AGGCGU---CCGGCCCUCCGCGA-GCGCCC GCGUGGGUG UGGGUU---C--CGGACC-CCGUCCGAUCCCGUUCCC-ACCGC-
GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAAU----------UUCUCCGGUCC- GCGACGC-UA-CGGCUuggaugg-uccacccg--acccgucuu-gaaacacgg
Lestomima_flavostigma_OPBc3 uaagacugaauacggccaCG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAG-GGGGAGAUUCAGGUCU-CGCCG-GCGUCGGGCGAGGG--UCGCUUCG-GU GGAUGGCACGCC--GGC-
GGUC-G-GGGG--GUAA---CCCCCC-UCC--CCGG-GCGUGUCACUCGGCG-GCCC-CCG-UGU--G--ACCGACGUCGGU-GUGAC-GCACUUCUC-- CCC-GAGUAGGACGUCGCGACCCGUCGG-
GCG-----CCGGCCC-CGAGG-GCCCGGGUG-GAGUC-CGU-GCCGCUC-----U-C------------GAGCGGC---CCGC-GAC CCCGGGAU-C-CCCGGC--CGGGUGC-CCGACGGUAGGAA-A-
CGA-GAAG---UCGACGCGCCGUCCCCCC--GCGAGGGGGGAGAGGCGU---CCGGCCCUCCGCGA-GCACCC

GCGUGGGUUCGGGUU---A--CGGACC-CGGUCCGAUCCCGUUCUC-ACCGC-GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAGUCUUU-GAAAGU-CUC-CGUCC-
GCGACGC-UA-CGGCUUGGAUGg-uccacccg--accggucuu-gauacacga
Rhipidolestes_hiraoi_ORH UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGGCAGUUCAACAGUACG CGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGUAAUUUCGAAA-UGGGAGAUUCAAGUCU-CGCCA-GUCUCGGGUGAGUG--UCGUUCC--UUGGAUGGCGUGCC--GAC- GGUC-G-GGGGUGGCAA---
CCCCCU-UCC---CGG-GCGCGUCACCCGGCG-GCCC-CCG-CGU--G-CAUCGAGGUCGGU-GUGAC-UUACUUCUC--CCC-GAUUAGGACGUCGC AACCCUUCGG-GCG-----CCGGUCA-CUGGG-
GCCUGGGUG-GAGAC-CGU-GCCGCUC-----U-C-----------GGGAGGC---UCGA-CACCCCGGGAU-C-CCCGGC--CGG GUGC-ACGACGGUAGGAA-G-CAA-GAAG---
UGGACGCGCCGAUCCCCC--GCGAGAUUGGCGAGGCGU---CCGUCCAUCCGCGA-GCACCCGCUGUGGUUCGCGUU---C--CGGACC- UGGUCCUUUUCCGUUCCC-ACCGC-GGAGAUGUC-CGCGAU-
C---AUGGAG-GUGUCCUCGAACGGCGUC-GAAUUCGUC-UAAA-UU-UC-GGUCC-G----------CGGCUUGGAUGG-U CCACCCG--ACCGGUCUU-GAA-CA-GG
Rhipidolestes_aculeata_BRA UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCCUCGGGCGAGGG--UCGUC-C--GCGGAUGGCGUGCC--GGC- GGUC-G-GGGG--GCAA---
CCCCCU-UCC---CGG-GCGCGUCACCCGGCG-GCCC-CCG-CGU--G-CUCCGGUGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCUUCGG-GCG-----CCGGCCA-CGAGG-
GCCCGGGUG-GAGAC-CGU-GCCGCUC-----U-C-----------GAGCGGC---ACGC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GAAG---
UCGACGCGCCGACCCCCC--GCGAGGGGGGCGAGGCGU---CCGGCCCUCCGCGA-GCACCCGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGUUCCCGUUCCC-ACCGA-GGGGCUGUC-CGCGAU-
C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAUUCGUA-AAAAGUUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
Paraphlebia_zoe_OPZ UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG
UGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGUCGGGCGAGGG--UCGUC-C--GCGGAUGGCGCGCC--GGC- GGUG-G-GGGG--
GCAA---CCCCCU-UCC---CGG-GCGCGUCACCCGGCG-GCCC-CCG-CUU--G-UUCCGGCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCUUCGG-GCG-----CCGGCCA-
CGAGG-GCCCGGGUG-GAGUC-CGC-GCCGCUC-----U-C-----------GAGCGGC---UCGU-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-CGA-GAAG---
UCGACGCGCCGACCCCCC--GCAAGGGGGGAGAGGCGU---CCGGCCCUCCGCGA-GCACCCGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGC-GGGGCUGUC-CGCGAU-
C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAA--CUC-UAAACUUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U Ccacccg--acccgucuu-gaaccaccg
Thaumatoneura_inopinata_OTIUAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUAccg-ugagggaaaguug?????????????????????????????????
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Hypolestes_clara_OHC UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGUCGGGCGAGGG--UCGCUUCG-GUGGAUGGCGCGCC--GGC- GGUCUG-GGGG--GCAA---
CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GUCC-CCG-AUU--G--ACCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CUGGCCU-CGAGG-
GCUCGGGUG-GAGUC-CGC-GCCGCUC-----U-C-----------GAGCGGC---UCGU-GACCCCGAGGU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GAAG---
UCGACGCGCCAACCACSC--GCGAGGGGGGAGACGCGU---CUGGCCCUCCGGGA-GCGCCCGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGA-GGGGCUGUC-CGCGAU-
C---AUGGAG-GAGUCCUUGGACGGCGUC-GAA-CACUC--AAAAUUCUCCGGUCA-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
Hypolestes_sp_BHY UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGUCGGGCGAGGG--UCGCUUCG-GU GGAUGGCGCGCC--GGC-
GGUCUG-GGGG--GCAA---CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCCC-CCG-AUU--G--ACCGCCGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CUGGCCU-CGAGG-GCUCGGGUG-GAGUC-CGC-GCCGCUC-----C-C-----------GAGCGGC---UCGU-GAC CCCGAG GU-C-CCCGGC--CGGGUGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCCAACCCCCC--GCGAGGGGGGAGAGGCGU---CUGGCCCUCCGCGA-GCGCCC GCGGGGGUU CGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGA-
GGGGCUGUC-CGCGAU-C---AUGGAG-GAGUCCUUGGACGGCGUC-GAA-CACUC--AAAAUUCUCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Agriomorpha_fusca_ZAF6 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCUUCGGGCGAGGG--CCGAUUCC-GC GGAUGGCGCGCC--GGC-
GGUC-G-GGGG--GCAA---CCCUCU-UCC---CAG-GCGAGUCACCCGGCG-GCCC-CCG-CGU--G-CACCGACGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCUUCGG-
GCG-----CCGGCCA-GGAGG-GCCCGGGUG-GAGAC-CGC-GCCGCUC-----C-C-----------GAGCGGC---UCGU-GAC CCCGGG GU-C-CCCGGC--CGGGUGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCCGACCCCCU--UCC-GGGGGGCGAGGCGU---CCGGCCCUCCGCGA-GCACCC GCGGGGGUU CGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGC-
GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAUUCGUC--AAAGUUCUCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-uccacccg--acccgucuu-gaaacacgg

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ZSY_Sinocnemis_yangbingi     ?????????????????????-??-???-???????????????????-?????????????????????????????????????????????????
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ZMP_Miocora_peraltica        ?????????????????????-??-???-???????????????????-?????????????????????????????????????????????????
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Cora_marina_OCMr             uaagacugaauacgggcacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguugaaaagaacuUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-ACGUCGGGCGAGGG--UCGCUUUG-GUGGAUGGCGCGCC--GGC- GGUC-G-GGGG--GCAA---
CCCCCG-UCC---CGG-GCGCGUCACCCGGUG-GCCU-UCG-AUU--G-UUCCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCA-CGAGG-
GCCCGGGUG-GAGUC-CGC-GCCGCUC-----U-C------------GAGCGGC---GCGUCGACCCCGGGAU-C-CCCGGC--CGG GUGC-UCGACGGUAGGAA-A-CGa-gaag---
ccgacgcgccgacccucc--gcaagggggcgaggcgu---ccggcccuccgcga-gcgcccgcgggggguucggguu---c--cggacc- cgguccgaucccguuccc-accgc-ggggcuguc-cgcgau-
c---auggag-guguccucggacggcguc-gaauuu-uc-aaaaguucuccggucc-gcgacgc-ua-cggcuuggaugg-u ccacccg--acccgucuu-gaaacacgg
Cora_cyane_BCC               UAAGACUGAAUACGGGCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-ACGUCGGGCGAGGG--UCGCUUCG-GUGGAUGGCGCGCC--GGC- GGUC-G-GGGG--GCAA---
CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCCU-UCG-AUA--G-UUCCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCA-CGAGG-
GCCCGGGUG-GAGUC-CGC-GCCGCUC-----U-C------------GAGCGGC---GCGC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-UCGACGGUAGGAA-A-CGA-GAAG---
CCGACGCGCCGACCCCCC--GCAAGGGGGGCGAGGCGU---CCGGCCCUCCGCGA-GCGCCCGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGC-GGGGCUGUC-CGCGAU-
C---AUGGAG-GUGUCCUCGGACGGCGUC-GAUUA-CUC-AAAAGUUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
Polythore_sp_Z_ZPZ           UAAGACUGAAUACGGGCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-ACGUCGGGCGAGGG--UCGCUUCG-GUGGAUGGCGCGCC--GGC- GGUC-G-GGGG--GCAA---
CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCCU-UCG-AUA--G-UUCCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCA-CGAGG-
GCCCGGGUG-GAGCC-CGC-GCCGCUC-----U-C------------GAGCGGC---GCGC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-UCGACGGUAGGAA-A-CGA-GAAG---
CCGACGCGCCGACCCCCC--GCAAGGGGGGCGAGGCGU---CCGGCCCUCCGCGA-GCGCCCGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGC-GGGGCUGUC-CGCGAU-
C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAUA-CUC-AAAAGUUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAGCACGG
Polythore_boliviana_BPB               UAAGACUGAAUACGGGCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-ACGUCGGGCGAGGG--UCGCUUCG-GU GGAUGGCGCGCC--GGC-
GGUC-G-GGGG--GCAA---CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCCU-UCG-AUU--G-UUCCGCCGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----CCGGCCA-CGAGG-GCCCGGGUG-GAGCC-CGC-GCCGCUC-----U-C------------GAGCGGC---GCGC-GAC CCCGGG AU-C-CCCGGC--CGGGUGC-UCGACGGUAGGAA-A-
CGA-GAAG---CCGACGCGCCGACCCCCC--GCAAGGGGGGCGAGGCGU---CCGGCCCUCCGCGA-GCGCCC GCGGGGGUU CGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGC-
GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAUA-CUC-AAAAGUUCUCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAGCACGG
Euthore_fasciata_ZEFs_BEFs   UAAGACUGAAUACGGGCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-ACGUCGGGCGAGGG--UCGCUUCG-GUGGAUGGCGCGCC--GGC- GGUC-G-GGGG--GCAA---
CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCCU-UCG-AUU--G-UUCCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCA-CGAGG-
GCCCGGGUG-GAGCC-CGC-GCCGCUC-----U-C------------GAGCGGC---GCGU-GACCCCGGGAU-C-CCCGGC--CGG GUGC-UCGACGGUAGGAA-A-CGA-GAAG---
CCGACGCGCCGACCCCCC--GCAAGGGGGGCGAGGCGU---CCGGCCCUCCGCGA-GCGCCCGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGC-GGGGCUGUC-CGCGAU-
C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAUA-CUC-AAAAGUUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
Rimanella_arcana_ORA         UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGUCGGGCGAGGG--UCGCUUCG-GUGGAUGGCGCGCC--GGC-
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GGUC-G-GGGG--GCAA---CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCCC-CCG-AGA--G-AUCCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-
GCG-----CCGGCCC-AGAGG-GCCCGGGUG-GAGAC-CGC-GCCGCUC-----U-C-----------GAGCGGC---GCGC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCCGACCCCCC--GCAAGGGGGGCGAGGCGU---C
CGGCCCUCCGCGA-GCGCCCGCGGGGGUUCGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGC-GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-
GAACUCGUC--AAAGUUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAANCACGN
Pentaphlebia_stahli_OPSt UAAGACUGAAUAcGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-UCGUCGGGCGAGGG--UCGCUUCG-GUGGAUGGCGCGCU--GGC- GGUC-G-GGGG--GCAA---
CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCCC-CCG-AUU--G-UUCCGCCGGCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCA-CGAGG-
GCCCGGGUG-GAGAC-CGC-GCCGCUC-----U-A-----------GAGCGGC---UCGU-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GAAG---
UCGACGCGCCGACCCCCC--GCAAGGGGGGCGAGGCGU---CCGGCCCUCCGCGA-GCACCCGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGA-GGGGCUGUC-CGCGAU-
C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAACGCUC-GAAAGUUCUCCGGUCC-GCGACGC-UA-CUGCUUGGAUGG-U CCACCCG--acccgucuu-gaacaccgg
Devadatta_podolestoides_BDPUAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-C-
GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGUCGGGCGAGGG--UCGCUUCG-GUGGAUGGCGCGCC--GGC- GGUC-G-GGGG--GCAA---CCCCCG-
UCC---CGG-GCGCGUCACCCGGCG-ACCC-CCG-AUU--G-AUCCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GUG-----CCGGCCA-AGAGG-
GCCCGGGUG-GAGAC-CGC-GCCGCUC-----U-CU---------CGAGUGGC---GCGC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-CGA-GAAG---UCGACGCGCC---
-------GAUC-------AAGGCGU---CCGGCCCUCCGCGA-GCGCCCGCGGGGGAACGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGC-GGGGCUGUC-CGCGAU-G---AAGGAG-
GUGUCCUCGGACGGCGUC-GA----UUC--A-----CUCCGGUCC-GCGACGC-UA-CGGCUUGAAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
Amphipteryx_longicaudata_ZAL5 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGAUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGGCGGGCGAGGG--UCGCUUCG-GG GGAUGGCGCGCC--GGC-
GGUC-G-GGGG--GCAA---CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCCU-UCG-AUU--G-UUCCGACGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----CCGGCCA-CGAGG-GCCCGAGUG-GAUAC-CGC-GCCGCUC-----A-C-----------GAGCGGU---UCGU-GAC ACCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAGGAA-G-
CGA-GAAG---UCGACGCGCCGCCCCCCC--GCAAGGGGGGAGAGGCGU---CCGGCCCUCCGCGA-GCACCC GCGGGGGUU CGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGC-
GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAGCCCUCGAAAACUUCUCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-uccacccg--acccgucuu-gaaacacgg
Pseudolestes_mirabilis_OPMb2uaagacugaauacGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCUUCGGGCGGGGG--UCGCU-CG-GUGGAUGGCGCGUC--GGC- GGUC-G-GGGG--GCAA---
CCCCCG-GCC-CGCGG-GCGCGUCACCCGGCG-GCUC-CCG-AUC--G-GUCCGCGGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCA-CGAGG-
GCCCGGGUG-GAGUC-CGG-GUCGCUC----CU-CG----------GAGCGAC---UCGC-GACCCCGGGAU-C-CCCGGC--CGG GUGU-CCGACGGUACGAA-G-CGA-GAAG---UCGACGCGCC---
-------GAAAC------AAGGCGU---CCGGCCCUCCGCGA-GCACCCGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUCCCC-ACCGC-GGGGCUGUC-GGCGAA-A---AUGGAG-
GUGUCCUCGGACGGCGUC-GAAGGC--------GUUCUCCGGUCC-GCGACGC-UA-CUGCUUGGAUGg-u ccacccg--acccgucuu-gaacaacgg
Philoganga_vetusta_BPVt UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGUCGGGCGAGGG--UCGCUUCG-GUGGAUGGCGCGCC--GGC- GGUC-G-GGGG--GCAA---
CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCCC-CCG-AUU--G-A-UCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----UCGGCCA-CGAGG-
GCCCGGGUG-GAGUC-CGU-GCCGCUC-----U--G----------CAGCGGC---UCGU-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GAAG---
UCGACGCGCCGACCCCCC--GCAAGGGGGGCGAGGCGU---CCGGCCCUCCGCGA-GCACCCGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGC-GGGGCUGUC-CGCGAU-
C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAUUCGUG-CAAAGUUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
Philoganga_robusta_OPRb2 UAAGACUGAAUACGGCCAcg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguuga????????????????????????????????
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Lestoidea_conjuncta_ZLC UAAGACugaauacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguugaaaagaacuuugaagagagaguucaagaguacg ugaaaccgu-
c-ugggagu-aaacgggugguacccgaaauuucgaaa-ggggagauucaggucu-cgccg-gcuucgggcggggu--ccgccucc-guggauggcgcgca--ggc- gguc-g-gggg--gcaa---
ccccug-gcc---cgg-gcgggucacccggcg-gauc-ucg-cgu--g-guccgaggucggu-gugac-gcacuucuc--ccc-gacuaggacgucgc cacccgucgg-gcg-----ucggcca-cgagg-
gcccgGGUG-GAGan-nnn-nnnnnnn--n-----------------nnnnnnnnnnnnn-naccccgggau-c-cccggc--cgg

gugc-ccgacgguaggaa-a-cga-gaag---ucgacgcggacgccc-----uugg--ggg-agaggcgu---ccggcccuccgcga-gcacccucgggggguucggguu---c--cggacc-
ugguccgaucccguuccc-accgc-ggggcuguc-cgcgau-c---auggag-guguccucggacggcguc-gaaacgcuc-gaaaguucuccggucc-gcgacgc-ua-ccgcuuggaugg-y
ycacccg--acccgucuu-gaaacacgg
Diphlebia_lestoides_ZDL   uaagacugaauacggccacg-ag-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAUUUcgaaa-ggggagauucaggucu-cgccg-gcuucgggcggggu--ccgccucc-guggauggcgcgcc--ggc- gguu-g-gggg--gcaa---
cccccg-gcc---cgg-gcgggucacccggcg-gucc-ucg-cgu--g-guccgaggucggu-gugac-gcacuucuc--ccc-gaguaggacgnnnnn nnnnnnnn??-???-----???????-?????-
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????????????-????????--acccgucuu-GAAACACGG
Diphlebia_coerlescens_ODC   UAAGACUGAAUACGGCCAcg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguugaaaagaacuuugaagagagaguucaagaguacg ugaaaccgu-
c-ugggagu-aaacggguggUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCUUCGGGCGGGGU--CCGCCUCC-GUGGAUGGCGCGCC--GGC- GGUU-G-GGGG--GCAA---
CCCCCG-GCC---CGG-GCGGGUCACCCGGCG-GUCC-UCG-CGU--G-GUCCGAGGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----UCGGCCA-CGAGG-
GCCCGGGUG-GAGAC-CUC-GCCGCUC-----U-C-----------GGGCGGC---GAGC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-A-CGA-GAAG---
UCGACGCGCCCACCC-----UUCG--GGG-AGAGGCGU---CUGGCCCUCCGCGA-GCACCCUCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGC-GGGGCUGUC-CGCGAU-
C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAACGCUC-GAAAGUUCUCCGGUCC-GCGACGC-UA-CCGCUUGGAUGG-y yCACCcg--acccgucuu-gaaacacgg
Bayadera_melanopteryx_ZBM   UAAGACUGAAUACGGCcaCG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG
UGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCUUCGGGCGAGGG--UCGUCUCG-GUGGAUGGCGCGCC--GGC- GGUC-G-GGGG--
GCAA---CCCCCG-GCC---CGG-GCGGGUCACCCGGCG-GCAC-UCG-CGA--G-GUCCGAAGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----UCGGCCA-
CGAGG-GCCCGGGUG-GAGAC-CGC-GCCGCUC-----U-C-----------GGGCGGC---GAGC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-A-CGA-GAAG---
UCGACGCGCCCACCC-----UUCG--GGG-AGAGGCGU---CCGGCCCUCCGCGA-GCACCCUCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGC-GGGGCUGUC-CGCGAU-
C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAACGCUC-GAAAGUUCUCCGGUCC-GCGACGC-UU-CCGCUuggaugg-u ccacccg--acccgucuu-gAAACACGG
Bayadera_brevicauda_BBB   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-UCUUCGGGCGAGGG--UCGUCUCG-GU GGAUGGCGCGCC--GGC-
GGUC-G-GGGG--GCGA---CCCCCG-GCC---CGG-GCGGGUCACCCGGCG-GCAC-UCG-GGA--G-GUCCGGAGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----CCGGCCA-CGAGG-GCCCGGGUG-GAGUC-CGC-GCCGCCU----UU-U-----------GGGCGGC---GCGC-GAC CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAGGAA-A-
CGA-GAAG---UCGACGCGCCGACCC-----CUCG--GGG-UGAGGCGU---CCGGCCCUCCGCGA-GCACCC GCGGGGGUU CGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGC-
GGGGCUGUC-CGCGAU-U---UUGGAG-GUGUCCUCGGACGGCGUC-GAAACGCUC-AAAAUUUCUCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Dysphaea_gloriosa_ODG   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAAU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCUUCGGGCGAGGG--UCGUCUCG-ACGGAUGGCGCGCC--GGC- GGUC-G-GGGG--GUGA---
CCCCCG-GCC---CGG-GCGGGUCACCCGGCG-GCAC-UCG-UGA--G-AUCCGGAGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----UCGGUCA-CG-GG-
GCCCACGUG-GAGUC-C---GUGCUUC---------------------GGCGC--------GACCCAGGGAU-C-CCCGAC--CGG GUGC-CCGACGGUAGGAA-A-CGA-GAAG---
UCGACGCGCCGACCC-----CUCG--GGG-UGAGGCGU---CCGGCCCUCCGCGA-GCGCCCGCGGGGCUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGC-GGGGCUGUC-CGCGAU-
C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAACGCUC-GAAAUUUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCAU-?????????
Euphaea_formosa_BEFm   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCUAAA-GGGGAGAUUCAGGUCU-CGCCG-GCUUCGGGCGAGGG--UCGUCUCG-GU GGAUGGCGCGCC--GGC-
GGUC-G-GGGG--GUGA---CCCCCG-GCC---CGG-GCGGGCCACCCGGCG-GCAC-UCG-UGA--G-GUCCGGAGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----UCGGUCA-CGGGG-GCCUAGGUG-GAGUC-C---GCGCCUC---------------------GGCGC--------GAC CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAGGAA-A-
CGA-GAAG---UCGACGCGCCGACCC-----CUCG--GGG-UGAGGCGU---CCGGCCCUCCGCGA-GCGCCC GCGGGGGUG CGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGC-
GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAACGCUC-GAAAUUUCUCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Euphaea_decorata_OED   UaagacUgaauacGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCUAAA-GGGGAGAUUCAGGUCU-CGCCG-UCUUCGGGCGAGGG--UCGUCUCG-GUGGAUGGCGCGCC--GGC- GGUC-G-GGGG--GUGA---
CCCCCG-GCC---CGG-GCGGGUCACUCGGCG-GCAC-UCG-UGA--G-GUCCGGAGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----UCGGUCA-CGGGG-
GCCCAAGUA-GAGUC-C---GCGCCUC---------------------GGCGC--------GA-CUCGGGAUUC-CCCGGC--CGG GUGC-CCGACGGUAGGAA-A-CGA-GAAG---
UCGACGCGCCGACCC-----UUCG--GGG-UGAGGCGU---CCGGCCCUCCGCGA-GCGCCCGCGGGGGUGCGGGUU---U--CGGACC-

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CGGUCCGAUCCCGUUCCC-ACCGC-GGGGCUGUC-CGCGAU-U---AUGGAG-GUGUCCUCGGACGGCGUC-GAAACGCUC-GAAAUUUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U
CCACCCG--ACCCGUcuu-gaa??????
Anisopleura_sp_A            UAAGACUGAAUaccgccaug-ag-acc-gauagcgaacaaguaccg-ugagggaaaguuga????????????????????????????????
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????????????-????????--acccgucnn-gaaacacgg
Disparocypha_biedermanni_ZDB          UAAGACUGAAUACGgccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguuga?????????????????
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Libellago_semiopaca_BLS          UAAGACUGAACACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAAUUCGAAA-GGGGAGAUUCAGGUCA-CGCCC-GCGUCGGGCGAGGG--UCGCUAAU-G- GGAUGGCGAGUC--GGC-
GGUC-G-GGGG--GCAA---CCCUCG-GCC---CGG-GCUCGUCACCUUUCG-GCCC-ACG---U--C-UUCCGACGCCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUAGG-
GCG-----CCGGCCG-CAAGG-GCCCGGGAG-GAGAC-CGC-GCCGCUU----CU-C------------UAGCGGC---ACGC-GAC CCCGGG AU-C-CCACGC--CGGGUGC-CCGACGGUACGAA-A-
CGA-GAAG---UCGACUCGCC----------UCUC---------GGCGU---CCGGCCCUCCGCGA-GCACCC GAGGGGGUU CGGGCC---U--CGGACC-CGGUCCGAUCCCGUCCCC-GCUUC-
GGGGCUGUC-CGCGA------AAGGAG-GUGUCCUCGGACGGAGUC-GAAUC---------AUUCUCCGGUCC- GCGACGC-UA-AGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Heliocypha_biseriata_BHB          UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAAUUCGAAA- GGGGAGAUUCAGGUCU-CGCCC-GCGUCGGGCGAGGG--UCGCCACG-G- GGAUGGCGCGUC--GGC-
GGUC-G-GGGG--GCGA---CUCCCG-GCC---CGG-GCGCGUCACCUAUCG-GCCC-ACG------U-UUCCGACGCGGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----CCGGCCG-CAAGG-GCCCGGGUG-GAGAC-CGC-GCCGCUU-----U-G------------ACGCGGC---ACGC-GAC CCCGGG AG-C-CCACGC--CGGGUGC-CCGACGGUACGAA-A-
CGA-GAAG---UCGACUCGCC----------UCUC---------GGCGU---CCGGCCCUCCGCGA-GCACCC GAGGGGGUU CGGGCC---U--CGGAUC-GGAUCCGAUCCCGUCCCU-UCUUC-
GGGGCUGUC-CGCGA------AUGGAG-GUGUCCUCGGACGGAGUC-GAAAG---------AUUCUCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Platycypha_caligata_OPC      UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAAUUCGAAA-GGGGAGAUUCAGGUCU-CGCCC-GCGUCGGGCGAGGG--UCGCUUC--AGGGAUGGCGCGCC--GCU- GGUC-G-GGGG--GUGA---
CUUCCG-GCC---CGG-GCGUGUCACCCGGCG-GCCC-ACG---U--U-UUCCGACGCGGGU-GUGAC-GCACUUUUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCG-CAAGG-
GCCCCGGUG-GAGAC-CGU-GCCGCUU-----U-U------------GAGCGGC---UCGU-GACCCCGGNAU-C-CCACGC--CGG GUGC-CCGACGGUAGGAA-A-CGA-GAAG---UCGACUCGCC---
-------UCAA---------GGCGU---CCGGCCCUCCGCGA-GCGCCCGAGGGGGUUCGGGUC---U--CGGACC- CGGUCCGAUCCCGUCCCU-UCUUC-GGGGCUGUC-CGCGA------AAGGAG-
GUGUCCUCGGACGGAGUC-GAACU---------AUUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAANCACGG
Chlorocypha_curta_AJ746319_ZCC        UAAGACUGAAuacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguuga?????????????????
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Sundacypha_petiolata        ????????????????????-??-???-??????????????????-?????????????????????????????????????????????????
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Rhinocypha_fenestrella_ORF   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAAUUCGAAA-GGGGAGAUUCAGGUCU-CGCCC-GCGUCGGGCGAGGG--UCGCC--ACGGGGAUGGCGCGUC--GGC- GGUC-G-GGGG--GCGA---
CUCCCG-GCC---CGG-GCGCGUCACCUAUCG-GCCC-ACG------U-UUCCGACGCGGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCG-CAAGG-
GCCCGGGUG-GAGAC-CGC-GCCGCUU-----U-A------------ACGCGGC---ACGC-GACCCCGGGAG-C-CCACGC--CGG GUGC-CCGACGGUACGAA-A-CGA-GAAG---UCGACUCGCC---
-------UAUC---------GGCGU---CCGGCCCUCCGCGA-GCACCCGAGGGGGUUCGGGCC---U--CGGACC- CGGUCCGAUCCCGUCCCU-UCUUC-GGGGCUGUC-CGCGA------AUGGAG-
GUGUCCUCGGACGGAGUC-GAAAG---------AUUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
Rhinocypha_tincta_BRT                UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAAUUCGAAA-GGGGAGAUUCAGGUCU-CGCCC-GCGUCGGGCGAGGG--UCGCUACG-G- GGAUGGCGCGUC--GGC-
GGUC-G-GGGG--GCGA---CCCCCG-GCC---CGG-GCGCGUCACCUUUCG-GCCC-ACG-A-A----UUCCGACGCGGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----CCGGCCG-CAAGG-GCCCGGGUG-GAGAC-CGC-GCCGCCU-----C-C------------GUGCGGC---ACGC-GAC CCCGGG AG-C-CCACGC--CGGGUGC-CCGACGGUAUGAA-A-
CGA-GAAG---UCGACUCGCCUCUCA---------------CGGGCGU---CCGGCCCUCCGCGA-GCACCC GAGGGGGUU CGGGCC---U--CGGACC-CGGUCCGAUCCCGUCCCC-GCAUC-
GGGGCUGUC-CGCGA------AUGGAG-GUGUCCUCGGACGGAGUC-GAAAU---------CCUUCCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Heliocharis_amazona_ZHAz     UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG
UGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGACGGGCGAGGG--UCGCAUCG-GUGGAUGGCGCGCC--GGC- GGGC-G-GGGG--
GCGA---CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCCC-CCG-U-U--C-CUCCGCCGCAGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCU-
UGAGG-UCCCGGGUG-GAGUC-CGC-GCCGCUC-----U-C------------GAGCGGC---UCGU-GACCCCGGGAA-C-CCCGGC--CGG GUGC-GCGACGGUAGGAA-G-CGA-GAAG---
UCGACGCGCCGACCC-----CCUC-GGGGGUGAGGCGU---CCGGCCCUCCGCGA-GCACCAGCGGGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGA-AGGGCUGUC-CGCGAU-
C---AUGGAG-GAGUCCUCGGACGGCGUC-GAUCA--------CAUUCUCCGGUCC-GCGACGC-UA-CUGCUUGGAUGG-C CCACCCG--ACCCGUcuu-gaaacacgg
Hetaerina_americana_OHA2     UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGCACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-YGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGACGGGCGAGGG--UCGCUU-G-ACGGAUGGCGCGCC--GGC- GGGC-G-GGGG--GUGA---
CCCCCG-UCA---CAG-GCGCGUCACCCGGUG-GCCC-UCG-A-A--U-GUUCGUCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-ACG-----CCGGCCC-CAAGG-
GCCCGGGUG-GAGUC-CCG-CCCGCUC-----U-C------------GAGCGGA---AAAG-GACCCCGGGAU-C-CCAGGC--CGG AUGU-CCGACGGUAGGAA-G-CGA--AAG---UCGACGCGCC---
-------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCCUCGGGGGUUAGGGUU---C--CGGACC- CGGUCCGAUCCCUUUCCC-ACCGU-GGGGCUGUC-CGCGAA-CC--GUG-AG-
GUGUCCUCGGACGGCGUC-GAAAG-----------UUUCGAGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
Caliphaea_confusa_ZCC        uaagacugAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGUCGGGCGAGGG--UCGU-U-G-GUGGAUGGCACGUC--GGC- GGGC-G-GGGG--GUAA---
CCCUCG-UCC---CGG-GCGUGUCACCCCGCG-GCCC-UCG-A-U--U-GUUCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----UCGGCCC-CGAGG-
GCCCGGGUG-GAGUC-CGU-GCCGCUU-----U-C------------GAGCGGC---UCGC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-AAAG---UCGACGCGCC---
-------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCCUCGUGGGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-UCCGA-GGGGCUGUC-CGCGAU-C---AUGGAG-
GUGUCCUCGGACGGCGUC-GAAC---------ACUUUUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
Noguchiphaea_yoshikoae_AJ459228       ????????????????????-??-???-??????????????????-???????????????????????????????
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Vestalis_beryllae_BVB                UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGUCGGGCGAGGG--UCGCC-CG-GU GGAUGGCGCGCC--GGC-
GGGC-G-GGGG--GUGA---CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCCC-UCG-A-A--U-GUUCGCCGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----UCGGCCC-CGAGG-GCCCGGGCU-CCGUC-UGU-GCCGCUC-----U-C------------GAGCGUC---ACGU-G-C CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
CGA-AAAG---UCGACGCGCC----------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCC UCGGGGGUU CGGGUU---A--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGC-
GGGGCUGUC-CGCGAC-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAA---------ACUUUUCCGGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Matrona_basilaris_BMB                UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGUCGGGCGAGGG--UCGCU-CG-GU
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GGAUGGCGCGCC--GGC-GGUC-G-GGGG--GUAA---CCUCCG-UCC---CAG-GCGCGUCACCCGGUG-GCUC-UCG-A-A--U-GUUCGCCGUCGGU-GUGAC-GCACUUCUC-- CCC -
GAGUAGGACGUCGCGACCCGUCGG-GCG-----UCGGCCC-CGAGG-GCCCGGGUU-CUGUC-UGU-GCCGCUC-----U-C------------GAGCGUC---ACGU--AC CCCGGG AU-C-CCCGGC--
CGGGUGC-CCGACGGUAGGAA-G-CGA-AAAG---UCGACGCGCC----------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCC UCGGGGGUU CGGGUU---C--CGGACC-
CGGUCCGAUCCCGUUCCC-ACCGU-GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAU---------ACUUUUCCAGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--
ACCCGUCUU-GAAACACGG
FJ596560_Atrocalopteryx_atrata UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGUCGGGCGAGGG--UCGCU-CG-GU GGAUGGCGCGCC--GGC-
GGUC-G-GGGG--GUAA---CCUCCG-UCC---CAG-GCGCGUCACCCGGUG-GCUC-UCG-A-A--U-GUUCGCCGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----UCGGCCCC-GAGG-GCCCGGGUU-CUGUC-UGU-GCCGCUC-----U-C------------GAGCGUC---ACGU--AC CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAGGAA-G-
CGA-AAAG---UCGACGCGCC----------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCC UCGGGGGUU CGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGU-
GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAU---------ACUUUUCCAGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAARCACGG
Echo_modesta_BEM UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGUCGGGCGAGGG--UCGCU-CG-UU GGAUGGCGCGCC--GGC-
GGGC-G-GGGG--GCAA---CCCCUG-UCC---CGG-GCGCGUCACCCGGCG-GCCC-UCG-A-A--U-GUUCGCCGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGG-
GCG-----UCGGCCC-CGAGG-GCCCGGGUU-CUGUC-GGU-GCCGCUC-----U-C------------GAGCGUC---ACGU--AC CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-
CGA-AAAG---UCGACGCGCC----------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCC UCGGGGGUG CGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGU-
GGGGCUGUC-CGCGAU-U---UUGGAG-GUGUCCUCGGACGGCGUC-GAAA---------CCUUUUCCAGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Neurobasis_ianthinipennis_BNI UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGUCGGGCGGGG--UCGCU-CG-UU GGAUGAUGCGUC--GGC-
GGUC-G-GGGG--GUAA---CCUCCG-UCC---AAG-GCGCGUCACCCGGUG-GCCA-CCG-A-A--U-GUUCGGCGUCGGU-GUGAC-GCACUUCUC-- CCC -GUGUAGGACGUCGCGACCCGUCGG-
GCG-----UCGGCUU-CGAGG-GCCCGGGUU-CUGUC-UGU-GCCGCUC-----U-C------------GAGCGUC---ACGU--AC CCCGGG AU-C-CCCGGC--CGGGUGU-CCGACGGUAGGAA-G-
CGA-AAAG---UCGACGCGCC----------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCAUCC UCGGGGGUG CGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-ACCGU-
GGGGCUUUU-CGCCAU-G---AAGGAG-GUGUCCUCGGACGGCGUC-GAAA---------ACUUUUCCAGUCC- GCGACGC-UA-CGGCUUGGAUGG-UCCACCCG--ACCCGUCUU-GAAACACGG
Sapho_orichalcea_OSO UAAGACUGAAUACGGCCACG-Ag-aCC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-GCGUCGGGCGAGGG--UCGCU-CG-GUGGAUGGCGCGCC--GGC- GGGC-G-GGGG--GUAA---
CCCUCG-UCC---CGG-GCGCGUCACCCGGCG-GUCC-UCG-A-A--U-GUUCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----UCGGCCC-CGAGG-
GCCCGGGUU-AAGUC-UGC-GCCGCUC-----U-C------------GAGCGUC---GCGU-GA-CCCGGGAU-C-CCCGGC--CGA GUGC-CCGACGGUAAGAA-G-CGA-AAAG---UCGACGCGCC---
-------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCCUCGGGGGUUCGGGUU---U--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGG-GGGGCUGUC-CGCGAU-C---AUGGAG-
GUGUCCUCGGACggcguc-gaaa---------aguuuuccagucc-gc????????-????????????-?
???????--acccgucuu-gAAACACGG
Calopteryx_amata_OCAm UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-ACGUCGGUCGAGGG--UCGCU-CG-GUGGAUGGCGUGCC--GGC- GGUC-G-GGGG--GUAA---
CCCUCG-UCC---CAG-GCGCGUCACCCGGCG-GCCC-UCG-A-A--U-GUUCGGCCUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----UCGGCCC-CGAGG-
GCUCGGGUU-CUGUC-UGC-GCCGCUC-----U-C------------GAGCGUC---GCGU--ACCCCGGGAU-C-CCCGGC--CGA GUGC-CCGACGGUAGGAA-G-CGA-AAAG---UCGACGCGCC---
-------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCCACGGGGGUACGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-ACCGC-GGGGCUGUC-CGCGAU-C---AUGGAG-
GUGUCCUCGGACGGCGUC-GAAA---------CUUUUUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-U CCACCCG--ACCCGUCUU-GAAACACGG
DCS_Calopteryx_splendens ????????????????????-??-???-???????????????????-??
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Calopteryx_aequabilis_BCA UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGAGUUCAAGAGUACG
UGAAACCGUUC-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAGGUCU-CGCCG-ACGUCGGUCGAGGG--UCGCU-CG-GUGGAUGGCGUGCC--GGC- GGUC-G-GGGG--
GUAA---CCCUCG-UCC---CAG-GCGCGUCACCCGGCG-GCCC-UCG-A-A--U-GUUCGGCCUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----UCGGCCC-
CGAGG-GCUCGGGUU-CUGUC-UGC-GCCGCUC-----U-C------------GAGCGUC---GCGU--ACCCCGGGAU-C-CCCGGC--CGA

GUGC-CCGACGGUAGGAA-G-CGA-AAAG---UCGACGCGCC----------GCAA---------GGCGU---CCGGCCCUCCGCGA-GCACCCACGGGGGUACGGGUU---C--CGGACC-
CGGUCCGAUCCCGUUCCC-ACCGC-GGGGCUGUC-CGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUC-GAAA---------CUUUUUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-U
CCACCCG--ACCCGUCUU-GAAACACGG
Iridictyon   ????????????????????-??-???-??????????????????-??
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ZIT_Iridictyon_trebbaui_   ????????????????????-??-???-??????????????????-??
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Unaligned_lestoid   D2-?????????????????-??-???-??????????????????-??
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Nubiolestes_diotima_OND   uaagacugaauacggccacg-ag-acC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGGUGG--CCGCGACC-AG
GGAUGGUGUCUC--CGA-GGUC-G-GGGG--GUAA---CUCCCG-GCC---CGU-GGGCGCCACCCCGCG-ACCG-CCG-CGU--U-UUCCGGCGUCGGU-GUGAC-GCACUUCUC-- CCC -
GAGUAGGACGUCGCGACCCGUCGA-GCG-----CCGGACU--GAGG-GCCCGGGUG-GAGCC-UGU-GCCGCUCG---UU-CG----------CGAGCGGC---ACAC-GAC CCCGGG AU-C-CCCGGC--
CGGGUGC-CCGACGGUAUCAA-G-CGA-GAAG---UCGACGCGCCGU-------UUUC--------UCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUU CGGGUU---C--CGGACC-
CGGUCCGAUCCCGUUCCC-UCCGU-GGGGCUGUU-UGCGAG-U---A-GGAG-GUGUCCUCGGACGGCGUC-GUU-----------UUUCUCCAGUCC- GCGACGC-UA-CGGCUUGGAUGG-CCUACccg--
acccgucuu-gaaccacgg
Perilestes_kahli_BPK   NNNNNNNNNNNNNNNNNNNN-NN-NNN-NNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGGUGG--CCGCGAUC-AGGGAUGGUGUCUU--CGC- GGUC-G-GGGG--GUAA---
CCCUCG-GCC---CGU-GGGCGCCACCCCGCG-ACCG-CCG-CGU--U-UUCCGGCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGACU--GAGG-
GCCCGGGUG-GAGCC-UGU-GCCGCUCG---UU-CG----------CGAGUGGC---GCAC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAUGAA-G-CGA-GAAG---UCGACGCGCC-A-
--------UCU-------UUGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-UUCGU-GGGGCUGUU-UGCGAU-C---A-GGAG-
GUGUCCUCGGACGGCGUC-GUU-----------UUUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Perissolestes_remotus_BPR   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG
UGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGG CGGUGG--CCGCGACC-AGGGAUGGCGUCCU--CGC- GGUC-G-GGGG--
GUAA---CCCUCG-GCC---CGC-GGGCGCCACCCCGCG-ACCG-CCG-CGU--U--U----CGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGACU-
-GAGG-GCCCGGGUG-GAGCC-UGU-GCCGCUCG---UUUUU----------CGAGGGGC---GCAC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAUGAA-G-CGA-GAAG---
UCGACGCGCCGA---------UC--------UCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-UCCGU-GGGGCUGUU-UGCGAC-
C---G-GGAG-GUGUCCUCGGACGGCGUC-GUU----------UUUUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Perissolestes_magellenae_OPMg   uaagacugaauacggccaCG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGGUGG--CCGCGACC-AG GGAUGGCGUCCU--CGC-
GGUC-G-GGGG--GUAA---CCCUCG-GCC---CGC-GGGCGCCACCCCGCG-ACCG-CCG-CGU--U--U----CGUCGGU-GUGAC-GCACUUCUC-- CCC-GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGACU--GAGG-GCCCGGGUG-GAGCC-UGU-GCCGCUCG---UUUUU----------CGAGGGGC---GCAC-GAC CCCGGGAU-C-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-
CGA-GAAG---UCGACGCGCCGA---------UC--------UCGGCGU---CCGGCCCUCCGCAA-GCGCCC

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GCGGGAGUUCGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-UCCGU-GGGGCUGUU-UGCGAC-C---G-GGAG-GUGUCCUCGGACGGCGUC-GUU----------UUUUCUCCAGUCC-
GCGACGC-UA-CGGCUUGGAUGG-CCuacccg--acccgucuu-gaaacacgg
Chlorolestes_umbrata_OCU     UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGGUGG--CCGCGACC-AGGGAUGGCGUCUU--CGC- GGUC-G-GGGG--GUAA---
CUCUCG-GCC---CGU-GGGCGCCACCCCGCG-ACCG-CCG-CUU--U-UUCCGGCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGACU--GAGG-
GCCCGGGUG-GAGCC-UGU-GCCGCUCG---UU-CG----------CGAGCGGC---GCAC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAUGAA-G-CGA-GAAG---UCGACGCGCCGA-
--------UCUC------UCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-UCCGU-GGGGCUGUU-UGCGAU-C---A-GGAG-
GUGACCUCGGACGGCGUC-GUU-----------UUUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Euchlorolestes_tessellata_OET         UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGGUGG--CCGCGACC-AG GGAUGGUGUCUU--CGC-
GGUC-G-GGGG--GUAA---CCCUCG-GCC---CGU-GGGCGCCACCCCGCG-ACCG-CCG-CGU--U-UUCCGGCGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGACU--GAGG-GCCCGGGUG-GAGCC-UGU-GCCGCUCG---UU-CG----------CGAGCGGC---GCAC-GAC CCCGGG AU-C-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-
CGA-GAAG---UCGACGCGCCGU---------UUA-------UCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUU CGGGUU---C--CGGACC-CGGUCCGAUCCCGUUCCC-UCCGU-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUCCUCGGACGGCGUC-GUU-----------UUUCUCCAGUCC- GCGACGC-UA-CGGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAANCACGG
Phylolestes_ethelae_OPE      uaagacugaauacggccacg-aG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG
UGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGGUGG--CCGCGAAC-AGGGAUGGCGUUCU--CGC- GGUC-G-GGGG--
GUAA---CCCUCG-GCC---CGU-GGGCGCCACCCCGCG-ACCG-CCG-CGU--U-CUCCGGCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGACU-
-GAGG-GCCCGGGUG-GAGCC-UGU-GCCGCUCG---UU-CGCG--------CGAGUGGC---GCAC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAGGAA-G-CGA-GAAG---
UCGACGCGCCCA---------UUA-------UCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-UCCGU-GGGGCUGUU-UGCGAU-
C---C-GGAG-GUGUCCUCGGACGGCGUC-GUU-----------UUUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAugg-c cuacccg--acccgucuu-gaaacacgg
Synlestes_weyersii_ZSW       UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGGUGG--CCGCGACC-AGGGAUGGUGUUUU--CGC- GGUC-G-GGGG--GUAA---
CCCUCG-GCC---CGU-GGGCGCCACCCCGCG-ACCG-CCG-CGU--U-UUCCGGCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGACU--GAGG-
GCCCGGGUG-GAGCC-UGU-GCCGCUCG---UU-CG----------CGAGUGGC---GCA--GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAUGAA-G-CGA-GAAG---UCGACGCGCCGU-
--------UUU-------UCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUUCGGGUU---C--CGGACC- UGGUCCGAUCCCGUUCCC-UCCGU-GGGGCUGUU-UGCGAU-C---U-GGAG-
GUGUCCUCGGACGGCGUC-GU------------UUUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Synlestes_tropicus_ZST       uaagacugaauacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguugaaaagaacuuugaagagagaguucaagaguacG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGGUGG--CCGCGACC-AGGGAUGGUGUUCU--CGC- GGUC-G-GGGG--GUAA---
CCCUCG-GCC---CGU-GGGCGCCACCCCGCG-ACCG-CCG-CGU--U-CUCCGGCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGACU--GAGG-
GCCCGggug-gagcc-ugu-gccgcucg---uu-cg----------cgaguggn---nnn--gaccccgggau-c-cccggc--cgg cugc-ccgacgguangaa-
g??????????????????????????????--?????????????????????????????????????????????????????????---
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????????????-????????--acccgucuu-GAAACACGG
Chorismagrion_risi_ZCRi      UAAGACugaauacggccacg-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGGUGG--CCGCGACC-AGGGAUGGUGUUCU--CGC- GGUC-G-GGGG--GUAA---
CCCUCG-GCC---CGU-GGGCGCCACCCCGCG-ACCG-CCG-CGU--U-UUCCGGCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGACU--GAGG-
GCCCGGGUG-GAGCC-UGU-GCCGCUCG---UU-CG----------CGAGUGGC---GCAU-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAUGAA-G-CGA-GAAG---UCGACGCGCCGA-
--------UCU-------UCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-UCCGU-GGGGCUGUU-UGCGAU-C---U-GGAG-
GUGUCCUCGGACGGCGUC-GUU-----------UUUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-C Cuacccg--acccgucuu-GAAACACGG
Episynlestes_cristatus_ZEC   uaagacugaauacggccacg-ag-acC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGGUGG--CCGCGACC-AGGGAUGGUGUUUU--CGC- GGUC-G-GGGG--GUAA---
CCCUCG-GCC---CGU-GGGCGCCACCCCGCG-ACCG-CCG-CGU--U-UUCCGGCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGACU--GAGG-
GCCCGGGUG-GAGCC-UGU-GCCGCUCG---UU-CG----------CGAGUGGC---GCAU-GACCCCGGGAU-U-CCCGGC--CGG GUGC-CCGACGGUAUGAA-G-CGA-GAAG---UCGACGCGCCGA-
--------UUU-------UCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-UCCGU-GGGGCUGUU-UGCGAU-C---U-
GGAGAGUGUCCUCGGACGGCGUC-GUU-----------UUUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-C Cuacccg--acccgucuu-gaaacacgg
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Episynlestes_albicauda_BEA   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGGUGG--CCGCGACC-AGGGAUGGUGUUUU--CGC- GGUC-G-GGGG--GUAA---
CCCUCG-GCC---CGU-GGGCGCCACCCCGCG-ACCG-CCG-CGU--U-UUCCGGCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGACU--GAGG-
GCCCGGGUG-GAGCC-UGU-GCCGCUCG---UU-CG----------CGAGUGGC---GCAU-GACCCCGGGAU-U-CCCGGC--CGG GUGC-CCGACGGUAUGAA-G-CGA-GAAG---UCGACGCGCCGA-
--------UUU-------UCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUUCGGGUU---C--CGGACC- CGGUCCGAUCCCGUUCCC-UCCGU-GGGGCUGUU-UGCGAU-C---U-GGAG-
GUGUCCUCGGACGGCGUC-GUU-----------UUUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Megalestes_micans_ZMMc   uaagacugaauacggcCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGGUGG--CCGCGACC-AGGGAUGGUGUCUU--AGC- GGUC-G-GUGG--GCAA---
CCCUCG-GCC---CGU-GGGCGCCACCCCGCG-ACCG-CCG-CGU--U-CUCCGGCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGACU--GAGG-
GCCUGGGUG-GAGCC-UGU-GCCUCUCG---CU-UG----------CGAGAGGC---GCAC-GACCCCGGGAU-C-CCCGGC--CGG GUGC-CCGACGGUAUGAA-G-CGA-GAAG---UCGACGCGCCGU-
--------UCU-------UCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUAUGGGUU---C--CGGACC- UGGUCCGAUCCCGUUCCC-UCCGU-GGGGCUGUU-UGCGAU-C---A-GGAG-
GUGUCCUCGGACGGCGUC-GU------------UUUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-C CUAcccg--acccgucuu-gaaacacgg
Megalestes_kurahashii   ????????????????????-??-???-??????????????????-???
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Orolestes_octomaculatus_ZOOuaagacugaauacggccacg-ag-acc-gauagcgaacaagurCCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-C-
GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGACUCAAGUCU-CGCCG-GCGUCGGGCGGUGG--CCGCGACC-AGGGAUGGUGUCUU--CGC- GGUC-G-GGGG--GCAA---CCCUCG-
GCC---CGU-GGGCGCCACCCCGCG-ACCG-CU---------CUCUGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----UCGGACU--GAGG-
GCCCGGGUG-GAGAC-UGU-GCCGCUCG---UU-CG----------CGAGUGGC---GCAC-GACCCCGGGAU-U-CCCGGC--CGG GUGC-CCGACGGUAUGAA-G-CGA-GAAG---UCGACGCGCCGA-
--------UUU-------UCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUUCGGGUU---C--CGGACC- UGGUCCGAUCCCGUUCCC-UCCGU-GGGGCUGUU-UGCGAa-c---a-ggag-
guguccucggacggcguc-guu-----------cgucuccagucc-gcgacgc-ua-cagcuuggaugg-c cuacccg--acccgucuu-ggaacacgg
Austrolestes_annulosus_BAA   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGGUGG--CCGCGACC-AGGGAUGGUGUCUU--CGC- GGUC-G-GGGG--GCAA---
CCCUCG-GCC---CGU-GGGCGCCACCCCGCG-ACCG-UC---------CUCUGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGACU--GAGG-
GCCCGGGUG-GAGCC-UGU-GCCGCUCG---UU-CG----------CGAGCGGC---GCAC-GACCCCGGGAU-U-CCCGGC--CGG GUGC-CCGACGGUAUGAA-G-CGA-GAAG---UCGACGCGCCGA-
--------UUU-------UCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUGUGGGUU---C--CGGACC- UGGUCCGAUCCCGUACCC-UCCGU-GGGGCUGUU-UGCGAA-C---A-GGAG-
GUGUCCUCGGACGGCGUC-GUU-----------UGUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Sympecma_paedisca_BSP   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGAUGG--CCGCGACC-AG GGAUGGUGUCUU--CGC-
GGUC-G-GGGG--GCAA---CCCUCG-GCC---CGU-GGGCGCCACCCCGCG-ACUG-UU---------CUUCGCCGUCGGU-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGACU--GAGG-GCCCGGGUG-GAGCC-UGU-GCCGCUCG---UU-CG----------CGAGUGGC---GCAU-GAC CCCGGG AU-U-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-
CGA-GAAG---UCGACGCGCCGA---------UUU-------UCGGCGU---CCGGCCCUCCGCAA-GCGCCC ACGGGAGUU CGGGUU---C--CGGACC-UGGUCCGAUCCCGUUCCC-UCCGU-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUCCUCGGACGGCGUC-GUU-----------UGUCUCCAGUCC- GCGACGC-UA-CGGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
ZSF_Sympecma_fusca   ????????????????????-??-???-??????????????????-???
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Austrolestes_analis_OAAn   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGACGG--CCGCGACC-AGGGAUGGUGUCUU--CGC-

GGUC-G-GGGG--GCAA---CCCUCG-GCC---CGU-GGGCGCCACCCCGCG-ACCG-UC---------CUCUGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-
GCG-----CCGGACU--GAGG-GCCCGGGUG-GAGCC-UGU-GCCGCUCG---UU-CG----------CGAGUGGC---GCAC-GACCCCGGGAU-U-CCCGGC--CGG GUGC-CCGACGGUAUGAA-G-
CGA-GAAG---UCGACGCGCCGA---------UUU-------UCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUUUGGGUU---C--CGGACC- UGGUCCGAUCCCGUUCCC-UCCGU-
GGGGCUGUU-UGCGAA-C---A-GGAG-GUGUCCUCGGACGGCGUC-GUU-----------CGUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Indolestes_pergrinus_OIP UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGGCGACGG--CCGCGACC-AGGGAUGGUGUCUU--CGC- GGUC-G-GGGG--GCAA---
CCCUCG-GCC---CGU-GGGCGCCACCCCGCG-ACCG-UC---------CUCUGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGACU--GAGG-
GCCCGGGUG-GAGCC-UGU-GCCGCUCG---UU-CG----------CGAGUGGC---GCAC-GACCCCGGGAU-U-CCCGGC--CGG GUGC-CCGACGGUAUGAA-G-CGA-GAAG---UCGACGCGCCGA-
--------UUC-------UCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUUUGGGUU---C--CGGACC- UGGUCCGAUCCCGUUCCC-UCCGU-GGGGCUGUU-UGCGAA-C---A-GGAG-
GUGUCCUCGGACGGCGUC-GUU-----------CGUCUCCAGUCC-GCGACGC-UA-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAANCACGG
Indolestes_cyanea ????????????????????-??-???-??????????????????-??
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Chalcolestes_viridis_ZCV uaAUACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCC-CGCCG-GCGUCGGUCGGUGG--CCGCGACC-AG GGAUGGUGUCUU--CGC-
GCUC-G-GGGG--GCAA---CCCUCG-GAC---CGU-GGGCGCCACCCCGCG-ACCG-UU---------CUCCGCCGUCGGU-GUGAC-GCACGUCUC-- CCC -CAGUAGGACGUCGCGACCCGUCGA-
GUG-----CCGGACU--GAGG-GCCCGGGUG-GAGCC-UGU-GCCGCUCG---UU-CG----------CGAGCGGC---GCAC-GAC CCCGGG AU-U-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-
CGA-GAAG---UCGACGCGCCGU---------UUU-------UCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUU CGGGUU---C--CGGACC-UGGUCCGAUCCCGUUCCC-UCCGU-
GGGGCUGUU-UGCGAA-A---U-GGAG-GUGUCCUCGGACGGCGUC-GUU-----------CGUCUCCAGUCC- GCGACGC-UA-CGGCUUGGAUGG-CCUACCCG--ACCCGucuu-gaaacacgg
Archilestes_grandis_OAG UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGGUUCAAGUCU-CGCCG-GCGUCGGGCGGCGG--CCGCGACC-AGGGAUGGUGUCUU--CGC- GGUC-G-GGGG--GCAA---
CCUUCG-GCC---CGU-GGGCGCCACCCCGCG-ACUG-UU---------UUCCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGACU--GAGG-
GCCCGGGUG-GAGCC-UGU-GCCGCUCG---UU-CG----------CGAGUGGC---GCAC-GACCCCGGGAU-U-CCCGGC--CGG GUGC-CCGACGGUAUGAA-G-CGA-GAAG---UCGACGCGCCGU-
-------AUUU-------UCGGCGU---CCGGCCCUCCGCAA-GCGCCCACGGGAGUUUGGGUU---C--CGGACC- UGGUCCGAUCCCGUUCCC-UCCGU-GGGGCUGUU-UGCGAU-C---A-GGAG-
GUGUCCUCGGACGGCGUC-GUU-----------UGUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-C CUACCCG--ACCNGUCAU-GA???????
Lestes_rectangularis_OLR UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGGUUCAAGUCU-CGCCG-GCUUCGGACGGCGG--CCGCGACC-AGGGAUGGUGUCUU--CGC- GGUC-G-GGGG--GCAA---
CCCUCG-GCC---CGU-GGGCGCCACCCCGCG-ACUG-UU---------UUCCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGACU--GAGG-
ACCCGGGUG-GAGCC-UGU-GCCGCUCG---UUCUG----------CGAGCGGC---GCAU-GACCCCGGGAU-U-CCCGGC--CGG GUGC-CCGACGGUAUGAA-G-CGA-GAAG---UCGACGCGCCGA-
-------UUUU-------UCGGCGU---CCGGCCCUCCGCAA-GCGCCCACGGGAGUUUGGGUU---C--CGGACC- UGGUCCGAUCCCGUUCCC-UCCGU-GGGGCUGUU-UGCGAU-C---A-GGAG-
GUGUCCUCGGACGGCGUC-GUU-----------UGUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-C CUACCCG--ACC?GUC?U-GA???????
Lestes_eurinus_OLE UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGGUUCAAGUCU-CGCCG-GCUUCGGACGGCGG--CCGCGACC-AGGGAUGGUGUCUU--CGC- GGUC-G-GGGG--GCAA---
CCCUCG-GCC---CGU-GGGCGCCACCCCGCG-ACUG-UC---------UUCCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGACU--GAGG-
GCCCGGGUG-GAGCC-UGU-GCCGCUCG---UUCUG----------CGAGAGGC---GCAC-GACCCCGGGAU-U-CCCGGC--CGG GUGC-CCGACGGUAUGAA-G-CGA-GAAG---UCGACGCGCCGA-
-------AUUC-------UCGGCGU---CCGGCCCUCCGCAA-GCGCCCACGGGAGUUUGGGUU---C--CGGACC- UGGUCCGAUCCCGUUCCC-UCCGU-GGGGCUGUU-UGCGAU-C---A-GGAG-
GUGUCCUCGGACGGCGUC-GUU-----------UGUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Hemiphlebia_mirabilis_OHM UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GUGGUGGGCGGCGG--CCGCGACC-AGGGAUGGUUCUUU--CGC- GGUC-G-GGGG--GCAA---
CCCUCG-GCC---CGG-GGGAGCCACUCCGCG-GCUG-CCG-CUU--C-CGCCGCCUCCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCU--GAGG-
GCCCGGGUG-GAGCC-GGU-GACG-------CG-CA------------AGCGUC---GCC--GACCCCGGGAU-C-CCCGGC--CGG

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GUGC-CCGACGGUACGAA-A-CGA-GAAG---UCGACGCGCCGU---------AAA-------ACG-CGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUUCGGUUU---C--CGGACC-
CGGUCCGAUCCCGUUCUC-AC-GUCGGGGCUGUU-UGCGAU-A---A-GGAG-GUGUCCUCGGACGGCGUC-GUU-----------UCUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-C
CUACCCG--ACCCGUCUU-GAAACACGG
Unaligned_Anisoptera         D2-?????????????????-??-???-??????????????????-?????????????????????????????????????????????????
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Epiophlebia_superstes_OES            UAAGACUGAAUAUGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-U-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCGG--CCGCGACC-AG GGAUGGCGUCUU--CGC-
GGCG-G-GGGG--GCAA---CCCUCC-GUC---CGG-GGGCGCCACUCCGCGGGCUG-CCG-UCC--C-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCC-UGU-GCAGUUCUCG-UC-CG--------CGCGAACUGC---GCAC-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCGC--------CCAG-------UCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUC CGGGUU---G--CGGACC-CCGUCCGAUCCCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAC-U---A-GGAG-GUGUCCUCGGACGGCGUC-g------------AUUCUCCAGUCC- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
Epiophlebia_laidlawi         ????????????????????-??-???-??????????????????-?????????????????????????????????????????????????
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Unaligned_Aeshnoid           D2-?????????????????-??-???-??????????????????-?????????????????????????????????????????????????
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Archipetia_auriculata_AAAu   uaagacugaauacggccacg-ag-acc-gauagcgaacaaguACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCUG--CCGCGACC-AGGGAUGGCGUCUU--CGC- GGUC-U-GGGG--GCAA---
CCCUCG-AAC---CGG-AGGUGCCACUCCGCG-GCUG-CCG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCU--AAGG-
CCCCGGGUG-GAGCC-UGU-GCAGUCCG---CU-CA--------CGCCGACUGC---GCAC-GACCCCGGGAA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-CGAGGAAGGAGUCGACGCGCCG--
-------CCUA--------AGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGGGUU---A--CGGACC- CGGUCCGAUCCCGUUCCC-UCCGC-GGGGCUGUU-UGCGAU-C---C-GGAG-
GUGCCCUCGGACGGCGuc-g------------auucuccagucg-gcgacgc-uu-cagcuuggaugg-c cuacccg--acccgucu?-?????????
Austropetalia_victoria_AAV   uaagacugaauacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguuga?????????????????????????????????
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Hypopetalia_pestilens_OHPe   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUUCCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCUG--CCGCGACC-AGGGAUGGCGUCUU--CGC- GGUC-G-GGGG--GCAA---
CCCUCG-AAC---CGG-AGGUGCCACUCCGCG-GCUG-CCG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCU--AAGG-
CCCCGGGUG-GAGCC-UGU-GCAGUCCG---UU-CA--------CGCCGACUGC---GCAC-GACCCCGGGAA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-CGAGGAAGGAGUCGACGCGCCG--
--------CUA--------AGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGGGUU---G--CGGACC-
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CGGUCCGAUCCCGUUCCC-UCCGC-GGGGCUGUU-UGCGAU-U---U-GGAG-GUGCCCUCGGACGGCGUC-G------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C
CUACCCG--ACCCGUCUU-GAAACACGG
Rheopetalia_Phyllopetalia_apicalis_ ????????????????????-??-???-??????????????????-????????????????????????????????
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Rheopetalia_Phyllopetalia_apollo UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUUCCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCUGUGCGUCGGGCGGCUG--CCGCGACC-AG GGAUGGCGUCUU--CGC-
GGUC-G-GGGG--GCAA---CCCUCG-AAC---CGG-AGGUGCCACUCCGCG-GCUG-CCG-CCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCC-UGU-GCAGUCCG---CU-CA--------CGCCGACUGC---GCAC-GAC CCCGGG AA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCG---------CUCA--------AGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUC CGGGUU---A--CGGACC-CGGUCCGAUCCCGUUCCC-UCCGC-
GGGGCUGUU-UGCGAU-C---U-GGAG-GUGCCCUCGGACGGCGUC-G-------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAGCACGG
Eurypetalia_altarensis_OEA uaagacugaauacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguuga?????????????????????????????????
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Ophiopetalia_diana_OOD UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUUCCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCUG--CCGCGACC-AGGGAUGGCGUCUU--CGC- GGUC-G-GGGG--GCAA---
CCCUCG-AAC---CGG-AGGUGCCACUCCGCG-GCUG-CCG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCU--AAGG-
CCCCGGGUG-GAGCC-UGU-GCAGUCCG---CU-CA--------CGCCGACUGC---GCAC-GACCCCGGGAA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-CGAGGAAGGAGUCGACGCGCCG--
-------CUUA--------AGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGGGUU---A--CGGACC- CGGUCCGAUCCCGUUCCC-UCCGC-GGGGCUGUU-UGCGAU-C---U-GGAG-
GUGCCCUCGGACGGCGUC-G------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--AC???????-?????????
Gomphaeschna_furcilata_OGF UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCGG--ACGCGACC-AGGGAUGGCACAAU--CGC- GGUC-G-AGGG--GCAA---
CCCUCG-UCC---CGG-AGGUGCCACUCCGCG-GCCG-CCG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCU--AAGG-
CCUCGGGUG-GAGCC-UGC-GCAGUCCG---CU-CA--------CGCAGACUGC---GCAC-GACCCCGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-CGAGGAAGGAGUCGACGCGCCG--
-------CUUUU------UUGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUUCGGGUU---A--CGGACC- CGGUCCGAUCUCGUUCCC-UCCGC-GGGGCUGUU-UGCGAC-U---A-GGAG-
GUGCCCUCGGACGGCGUC-G------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCNGUCAU-G????????
Oligoaeschna_pryeri ????????????????????-??-???-??????????????????-???
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Austroaeschna_parvistigma_AAPs UAAGacugaauACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GAGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCGG--ACGCGACC-AG GGAUGGCGCAGC--CGC-
GGUC-G-GAGG--GCAA---CCUUCG-GCC---CGG-AGGUGCCACUCCGCG-GCCG-CCG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CUC-GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCU--AAGG-CCUCGGGUG-GAGAC-UGC-GCAGUCCG---UU-CA--------CGCAGACUGC---GCAC-GAC CCCGGGGA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCG---------CCUC--------AGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUAUGGGUU---A--CGGACC-GAGUCCGAU

CUCGUACCC-UCCGC-GGGGCUGUU-UGCGAC-G---A-GGAG-GUGCCCUCGGACGGCGUC-G------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--
ACCCGUcuu-gaancacgg
Telephlebia_tillyardi_ATT ????????????????????-??-???-??????????????????-???
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Boyeria_vinosa_OBV UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GAGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCGG--ACGCGACC-AGGGAUGGCGCAGU--CGC- GGUC-G-GAGG--GCAA---
CCUUCG-GCC---CGG-AGGCGCCACUCCGCG-GCCG-CCG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CUC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCU--AAGG-
CCCCGGGUG-GAGCC-UGC-GCAGUCCG---CU-CA--------CGCGCGCUGC---GCAC-GACCCCGGGGA-C-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-CGAGGAAGGAGUCGACGCGCCG--
-------CCUCA-------AGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUGUGGGUU---A--CGGACC- AGGUCCGAGCUCGUACCC-UCCGC-GGGGCUGUU-UGCGAU-C---A-GGAG-
GUGCCCUCGGACGGCGUC-G------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCNGUCUU-NAAACACGA
FJ596627_Boyeria_irene UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG
UGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GAGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCGG--ACGCGACC-AGGGAUGGCGCAGU--CGC- GGUC-G-GAGG--
GCAA---CCUUCG-GCC---CGG-AGGCGCCACUCCGCG-GCCG-CCG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CUC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCU-
-AAGG-CCCCGGGUG-GAGCC-UGC-GCAGUCCG---CU-CA--------CGCGCGCUGC---GCAC-GACCCCGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCG---------CCUCA-------AGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUGUGGGUU---A--CGGACC- AGGUCCGAGCUCGUACCC-UCCGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGCCCUCGGACGGCGUC-G------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAGCACGG
EU424323_Brachytron_pratenseUAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GAGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCGG--ACGCGACC-AGGGAUGGCGCAGC--CGC- GGUC-G-GAGG--GCAA---
CCUUCG-GCC--CCGG-AGGAGCCACUCCGCG-GCCG-CCG-UCU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CUC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCU--AAGG-
CCCCGGGUG-GAGCC-UGC-GCAGCCCG---CU-CA--------CGCAGACUGC---GCAC-GACCCCGGGGA-C-CCCGGC--CGG GAGC-CCGACGGUACGAA-G-CGAGGAAGGAGUCGACGCGCCG--
-------CCUA--------AGGCGU---CCGGCCCUCCGCAA-GCGCCCGUGGGAGUGUGGGUU---A--CGGACC- AGGUCUGAGCUCGUACCC-UCCGC-GGGGCUGUU-UGCGAU-C---A-GGAG-
GUGUCCUCGGACGGCGUC-G------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAGCACGG
Epiaeschna_heros_OEH UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GAGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCGG--ACGCGACC-AGGGAUGGCGCAGC--CGC- GGUC-G-GAGG--GCAA---
CCUUCG-GCC---CGG-AGGAGCCACUCCGCG-GCCG-CCG-UCU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CUC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCU--AAGG-
CCUCGGGUG-GAGCC-UGC-GCAGCCCG---CU-CA--------CGCAGACUGC---GCAC-GACCCCGGGGA-C-CCCGGC--CGG GAGC-CCGACGGUACGAA-G-CGAGGAAGGAGUCGACGCGCCG--
-------CCUA--------AGGCGU---CCGGCCCUCCGCAA-GCGCCCGUGGGAGUGUGGGUU---A--CGGACC- AGGUCUGAGCUCGUACCC-UCCGC-GGGGCUGUU-UGCGAU-C---A-GGAG-
GUGUCCUCGGACGGCGUC-G------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAANCACGG
FJ596626_Caliaeschna_microstigma UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GAGGAGAUUCAAGUCU-CGCCGUGCGUCGGGCGGCGG--ACGCGACC-AG GGAUGGUGCAGU--CGC-
GGUC-G-AGGG--GCAA---CCUUCG-GCC---CGG-AGGUGCCACUCCGCG-GCCG-CCG-UCU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CUC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCU--AAGG-CCUCGGGUG-GAGCC-UGC-GCAGUCCG---UU-CA--------CGCAGACUGC---GCAC-GAC CCCGAG AA-C-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCG---------CUUA--------AGGCGU---CCGGCCCUCCGCAA-GCGCCC GUGGGAGUG UGAGUU---A--CGGACC-ACGUCCGAUCUCGUACCC-UCCGC-
GGGGCUGUU-UGCGAC-U---A-GGAG-GUGUCCUCGGACGGCGUC-G------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
FJ596628_Anaciaeschna_isoceles UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCGG--ACGCGACC-AG GGAUGGCGUAGC--CGC-
GGUC-G-GGGG--GCAA---CCCUCG-GCC---CGG-AGGCGCCACUCCGCG-GCCG-CCG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CUC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCC-UGC-GCAGCCCG---UU-CA--------CGCAGGCUGC---GCAC-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCG---------CCUA--------AGGCGU---CCGGCCCUCCGCAA-GCGCCC GUGGGAGUG UGGGUU---A--CGGACC-AGGUCUGAGCUCGUACCC-UC-GC-
GGGGCUGUU-UGCGAC-U---A-GGAG-GUGUCCUCGGACGGCGUC-G------------AUUCUCCGGUCG- GCGACGC-UU-CANCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG

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Oplonaeschna_sp                ????????????????????-??-???-??????????????????-???????????????????????????????????????????????
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Aeshna_canadensis_OAC        UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GAGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCGG--ACGCGACC-AGGGAUGGCGUAGC--CGC- GGUC-G-GAGG--GCAA---
CCUUCG-GCC---CGG-GGGCGCCACUCCGCG-GCCG-CCG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CUC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCU--AAGG-
CCCUGGGUG-GAGCC-UGU-GCAGCCCG---UU-CA--------CGCAGGCUGC---GCAC-GACCCCGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-CGAGGAAGGAGUCGACGCGCCG--
-------CCUA--------AGGCGU---CCGGCCCUCCGCAA-GCGCCCGUUGGAGUGUGGGUU---A--CGGACC- AGGUCUGAGCUCGCGCCC-UC-GC-GGGGCUGUU-UGCGAC-G---A-GGAG-
GUGUCCUCGGACGGCGUC-G-------------AUUCUCCGGUCG-GCGACGC-UU-CAGCUUGGAUgg-n cuacccg--accnnnnuu-gaaacacgg
Aeshna_Rhionaeschna_multicolor            UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAA
CUUUGAAGAGAGAGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GAGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCGG--ACGCG ACC-
AGGGAUGGCGUAGC--CGC-GGUC-G-GAGG--GCAA---CCUUCG-GCC---CGG-AGGCGCCACUCCGCG-GCCG-CCG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACU UCUC--CUC-
GAGUAGGACGUCGCGACCCGUCGA-GCG-----CCGGCCU--AAGG-CCUCGGGUG-GAGCC-UGC-GCAGCCCG---UU-CA--------CGCAGGCUGC---GCAC- GAC CCCGGGGA-U-CCCGGC--
CGGGUGC-CCGACGGUACGAA-G-CGAGGAAGGAGUCGACGCGCCG----------CUAUG------AGGCGU---CCGGCCCUCCGCAA-GCGCCC GUGGGAGUGUGGGUU---A--CGGACC-
AGGUCUGAGCUCGUACCC-UC-GC-GGGGCUGU--UGCGAC-U---A-GGAG-GUGACCUCGGACGGCGUC-G-------------AUUCUCCGGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--
ACCCGUCUU-GAAACACGG
Aeschna_cyanea_                ????????????????????-??-???-??????????????????-???????????????????????????????????????????????
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FJ596630_Aeshna_grandis      UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GAGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCGG--ACGCGACC-AGGGAUGGCGUAGC--CGC- GGUC-G-GAGG--GCAA---
CCUUCG-GCC---CGG-GGGCGCCACUCCGCG-GCCG-CCG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CUC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCU--AAGG-
CCCUGGGUG-GAGCC-UGU-GCAGCCCG---UU-CA--------CGCAGGCUGC---GCAC-GACCCCGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-CGAGGAAGGAGUCGACGCGCCG--
-------CCUA--------AGGCGU---CCGGCCCUCCGCAA-GCGCCCGUUGGAGUGUGGGUU---A--CGGACC- AGGUCUGAGCUCGCGCCC-UC-GC-GGGGCUGUU-UGCGAC-G---A-GGAG-
GUGUCCUCGGACGGCGUC-G-------------AUUCUCCGGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
FJ712316_Gynacantha_japonica_or_bullata         UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAA CUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GAGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCGG--ACGCG ACC-AGGGAUGGUGCAGC--CGC-
GGUC-G-GAGG--GCAA---CCUUCG-GCC---CGG-AGGCGCCACUCCGCG-GCCG-CCG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACU UCUC--CUC-GAGUAGGACGUCGCGACCCGUCGA-GCG-
----CCGGCCU--CAGG-CCCCGGGUG-GAGCC-UGC-GCAGCCCG---UU-CA--------CGCAGGCUGC---GCAC- GAC CCCGGGGA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCG---------CUUU--------AGGCGU---CCGGCCCUCCGCAA-GCGCCC GUGGGAGUGUGGGUU---A--CGGACC-AGGUCUGAGCUCGUACCC-UC-GC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUCCUCGGACGGCGUC-G-------------AUUCUCCGGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Austrogynacantha_heterogen_BYB         UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GAGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCGG--ACGCGACC-AG GGAUGGUGCAGU--CGC-
GGUC-G-GAGG--GCAA---CCUUCG-GCC---CGG-AGGCGCCACUCCGCG-GCCG-CCG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CUC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCU--AAGG-CCCUGGGUG-GAGUC-UGC-GCAGCCCG---UU-CA--------CGCAGGCUGC---GCAC-GAC CCCAGG GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCG---------CCUC--------AGGCGU---CCGGCCCUCCGCAA-GCGCCC GUGGGAGUG UGGGUU---A--CGGACC-AGGUCUGAGCUCGUACCC-UC-GC-
GGGGCUGUU-UGCGAC-U---A-GGAG-GUGUCCUCGGACGGCGUC-G-------------AUUCUCCGGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
Hemianax_ephippiger            ????????????????????-??-???-??????????????????-???????????????????????????????????????????????
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Anax_junius_OAJ             UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GAGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCGG--ACGCGACC-AGGGAUGGCGCAGC--CGC- GGUC-G-GAGG--GCAA---
CCUUCG-GCC---CGG-AGGCGCCACUCCGCG-GCCG-CCG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCU--AAGG-
CCCCGGGUG-GAGCC-UGC-GCAGCCCG---UU-CA--------CGCAGGCUGC---GCAC-GACCCCGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-CAAGGAAGGAGUCGACGCGCCG--
-------CCUA--------AGGCGU---CCGGCCCUCCGCAA-GCGCCCGUGGGAGUGUGGGUU---A--CGGACC- AGGUCUGAGCCCGUACCC--UUGC-GGGGCUGUU-UGCGAC-C---A-GGAG-
GUGCCCUCGGACGGCGUC-G-------------AUUCUCCGGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
FJ596632_Anax_imperator     UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GAGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCGG--ACGCGACC-AGGGAUGGCGCAGC--CGC- GGUC-G-GAGG--GCAA---
CCUUCG-GCC---CGG-AGGCGCCACUCCGCG-GCCG-CCG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CUC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCU--AAGG-
CCCCGGGUG-GAGCC-UGC-GCAGCCCG---UU-CA--------CGCAGGCUGC---GCAC-GACCCCGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-CAAGGAAGGAGUCGACGCGCCG--
-------CCUA--------AGGCGU---CCGGCCCUCCGCAA-GCGCCCGUGGGAGUGUGGGUU---A--CGGACC- AGGUCUGAGCCCGUACCC-UC-GC-GGGGCUGUU-UGCGAC-C---A-GGAG-
GUGCCCUCGGACGGCGUC-G-------------AUUCUCCGGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Unaligned_Gomphid           D2-?????????????????-??-???-??????????????????-?????????????????????????????????????????????????
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Sinogomphidia_kruegeri_ASK  UAAGACugaauacggccacg-ag-acc-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGUGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGACGGGCGGUGG--ACGCGAGC-AGAGAUGGUGUCUU--UGC- GGUC-G-AGAG--GCAA---
CUCUCG-UCU---CGG-AGGCGCCACUCCGCG-GCCG-CUG-UUU--G-UCCCGUCGUCGGA-GUGAC-GCACUUCUC--CCC-CAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCU--AAGG-
UCACGAGUG-GAGUC-UGU-GCGGUCUG---UU-UA--------CGCCGACCGC---GCAU-GACCUCGGGAU-U-CCCGGC--CGG GAGC-UCGACGGUACAAA-A-
CUUGGAAGGAGUCGACGCGCCACU---------U-------GUUGGCGU---CCGGCCCUCCGCAA-GCGCCCACGGUAGUCCGGGUG---U--CGGGCC- UGGCCCGAUUCCGGUCCU-UCCGU-
GGGGCUGAU-UGCGAU-G---A-agag-guguccucggauggcguu-g-------------auucuccagucg-gcgac-c-uu-cagcuuggaugg-c cuacccg--acccgucuu-gaaacacgg
Ictinogomphus_australis_AIA           UAAGACUGAAUAUGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGUGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGUGG--ACGCGAAC-AG AGAUGGUGUCUU--UGA-
GGAC-G-AGGG--GCAA---CCCUUG-UCC---CGG-AGCCACCACUCCGCG-GCCG-CUG-AUC--A-UCUCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCU--AAGG-UCCUGAGUG-GAGAC-UGU-GCGGUCUG---UU-UA--------CGCCGACCGC---GCAU-GAC CUCAGG AA-U-CCCGGC--CGGGAGC-UCGACGGUACAAA-A-
CUUGGAAGGAGUCGACGCGCCAAU---------C-------UUUGGCGU---CCGGCCCACCGCAA-GCGCCC ACGGUAGUC CGGGUU---G--CGGGCC-CGGCCCGAUUCCGGUCCU-UCCGU-
GGGGCUGUU-UGCGAU-U---A-GGUG-GUGUCCUCGGAUGGCGUU-G-------------AUUCUCCAGUCA- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
Ictinogomphus_sp            ????????????????????-??-???-??????????????????-?????????????????????????????????????????????????
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FJ712322_Onychogomphus_sp_mistake       UAAGACUGAAUAUGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGUGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGUGG--ACGCGAGC-AG AGAUGGUGUCCU--UGC-
GGUA-U-AGAG--GCAA---CUCUAU-UCC---CGG-AGGCGCCACUCCGCG-GCCA-UUG-ACA--G-UCUCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC-GAGUAGGACGUCGCGACCCGUCGA-
GCG-----UCGGCCU--AAGG-UCCCGGGUG-GAGUC-UGU-GCGGUCUG---UU-UA--------CGCCGACCGC---GCAU-GAC
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CUCGGGAU-U-CCCGGC--CGGGAGC-UCGACGGUACAAA-A-CUUGGAAGGAGUCAACGCGCCACU---------U-------GUUGGCGU---CCGGCCCUCCGCAA-GCGCCC ACGGUAGUC CGGGUU-
--G--CGGGCC-CGGCCCGAUUCCGGUCCU-UCCGC-GGGGCUGUU-UGCGAU-U---A-GGAG-GUGUCCUCGGAUGGCGUU-G------------AUUCUCCAGUCA- GCGACGC-UU-
CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
Phyllogomphoides_stigmatus_APS UAAGACUGAAUACggccacg-ag-acc-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCGACC-AG AGAUGCCGUUUC--CGC-
GACC-G-UGGG--GCAA---CUUGCG-GUC---CGG-GCGCGACACUCCGCG-GCCG-CCG-UAU--G-UCCCGGUGUCGGA-GUGAC-GCACUUCUC-- CUC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCU--AAGG-UUCCGGGUG-GAGUC-UGU-GUGGUCUG---UU-UC--------GGCCGACCGC---GCAC-GAC CCCGGU AU-A-CCCGGC--CGGGUGC-CCGACGGUACAAA-G-
CAUGUAAGGAGUCGACGCGCCACU---------U-------AUAAGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGUAGUC UG-GUU---A--CGGGCC-UGGCCCGAUUCCGGUCC--UCCGU-
GGGGCUGUU-UGCGAU-C---A-AGAG-GUGUCCUCGGACAGCGUU-G------------AUUCUCCAGUCA- GCGACGC-UU-CAGCUUGGAugg-ccuacccg--acccgucuu-gaaacacgg
Progomphus_Neaprogomphus_obscurus_OPOUAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGAGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAUGUCU-CGCCGCGAGCCGGGCGGCGG--ACGCGACC-GG AGAUGGGAUCUC--UGA-
GGUU-G-AGGG--GCAA---CUUUCA-ACC---CAG-GGUUGCCACUCCGCG-GCCG-CUG-UCA--A-UCCCGGC-ACGGA-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCU--AAGG-UCUCGGGAG-GAGUC-UGC-GAGGUCUG---CUUUU--------UGCCGACCUC---GCAC-GAC CCCGAG AA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
CUUGGAAGGAGUCGACGCGCCAAU--------UUUC-----UUUGGCGU---CCGGCCCUCUGCAA-GCGCCC GCGGUAGAC UGUGUU---G--CGGGCC-UGGCCCGAUUCCAGUCC--UCCGU-
GGGGCUGUU-UGCGAU-U---A-AGAG-GUGUCCUCGGACGGCGUU-G------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAANCACGG
EU055271_Progomphus_Neaprogomp_borealis UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAA
CUUUGAAGAGAGAGUUCAAGAGUACGUGAAACCGU-C-UGAGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGAGCCGGGCGGCGG--ACGCG ACC-
AGAGAUGGUAUCUC--UGA-GGUU-G-AGGG--GCAA---CUUUCA-ACC---CAG-CGUUGCCACUCCGCG-GCCG-CUG-UCA--A-UCCCGGC-ACGGA-GUGAC-GCACU UCUC--CCC-
GAGUAGGACGUCGCGACCCGUCGA-GCG-----CCGGCCU--AAGG-UCUCGGGAG-GAGUC-UGU-GAGGUCUG---CUUUU--------UGCCGACCUC---GCCC- GAC CCCGAGAA-U-CCCGGU--
UGGGUGC-CCGACGGUACGAA-G-CUUGGAAGGAGUCGACGCGCCAAA---------UAU-----UUUGGCGU---CCGGCCCUCUGCAA-GCGCCC GCGGUAGACCGUGUU---G--CGGGCC-
UUGCCCGAUUCCGGUCC--UCCGU-GGGGCUGUU-UGCGAU-U---A-AGAG-GUGUCCUCGGACGGCGUU-G------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGG-UCUACCCG--
ACCCGUCUU-GAAACACGG
Hagenius_brevistylus_OHB UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCAAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCGACC-AGAGAUGGUGUUUU--CGC- GAUC-G-AGGG--GCAA---
CUCCCG-GUC---CGG-AGGCGCCACUCCGCG-GCCG-CCG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGUCU--AAGG-
UCCCGGGUG-GAGUC-UGU-GCGGUCUG---UU-UC--------GGCCGACUGC---GCAC-GACCCCGGGAU-U-CCCGGC--CGG GUGC-ACGACGGUACGAA-G-
CAUGGAAGGAGUCGACGCGCCACC---------U-------GUUGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGGGUU---G--CGGGCC- CGGCCCGAUUCCGGAUCC-UCCGC-
GGGGCUGUU-UGCGAU-G---A-GGAG-GUGUCCUCGGACGGCGUU-G------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Lanthus_vernalis_OLV UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCGACC-AGAGAUGGUGUUUU--CGC- GGUC-G-AGGG--GCAA---
CUCUCG-UCC---CGG-AGGCGCCACUCCGCG-GCCG-CCG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGUCU--AAGG-
UCCCGGGUG-GAGUC-UGU-GCAGUCUG---UU-UC--------GGCCGACUGC---GCAC-GACCCCGGGAA-U-CCCGGC--CGG GUGC-ACGACGGUACGAA-G-
CACGGAAGGAGUCGACGCGCCACC---------A-------GUUGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGGGUU---G--CGGGCC- CGGCCCGAUUCCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUCCUCGGACGGCGUU-G------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCNGUCUU-GANACACGG
Davidius_nanus ????????????????????-??-???-??????????????????-???
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Neogomphus_edenticulatus_ONEUAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCGACC-AGAGAUGGCGUUUU--CGC- GGUC-G-AGGG--GCAA---
CUCUCG-GCC---CGG-AGGCGCCACUCCGCG-GCCG-CCG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCU--AAGG-
UCCCGGGUG-GAGUC-UGU-GCGGUCUG---UU-UC--------GGCCGACCGC---GCAC-GACCCCGGGAA-U-CCCGGC--CGG GUGC-ACGACGGUACGAA-G-
CACGGAAGGAGUCGACGCGCCACU--------CUC--UUGGGUUGGCGU---CCGGCCCUCAGCAA-GCGCCCGCGGUAGUCCGGGUU---G--CGGGCC-

CGGCCCGAUUCCGGUCCC-UCCGC-GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUCCUCGGACGGCGUU-G------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C
CUACCCG--ACCCGUCUU-GAANCACGG
Armagomphus_armiger_AAAr uaagacugaauacggccacG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCGACC-AGAGAUGGCGUUUU--CGC- GGUC-G-AGGG--GCAA---
CUCUCG-UCC---CGG-AGGCGCCACUCCGCG-GCCG-CCG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGUCU--AAGG-
UCCCGGGUG-GAGUC-UGU-GCAGUCUG---UU-UC--------GGCCGACUGC---GCAC-GACCUCGGGAA-U-CCCGGC--CGG GUGC-ACGACGGUACGAA-G-
CACGGAAGGAGUCGACGCGCCAAU--------CUC-------UUGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGUAGUCCGGGUU---G--CGGGCC- CGGCCCGAUUCCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUCCUCGGACGGCGUU-G------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUAcccg--acccgucuu-gaancacgg
Hemigomphus_comitans_AHC_ ????????????????????-??-???-??????????????????-??
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AFJ596622_Hemigomphus_heteroclytus UAAGACUGAAUAUGGCCACG-AG-ACC-GAUAGCGMRMMAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCGACC-UG AGAUGGCGUCUU--CGC-
GGUC-G-AGGG--GCAA---CCCUCG-GCC---CGG-AGGCGACACUCCGCG-GCCG-CCG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGUCU--AAGG-UCCUGGGUG-GAGUC-UGU-GCGGUCUG---UC-UC--------GGCCGACCGC---GCAC-GAC CCUGGG AU-A-CCCGAC--CGGGUGC-ACGACGGUACGAA-G-
CAUGGAAGGAGUCGACGCGCCACU-------CUA-------GUUGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGUAGUC CGGGUU---A--CGGGCC-CGGCCCGAUUCCGUUCC--UCCGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUCCUCGGACGGCGUU-G------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Hemigomphus_magela_BYB UAAGACUGAAUAUGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCGACC-UG AGAUGGCGUCUU--CGC-
GGUC-G-AGGG--GCAA---CCCUCG-GCC---CGG-AGGCGACACUCCGCG-GCCG-CCG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGUCU--AAGG-UCCUGGGUG-GAGUC-UGU-GCGGUCUG---UC-UC--------GGCCGACCGC---GCAC-GAC CCUGGG AU-A-CCCGAC--CGGGUGC-ACGACGGUACGAA-G-
CAUGGAAGGAGUCGACGCGCCACU-------CUA-------GUUGGCGU---CCGGCCCUCUGCAA-GCGCCC GCGGUAGUC CGGGUU---A--CGGGCC-CGGCCCGAUUCCGUUCC--UCCGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUCCUCGGACGGCGUU-G------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAGCACGG
Trigomphus_sp ????????????????????-??-???-??????????????????-??
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FJ596615_Stylogomphus_Lanth_albistylus UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGA--ACGCGAAC-AG GGAUGACGUCUU--CGC-
GGUC-G-AGGG--GCAA---CCCUCG-UCC---CGG-AGGCGCCACUCCGCG-GCCG-CCG-UAC--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGUCU--AAGG-UCCCGGGUG-GAGUC-UGU-GCAGUCUG---CC-UC--------GUCCGACUGC---GCAC-GAC CCCGGG AA-U-CCCGAC--CGGGAGC-ACGACGGUACGAA-G-
CACGGAAGGAGUCGACGCGCCNUC--------AC-------UUUGGCGU---CCGGCCCUCCGCAA-GCGCCC GUGGGAGUC CGGGUU---G--CGGGCC-CGGCCCGAUUCCGGACCC-UCCGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUCCUCGGACGGCGUU-G------------AUUCUCCAGUCA- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAGCACGG
FJ712325_Stylogomphus_shirizui UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGA--ACGCGAAC-AG GGAUGGCGUCUU--CGC-
GGUC-G-AGGG--GCAA---CCCUCG-UCC---CGG-AGGCGCCACUCCGCG-GCCG-CCG-UAC--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGUCU--AAGG-UCCCGGGUG-GAGUC-UGU-GCAGUCUG---CC-UC--------GGCCGACUGC---GCAC-GAC CCCGGG AA-U-CCCGAC--CGGGAGC-ACGACGGUACGAA-G-
CACGGAAGGAGUCGACGCGCCACC--------A--------GUUGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUC CGGGUU---G--CGGGCC-CGGCCCGAUUCCGGACCC-UCCGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUCCUCGGACGGCGUU-G------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG

EU055286_Davidioides_martini UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GAGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCGACC-AG AGAUGGUAUUCU--CGC-
GGUC-G-AGGG--GUAA---CUCUCG-GCC---CGG-GGGUGCCACUCCGCG-GCCG-CCG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGUCU--AAGG-UCACGGGAG-GAGUC-UGU-GCAGUCUGCGCUU-AC--------UGCCGACUGC---GCAU-GAC CCCGUG AA-U-UCCGAC--CGGGUGC-ACGACGGUACAAA-A-
CAUGGAAGGAGUCGACGCGCCACU---------U-------GUUGGCGU---CCGGCCCUCCGCAA-GAGCUC GCGGGAGUC CGGGUU---G--CGGGCC-CGGCCCGAUUCCGGUCUC-UCCGC-
GAGACUGUU-UGCGAU-G---A-GGAG-GUGUCCUCGGACGGCGUU-G-------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
Burmagomphus_collaris_ABC UAAGACUGAAUAUGGCCACG-Ag-acc-gauagcgaacaaguaccg-ugagggaaaguuga???????????????????????????????
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EU055285_Cyclogomphus_heterostylus UAAGACUGAAUAUGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCUGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCACUGGGCGGUGG--ACGCGAGA-AG AGAUGGCGUUUU-CUGC-
GGCU-G-AGGG--GCGA---CCCUUG-GUC-CGUGG-CAGCGCCACUCCGCG-GCCG-CUG-UCU--A-UCCCAGUGUUGGA-GUGAC-GCACUUCUC-- CUC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCU--AAGG-CCGCAGGUG-GAGUC-UGU-GAGGCCUGCCUCUCCUUGAGGGG-GGCUGGCCGC---GCAU-GAC CCUGUG AG-U-CCCGGC--CGGGAGC-GCGACGGUAUGAA-G-
CAUGGAAGGAGUCAAUGCGCCACU---------U-------GUUGGCGU---CUGGCCCUCCGCAA-GCGCCC AUGGGAGUC CGGGCU---G--CGGGCC-UGGCCCGAUCCCGGUCCC-UCUGU-
GGGGCUGUU-UGCGAG-A---A-GGAG-GUGUCCUCGGACGGCAUU-G-------------AUUCUCCAGUCG- GCGACGC-UA-CAGCUUGGAUGG-UCUACCCG--ACCCGUCUU-GAAACACGG
Anisogomphus_pinratani_not_pinratanai????????????????????-??-???-??????????????????-?????????????????????????????????
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FJ596613_Dromogomphus_spinosus UAAGACUGAAUAUGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCGAGA-AG AGAUGGCGUUUU--CAC-
GGUC-G-AGGG--GUGA---CUCUCG-GCU-UGUGG-GAGCGCCACUCCGCG-GCCG-CCG-UCU--C-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCU--AAGG-CCGCGGGUG-GAGCC-UGC-GAGGCCUGCCUCUCCGCAAGGGGGGGCCGACCGC---GCAU-GAC CCCGCG AG-U-CCCGGC--CGGGAGC-GCGACGGUACGAA-G-
CAUGGAAGGAGUCGACGCGCCGAAA-----CUCUG--UU-UCUUGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUC CGGGCU---G--CGGGCC-CGGCCCGAUCCCGGUCCC-UUCGC-
GGGGCUGUU-UGCGAG-A---A-GGAG-GUGUCCUCGGACGGCGUU-G-------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
Arigomphus_villosipes_OAV UAAGACUGAAUAUGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCUGGGCGGCGG--ACGCGAGC-AGAGAUGGCGUUUUUCCGC- GGUC-G-AGGG--GCAA---
CUCUUG-GCC-UGUGG-GAGCGCCACUCCGCG-GCCG-CUG-UCU--G-UCCUGGCGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CUGGCCU--AAGG-
CCGCGGGUG-GAGCC-UGC-GAGGGCUGCCUCUCCUCGAGGGA-GGCUGACCGC---GCAU-GACCCCGUGAG-U-CCCGGC--CGG GAGC-GCGACGGUAUGAA-
GUGACGGAAGGAGUCGACGCGCCUUA-------UUU-------UUUGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGAUCGGAUA---U--CGGGCC- UGGCCCGGUCCUGGUCCCAUUCGC-
GGGGCUGUU-UGCGAG-A---A-GGAG-GUGUCCUCGGACGGCGUU-G-------------AUUCUCCGGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCNGUCNU-GA???????
Arigomphus_cornutus_ ????????????????????-??-???-??????????????????-???
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FJ712319_Stylurus_intricatusUAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCGAGC-AGAGAUGGCGUUUU-CCGC- GGUC-G-AGGG--GCGA---
CCCUCG-GCU-CGUGG-GAGCGCCACUCCGCG-GCCG-CCG-UCU--C-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCU--AAGG-
CCGCGGGUG-GAGUC-UGC-GAGGCCUGCCUCUCCGCGAGGGGGGGCCGACCGC---GCAC-GACCCCGCGAG-U-CCCGGC--CGG GAGC-GCGACGGUACGAA-G-
CAGGGAAGGAGUCGACGCGCCAAC--------------UUUGUUGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGGGCU---G--CGGGCC- CGGCCCGAUCCCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAG-A---A-GGAG-GUGUCCUCGGACGGCGUU-G-------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
Stylurus_amnicola ????????????????????-??-???-??????????????????-???
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FJ596610_Stylurus_nagoyanusUAAGACUGAAUAUGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-C-
UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCGAGC-AGAGAUGGCGUUUU--CGC- GGUC-G-AGGG--GCGA---CCCUCG-
GCU-CGCGG-GAGCGCCACUCCGCG-GCCG-CCG-UCU--C-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCU--AAGG-
CCGCGGGUG-GAGUC-UGC-GAGGCCUGCCUCUCCGCGAGGGGUGGCUGACCGC---GCAC-GACCCCGCGAG-U-CCCGGC--CGG GAGC-GCGACGGUACGAA-G-
CAGGGAAGGAGUCGACGCGCCACU----------------UGUUGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGGGCU---G--CGGGCC- UGGCCCGAUCCCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAG-A---A-GGAG-GUGUCCUCGGACGGCGUU-G-------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
FJ596612_Gomphurus_Gomphus_externus UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCGAGC-AG AGAUGGCGUUUU--CGC-
GGUC-G-AGGG--GUGA---CCCUCG-GCU-CGUGG-GAGCGCCACUCCGCG-GCCG-CCG-UCU--C-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCU--AAGG-CCGCGGGUG-GAGCC-UGC-GAGGCCUGCCUCUCCGCGAGGGGGGGCCGACCGC---GCAC-GAC CCCGCG AG-U-CCCGGC--CGGGAGC-GCGACGGUACGAA-G-
UACGGAAGGAGUCGACGCGCCGAAA------CUCU--GUUUGUUGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUC CGGAUU---U--CGGGCC-CGGCCCGAUCCCGGUCCC-UUCGC-
GGGGCUGUU-UGCGAG-A---A-GGAG-GUGUCCUCGGACGGCGUU-G-------------ACUCUCCGGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
FJ596611_Asiagomphus_melaenops UAAGACUGAAUAUGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAA CUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCG AGC-AGAGAUGGCGUUUU-CCGC-
GGUC-G-AGGG--GCGA---CUCUCG-GCC-CGCGG-GAGCGCCACUCCGCG-GCCG-CCG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACU UCUC--CCC-GAGUAGGACGUCGCGACCCGUCGA-GCG-
----CCGGCCU--AAGG-CUGCGGGUG-GAGUC-UGC-GAGGCUUGCCUCUCCGCGAGGGGGGGCCGACCGC---GCAC- GAC CCCGCGAG-U-CCCGGC--CGGGAGC-GCGACGGUACGAA-G-
CAAGGAAGGAGUCGACGCGCCGAAA------CUCU--GUUUCUUGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUCCGGGCU---G--CGGGCC-CGGCCCGAUCCCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAG-A---A-GGAG-GUGUCCUCGGACGGCGUU-G-------------AUUCUCCWGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
FJ596614_Gomphus_Phanogomphus_exilis UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCGAGA-AG AGAUGGCGUUUU--CGC-
GGUC-G-AGGG--GCAA---CUCUCG-GCUUUGCGG-GAGCGCCACUCCGCG-GCCG-CCG-UCU--C-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCU--AAGG-CCGCGGGUG-GAGCC-UGC-GAGGCCUGCCUCUCCGCGAGGGGGGGCCGACCGC---GCAC-GAC CCCGCG AG-U-CCCGGC--CGGGAGC-GCGACGGUACGAA-G-
CAAGGAAGGAGUCGACGCGCCUUU----------------UUUAGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUC CGGGCU---G--CGGGCC-UGGCCCGAUCCCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAG-A---A-GGAG-GUGUCCUCGGACGGCGUU-G-------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
Gomphus_Gomphus_graslini ????????????????????-??-???-??????????????????-?????????????????????????????????
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Gomphus_Hylogomphus_adelphus_OGA UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGUGCGUCGGGCGGCGG--ACGCGAGC-AG

AGAUGGCGUUUU-CCGC-GGUC-G-AGGG--GUGA---CUCUCG-GCU-CGCGG-GCGCGCCACUCCGCG-GCCG-CCG-UCU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -
GAGUAGGACGUCGCGACCCGUCGA-GCG-----CCGGCCU--AAGG-CCGCGGGUG-GAGCC-UGC-GAGGCCUGCUUCUCCGCGAGGGGGGGCCGACCGC---GCAC-GAC CCCGCG AG-U-CCCGGC--
CGGGAGC-GCGACGGUACGAA-GUAACGGAAGGAGUCGACGCGCCAAU---GA--UUUUUU----UUUGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGAU CGGAUA---C--CGGGCC-
CGGCCCGAUCCCGGUCUCAUUCGC-GGGGCUGUU-UGCGAG-A---A-GGAG-GUGUCCUCGGACGGCGUU-G-------------AUUCUCCGGUCG- GCGACGC-UU-CAGCUUGGAUGG-C???????--
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FJ712320_Gomphus_Gomphus_vulgatissimus UAAGACUGAAUAUGGCCACG-AG-ACC-GAUAGCAAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACAUUGAAGAGAG
AGUUCAAGAGUAUGUGAAACCAU-C-UGGGAGU-AAACAGGUGGUACCUGAAAGUUCAAAA-GGGGAGAUUCAAGUCU-UGCUGCGCGCUGGGCAGCAG--UUGCAAGC-AG AGAUGGCGUUUU--UGC-
AGUC-A-AGGG--GCAA---CUCUUGGUCU--GUGG-GAGCACCACUCCAUG-GCCG-CUG-UCU--C-UCCUGGCAUCAGA-GUGAC-GCACUUCUC-- CCC -AAGUAGGAUGUUGCGACCCAUCGA-
GCG-----CCGGCCU--AAGG-CUGCAGGUG-GAGCC-UGC-GAGGCCUGCCUCUCCGCAAGGGGGGGCCGACCGC---GCAC-GAC CCGGCG AG-U-CCCGGC--CAGGAGC-GCGAUGGUAUGAA-G-
CAAGGAAUGAGUCAACAUGCCAAU--------------UAAUUUGAUGU---CUGGCCCUGCGCAA-GCACCU GCGGGAGUC AAGGCU---G--UGGGCC-UGGCCUGAUCCCGGUCCC-UCUGU-
GGGGCUAUU-UGCAAG-A---A-G----GUGUCCUCGGAUGGUGUU-G-------------AUUCUCCAGUCA- GUGACAC-UU-CAGCUUGGAUGG-CCUACCCG--ACCUGUCUU-GAAACACGG
Megalogomphus_sp ????????????????????-??-???-??????????????????-???
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Onychogomphus_uncatus_FJ712321 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCGACC-AG AGAUGGUGUUCU--CGC-
GGCU-G-AGGG--GCAA---CUCUUG-GUC---CGG-GGGUUCCACUCCGCG-GCCG-CCG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGUCU--AAGG-UCACGGGAG-GAGUC-UGU-GCAGUCUG--CUCUUC--------UGCUGACUGC---GCAC-GAC CCCGUG AA-U-UCCGGC--CGGGUGC-ACGACGGUACGAA-G-
CAUGGAAGGAGUCGACGCGCCACA---------A-------GUUGGCGU---CCGGCCCUCCGCAA-GAGCUC GCGGGAGUC CGGG-U---U-GCGGGCC-CGGCCCGAUUCCGGUCUC-UCCGC-
GAGGCUGUU-UGCGAU-U---A-GGAG-GUGUCCUCGGACGGCGUU-G-------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
FJ596620_Onychogomphus_Onych_forcipatus UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAA CUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCG ACC-AGAGAUGGUAUUCU--CGC-
GGCU-A-AGGG--GCAA---CUCUUG-GUC---CGG-GGGUUCCACUCCGCG-GCCG-CCG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACU UCUC--CCC-GAGUAGGACGUCGCGACCCGUCGA-GCG-
----CCGGUCU--AAGG-UCACGGGAG-GAGUC-UGU-GCAGUCUG--CUCUUC--------UGCUGACUGC---GCAU- GAC CCUGUGAA-U-UCCGGC--CGGGUGC-ACGACGGUACGAA-G-
CAUGGAAGGAGUCGACGCGCCACC---------A-------GUUGGCGU---CCGGCCCUCCGCAA-GAGCUC GCGGGAGUCCGGGUU---G--CGGGCC-CGGCCCGAUUCCGGUCUC-UCCGC-
GAGGCUGUU-UGCGAU-U---A-GGAG-GUGUCCUCGGACGGCGUU-G-------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
FJ596617_Lindenia_tetraphylla_mistakeUAAGACUGAAUAYGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCGACC-AG AGAUGGUAUUCU--CGC-
GGCU-A-AGGG--GCAA---CUCUUG-GUC---CGG-GGGUUCCACUCCGCG-GCCG-CCG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGUCU--AAGG-UCACGGGAG-GAGUC-UGU-GCAGUCUG--CUCUUC--------UGCUGACUGC---GCAU-GAC CCUGUG AA-U-UCCGGC--CGGGUGC-ACGACGGUACGAA-G-
CAUGGAAGGAGUCGACGCGCCACC---------A-------GUUGGCGU---CCGGCCCUCCGCAA-GAGCUC GCGGGAGUC CGGGUU---G--CGGGCC-CGGCCCGAUUCCGGUCUC-UCCGC-
GAGGCUGUU-UGCGAU-U---A-GGAG-GUGUCCUCGGACGGCGUU-G-------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Ophiogomphus_carolus_OOC UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCGACC-AGAGAUGGUGUUCU--CGC- GGCU-G-AGGG--GCAA---
CUCUUG-GUC---CGG-GGGUUCCACUCCGCG-GCCG-CCG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGUCU--AAGG-
UCACGGGAG-GAGUC-UGU-GCAGUCUG--CUCUUC--------UGCUGACUGC---GCAC-GACCCCGUGAA-U-UCCGGC--CGG GUGC-ACGACGGUACGAA-G-
CAUGGAAGGAGUCGACGCGCCACA---------A-------GUUGGCGU---CCGGCCCUCCGCAA-GAGCUCGCGGGAGUCCGGGUU---G--CGGGCC- CGGCCCGAUUCCGGUCUC-UCCGC-
GAGGCUGUU-UGCGAU-U---A-GGAG-GUGUCCUCGGACGGCGUU-G-------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
FJ596618_Ophiogomphus_severus UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCGACC-AG AGAUGGUGUUCU--CGC-
GGCU-G-AGGG--GCAA---CUCUUG-GUC---CGG-GGGUUCCACUCCGCG-GCCG-CCG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC-GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGUCU--AAGG-UCACGGGAG-GAGUC-UGU-GCAGUCUG--CUCUUC--------UGCUGACUGC---GCAC-GAC

CCCGUGAA-U-UCCGGC--CGGGUGC-ACGACGGUACGAA-G-CAUGGAAGGAGUCGACGCGCCACA---------A-------GUUGGCGU---CCGGCCCUCCGCAA-GAGCUC GCGGGAGUC CGGGUU-
--G--CGGGCC-CGGCCCGAUUCCGGUCUC-UCCGC-GAGGCUGUU-UGCGAU-U---A-GGAG-GUGUCCUCGGACGGCGUU-G------------AUUCUCCAGUCG- GCGACGC-UU-
CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
Ophiogomphus_Ophiogomphus_caecilia   ????????????????????-??-???-??????????????????-?????????????????????????????????
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Leptogomphus_elegans_OLEg   ????????????????????-??-???-??????????????????-???
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Leptogomphus_sauteri_FJ596609   UAAGGCUGAAUAUGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCUGGGCGGUGG--ACGCGAAC-AG GGAUGGUGAUCU--CGC-
GGUC-G-AGGG--GCGA---CUCUCG-GUCCGUAGG-GUGAACCACUCCGCG-GCCG-CCG-UCU--C-UCCCAGCGUCGGA-GUGAC-GCACUUCUC-- CCC -GAGUAGUACGUCGCGACCCGUCGA-
GCG-----CCGGCCU--AAGG-UCCCGGGAG-GAGUC-UGU-GCAGUCUG---CG-AA--------AGCCGACCGC---GCAC-GAC CUCGGG AA-U-CCUGGC--CGGGAGC-GCGACGGUAGGAA-G-
CUCGGAAGGAGUCGACGCGCCAAA--------------CCUUUGGCGU---CCGGCCCUCCGCAA-GCGCCU GCGGGAGUC UGUGGC---U--UGUGCC-UCGCACAACCACGGUCCC-UCUGC-
GGGGCUGUU-UGCGAC-A---U-GGAG-GUGUUCUCGGAUGGCGUU-G------------AUUCCUCAGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
Epigomphus_compactus_AEC   ????????????????????-??-???-??????????????????-???
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Microgomphus_chelifer_FJ712323   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGUCGG--ACGCGAAC-AG GGAUGGUGUCUU--CGC-
GACC-G-AAAG--GCAA---CUUUCG-GUUUGUCGG-GGAUACCACUCCGCG-GCCG-CCG-UAU--U-UCCCGGCGUUGGA-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCU--AAGG-UCCCGGGAG-GAGUC-UGU-GAGGUCUG---CC-UG--------UGCCGACCGC---GCAU-GAC CCUGGG GC-A-CCCGGC--CGGGAGC-CCGACGGUACGAA-G-
CUUGGAAGGAGUUGACGCGCCACC---------------AGUUGGCGU---CCGGCCCUCCGCAA-GCGCCC GUGGGAGUC CGCGAC---U--CGUGCC-CGGCACGAUUGCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAU-U---U-GGAG-GUGUCCUCGGACGGCGUU-G------------AUUCCCCAGUCG- GCGACGC-UU-CAGGUUG-ACGG-UCUACCCG--ACCCGUCUU-GAARCACGG
Heliogomphus_retroflexus   ????????????????????-??-???-??????????????????-???
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Macrogomphus_parallelogramma????????????????????-??-???-??????????????????-???
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Ceratogomphus_pictus_OCH   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCACCGGGCGGCGG--ACGCGACC-AGAGAUGGUGUUUC--CGC- GUUC-G-AGAG--GCAA---
CUUUCG-UUC---CGG-GAGCUCCACUCCGCG-GCCG-CCG-UUA--C-UCCCGGUGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGUCU--AAGA-
UCGUGAGUG-GAGUC-UGU-GCAGUCUG---UU-UC--------GGCCGACUGC---GUAU-GACCUUGCGAA-U-UCCGGC--CGG GUGC-UCGACGGUACGAA-G-
CAUGGAAGGAGUCGACGCGCCAAU--------UU-------UCUGGCGU---CCGGCCCUCCGCAA-GCGCCCGUGGGAGUCCGGGCU---G--CGGGCC- UGGCCCGAUUCCGGUCUC-UCCGC-
GGGGCUGUU-UGCGAU-A---A-GGAG-GUGUCCUCGGACGGCGUU-G------------AUUCUCCAGUCA-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Lestinogomphus_angustus_ALA?????????????????????-??-???-??????????????????-???
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Austrogomphus_guerini_AAG   uaagacugaauauggccacg-ag-acc-gauagcgaacaaguaccg-ugAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGUGG--CCGCGAUC-AGAGAUGGUGUAUC--CGC- UUCC-G-AGGG--GCAA---
CUUUCG-GAC---CGG-GUGCUCCACUCCGCG-ACUG-CCG-UGU--G-UCCCGGUGACGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGU GACCCGUCGA-GCG-----CCGGUCU--AAGG-
UCACGGGUG-GAGUC-UGU-GCAGUCUG---UU-UC--------GGCCGACUGC---GCAC-GACCCCGUGAA-U-CCCGAC--CGG GUGC-ACGACGGUACGAA-G-
CAUGGAAGGAGUCGACGCGCCACU---------U-------GUUGGCGU---CCGGCCCUCCGCAA-GCGCCCGUGGGAGACCGUGUU---G--CGGGCC- UGGCCCGAUUCCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAU-U---A-GGAG-GUGUUCUCGGACGGCGUU-G------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGg-c cuacccg--acccgucuu-gaancacgg
EU055267_Austrogomphus_amphiclitus   UAAGACUGAAUAUGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGUGG--CCGCGAUC-AG AGAUGGUGUAUC--CGC-
GGUC-G-AGGG--GCAA---CUCUCG-GUC---CGG-GUACUCCACUCCGCG-ACUG-CCG-UGU--G-UCCCGGCGACGGA-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGUGACCCGUCGA-
GCG-----CCGGUCU--AAGG-UCACGGGUG-GAGUC-UGU-GCAGUCUG---UU-AC--------GGCCGACUGC---GCAC-GAC CCCGUG AA-U-CCCGAC--CGGGUGC-ACGACGGUACGAA-G-
CAUGGAAGGAGUCGACGCGCCACU---------U-------GUUGGCGU---CCGGCCCUCCGCAA-GCGCCC GUGGGAGAC CGUGUU---G--CGGGCC-UGGCCCGAUUCCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAU-U---A-GGAG-GUGUUCUCGGACGGCGUU-G------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
EU055261_Antipodogomphus_acolythus   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGUGG--UCGCGAUC-AG AGAUGGUGUUUU--CGC-
GGUC-G-AGGG--GAAA---CUCUCG-GCC---CGG-AGGCUCCACUCCGCG-ACUG-CCG-UGU--G-UCCCGGUGUCGGA-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGUGACCCGUCGA-
GCG-----CCGGUCU--AAGG-UCACGGGUG-GAGUC-UGU-GCAGUCUG---CU-UU--------GGCCGACUGC---GCAC-GAC CCCGUG AA-U-CCCGAC--CGGGUGC-ACGACGGUACGAA-G-
CAUGGAAGGAGUCGACGCGCCAUU---------UG------UUUGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGAC CGGGUU---G--CGGGCC-CGGCCCGAUUCCGGUUCC-UUCGC-
GGGGCUGUU-UGCGAU-U---A-GGAG-GUGUUCUCGGACGGCGUU-G------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--GCCCGUCUU-GAAACACGG
Unaligned_Petalurid   D2-?????????????????-??-???-??????????????????-???
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EU055268_Tanypteryx_hageni   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCUC--CCGCGACC-AGAGAUGGCGUCUU--CGC- GGCC-G-GGGG--GCGA---
CCCUCG-GCC---CGG-AGGUGCCACUCCGCG-GGCG-CCG-CCG--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCU--AAGG-
UCCCGGGUG-GAGCC-UGU-GCAGCCUG---CU-CA--------CGCCGGCUGC---GCAC-GACCCCGGGAA-U-CCCGGC--CGG GUGC-ACGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCGCC---------CU-----UUUCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGGGUC---U-CCGGGCC- CGGUCCGGUCCCGGACCC-UCCGC-
GGGGCUGUU-UGCGAU-CC--A-GGAG-GUGCCCUCGGACGGCGUC-G------------CCUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG

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Tanypteryx_sp              ????????????????????-??-???-??????????????????-?????????????????????????????????????????????
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FJ712330_Tanypteryx_pryeri   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCUC--CCGCGACC-AGAGAUGGCGUCUU--CGC- GGUC-G-GGGG--GCGA---
CCCUCG-GCC---CGG-AGGUGCCACUCCGCG-GGCG-CCG-CCG--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCU--AAGG-
UCCCGGGUG-GAGCC-UGU-GCAGCCUG---CU-CA--------CGCCGGCUGC---GCAC-GACCCCGGGAA-U-CCCGGC--CGG GUGC-ACGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCGCC---------CU-----UUUCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGGGUC---U-CCGGGCC- CGGUCCGGUCCCGGACCC-UCCGC-
GGGGCUGUU-UGCGAU-CC--A-GGAG-GUGCCCUCGGACGGCGUC-G-------------CCUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Tachopteryx_thoreyi          UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG
UGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCUC--CCGCGACC-AGAGAUGGCGUCUU--CGC- GGCC-G-GGGG--
GCGA---CCCUCG-GCC---CGG-AGGUGCCACUCCGCG-GGCG-CCG-CCG--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCU-
-AAGG-UCCCGGGUG-GAGCC-UGU-GCAGCCUG---CU-UU--------UGCCGGCUGC---GCAC-GACCCCGGGAA-U-CCCGGC--CGG GUGC-ACGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCGCC---------CU-----UUUCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGGGUU---U-CCGGACC- CGGUCCGAUCCCGGACCC-UCCGC-
GGGGCUGUU-UGCGAU-C---C-GGAG-GUGACCUCGGACGGCGUC-G-------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--AC???????-?????????
Phenes_raptor_OPR            UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCUC--CCGCGACC-AGAGAUGGCGGCUU--CGC- GGCC-A-GGGG--GCAA---
CCCcUG-GUC---CGG-AGGCGCCACUCCGCG-GGUG-CCG-GCG--A-UCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCUGCCU--AAGG-
UCCCGGGUG-GAGCC-UGU-GCAGCCUG---CU-CG--------CGCCGGCUGC---GCAU-GACCCCGGGAA-U-CCCGGC--GGG GUGC-ACGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCGCC---------CU------UUCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGGGUU---U-CCGGACC- UGGUCCGAUCCCGGACCC-UCCGC-
GGGGCUGUU-UGCGAU-C---G-GGAG-GUGACCUCGGACGGCGUC-G-------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Phenes_centralis             UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCUC--CCGCGACC-AGAGAUGGCGGCUU--CGC- GGCC-A-GGGG--GCAA---
CCCcUG-GUC---CGG-AGGCGCCACUCCGCG-GGUG-CCG-GCG--A-UCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCUGCCU--AAGG-
UCCCGGGUG-GAGCC-UGU-GCAGCCUG---CU-CG--------CGCCGGCUGC---GCAU-GACCCCGGGAA-U-CCCGGC--GGG GUGC-ACGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCGCC---------CU-----UUUCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGGGUU---U-CCGGACC- UGGUCCGAUCCCGGACCC-UCCGC-
GGGGCUGUU-UGCGAU-C---G-GGAG-GUGACCUCGGACGGCGUC-G-------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
FJ596625_Uropetalia_caroveiUAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-C-
UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCUC--CCGCGACC-AGAGAUGGCGCCUC--CGA- GGCC-C-GGGG--GCAA---CCCCGG-
GUC---CGG-AGGUGCCACUCCGCG-GGCG-CCG-GCG--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCUGCCU--AAGG-
UCCCGGGUG-GAGCC-UGU-GCAGCCUG---CU-CA--------CGCCGGCUGC---GCAC-GACCCCGGGAA-U-CCCGGC--GGG GUGC-ACGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCGCC---------CU-----UGUCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGGGUU---U-CCGGACC- UGGUCCGAUCCCGGACCC-UCCGC-
GGGGCUGUU-UGCGAU-U---C-GGAG-GUGUCCUCGGACGGCGUC-G-------------GUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Petalura_hesperia_APH        UAAGACUGAAuacggccacg-ag-acc-gauagcgaacaaguacCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCUC--CCGCGACC-AGAGAUGGCGCCUU--CGC- GGCC-C-GGGG--GCAA---
CCCCGG-GUC---CGG-AGGUGCCACUCCGCG-GGCG-CCG-CCG--A-UCCCGGCGUCGGA-CUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCUGCCU--AAGG-
UCCCGGGUG-GAGCC-UGU-GCAGccug---cu-cg--------cgccggcugc---GCAC-gAccccgggAA-U-CCCGGC--GGG GUGC-ACGACGGUACGAA-G-
CGAGGAAGGAGUCGACgcgccgcc---------cu-----uuucggcgu---ccggcccucCGCAA-gcgcccGCGGGAG
UCcggguu---u-CCGGACC-UGGUCCGAUCCCGGACCC-uccgc-ggggcuguu-ugcgAU-c---c-GGAG-GUGACCUCGGACGGCGUC-g-------------AUUCUCCAGUCG-GCGACG
c-uu-CAGCUUGGAUGG-cCUACCCG--ACCCGUCUU-GAAACA???
Petalura_gigantea_OPG2       UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCUC--CCGCGACC-AGAGAUGGCGCCUU--CGC-
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GGCC-A-GGGG--GCAA---CCCCUG-GUC---CGG-AGGCGCCACUCCGCG-GGUG-CCG-GCG--A-UCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-
GCG-----CCUGCCU--AAGG-UCCCGGGUG-GAGCC-UGU-GCAGCCUG---CU-CG--------CGCCGGCUGC---GCAU-GACCCCGGGAA-U-CCCGGC--GGG GUGC-ACGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCGCC---------CU-----UUUCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGGGUU---U-CCGGACC- UGGUCCGAUCCCGGACCC-UCCGC-
GGGGCUGUU-UGCGAU-C---G-GGAG-GUGACCUCGGACGGCGUC-G-------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Petalura_litorea_OPG2        UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-????????????????-????????????????????--??????????????????????????????
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Petalura_ingentissima_API    UAAGacugaauacggccacg-ag-acc-gauagcgaacaaGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCUC--CCGCGACC-AGAGAUGGCGCCUU--CGC- GGCC-C-GGGG--GCAA---
CCCCGG-GUC---CGG-AGGUGCCACUCCGCG-GGCG-CCG-CCG--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCUACCU--AAGG-
UCCCGGGUG-GAGCC-UGU-GCAGCCUG---CU-CA--------GGCCGGCUGC---GCAC-GACCCCGGGAA-U-CCCGGC--GGG GUGC-ACGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCGCC---------CU---UUUCucggcgu---ccggcccuccgcaa-gcgcccgcgggaguccggguu---u-ccggacc- ugguccgaucccggaccc-uccgc-
ggggcuguu-ugcgau-u---c-ggag-gugaccucggacggcguc-g-------------auucuccagucg-gcgacac-uu-cag?????????-?
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Zoraena_bilineata_OZB        UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGC--CCGCGACC-AGAGAUGGCGUCUU--CGC- GGCC-G-GGGG--GCAA---
CCCUCG-GAC---CGG-GGGCGCCACUCCGCG-GCCG-CCG-UCUUUG-UCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCU--AAGG-
CCUCGGGUG-GAGUC-UGU-GCAGCCCG---UU-CA--------CGCUGGCUGC---GCAC-GACCCCGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCGCU---------CU---UUUGUCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUUUGGGUU---U-CCGGACC- CGGUCCGAUCCCGGACCC-UCCGC-
GGGGCUGUU-UGCGAU-U---U-GGAG-GUGUCCUCGGACGGCGUC-G-------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCNGUCNU-GAANCNCGN
Taeniogaster_obliqua_OTO     UAAGACUGAAUACGGCCACG-AG-ACC-gauagcgaccaaguaccg-ugagggaaaguugaaaagaacuuugaagagagaguucaagaguacg ugaaaccgu-
c-ugggagu-aaacgggugguacccgaaaguacgaaa-ggggagauucaggucu-cgccgcgcgucgggcggcgc--ccgcgacc-agagauggcgucuu--cgc- ggcc-g-gggg--gcaa---
cccucg-gac---cgg-gggcgccacuccgcg-gccg-ccg-ucuuug-ucccggcgccggA-GUGAC-GCACUUCUC--CCC-CAGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCU--AAGG-
CCUCGGGUG-GAGUC-UGU-GCAGCccg---uu-ca--------cgcuggcugc---gcac-gaccccgggga-u-cccggc--cgg gugc-ccgacgguacgaa-g-
cgaggaaggagucgacgcgccgcu---------cu---uuugucggcgu---ccggcccuccgcaa-gcgcccgcgggaguccggguu---u-ccggacc- cgguccgaucccggaccc-uccgc-
ggggcuguu-ugcgau-u---u-ggag-guguccucggacggcguc-g-------------auucuccagucg-gcgacgc-uu-cagcuuggaugg-c cuacccg--accgucuuu-gaaacacgg
Kalyptogaster_erronea_OKE    UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGC--CCGCGACC-AGAGAUGGCGUCUU--UGC- GGCC-G-GGGG--GCAA---
CCCUCG-GAC---CGG-GGGCGCCACUCCGCG-GCCG-CCG-UCUUUG-UCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCA-CAGUAGGACGUCGC AACCCGUCGG-ACG-----CCGGCCU--AAGG-
CCUCGGGUG-GAGUC-UGU-GCAGCCCG---UU-CA--------CGCUGGCUGC---GCAC-GACCCCGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCGCU---------CU---UUUGUCGGCGU---CCGGUCCUCCGCAA-GCGCCCGCGGGAGUCCGGGUU---U-CCGGACC- CGGUCCGAUCCCGGACCC-UCCGC-
GGGGCUGUU-UGCGAU-U---U-GGAG-GUGUCCUCGGACGGCGUC-G-------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCNGUCNU-GA???????
FJ712317_Cordulegaster_maculata       UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGC--CCGCGACC-AG AGAUGGCGUCUU--CGC-
GGCC-G-G-----------------------------------------------------------------------------------------------
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-------------------------------------------------------------------------------------UC-G-------------AUUCUCCAGUCG-GCGACGC-UU-
CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
EU055277_Cordulegaster_dorsalis       UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGC--CCGCGACC-AG AGAUGGCGUCUU--CGC-
GGCC-G-GGGG--GCAA---CCCUCG-GAC---CGG-GGGCGCCACUCCGCG-GCCG-CCG-UCUUUG-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC-CAGUAGGACGUCGCGACCCGUCGG-
GCG-----CCGGCCU--AAGG-CCUCGGGUG-GAGUC-UGU-GCAGCCCG---UU-CA--------CGCUGGCUGC---GCAC-GAC
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CCCGGGGA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-CGAGGAAGGAGUCGACGCGCCGCU---------CU---UUUGUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUC CGGGUU-
--U-CCGGACC-UGGUCCGAUCCCGGACCC-UCCGC-GGGGCUGUU-UGCGAU-U---U-GGAG-GUGUCCUCGGACGGCGUC-G------------AUUCUCCAGUCG- GCGACGC-UU-
CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
FJ596634_Cordulegaster_boltonii       UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGC--CCGCGACC-AG AGAUGGCGUCUU--CGC-
GGCC-G-GGGG--GCAA---CCCUCG-GAC---CGG-GGGCGCCACUCCGCG-GCCG-CCG-UCUUUG-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CAGUAGGACGUCGCGACCCGUCGG-
GCG-----CCGGCCU--AAGG-CCUCGGGUG-GAGUC-UGU-GCAGCCCG---UU-CA-------CGCUGGCUGC---GCAC-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-UCGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCGCU---------CU---UUUGUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUC CGGGUU---U-CCGGACC-CGGUCCGAUCCCGGACCC-UCCGC-
GGGGCUGUU-UGCGAU-U---U-GGAG-GUGUCCUCGGACGGCGUC-G------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
FJ596637_Cordulegaster_picta          UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGC--CCGCGACC-AG AGAUGGCGUCUU--CGC-
GGCC-G-GGGG--GCAA---CCCUCG-GAC---CGG-GGGCGCCACUCCGCG-GCCG-CCG-UCUUUG-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CAGUAGGACGUCGCGACCCGUCGG-
GCG-----CCGGCCU--AAGG-CCUCGGGUG-GAGUC-UGU-GCAGCCCG---UU-CA-------CGCUGGCUGC---GCAC-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-UCGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCGCU---------CU---UUUGUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUC CGGGUU---U-CCGGACC-CGGUCCGAUCCCGGACCC-UCCGC-
GGGGCUGUU-UGCGAU-U---U-GGAG-GUGUCCUCGGACGGCGUC-G------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
FJ596638_Anotogaster_sieboldii        UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGC--CCGCGACC-AG AGAUGGCGUCUU--CGC-
GGCC-G-GGGG--GCAA---CCCUCG-GAC---CGG-AGGCGCCACUCCGCG-GCCG-CCG-UCUUUG-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CAGUAGGACGUCGCGACCCGUCGG-
GCG-----CCGGCCU--AAGG-CCUCGGGUG-GAGUC-UGU-GCAGCCCG---UU-CA-------CGCUGGCUGC---GCAC-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCGCU---------CU---UUUGUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUC CGGGUU---U-CCGGACC-CGGUCCGAUCCCGGACCC-UCCGC-
GGGGCUGUU-UGCGAU-U---U-GGAG-GUGUCCUCGGACGGCGUC-G------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Neopetalia_punctata_ONP     UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGG--CCGCGACC-AGAGAUGGCGUCUU--CGC- GGCC-G-GGGG--GCAA---
CCCUCG-GUC---CGG-GGGCGCCACUCCGCG-GCCG-CCG-UCAC-G-UCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CUGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCU--AAGG-
CCCCGGGUG-GAGCC-UGU-GCAGACCG---CU-CA-------CGCCGUCUGC---GCAC-GACCCCGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCGCC---------A-------GUCGGCGU---CCGGCCCUCCGCAA-GCGCCUGCGGGAGUCCGGGCU---U-CCGGGCC- CGGCCCGAUCUCGGACCC-UCCGC-
GGGGCUGUU-UGCGAC-G---A-GGAG-GUGCCCUCGGACGGCGUC-G------------AUUCUCCAGUCG-GCGACGC-UU-CAGCUUGGAUGC-C CUACCCG--ACC??????-?????????
Chloropetalia_soarer_OCSr   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACcg-ugagggaaaguuGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUACCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGG--CCGCGACC-AGAGAUGGCGUUUC--CGC- GGCC-G-GGGG--GCGA---
CCCUCG-GUC---CGG-GGGCGCCACUCCGCU-GCCG-CCGUUCACUG-UCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CUGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCU--AAGG-
CCCCGGGUG-GAGUC-UGC-GCGGUCCG-CUCUCCCUUCGGGGGGGCUGCCUGC---GCAC-GACCCCGGGGA-C-CCCGGC--CGG GUGC-UCGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCGAA---------CU------UUCGGcgu---ccggcccuccgcaa-gcgcccgcgggaguccgggcu---u-ccgggcc- cggcccgaucccggaucc-uccgc-
ggggcuguu-ugcgau-u---u-ggag-gugaccucggacggcguc-g------------guucuccagucc-gcgacgc-uu-cagcuuggaugg-c cuacccg--acccgucuu-gaaacacgg
Sinorogomphus_nasutus_OSN   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG
UGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGG--CCGCGACC-AGAGAUGGCGUUUC--CGC- GGCC-G-GGGG--
GCGA---CCCUCG-GUC---CGG-GGGCGCCACUCCGCU-GCCG-CCGUUCACUG-UCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CUGUAGGACGUCGC GACCCGUCGG-GCG-----CCGGCCU-
-AAGG-CCCCGGGUG-GAGUC-UGC-GCGGUCCG-CUCUCCCUUCGGGGGGGCUGCCUGC---GCAC-GACCCCGGGGA-C-CCCGGC--CGG GUGC-UCGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCGAA---------CG------UUCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGGGCU---U-CCGGGCC- CGGCCCGAUCCCGGAUCC-UCCGC-
GGGGCUGUU-UGCGAU-U---U-GGAG-GUGACCUCGGACGGCGUC-G------------GUUCUCCAGUCC-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
FJ596635_Chlorogomphus_brunneus       UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGG--CCGCGACC-AG AGAUGGCGUUUC--CGC-
GGCC-G-GGGG--GCGA---CCCUCG-GUC---CGG-GGGCGCCACUCCGCU-GCCG-CCGUUCACUG-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC-CUGUAGGACGUCGCGACCCGUCGG-
GCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGUC-UGC-GCGGUCCG-CUCUCCCUUCGGGGGGGCUGCCUGC---GCAC-GAC CCCGGGGA-C-CCCGGC--CGGGUGC-UCGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCGGU---------CA------UUCGGCGU---CCGGCCCUCCGCAA-GCGCCC
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GCGGGAGUCCGGGCU---U-CCGGGCC-CGGCCCGAUCCCGGAUCC-UCCGC-GGGGCUGUU-UGCGAU-U---U-GGAG-GUGACCUCGGACGGCGUC-G-------------GUUCUCCAGUCC-
GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Chlorogomphus_sp ????????????????????-??-???-??????????????????-???
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Synthemis_eustalacta_OSE UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCUGCGCGUCGGGCGGCGC--CCGCGAUC-AGAGAUGGUGUUCU--CGC- GGCC-G-GGGG--GCGA---
CCCUCG-GUC---CGG-GAGCUCCACUCCGCG-GGCG-CCG-UAUUAGCUCCCGACGCCGGA-GUGAC-GCACUUCUC--CCC-CAGUAGAACGUCGC GACCCGUCGG-GCG-----CCGGCCU--AAGG-
UCCCGGGUG-GAGUC-UGU-GCAG-------UU-CG-------------CUGC---GCAA-GACCCCGGGGU-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGACGCGCCGCU---------CGU-----AUCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGAGAC---U-CCGGGCC- CGGCCCCGGUCUCGCUCCC-UCCGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUCCUCGGACGGCGUC-G-------------AUCCUCCCGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGGCUG-UUCAAUGG
Archaeosynthemis_marcrostigma ????????????????????-??-???-??????????????????-?????????????????????????????????
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Archaeosynthemis_leachii ????????????????????-??-???-??????????????????-???
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???????--ACCCGUCUU-GAAACACGG
Eusynthemis_brevistyla_OEB uaagacugaauacggccacg-ag-acc-gauagcgaccaaguaccg-ugagggaaaguugaaaagaacuuugaagagagaguucaagaguacg ugaaaccgu-
c-ugggagu-aaacggguggguucCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGC--CCGCGAUC-AGAGAUGGUGUUCU--CGC- GGCC-G-GGGG--GCGA---
CCCUCG-GUC---CGG-GAGCUCCACUCCGCG-GGCG-CCG-UUCUAGCUCCCGACGCCGGA-GUGAC-GCACUUCUC--CCC-CAGUAGAACGUCGC GACCCGUCGG-GCG-----CCGGCCU--AAGG-
UCCCGGGUG-GAGUC-UGU-GCAG-------CU-CG-------------CUGC---GCAC-GACCCCGGGGA-U-CCCGGC--CGG GUGC-UCGACGGUACGAA-G-
AGAGGAAGGAGUCGACGCGCCGCU---------CGU-----CUCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUGCGAGAC---U-CCGGGCC- CGGCCCCGGUCUCGCUCCC-UCCGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGCCCUCGGACGGcguc-g-------------auccucccgucg-gcgacgc-uu-cagcuuggaugg-c cuacccg--acccgucuu-gaaacacgg
FJ596573_Eusynthemis_guttata UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGC--CCGCGAUC-AG AGAUGGUGUUCU--CGC-
GGCC-G-GGGG--GCGA---CCCUCG-GUC---CGG-GAGCUCCACUCCGCG-GGCG-CCG-UUCUAGCUCCCGACGCCGGA-GUGAC-GCACUUCUC-- CCC -CAGUAGAACGUCGCGACCCGUCGG-
GCG-----CCGGCCU--AAGG-UCCCGGGUG-GAGUC-UGU-GCAG-------CU-CG-------------CUGC---GCAC-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-UCGACGGUACGAA-G-
AGAGGAAGGAGUCGACGCGCCGCU---------CGU-----CUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUG CGAGAC---U-CCGGGCC-CGGCCCGGUCUCGCUCCC-UCCGC-
GGGGCUGUU-UGCGAC-G---A-GGAG-GUGCCCUCGGACGGCGUC-G-------------AUCCUCCCGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
EU055262_Eusynthemis_nigra UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCUGCGCGUCGGGCGGCGC--CCGCGACC-AGAGAUGGUGUUCU--CGC- GGCC-G-GGGG--GCGA---
CCCUCG-GUC---CGG-GAGCUCCACUCCGCG-GGCG-CCG-UUU----UCCCGACGCCGGA-GUGAC-GCACUUCUC--CCC-CAGUAGAACGUCGC GACCCGUCGG-GCG-----CCGGCCU--AAGG-
UCCCGGGUG-GAGUC-UGU-GCAG-------CU-CG-------------CUGC---GCAC-GACCCCGGGGA-U-CCCGGC--CGG GUGC-UCGACGGUACGAA-G-
AGAGGAAGGAGUCGACGCGCCGCU---------CUC-----GUCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUGCGAGAC---U-CCGGGCC- CGGCCCCGGUCUCGCUCCC-UCCGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGCCCUCGGACGGCGUC-G-------------AUCCUCCC-UCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAGCACGG

EU055263_Choristhemis_flavoterminata UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCUGCGCGUCGGGCGGCGC--CCGCGACC-AG AGAUGGUGUUCU--CGC-
GGCC-G-GGGG--GCGA---CCCUCG-GUC---CGG-GAGCUCCACUCCGCG-GGCG-CCG-UUU----UCCCGACGCCGGA-GUGAC-GCACUUCUC-- CCC -CAGUAGAACGUCGCGACCCGUCGG-
GCG-----CCGGCCU--AAGG-UCCCGGGUG-GAGUC-UGU-GCAG-------CU-CG-------------CUGC---GCAC-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-UCGACGGUACGAA-G-
AGAGGAAGGAGUCGACGCGCCGCU---------CUC-----GUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUG CGAGAC---U-CCGGGCC-CGGCCCGGUCUCGCUCCC-UCCGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGCCCUCGGACGGCGUC-G------------AUCCUCCCGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
Synthemiopsis_gomphomacromioides_ASG UAAGACUGAAUACGGCCACG-AG-Acc-gAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCUGCGCGUCGGGCGGCGC--CCGCGAUC-AG AGAUGGCGUUCU--CGC-
GGCC-G-GGGG--GCGA---CCCUCG-GUC---CGG-GAGCUCCACUCCGCG-GGCG-CCG-UAUUAGUUCCCGACGCCGGA-GUGAC-GCACUUCUC-- CCC -CAGUAGAACGUCGCGACCCGUCGG-
GCG-----CCGGCCU--AAGG-UCCCGGGUG-GAGUC-UGU-GCAG-------CU-CG-------------CUGC---GCAU-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-UCGACGGUACGAA-G-
AGAGGAAGGAGUCGACGCGCCGAU---------CAU-----CUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUC CGAGAC---U-CCGGGCC-CGGCCCGGUCUCGCUCCC-UCCGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUCCUCGGACGGCGUC-G------------AUCCUCCCGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCgucuu-gaaacacgg
Gomphomacromia_chilensis_OGPUAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG
UGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCUGCGCGUCGGGCGGCGC--CCGCGAUC-AGAGAUGGUGUUCU--CGC- GGCC-G-GGGG--
GCAA---CUCUCG-GUC---CGG-GGGCUCCACUCCGCG-GGCG-CCG-UUU--GGUCCCGACGCCGGA-GUGAC-GCACUUCUC--CCC-CAGUAGAACGUCGC GACCCGUCGG-GCG-----CCGGCCU-
-AAGG-UCCCGGGUG-GAGUCUUGU-GCAG-------UU-CG-------------CUGC---GCUA-GACCCCGGGGA-U-CCCGGC--CGG GUGC-UCGACGGUACGAA-G-
AGAGGAAGGAGUCGACGCGCCGCU---------C-------GUCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGAGAC---U-CCGGGCC- CGGCCCGGUCUCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAU-AU--A-GGAG-GUGUCCUCGGACGGCGUC-G------------AUCCUCCGGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
FJ712318_Gomphomacromia_paradoxa   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCUGCGCGUCGGGCGGCGC--CCGCGAUC-AG AGAUGGUGUUCU--CGC-
GGCC-G-GGGG--GCAA---CUCUCG-GUC---CGG-GGGCUCCACUCCGCG-GGCG-CCG-UUU--GGUCCCGACGCCGGA-GUGAC-GCACUUCUC-- CCC -CAGUAGAACGUCGCGACCCGUCGG-
GCG-----CCGGCCU--AAGG-UCCCGGGUG-GAGUCUUGU-GCAG-------UU-CG-------------CUGC---GCUA-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-UCGACGGUACGAA-G-
AGAGGAAGGAGUCGACGCGCCGCU---------C-------GUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUC CGAGAC---U-CCGGGCC-CGGCCCGGUCUCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAU-AU--A-GGAG-GUGUCCUCGGACGGCGUC-G------------AUCCUCCGGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Syncordulia_serendipator   ????????????????????-??-???-??????????????????-??
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Syncordulia_venator   ????????????????????-??-???-??????????????????-??
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EU055287_Idionyx_imbricata   UAAGGCUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGC--CCGCGACC-AGAGAUGGCGUUCU--CGC- GGCC-G-GGGG--GCGA---
CCCCCG-GUC---CGG-GAGCUCCACUCCGCG-GGCG-CCG-AU--GGCUCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CAGUAGAACGUCGC GACCCGUCGG-GCG-----CCGGCCU--AAGG-
UCCCGGGUG-GAGAC-UGC-GCAG-------CU-CG-------------CUGC---GCAC-GACCCCGGGGA-U-CCCGGC--CGG GUGC-UCGACGGCACGAA-G-
AGAGGAAGGAGUCGACGCGCCGCU---------C-------GUCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGAGAC---U-CCGGGCC- CGGCCCGGUCUCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUCCUCGGACGGCGUC-G------------GUCCUCCGGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Idionyx_selysi_   ????????????????????-??-???-??????????????????-??
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???????--ACCCGUCUU-GCAACACGG
EF631478_306_271_Macromidia_rapida    -----------------------------------------------------------------------GAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-N-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCUUCGCCGCGCGUCGGGCGGCGC--ACGCGAUC-CG AGAUGGUGUUCU--CGC-
GGCC-G-UGGG--GCAA---CCCACG-GUC---CGG-GGGCUCCACUCCGCG-GGCG-CCG-UU--UGAUCCCUUCGCCGGA-GUGAC-GCACUUCUC-- CCC -CAGUAGAACGUCGCGACCCGUCGG-
GCG-----CCGGCCU--AAGG-UCCCGGGUG-GAGUC-UGC-GCGG-------CU-UG-------------CCGC---GCAC-GAC CCCGGG GU-U-NCCGGC--CGGGUGC-UCNACGGUACNAA-N-
AGAGGAAGNANUNGACGCNCCUCU---------C-------GUCNGCGU---CCGACCCUCCGCAA-GCGCCC GCGGGAGUC CGAGAU---U-CCGGGCC-CGGCCCGGUCUCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUCCUCGGACNNNNN-----------------nnnnnnnnnnn nnnnnnnnnnnnnnnnnnnnnnnn---------ACCCGUCUU-GAAACACGG
EU424325_Oxygastra_curtisiiUAAGACUGAAUACGGCCACGCAG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-C-
UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGC--CCGCGACC-AGAGAUGGAGUCUU--CGC- GGCC-G-AGGG--GCGA---CCCUCG-
GUC---CGG-GGGCCCCACUCCGCG-GGCG-CCG-UU--CCAUCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CAGUAGAACGUCGC GACCCGUCGG-GCG-----CCGGCCU--AAGG-
YCCCGGGUG-GAGUC-UGC-GCGG-------UU-CG-------------CCGC---GCAC-GACCCCGGGGA-U-CCCGGC--CGG GUGC-UCGACGGCACGAA-G-
AGAGGAAGGAGUCGACGCGCCGCU---------U-------GCCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGGGAU---U-CCGGGCC- CGGCCCGGUCUCGGUCCC-UCCGC-
GGGGCUGUU-UGCAAU-C---A-GGAG-GUGUCCUCGGACGGCGUC-G-------------AUCCUCCGGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
EU055244_Cordulephya_pygmaea          UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCUGCGCGUCGGGCGGCGC--CCGCGAUC-AG AGAUGGUGUUCU--CGC-
GGCC-G-GGGG--GCAA---CCCUCG-GUC---CGG-GGGCUCCACUCCGCG-GGCG-CCG-GU---GUUCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CAGUAGAACGUCGCGACCCGUCGG-
GCG-----CCGGCCU--AAGG-UCCCGGGUG-GAGUC-UGC-GCAG-------UU-CG-------------CUGC---GCAC-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-UCGACGGUACGAA-G-
AGAGGAAGGAGUCGACGCGCCGCC--------UA-------GUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUC CGAGAU---U-CCGGGCC-UGGCCCGGUCUCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAC-A---A-GGAG-GUGUCCUCGGACGGCGUC-G-------------GUCCUCCGGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
EF631456_Pseudocordulia_circularis_8    ????????????????????-??-???-??????????????????-?????????????????????????????????
?????????GUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGC--CCGCGAUC-AG AGAUGGUGUUCU--CGC-
GGCC-G-GGGG--GCAA---CCCUCG-GUC---CGG-GGGCUCCACUCCGCG-G-CG-CCGUUU---GU-CCCGACGUCGGA-GUGAC-GCACUUCUC-- CCC -CAGUAGAACGUCGCGACCCGUCGG-
GCG-----CCGGCCU--AAGG-UCCCGGGUG-GAGUC-UGC-GCAG-------UU-CG-------------CUGC---GCAC-GAC CCCGGG -A-U-CCCGGC--CGGGUGC-UCGACGGUACGAA-G-
AGAGGAAGGAGUCGACGCGCCGCU---------A-------GUCGGCGU---CCGNCCCUCCGCAA--CGCCC GCGGGAGUC CGAGAC---U-CCGGGCC-CGGCCCGGUCUCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAC-U---A-GGAG-GUGUCC------??????????-?????-???-????????????-
???????-??-?????????????-???????--ACCCGUCUU-GAAACACGG
Hesperocordulia_berthoudi_BYB         UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCUGCGCGUCGGGCGGCGC--CCGCGAUC-AG AGAUGGUGUUCU--CGC-
GGCC-G-GGGG--GCGA---CCCUCG-GUC---CGG-GAGCUCCACUCCGCG-GGCG-CCGUUU---GUUCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CAGUAGAACGUCGCGACCCGUCGG-
GCG-----CCGGCCU--AAGG-UCCCGGGUG-GAGUC-UGC-GCAG-------UU-CG-------------CUGC---GCAC-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-UCGACGGUACGAA-G-
AGAGGAAGGAGUCGACGCGCCGCU---------C-------GUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUC CGAGAC---U-CCGGGCC-CGGCCCGGUCUCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAU-G---A-GGAG-GUGUCCUCGGACGGCGUC-G-------------AUCCUCCGGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
EF631444_Lathrocordulia_metallica_6     ????????????????????-??-???-??????????????????-?????????????????????????????????
?????????GUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCUGCGCGUCGGGCGGCGC--CCGCGAUC-AG AGAUGGUGUUCU--CGC-
GGCC-G-GGGG--GCGA---CCCUCG-GUC---CGG-GGACUCCACUCCGCG-GGCG-CCGGUU---GUUCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CAGUAGAACGUCGCGACCCGUCGG-
GCG-----CCGGCCU--AAGG-UCCCGGGUG-GAGUC-UGC-GCAG-------UU-CG-------------CUGC---GCAC-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-UCGACGGUACGAA-G-
AGAGGAAGGAGUCGACGCGCCGCU---------C-------GUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUC CGAGAC---U-CCGGGCC-CGGCCCGGUCUCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAU-G---A-GGAG-GUGUCCUCGGAC??????????-?????-???-????????????-
???????-??-?????????????-???????--ACCCGUCUU-GAAACACGG
Micromidia_convergens_BYB             UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUUCGAAA-GGGGAGAUUCAGGUCU-CGCUGCGCGUCGGGCGGCGC--CCGCGAUC-AG AGAUGGUGUUCU--CGC-
GGCC-G-AGGG--GCGA---CCCUCG-GUC---CGG-GGGCUCCACUCCGCG-GGCG-CCGGUU---GUUCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC-CAGUAGAACGUCGCGACCCGUCGG-
GCG-----CCGGCCU--AAGG-UCCCGGGUG-GAGUC-UGC-GCAG-------UU-CG-------------CUGC---GCAC-GAC
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CCCGGGGA-U-CCCGGC--CGGGUGC-UCGACGGUACGAA-G-AGAGGAAGGAGUCGACGCGCCGCU---------U-------GUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUC CGAGAC-
--U-CCGGGCC-CGGCCCGGUCUCGGUCCC-UCCGC-GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUCCUCGGACGGCGUC-G-------------AUCCUCCGGUCG- GCGACGC-UU-
CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAGCACGG
Micromidia_atrifrons        ????????????????????-??-???-??????????????????-???????????????????????????????????????????????
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EF631441_Austrophya_mystica????????????????????-??-???-??????????????????-????????????????????????GAAGAGAGAGUUCAAGAGUACG UGAAACCGU-C-
UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCUGCGCGUCGGGCGGCGC--CCGCGAUC-AGAGAUGGUGUUCU--CGC- GGCC-G-GGGG--GCAA---CCCUCG-
GUC---CGG-GGGCUCCACUCCGCG-GGCG-CCGGUU---GUUCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CAGUAGAACGUCGC GACCCGUCGG-GCG-----CCGGCCU--AAGG-
UCCCGGGUG-GAGUC-UGC-GCAG-------UU-CG-------------CUGC---GCAC-GACCCCGGGGA-U-CCCGGC--CGG GUGC-UCGACGGUACGAA-G-
AGAGGAAGGAGUCGACGCGCCGCU---------C-------GUCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUCCGAGAC---U-CCGGGCC- CGGCCCGGUCUCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAU-G---A-GGAG-GUGUCCUCGGAC??????????-?????-???-????????????-???????-??-?????????????-
???????--ACCCGUCUU-GAAACACGG
EF631448_Austrocordulia_refracta_36     ????????????????????-??-???-??????????????????-?????????????????????????????????
?????????GUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAG
GUCU-CGCUGCGCGUCGGGCGGCGC--CCGCGAUC-AGAGAUGGUGUUCU--CGC-GGCC-G-GGGG--GCGA---CCCUCG-GUC---CGG-GGGNUNCACUCCGCG-GGCG-CCG
GU----GUUCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CAGUNGAANGUCGNGACCCNUCGG-GNN-----CCGGNGU----------------------------------
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EF631470_Archaeophya_magnifica_19       ????????????????????-??-???-??????????????????-????????????????????????GAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCUGCGCGUCGGGCGGCGU--CCGCGAUC-AG GGAUGGUGUUCU--CGC-
GGCC-G-GGGG--GCGA---CCCUCG-GUC---CGG-GAGCUCCACUCCGCG-GGCG-CCGUGUCUUGCUCCCGACGCCGGA-GUGAC-GCACUUCUC-- CCC -CAGUAGAACGUCGCGACCCGUCGG-
GCG-----CCGGCCU--AAGG-UCCCGGGUG-GAGUC-UGU-GCGG-----CCCU-CG-----------AAACCGC---GCAC-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-UCGACGGUACGAA-G-
AGAGGAAGGAGUCGACGCGCCGAA-------UCC-------AUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUC CGAGAC---U-CCGGGCC-CGGCCCGGUCUCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUCCUCGGAC??????????-?????-???-????????????-
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Epophthalmia_elegans        ????????????????????-??-???-??????????????????-???????????????????????????????????????????????
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Didymops_transversa_ODT     UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGC-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUGGGAAGGAUC--UCGCGACC-AGAGAUGGCGUUUC--CGC- GGCC-G-AGGG--GCAA---
CCUUCG-GUC---CGG-GGGCGCCACUCCGCG-GGCU-CCG---------UCCCUC-CCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GACCCGUCGG-GUG-----CCGGCCU--AAGG-
UCCCGGGUG-GAGCC-UCGCGCGGA------UC-UU-------------CCGC---GCGA-GACCCCGGGGA-U-CCCGGC--CGG UCGC-CCGACGGCACGAA-G-
AGAGGAAGGAGUCGACGCGCCGCU---------CA------GUCGGCGU---CCGGCCCUCCGCAA-GCACCCGCGGUAGUCCGGGGU---U-CCGGGCC- CGGCCCGGUCUCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUCCUCGGACGGCGUC-G-------------AUCCUCCGGUCG-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACC??????-?????????
Macromia_illinoiensis_OMi   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUGGGAAGGAUC--UCGCGACC-AGAGAUGGCGUUCU--CGC- GGCC-G-AGGG--GCGA---
CCCUCG-GUC---CGG-GGGCGCCACUCCGCG-GGCU-CCG---------UCCCUC-CCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GACCCGUCGG-GUG-----CCGGCCU--AAGG-
UCCCGGGUG-GAGCC-UCGCGCGGAU-----UC-UU-------------CCGC---GAGA-GACCUCGGGGA-U-CCCGGC--CGG UCGC-CCGACGGCACGAA-G-
AGAGGAAGGAGUCGACGCGCCGCU---------CG------GUCGGCGU---CCGGCCCUCCGCAA-GCACCCGCGGUAGUCCGGGGU---U-CCGGGCC-
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CGGCCCGGUCUCGGUCCC-UCCGC-GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUCCUCGGACGGCGUC-G-------------UUCCUCCGGUCA-GCGACGC-UU-CAGCUUGGAUGG-C
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FJ596570_Macromia_amphigena UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUGGGAAGGAUC--UCGCGACC-AG AGAUGGCGUUCU--CGC-
GGCC-G-AGGG--GCGA---CCCUCG-GUC---CGG-GGGCGCCACUCCGCG-GGCU-CCG---------UCCCUC-CCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGACCCGUCGG-
GUG-----CCGGCCU--AAGG-UCCCGGGUG-GAGCC-UCGCGCGGAU-----UC-UU--------------CCGC---GCGA-GAC CCCGGG GA-U-CCCGGC--CGGUCGC-CCGACGGCACGAA-G-
AGAGGAAGGAGUCGACGCGCCGCU---------CG------GUCGGCGU---CCGGCCCUCCGCAA-GCACCC GCGGUAGUC CGGGGU---U-CCGGGCC-CGGCCCGGUCUCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUCCUCGGACGGCGUC-G-------------UUCCUCCGGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Macromia_eurynome_BYB CAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-CGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGAGUGCGGGACGCAUC--CCGCGACC-AG AGAUGGCGUUCU--CGC-
GGCC-G-AGGG--GCGA---CCCUCG-GUC---CGG-GGGCGCCACUCCGCG-GGCC-GCG---------UCCCUC-CCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGACCCGUCGG-
GUG-----CCGGCCU--AAGG-UCCCGGGAG-GAGCC-UCGCGCGGA------UC-UU--------------CCGC---GCGG-GAC CCCGGG GA-U-CCCGGC--CGGUCUC-CCGACGGCACGAA-G-
AGAGGAAGGAGCAGGCGCGCCGCA---------CC------GUCGGCGU---CCGGCCCUCCGCAA-GCACCC GCGGGCGUC CGGGGU---U-CCGGGCC-CGGCCCGGUCUCGGUCGC-UCCGC-
GGGGCUGUU-UGCGAU-A---C-GGAG-GUGUCCUCGGACGGCGUC-U-------------GUCCUCCGGUCG- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
Macromia_magnifica ????????????????????-??-???-??????????????????-??
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FJ712329_Macromia_splendens UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGC-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUGGGAAGGAUC--CCGCGACC-AG AGAUGGCGUUCU--CGC-
GGCC-G-AGGG--GCGA---CCUUCG-GUC---CGG-GGGCGCCACUCCGCG-GGCU-CCG---------ACCCUC-CCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGACCCGUCGG-
GUG-----CCGGCCU--AAGG-UCCUGGGUG-GAGCC-UCGCGCGGA------UC-A----------------------------------
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---GGAG-GUGUCCUCGGACGGCGUC-G-------------AUCCUCCGGUCG-GCGACGC- UU-
CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
EF631397_Phyllomacromia_bifasciata_OPBi????????????????????-??-???-??????????????????-?????????????????????????????????
?????????GUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCGGGACGGCCC--CCGCGACC-AG AGAUGGCGUUCU--CGC-
GGCC-G-AGGG--GCGA---CCCUCG-GUC---CGG-GGGCGCCACUCCGCG-GGUU-CCU---------UCCCGC-CCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGGACGUCGCGACCCGUCGG-
GUG-----CCGGCCU--AAGG-UCCCGGGUG-GAGUC-UCGC-----------CU-UU----------CGAGGCGC---GCGA-GAC CCCGGG GU-U-CCCGGC--CGGUCGC-CCGACGGCACGAA-G-
AGAGGAAGGAGUCGACGCGCCGCU---------CAG-----UUCGGCGU---CCGGCCCUCCGCAA-GCACCC GCGGGAGUC CGGGGU---U-CCGGGCC-CGGCCCGGUCUCGGUCCC-UC----------
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FJ596572_Idomacromia_proavita UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGC--CCGCGACC-AG AGAUGGCGUUCU--CGC-
GGCC-G-AGGG--GCGA---CCCUCG-GUC---CGG-GGGCGCCACUCCGCG-GGCG-CCG-UGU--AAUCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CAGUAGAACGUCGCGACCCGUCGG-
GCG-----CCGGCCU--AAGG-UCCCGGGUG-GAGCC-U-GCGCGG-------UU-CG--------------CCGC---GCAC-GAC CCCGGG GU-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGACGCGCCGCU---------C-------GUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUC CGGGAC---U-CCGGGCC-CGGCCCGGUCUCGGUCCC-UCCGC-
GGGGCUGUU-UGCGAU-A---A-GGAG-GUGUCCUCGGACGGCGUC-G-------------AUCCUCCNNNNN- NNNNNNN-NN-NNNNNNNNNNN-NNNNNNNN--ACCGGUCUU-GAAGCACGG
EF631427_Aeschnosoma_forcipula_29 ????????????????????-??-???-??????????????????-????????????????????????????????
?????????--UCU-CGCCGUGCGUAGGGCGUCGU--CCGCNAAU-GG GGAUGGCGUCUU--CGA-
GUCC-G-GGGG--GCGA---CCCCCG-GGC---CGG-AGGCUCCACUCCGCG-GGCG-UCG-AGU--A--CCCUGCGUUGGA-AAGAC-GCACUUCUC-- CCC -CGGUAGGACGUCGCGACCCGUCGG-
CCG-----CCGGCCU--AAGG-UCCCGGGUG-GAGCC-UCGC-----------CC-UC-----------GUGCCGC---GCGA-GAC CCCGAG GG-U-CCCGGC--CGGUUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGACGCGCCGAC---------GU----GCUCGGCGGU---CCGGCCCUCCGCAA-GCACCC GUGGGAGAG CGGGGU---U-CCGGGCC-CGGCCCGGUCCCGUUCCC-UCCGC-
GGGGCUGUU-UGCGAC-C---A-GGAG-GUGUCCUCGGAC??????????-?????-???-????????????-
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EF631415_Pentathemis_membranulata_15   ????????????????????-??-???-??????????????????-?????????????????????????????????
?????????GUACGUGAAACCGU-U-UGGGAGU-AAACGGGUGGUUCCCGAAAGUUCGAAA-GGGGAGAUUCAGGUCU-CGCCGUGCGCAGGGCGUCGC--UCGCGAAU-GG GGAUGGUGUCUU--CGA-
GUCC-G-GGGG--GCGA---CCCCCG-GGC---CGG-AGGCCCCACCCCGCG-GGCG-GCG-GGC--A--CCCUGCGUUGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGGACGUCGCGACCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAGCC-UCGC----------CC-CA----------GCGCCGC---GCGA-GAC CCCGAG GG-U-CCCGGC--CGGUUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGACGCGCCGAU---------CC------CUCGGCGU---CCGGCCCUCCGCAA-GCACCC GCGGGAGAG CGGGGC---U-CCGGGCC-CGGCCCGGUCCCGUUCCC-UCCGA-
GGGGCUGUU-UGCGAG-C---A-GGAG-GUGUCCUCGGAC??????????-?????-???-????????????- NNNNNNN-NN-NNNNNNNNNNN-NNNNNNNN--ACCCGUCUUGGAAACACGG
Tetragoneuria_cynosura   UAAGACUGAAUACGGCCACG-AG-GCC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUAAAGAGUACG UGAAACCGU-
G-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGACGGCGC--CCGCGAAC-GGAGAUGGAGUCUG--CGC- AGCC-G-GGGG--GUAA---
CCCUCG-GUCUCGCGG-GGGCUCCACUCCGCG-GGCG-UCU-UCU----UUCCGGCGCCGGA-GCGAC-GCACUUCUC--CCCCCUGUAGAACGUCGC GACCCGUCGG-UCG-----UCGGCCU--AAGG-
CCCCGGGUG-GAGCC-UCGCGCGCGUCU---CU-CG----------GGACGCGUUU-GCGA-GACCCCGGGGA-C-CCCGGC--CGG CUAC-CCGACGGAAGGAA-G-
AGAGGAAGGAGUCGACGCGCCGAC-------CUUA----UGCUCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUGCGGU-----U-CCGGGCC- UGGCCCGCUGCCGCGCCC-UCCGC-
GGGGCUGUU-UGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUCUG-------------AUCCUCCGGUCU-GUGGCGC-UU-CAGCUUGGAAGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Tetragoneuria_costalis   ????????????????????-??-???-??????????????????-???
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FJ596567_Tetragoneuria_canis   UAAGACUGAAUACGGCCACG-AG-GCC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-G-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGACGGCGC--CCGCGAAC-GG AGAUGGAGUCUG--CGC-
AGCC-G-GGGG--GUAA---CCCUCG-GUCUCGCGG-GGGCUCCACUCCGCG-GGCG-UCU-UCU--U--UCCGGCGCCGGA-GCGAC-GCACUUCUC-- CCC CCUGUAGAACGUCGCGACCCGUCGG-
UCG-----UCGGCCU--AAGG-CCCCGGGUG-GAGCC-UCGCGCGCGUCU---CU-CG----------GGACGCGUUU-GCGA-GAC CCCGGG GA-C-CCCGGC--CGGCUAC-CCGACGGAAGGAA-G-
AGAGGAAGGAGUCGACGCGCCGAC-------CUUA----UGCUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUG CGGU-----U-CCGGGCC-UGGCCCGCUGCCGCGCCC-UCCGC-
GGGGCUGUU-UGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUCUG-------------AUCCUCCGGUCU- GUGGCGC-UU-CAGCUUGGAAGG-CCUACCCG--ACCCGUCUU-GAARCACGG
FJ596565_Epitheca_princeps   UAAGACUGAAUACGGCCACG-AG-CCC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUAAAGAGUACG UGAAACCGU-
G-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGACGGCGC--CCGCGAAC-GGAGAUGGAGUCUG--CGCA G-CC-G-GGGG--GUUA---
CCCUCG-GUCUCGCGG-GGGCUCCACUCCGCG-GGCG-UCU-UCU--U--UCCGGCGCCGGA-GCGAC-GCACUUCUC--CCCCCUGUAGAACGUCGC
GACCCGUCGG-UCG-----UCGGCCU--AAGG-CCCCGGGUG-GAGCC-UCGCGCGCGUCU---CU-CG----------GGACGCGUUU-GCGA-GACCCCGGGGA-C-CCCGGC--CGG CUAC-
CCGACGGAAGGAA-G-AGAGGAAGGAGUCGACGCGCCGAC---------CU--UACGCUCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUGCGGU-----U-CCGGGCC-
UGGCCCGCUGCCGCGCCC-UCCGC-GGGGCUGUU-UGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUCUG-------------AUCCUCCGGUCU-GUGGCGC-UU-CAGCUUGGAAGG-C CUACCCG-
-ACCCGUCUU-GAAACACGG
FJ596561_Epitheca_marginata   UAAGACUGAAUACGGCCACG-AG-GCC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-G-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGACGGCGC--CCGCGAAC-GG AGAUGGUGUCCA--CGC-
AGCC-G-GGGG--GCAA---CCCUCG-GUCUUGCGG-AGGCUCCACUCCGCG-GGCG-UCU-UCU--U--UCCGGCGCCGGA-GCGAC-GCACUUCUC-- CCC CCUGUAGAACGUCGCGACCCGUCGG-
UCG-----CCGGCCU--AAGG-CUUCGGGUG-GAGCC-UCGCGCGCGUCU---CU-CG----------GGACGCGUUA-GCGA-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-CCGACGGAAGGAA-G-
AGAGGAAGGAGUCGACGCGCCGAC-------CUAA----CGCUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUG CGGU-----U-CCGGGCC-UGGCCCGCUGCCGCGCCC-UCCGC-
GGGGCUGUU-UGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUCUG-------------AUCCUCCGGUCA- GUGGCGC-UU-CAGCUUGGAAGG-CCUACCCG--ACCCGUCUU-GAARCACGG
FJ596564_Epitheca_bimaculata   UAAGACUGAAUACGGCCACG-AG-CCC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUAAAGAGUACGUGAAACCGU-G-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGACGGCGC--CCGCGAAC-GG AGAUGGAGUCUG--CGC-
AGCC-G-GGGG--GUUA---CCCUCG-GUCUCGCGG-GGGCUCCACUCCGCG-GGCG-UCU-UCU--U--UCCGGCGCCGGA-GCGAC-GCACUUCUC-- CCC CCUGUAGAACGUCGCGACCCGUCGG-
UCG-----UCGGCCU--AAGG-CCCCGGGUG-GAGCC-UCGCGCGCGUCU---CU-CG----------GGACGCGUUU-GCGA-GAC CCCGGG GA-C-CCCGGC--CGGCUAC-CCGACGGAAGGAA-G-
AGAGGAAGGAGUCGACGCGCCGAC-------CUUA----CGCUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUG CGGU-----U-CCGGGCC-UGGCCCGCUGCCGCGCCC-UCCGC-
GGGGCUGUU-UGCGAU-C---AUGGAG-GUGUCCUCGGACGGCGUCUG-------------AUCCUCCGGUCU- GUGGCGC-UU-CAGCUUGGAAGG-CCUACCCG--ACCCGUCUU-GAARCACGG
EF631480_Rialla_villosa_83   ????????????????????-??-???-??????????????????-?????????????????????????????????
?????????--GAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCGGCGC--CCGCGAAC-GG

AGAUGGGGUCCG--CGC-UGCC-G-GGGG--GCAA---CCCCCG-GUC---CGG-GGGCCCCACUCCGCG-GGCG-UCU-UCU--U-UUCCGGCGCCGGA-GCGAC-GCACUUCUC-- CCC
CCUGUAGAACGUCGCGACCCGUCGG-UCG-----CCGGCCU--AAGG-CCCCGGGAG-GAGCC-UCGCGCGCGUCU---UU-CG----------GGACGCGUUUUGCGA-GAC CCCGGG GA-U-CCCGGC--
CGGGUGC-CCGACGG---
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Cordulia_aenea_ ????????????????????-??-???-??????????????????-???
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Cordulia_shurtleffii_BYB UAAGGCUGAAUACGGCCACG-AG-GCC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-G-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGC--CCGCGAAC-GG AGAUGGGGUCCA--CGC-
GGCC-G-GGGG--GCGA---CCCCCG-GUCUCGCGG-GGGCUCCACUCCGCG-GGCG-UCU-UCU--U-UCCCGGCGCCGGA-GCGAC-GCACUUCUC-- CCC CCUGUAGAACGUCGCGACCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGAG-GAGCC-UCGCGCGCGUCC---CU-CG----------GGACGCGUUU-GCGA-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-CCGACGGAAGGAA-G-
AGAGGAAGGAGUCGACGCGCCGAC-------CUAU----UGCUCGGCGU---CCGGCCCUCCGCAA-GCGCUC GCGGGAGUG UGGU-----U-CCGGGCC-UGGCCCGCUGCCGCGCCC-UCCGC-
GAGGCUGUU-UGCGAU-C---ACGGAG-GUGUCCUCGGACGGCGUCCG-------------AUUCUCCGGUCU- GCGGCGC-UU-CAGCUUGGAAGG-CCUACCCG--ACCCGUCUU-GAAACACGG
FJ596568_Somatochlora_alpestris UAAGGCUGAAUACGGCCACG-AG-GCC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-G-AGGGAGU-AAACGGGUGGUUCCCAAAAGUACGAAA-GGGGAGAUUUAGGUCU-CGACGCACGUCGAGCGGCGU--CCGCGAUA-GG AGAUGGGGUUCA--UGC-
AGCC-G-GGGG--GCAA---CCUCUG-GUU-CGCGG-GGGCUUCAGUCCGCG-GGCG-UCU-UCU--U-UC------------------------------- C CCUGUAGAACGUCGCGACCCGUCGG-
UGG-----CUGGCCG--AAGG-CCUCGGGUG-GAGGC-UAGCGCGCGUCU---CU-CG----------GGACGCGUCA-GCGA-GACCCCGGG GA-U-CCCGGC--UGCGUGG-UUGACGGAAGAAA-G-
AGGGAAAGGAGUCGACGCGCCGAA--------UUA-------UCGGCAA---CCGGCCCUCCACAA-GCGCACGCAGGAGUGUGGU
-----U-CCGAGCC-UGGCCCGAUACCGCACCC-UCCGC-GGGGCUGUU-UGCGAU-G---AUGGAG-GAGUCCUCGGACGGCGUCUG-------------GCCCUCCGAUUA-GCGGCUC-UU-
CAGCUUGGAAGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Somatochlora_flavomaculata ????????????????????-??-???-??????????????????-???
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FJ596569_Somatochlora_metallica UAAGGCUGAAUACGGCCACG-AG-GCC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-G-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGU--CUGCGAUU-GG AGAUGGGGUUCA--CGC-
GGCC-G-GGGG--GCAA---CCUCUG-GUUU-GCGG-GGGCUUCACUCCGCA-GGCG-UCU-UCU--U-UCCCGGCGCCGGA-GCGAC-GCACUUCUC-- CCC CCUGUAGAACGUCGCGACCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCC-UCGCGCGCAUCU---CU-CG----------GGACGCGUCU-GCGA-GAC CCCGGG GA-U-CCCGGC--CGGGUGA-UCGACGGAAGGAA-G-
AGAGGAAGGAGUCGACGCGCCGAA--------AU-------AUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUG UGGU-----U-CCGGGCC-UGGCCCGCUGCCGCGCCC-UCCGC-
GGGGCUGUU-UGCGAU-G---AUGGAG-GUGUCCUCGGACGGCGUCUG-------------ACCCUCCGGUCG- GCGGCGC-UU-CAGCUUGGAAGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Somatochlora_tenebrosa_OSTnUAAGGCUGAAUACGGCCACG-AG-GCC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-G-
UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCGGCGU--CUGCGAUU-GGAGAUGGGGUUCA--CGC- GGCC-G-GGGG--GCAA---CCUCUG-
GUUU-GCGG-GGGCUUCACUCCGCA-GGCG-UCU-UCU----UUCCGGCGCCGGA-GCGAC-GCACUUCUC--CCCCCUGUAGAACGUCGC GACCCGUCGG-UCG-----CCGGCCU--AAGG-
CCCCGGGUG-GAGCC-UCGCGCGCAUCU---CU-CG----------GGACGCGUCA-GCGA-GACCCCGGGGA-U-CCCGGC--CGG GUGA-UCGACGGAAGGAA-G-
AGAGGAAGGAGUCGACGCGCCGAA--------AU-------AUCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGGGAGUGUGGU-----U-CCGGGCC- UGGCCCGCUGCCGCGCCC-UCCGC-
GGGGCUGUU-UGCGAU-G---AUGGAG-GUGUCCUCGGACGGCGUCUG-------------ACCCUCCGGUCG-GCGGCGC-UU-CAGCUUGGAAGG-C CUACCnG--ACCNGUCUU-GAAnCACGG
FJ596562_Hemicordulia_mindana UAAGGCUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCAU-G-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGAGGCGC--CCGCAAAC-GG AGAUGGUGUCCA--CGC-
UGCC-G-GGGG--GCGA---CCCCCG-GUCUCGCGG-GGCCUCCACUCCGCG-GGAG-UCU-UCU--U-AUCCGGCGCCGGA-GCGAC-GCACUUCUC-- CCCCCUGUAGAACGUCGCGACCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGCG-GAGCC-UC--GCGCGAGU---CUUUC---------GGGACGCGUCU-GCGA-GAC

CCCGGGGG-U-CCCGGC--CGGGUGC-CCGACGGAAGGAA-G-AGAGGAAGGAGUCGACGCGCCGAU-----------------UUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUG CGGU---
--U-CCGGGCC-CGGCCCGUUGCCGCGCCC-UCCGC-GGGGCUGUU-UGCGAU-UA--A-GGAG-GUGUCCUCGGACGGCGUCUG-------------ACCCUCCGGUCG- GCGGCGC-UU-
CAGCUUGGAAGG-CCUACCCG--ACCCGUCUU-GAARCACGG
EU055266_Hemicordulia_australiae UAAGGCUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCAU-G-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGAGGCGC--CCGCAAAC-GG AGAUGGUGUCCA--CGC-
UGCC-G-GGGG--GCGA---CCCCCG-GUCUCGCGG-GGGCUCCACUCCGCG-GGAG-UUU-UCU--U-AUCCGGCGCCGGA-GCGAC-GCACUUCUC-- CCC CCUGUAGAACGUCGCGACCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGCG-GAGCC-UC--GCGCGAGU---CUUUC---------GGGACGCGUCU-GCGA-GAC CCCGGG GG-U-CCCGGC--CGGGUGC-UCGACGGAAGGAA-G-
AGAGGAAGGAGUCGACGCGCCGAU-----------------UUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUG CGGU-----U-CCGGGCC-CGGCCCGUUGCCGCGCCC-UCCGC-
GGGGCUGUU-UGCGAU-UA--A-GGAG-GUGUCCUCGGACGGCGUCUG-------------ACCCUCCGGUCG- GCGGCGC-UU-CAGCUUGGAAGG-CCUACCCG--ACCCGUCUU-GAAACACGG
EU055254_Procordulia_jacksoniensis UAAGGCUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCAU-G-UGGGAGU-AAACGGGUGGUUCCCGAAAGUACGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGAGGCGC--CCGCGAAC-GG AGAUGGUGUCCA--CGC-
UGCC-G-GGGG--GCGA---CCCCCG-GUCUCGCGG-GGGCUCCACUCCGCG-GGCG-UCU-UCU--U-AUCCGGCGCCGGA-GCGAC-GCACUUCUC-- CCC CCUGUAGAACGUCGCGACCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGCG-GAGCC-UC--GCGCGAGU---CUUUC---------GGGACGCGUCU-GCGA-GAC CCCGGG GG-U-CCCGGC--CGGGUGC-CCGACGGAAGGAA-G-
AGAGGAAGGAGUCGACGCGCCGAA-------CUAU----CGAUCGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUG CGGU-----U-CCGGGCC-CGGCCCGCUGCCGCGCCC-UCCGC-
GGGGCUGUU-UGCGAU-UA--C-GGAG-GUGUCCUCGGACGGCGUCUG-------------ACCCUCCGGUCG- GCGGCGC-UU-CAGCUUGGAAGG-CCUACCCG--ACCCGUCUU-GAAACACGG
Unaligned_Libellulid D2-?????????????????-??-???-??????????????????-???
???????????????????-???????????????????????????-????????????????-????????????????????--??????????????????????????????
????-?-??????????---????????????????-????????????????????????---------???????????????????????????--??????????????????
??????????-???-----???????-?????-?????????-??????????????ddddddd-----dddddddddddddd???????????????????????-?-??????--???
????-?????????????-??????????????????????????44444444444444444??---
??-?????????--??????-????????????????????xXXXXXXXXXXXX????????????-??????????-
????????????-????????--?????????-?????????
FJ596583_Notiothemis_robertsi UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACA-AG GGAUGGCGUUCU--CGC-
GGCC-G-UGGG--GCGA---CCCACG-GUC---CGG-GAGUGCCACCCCGCG-GGCG-CGG-UCU--G-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCC-UGC-GCGG-------UU-CG--------------CCGC---GCAC-GAC ACCGGG UC-G-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAUGAAGGAGCAGGCGCGCCUCU---------UU------GCAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUG GGAGGU---C-CCGGGCC-CGGCCCGGCCUCCA-CCU-UCAGC-
GGGGCUGUU-UGCGAU-U---C-GGAG-GUGUGCUCGGACGGCGUC-G-------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
FJ596578_Tetrathemis_irregularis UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACG-AG GGAUGGCGUUCU--CGC-
GACC-G-UGGG--GCGA---CCCACG-GUC---CGG-GAGUGCCACCCCGCG-GGCG-CGG-UCU--G-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
CCG-----CCGGCCU--AAGG-UCCCGGGUG-GAGCC-UGC-GCGG-------UU-CU--------------CCGC---GCAC-GAC CCCGGG UC-G-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAUGAAGGAGUCGGCGCGCCUCU---------AAAA---AGCAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCUGGAGCG GGAGGU---C-CCGGGCC-CGGCCCGGCCUCCU-CUU-CCGGC-
GGGGCUGUU-UGCGAU-U---C-GGAG-GUGUGCUCGGACGGCGCC-G-------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
EF631495_318_222_Tetrathemis_polleni --GAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCCGCGC--CCGCGACC-AG GGAUGGCGAGUU--CGC-
GGCC-G-CGGG--GCGA---CCCGCG-GUC---CGG-GAGCGCCACCCCGCG-GGCG-CGG-UCU--G-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
CCG-----CCGGCCU--AAGG-UCCCGGGUG-GAGUC-UGC-GCGGA------CUUGA-----------UAUCCGC---GCAC-GAC CCCGGG UC-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAUGAAGGAGCAGGCGCGCCUCU-------UUCG-----AGCAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGAG GGAGUU---C-CCGGGCC-CGGCCCGGACUCCU-CCU-CCUGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGCGCUCGGAC-------------------------------N- NNNNNNN-NN-NNNNNNNNNNN-NNNNNNN----CCCGUCUU-GAAACACGG
FJ596587_Urothemis_signata UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACU-AGGGAUGGCGUUCU--CGC- GGCC-G-UGGG--GCGA---
CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGCG-CGGUUCU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-CCG-----CCGGCCU--AAGG-
UCCCGGGAG-GAGCC-UCCCGCGG-------UC-UU-------------UCCGC---GGGA-GACCCCGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCCAC--------UCU----UUGCGGGCGU---CCGCCCCUCCGCAA-GCGCUCGCGGGAGUCGGAGGA--CU-CCGGGCC-

CGGCCCGGCCUCCU-UCU-UCAGC-GGGGCUGUU-UGCGAU-CG--AAGGAG-GUGAGCUCGGACGGCGUC-G------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C
CUACCCG--ACCCGUCUU-GAARCACGG
EF631421_313_217_Urothemis_assignata ---
-AGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGUGCGCCGGGCCGCGC--CCGCGACU-CGGGAUGGCGUUC U--CGC-GGCC-G-
UGGG--GCGA---CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGGUUCU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCG-CGGUAGAA CGUCGCGAUCCGUCGG-GCG-----
CCGGCCU--AAGG-CCUCGGGCG-GAGCC-U-------CUC----UC-UU------------UCCGC---GGGA-GACCCCGGGGA-U-CCC GGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCCAC--------CAC----GCGCGGGCGU---CCGCCCCUCCGCAA-GCGCUCGCGGGAGUCGGAGGUUU-U- CCGGGCC-CGGCCCGGCCUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-U---C-GGAG-GUGUGCUCGGAC----------------------------------NNNNNNN-NN- NNNNNNNNNNNN-NNNNNNNN--ACCCGUCUU-GAAACACGG
FJ596588_Macrodiplax_cora UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCUCGC--CCGCGAUA-UGGGAUGGCGUUCU--CGC- GGCC-G-UGGG--GCGA---
CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGCG-GGGUUCU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-CCG-----CCGGCCU--AAGG-
UCUCGGGAG-GAGCC-UCUCGCGG-------UU-UU------------UCCGC---GGGA-GACCCCGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCCUU---------------CGCGGGCGU---CCGCCCCUCCGCAA-GCGCUCGCGGGAGUCGGAGGUU--U-CCGGGCC- CGGCCCGGCCUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-U---U-GGAG-GUGCGCUCGGACAGCGUC-G------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
EU055229_Macrodiplax_balteata UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCUCGC--UCGCGACA-CG GGAUGGCGUUUU--CGC-
GGCC-G-CGGG--GCGA---CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGCG-GGGUUCA-UU-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -
CGGUAGAACGUCGCGAUCCGUCGGGUCG-----CCGGCCU--AAGG-UCUCGGGAG-GAGGC-UCUCGCGG-------UC-UU------------UCCGC---GGGA-GAC CCCGGG GA-U-CCCGGC--
CGGGUGC-CCGACGGCACGAA-G-AGAGGAAGGAGUCGGCGCGCCCCA-------CUU-------CGG-GCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGAG GGAGGUGUCU-UCGGGCC-
CGGCCCGGCCUCCU-CCU-UCAGC-GGGGCUGUU-UGCGAU-U---C-GGAG-GUGAGCUCGGACAGCGUC-G------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--
ACCCGUCUU-GAAACACGG
EF631458_344_253_Zyxomma_elgneri --GAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCUU--CCGCGACA-AG GGAUGGCUCUCU--CGC-
GGCC-G-UGGG--GCGA---CCCACG-GUC---CGG-GAGCGCCACUCCGCG-GGAG-CGG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGUC-UGC-GCGG-------UU-CG-------------CCGC---GCAC-GAC CCCGGG AA-C-CCCGGC--CGGGAGC-CCGACGGUAUGAA-A-
AGAGGAAGGAGUCGGCGCGCCUUC---------C-------GCAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGAGG----U-CCGGGCC-CGGCCCGGCUUCUU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---C-GGAG-GUGUGCUCGGACN------------------------------N- NNNNNNN-NN-NNNNNNNNNNN-NNNNNNnn--nnnnnnnnnnnnnnnnnn
Zyxomma_petiolatum_GU196340UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-C-
UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCUU--CCGCGACA-AGGGAUGGCUCUCU--CGC- GGCC-G-UGGG--GCGA---CCCACG-
GUC---CGG-GAGCGCCACUCCGCG-GGUG-CGG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
CCCCGGGUG-GAGUC-UGC-GCGG-------UU-CG-------------CCGC---GCAC-GACCCCGGGAA-U-CCCGGC--CGG GAGC-CCGACGGUAUGAA-A-
AGAGGAAGGAGUCGGCGCGCCUUC---------C-------GCAGGCGU---CCGCCCCUCCGCAA-GCGCCCGCGGGAGUCGGAGG----U-CCGGGCC- CGGCCCGGCUUCUU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---C-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
FJ596576_Zygonyx_torridus UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG
UGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAG-UCU-CGCCGCGCGCCGGGGCGCGC--CCGCGAUC-CGAGAUGGCGCUUU--CGC- GGCC-G-UGGG--
GCGA---CCCACG-GUC---CGG-GAUCGCCACUCCGCG-GGCG-CGG-UCC--G-ACCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCC
U--AAGG-UCCCCGGUG-GAGCC-UGC-GCGG-------UU-CG-------------CCGC---GCAC-GACCCGGGGGU-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUUC---------C-------GCAGGCGU---CCGCCCCUCCGCAA-GCGCCCGGUGGAGUCGGGAG----U-CCGGGCC-CGGCCCGGCUUCCU-UUU- UCGUC-
GGGGCUGUU-UGCGAU-U---C-GGAG-GUGCGCUCGGACGGCGUC-G------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU- GAARCACGG
EU055233_Nannophlebia_sp UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAG-UCU-CGCCGCGCGCCGGGCCGCGU--CAGCGACC-AGGGAUGGAGUUCU--CGC- GGCC-G-UGGG--GCGA---
CCCACG-GUC---CGG-GAUCGCCACCCCGCG-GGCG-CGG-UCU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
UCCCCGGUG-GAGCC-UGC-GCGG-------UU-UU-------------CCGC---GCAC-GACCCGGGGGA-U-CCCGGC--CGG GUGG-CGGACGGCACGAA-G-
AGAGGAAGGAGUCGGCGCGCCCUC----------------GCGGGCGU---CCGCCCCUCCGCAA-GCGCCCGCGGGAGUCGGGAG----A-CCGGGCC-

```
CGGCCCGGCUUCCU-UCU-UCAGC-GGGGCUGUU-UGCGAU-U---C-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C
CUACCCG--ACCCGUCUU-GAAACACGG
Bironides_sp_HOL_2010_GU196365        UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAG-UCU-CGCCGCGCGCUGGGCCGCUC--CCGCGACA-AG GGAUGGAGUUCU--CGC-
GGCC-G-UGGG--GCGA---CCCACG-GUC---CGG-GAUCGCCACCCCGCG-GGAG-CGG-UGU--U-UGCCGGCGUCGGG-GUGAC-GCACUUCUU-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCUU--AAGG-CCCGCGGUG-GAGUC-UGC-GCGG-------UU-CG-------------CCGC---GCAC-GAC CCGCGU GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGACGCGCCCUC----------------GUGGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGGAGU---C--CGGGCC-AGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAC-G---A-GGAG-GUGCGUUCGGACGGCGUC-G------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
Huonia_epinephela_GU196370   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGCGCGAAA-GGGGAGAUUCAG-UCU-CGCCGCGCGCCGGGCCGCUC--CAGCGACC-AGGGAUGGAGUUCU--CGC- GGCC-G-UGGG--GCGA---
CCCACG-GUC---CGG-GAUCGCCACCCCGCG-GGAG-CGG-CGC--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-CCG-----CCGGCCU--AAGG-
UCCCCGGUG-GAGUC-UGC-GCGG-------UU-CG-------------CCGC---GCAU-GACCUGGGGGG-U-CCCGGC--CGG GUGU-CCGACGGCACGAA-G-
AGAGGAAGGAGUCGGCGCGCCCUC--------UU-------CGGGGCGU---CCGCCCCUCCGCAA-GCGCCUGCGGGAGUGGGGAGA---C--CGGGCC- CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---C-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
EF631477_361_270_Huonia_oreophila      ------------------------------------------------------------------------------------
---UACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAG-UCU-CGCCGUGCGCCGGGCCGCUC--CAGCGACC-AGGGAUGGAGUUC U--CGC-GGCC-G-
UGGG--GCGA---CCCACG-GUC---CGG-GAUCGCCACCCCGCG-GGGG-CGG-UCU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAA CGUCGCGAUCCGUCGG-CCG-----
CCGGCCU--AAGG-UCCUCGGUU-GAGUN-UGC-GCGG-------UU-CU-------------CCGC---GCAC-GAUCCGAGGGG-U-CCC GGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCCUC----------------CGGGGCGU---CCGCCCCUCCGCAA-GCGCCCGCGGGAGUCGGGAG----U- CCGGGCC-CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCNAU-U---CGAGAG-GUGCGCUCGGAC--------------------------------N-NNNNNNN-NN- NNNNNNNNNNNN-NNNNNNNU--ACCCGUCUU-GAAACACGG
A_EF631485_367_278Onycothemis_testacea-----------------------------------------------------------------------GAAGAGAG
AGUUCAAGAGUANGUGAAACCGU-C-UGGGAGU-AAANNNGUNGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAG-UCU-CGCCGUGCGCCGGGCCNCNC--NCNNGANU-NG GGAUGGNGUUUU--CGC-
GGCC-G-UGGG--GCAA---CNCUNG-GUC---CGG-GAUCGCCACCCCGNG-GGUG-CGG-UCU--C-UCCCGNCGUCGGA-GUGAC-GCACUUCUC-- CCN -CGGUAGAANGUCNAGAUCCNUCGG-
UCG-----CCGGCCU--AAGG-UCCCCGGUG-NAGAC-UGC-GCGG-------UU-CG-------------CCGC---GCAC-GAC CCGGGG GU-U-CCNGGC--CGGGUGC-CCGACGGUAUGAA-G-
AGAGGAAGGAGUCGGCNCGCCCNU-------AGA-------CGGGGNNU---CCGCCCCUCCNCAA-GCGCCC GCGGGAGUC NGGAG----U-CCGGGCC-CGGCCCGNCUUCCU-UCU-UCANC-
GGGGCUGUU-UGCGAG-AU--AUGGAG-GUGUGCUCNGA---------------------------------C- NNNNNNN-NN-NNNNNNNNNNNN-NNNNNNNN--ACCCGUCUU-GAAACACGG
FJ596582_Rhyothemis_variega_imperatrixUAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACA-AG GGAUGGUGUUCU--CGC-
GGCC-G-AGGG--GCGA---CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCCGUGC-GCGG-------UU-CG-------------CCGC---GCUC-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUAUGAA-A-
AGAGGAAGGAGUCGGCGCGCCUCU---------CG------UUAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGAGGC---U-CCGGGCC-CGGCCCGGUCUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-A---A-GGAG-GUGCGCUCGGACGGCGUC-G------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Rhyothemis_fuliginosa_GU196333        UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGUCGCGC--CCGCGACA-AG GGAUGGUGUUUU--CGC-
GGCC-G-GGGG--GCGA---CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGCG-CGG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--ACGG-CCCCGGGUG-GAGCC-UGC-GCGG-------UU-CG-------------CCGC---GCAC-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUAUGAA-A-
AGAGGAAGGAGUCGGCGCGCCUCU---------CG------UUAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGAGGC---U-CCGGGCC-CGGCCCGGUCUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-U---A-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Miathyria_marcella           ????????????????????-??-???-??????????????????-?????????????????????????????????????????????
?????????-?-???????-????????????????????????????-????????????????-?????-??????????????--?????-?????????????????--???-
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Miathyria_simplex_GU196345   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGUUC--CCGCGACA-AGGGAUGGUGUUUU--CGC- GGCC-G-GGGG--GCGA---
CCCUCG-GUC---CGG-AGGCGUCACCCCGCG-GGUG-CGG-UCU----UCCCGGCGUCGGA-GUGAC-GCAUUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-CCG-----CCGGCCU--AAGG-
CCCCGGACG-GAGCCUCGU-UCGG-------UU-CG-------------CCGA---GCGA-GACCCCGGGGA-U-CCCGGC--CGG GUGC-CCGACGGCACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------C-------GCAGGCGU---CCGCCCCUCUGCAA-GCGCUCGCGGGAGUCGGAGGU--UU-CCGGGCC- CGGCCCGGCCUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-U---C-GGAG-GUGCGCUCGGACAGCGUC-G------------ACUCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
FJ596577_Tholymis_citrina   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
A-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACA-AGGGAUGGCUCCCU--CGC- GGCC-G-UGGG--GCGA---
CCCACG-GUC---CGG-GGGCGCCACUCCGCG-GGCG-CGG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGCCCU--AAGG-
CCCCGGGUG-GAGUCGCUC-GCGGUGG----UU-CG----------CCA-UGC---GCGC-GACCCCGGGGA-U-CCCGGG--CGG GAGC-CCGACGGUACGAA-A-
AGAGGAAGGAGUCGGCGCGCCUCU---------C-------GAAGGCGU---CCGCCCCUCCGCAA-GCGCCCGCGGGAGCGGGAGG----C-CCGGGCC- CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---G-GGAG-GUGAGCUCGGACGGCGUC-G------------UUCCUCCGAUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
EF631403_298_202_Tholymis_tillarga   ---
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCUGCUC--CCGCGACA-AG GGAUGGCUCUCU--CGC-
GGCC-G-UGGG--GCGA---CCCACG-GUC---CGG-GAGCGCCACUCCGCG-GGUG-CGG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGUC----GCGC-------UU-CG-------------CCGC---GCUC-GAC CCCGGG GA-U-CCCGGC--CGGGAGC-CCGACGGUAUGAA-A-
AGAGGAAGGAGUCGGCGCGCCUCU---------C-------GUAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGAGG----A-CCGGGCC-CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCNNNN-NNN---NNNNNNNN- NNNNNNN-NN-NNNNNNNNNNNN-NNNNNNNN--------------------
EF631487_369_280_Pantala_flavescens   ---GAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAG-UCU-CGCCGCGUGCCGGGCCGCGC--CCGCGAAA-AG GGAUGGUGUUCU--CGC-
GGCC-A-AGGG--GCGA---CCCUUG-GUC---CGG-GAUCGCCACCCCGCG-GGUG-CGG-UCC----UCCCGGUGCCGGA-GCGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-UCCCUGGUG-GAGCC-UGC-GCGG-------UU-CG-------------CCGC---GCAU-GAC CCAGGG GU-U-UCCGGC--CGUGUGC-CCGACGGUAUGAA-G-
AGAGGAAGGAGUUGGCGCGCCUCU---------U-------GUAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGGAG----U-CCGGGCC-CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUGCUCGGA--------------------------------C- NNNNNNN-NN-NNNNNNNNNNNN-NNNNNNNN--ACCCGUCUU-GAAACACGG
Tramea_lacerata_OTL   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCCGCCC--CCGCGACA-AGGGAUGGCGUUUU--CGC- GGCC-G-CGGG--GCGA---
CCCGCG-GAC---CGG-AGGCGCCACCCCGCG-GGGG-CGG-UCU----UCCCGGCGUCGGAAGUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
CCCCUGGUG-GAGCC-UGU-GCGG-------CG-UU-------------CCGC---GCAU-GACCCAGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUUU-----------------UUAGGCGU---CCGCCCCUCCGCAA-GCGCUCGCGGGAGUCGGAAG----A-ACGGGCC- CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-A---A-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
FJ596586_Tramea_calverti   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCCGCUC--CCGCGACA-AG GGAUGGCGUUUU--CGC-
GGCC-G-UGGG--GCGA---CCCACG-GAC---CGG-AGGCGCCACCCCGCG-GGGG-CGG-UCU----CCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCUCGGGUG-GAGCCUUGC-GCGG-------UU-CG-------------CCGC---GCCA-GAC CCCGAG GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------C-------GCAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGAGGUUU-U-CCGGGCC-CGGCCCGGCCUCUU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGCGCUCGGACUGCGCC-GUA-----------UCUCUCCCGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Sympetrum_Kalosympetrum_janeae_OSJ   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUUU-CGCCGCGCGUCGGGACGCAU--CCGAAGCA-AG GGAUGGUGUUCU--CGC-
GGCC-U-UGGG--GCAA---CCCUCG-GUC---CGG-GAGCGCCACCUUUCGUGGUG-CUG-UAU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCC-UGC-GCGG-------CG-UU-------------CCGC---AUAA-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------U-------GUAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGAGC----U-CCGGGCC-CGGCCCGGUCUCUU-UCU-UCAAC-
GGGGCUGUU-UGCGAU-A---A-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUN-NA???????
Sympetrum_Kalosympetrum_obtrusum   ????????????????????-??-???-???????????????????-??????????????????????????????????
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FJ596606_Sympetrum_Sympetrum_vulgatumUAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUUU-CGCCGCGCGUCGGGACGCGC--CCGAAG----G GGAUGGUGUUCU--CGC-
GGCC-U-UGGG--GCAA---CCCUCG-GUC---CGG-GAGCGCCACCUUUCGAGGCG-CUG-CUU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAA-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-
AGAGGAAGGAGUCGGCGCGCCUUU---------U-------UUAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGAGU----U-CCGGGCC-CGGCCCGGUCUCUU-UCU-UCAAC-
GGGGCUGUU-UGCGAU-A---A-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Sympetrum_Sympetrum_pedemontanum       ????????????????????-??-???-??????????????????-?????????????????????????????????
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Sympetrum_Nesogonia_blackburni         ????????????????????-??-???-??????????????????-?????????????????????????????????
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FJ596607_Sympetrum_Sympetrum_sanguineum        UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAA CUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUUU-CGCCGUGCGUCGGGACGCGC--CCGAA GCA-AGGGAUGGUGUUCU--CGC-
GGCC-U-UGGG--GCAA---CCCUCG-GUC---CGG-GAGCGCCACCUUUCGAGGCG-CUG-CUU--U-UCCCGGCGUCGGA-GUGAC-GCACU UCUC--CCC-CGGUAGAACGUCGCGAUCCGUCGG-UCG-
----CCGGCCU--AAGG-CCCCGGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAA- GAC CCCGGGGA-U-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-
AGAGGAAGGAGUCGGCGCGCCUUU---------U-------UUAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUCGGAGC----U-CCGGGCC-CGGCCCGGUCUCUU-UCU-UCAAC-
GGGGCUGUU-UGCGAU-A---A-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
EU055230_Sympetrum_Tarnetrum_corruptumUAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUUU-CGCCGCGCGUCGGGACGCGC--CCGAAGCA-AG GGAUGGUGUUCU--CGC-
GGCC-U-UGGG--GCAA---CCCUCG-GUC---CGG-GGGCGCCACCUUUCGAGGCG-CUG-UUU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-UCCCGGGUG-GAGCCAUGC-GCGG-------UU-CG-------------CCGC---GCAA-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-
AGAGGAAGGAGUCGGCGCGCCGCU---------UU----CAGUAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGAGC----U-CCGGGCC-CGGCCCGGUCUCUU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-A---A-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAGCACGG
Sympetrum_fonscolombei_GU196359        UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUUU-CGCCGCGCGUCGGGACGCGC--CCGAAGCA-AG GGAUGGCGUUCU--CGC-
GGCC-U-UGGG--GCAA---CCCUCG-GUC---CGG-GAGCGCCACCUUUCGAGGCG-CUG-CUU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAA-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------CGU------UAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGAGC----U-CCGGGCC-CGGCCCGGUCUGCU-UCU-UCAGC-
GGGGCUGUU-UGCGAC-A---A-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Sympetrum_Tarnetrum_illotum????????????????????-??-???-??????????????????-???????????????????????????????????????????????
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Sympetrum   ????????????????????-??-???-??????????????????-???
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EU424330_Sympetrum_danae   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUUU-CGCCGCGCGUCGGGACGCGU--CCGAAUCA-CG GGAUGGUGUUCU--CGC-
GGCC-U-UGGG--GCAA---CCCUCG-GUC---CGG-GAGCGCCACCUUUCG-UGGC-GUU-GUU--UUUCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAA-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-
AGAGGAAGGAGUCGGCGCGCCUUU---------U-------UUAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGAGC----U-CCGGGCC-CGGCCCGGUCUCUU-UCU-UCAAC-
GGGGCUGUU-UGCGAU-A---A-GGAG-GUGUGCUCGGACGGCGUC-G-------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Sympetrum_meridionale_GU196334   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUUU-CGCCGCGCGUCGGGACGCGC--CCGAAGCA-AG GGAUGGCGUUCU--CGC-
GGCC-U-UGGG--GCAA---CCCUCG-GUC---CGG-GAGCGCCACCUUUCGAGGCG-CUG-CUU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAA-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUUU--------UU-------UUAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGAGC----U-CCGGGCC-CGGCCCGGUCUCCU-UCCUUCAAC-
GGGGCUGUU-UGCGAC-C---A-GGAG-GUGUGCUCGGACGGCGUC-G-------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
FJ596605_Leucorrhinia_pectoralis   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGGGCGAAA-GGGGAGAUUCAGGUUU-CGCCGCGCGCCGGGCCGCGC--CCGAAGCA-AG GGAUGGCGUUCU--CGC-
GGUC-GGUGGG--GUGA---CCCCCG-GUC---CGG-GAGCGCCACCCUUCGAGGCG-CUG-UUC--G-U-CCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCCGUUG-GCGG-------UU-CG-------------CCGC---GAAC-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-CCGACGGCAUGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------UU----UGGUAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGGGA----U-CCGGGCC-CGGCCCGGUCUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAC-A---A-GGAG-GUGUGCUCGGACGGCGCC-G-------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
EF631409_Leucorrhinia_glacialis_OLF   ????????????????????-??-???-??????????????????-?????????????????????????????????
?????????------------U-C-UGGGAAU-A--CGGGUGGUUCC-GAAAGGGCGAAA-GGGGAGAUUCAAGUUU-CGCCGCGCGCCGUGGCGGGC--CCGAAGCA-AG GGAUGGCGUUCU--CGC-
GGCC-GGUGGG--GUGA---CCCCCG-GUC---CGG-GAGCGCCACCCUUCGAGGCG-CUG-UUC--G-U-CCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCCGU---UCU--------UU-UU-------------CCGC---GAGC-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-CCGACGGCAUGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU-----------------UUAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGGGA----U-CCGGGCC-CGGCCCGGUCUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAN-G---N-GNAG-GUGUGCUCGGAY??????????-?????-???-????????????-
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Celithemis_elisa_OCE   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUUU-CGCCGCGCGCCGGGCCGCGC--CCGAAGCA-AGGGAUGGCGUUCU--CGC- GGCC-G-AGGG--GCGA---
CCCCCG-GUC---CGG-GAGCGCCACCCUUCGAGGCG-CUG-UAC--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--ACGG-
CCCCGGGUG-GAGCC-UGC-GCGG-------CG-UU-------------CCGC---GCAU-GACCCCGGG-A-U-CCCGGC--CGG GUGC-CCGACGGCAUGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------CG------UUAGGCGU---CCGCCCCUCCGCAA-GCGCCCGCGGGAGUCGGAGGC---U-CCGGGCC- CGGCCCGGUCUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAC-G---A-GGAG-GUGUGCUCGGACGGCGCC-G-------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCNGUCUN-GA???????
Celithemis_eponina_   ????????????????????-??-???-??????????????????-???
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Brachymesia_gravida ????????????????????-??-???-??????????????????-???
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Brachymesia_herbida_GU196344UAAGACUGAAUUCGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGAGAAA-GGGGAGAUUCAGGUCC-CGCCGCGCGCCGGGCCGAGC--CCGCGACA-AGGGAUGGCGUUCU--CGC- GGCC-G-UGGG--GCGA---
CCCACG-GUC---CGG-GAUGGCCACCC CGCG-GGCG-CGG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCGU--AAGG-
CCCCUGGCG-GAGCC-UGC-GCGG-------UU-CG-------------CCGC---GCAC-GACCCAGGGGA-U-CCCGAC--CGG GCGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------C-------GCAGGCGU---CCGCCCCUCCGCAA-GCGCCCGCGGGAGUCGGAGGU---U-CCGGGCC- CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGCGCUCGGACGGCGUC-G-------------UUCCUCCGGUCU-GCGACGC-CU-CGGCUUGGAUGG-C AUACCCG--ACCCGUCUU-GAARCACGG
EF631463_349_258_Brachythemis_leucostic --
GANUUCANGACUACGUGNAUUCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGAGCGUCGGGCAGCGC--UCGCG----CG GGAUGGCACUCU--CGC-
GGCC-G-CGGG--GCGA---CCCGCG-GUC---CGG-GGGGGCCACCCCGCG-AGCGCCUG--------UCCCGACGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGACCCGUCGG-
CCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCC-UGC-GCGG-------UU-CG-------------NCCGC---GCAC-GAC CCCGGG GA-U-CCCGGC--CGGGAGU-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCGU------CUA-------GCAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGCG GGAGG----U-CCGGGCC-CGGCCCGGCCUCCU-CCU-UCAGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGCGCUCGGACN-------------------------------N- NNNNNNN-NN-NNNNNNNNNNNN-NNNNNNUU--ACCCGUCUU-GAAACACGG
Brachythemis_contaminata_ ????????????????????-??-???-??????????????????-???
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Deielia_phaon_GU196343 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGAGCGCCGGGCAGCGC--CCGCGACA-AGGGAUGGCUUUCU--CGC- GGCC-G-CGGG--GCAA---
CCCGCG-GUC---CGG-GAGUGCCACCCCGCG-GGCG-----UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-CCG-----CCGGCCU--AAGG-
CCCCGGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAU-GACCCCGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUAUGAA-A-
AGAGGAAGGAGUCGGCGCGCCUCU---------C-------GCAGGCGU---CCGCCCCUCCGCAA-GCGCCCGCGGGAGAGGGAGG----U-CCGGGCC- CGGCCCGGCCUCCA-CCU-UCAAC-
GGGGCUGUU-UGCGAU-C---C-GGAG-GUGUGCUCGGACGGCGUC-G-------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
EF631398_294_198_Pachydiplax_longipenni --
---------AGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACA-AG GGAUGGCGUUUU--CGC-
GGCC-G-UGGG--GCGA---CCCUCG-GUC---CGG-GAGCGCCACUCCGCG-GGUG-CGG-UCU--A-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCC-U---GC---------UUUCG-------------CCGC---GCAC-GAC CCCGGG GA-U-CCAGGC--CGGGUGU-CCGACGGUAUGAA-G-
AGAGGAAGGAGCCGGCGCGCCCCG-------UUUG------GUGGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGAGUU---U-CCGGGCC-CGGCCCGGUCUCCU-UNU-UCAGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGCGCUCGGA---------------------------------C- NNNNNNN-NN-NNNNNNNNNNNN-NNNNNNNN--ACCCGUCUU-GAAACUCGG
AY750042_Erythemis_sp UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCUC--CCGCGACA-AGGGAUGGCGUUCU--CGC- GGCC-G-UGGG--GCGA---
CCCACG-GUC---CGG-GAGUGCCACCCCGCG-GGUG-CGG-UCU--G-UCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----UCGGCCU--AAGG-
CCCCUGGUG-GAGCCGCGC-GCGG-------UU-CG-------------CCGC---GCUC-GACCCAGGGGA-U-CCCGGC--CGA GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCC---------C-------UGAGGCGU---CCGCCCCUCCGCAA-GCAUCCGCCGGAGUCGGAGA----U-CCGGGCC- CGGCCCGGCCUCCU-UCU-UCGAC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUGCUCGGACGGCGUC-G-------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG

FJ596592_Acisoma_panorpoidesUAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCUC--CCGCGACA-AGGGAUGGUGUUCU--CGC- GGCU-G-UGGG--GCAA---
CCUACG-GUC---CGG-GAGUGCCACCCCGCG-GGUG-CGG-UCU--A-UCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
CCCCUGGUG-GAGCCGAGU-UCGG-------UU-CG-------------CCGA---GCCC-GACCCAGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------U-------UGAGGCGU---CCGCCCCUCCGCAA-GCACUCGCGGGAGUCGGAGG----C-CCGGGCC- CGGCCCGGCCUCCU-UCU-UCAAC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUGCUCGGACGGCGUC-G-------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
EU055239_Erythrodiplax_minuscula UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCCGCGC--CCGCGACA-AG GGAUGGCGUUCU--CGC-
GGCC-G-UGGG--GCGA---CCCACG-GUC---CGG-GAGCGCCACUCCGCG-GGCG-CGG-UCU--C-UCCCGACGUCGGA-GUGAC-GCACUUCUC-- CCC-CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCCGGAG-GAGCCGAGC-GCGG-------UU-CG-------------CCGC---GCCC-GAC CCGGGGGA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCG---------UU-----AGCAGGCGU---CCGCCCCUCCGCAA-GCACCC GCGGGAGAGCGAGG----A-ACGGGCC-CGGCCCG
GCCUCUC-UCU-UCAAC-GGGGCUGUU-UGCGAA-A---C-GGAG-GUGUGCUCGGACGGCGCC-G-------------UCUCUCCGGUCU-GCGACGC-UU-AAGCUUGGAUGG-CCUACCCG-
-ACCCGUCUU-GAAACACGG
Erythrodiplax_basalis_ ????????????????????-??-???-??????????????????-??
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EF631390_289_192_Crocothemis_servilia---
-AGUACUUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACA-AGGGAUGGCGUUC U--CGC-GGCC-G-
UGGG--GCGA---CCCACG-GUC---CGG-GAGUGCCACUCCGCG-GGCG-CGG-UCU--G-UCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAA CGUCGCGAUCCGUCGG-UCG-----
CCGGCCU--AAGG-CCCCUGGUG-GAGCCGAGC-GCGN-------UU-CG-------------CCGC---GCCC-GACCCAGGGGA-U-CCC GGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------U-------GUAGGCGU---CCGCCCCUCCGCAA-GCACUCGCGGGAGAGGGAGG----U- CCGGGCC-CGGCCCGGCCUCUU-UCU-UCAUC-
GNNGCUGUU-UNAGAC-A---AUG---N-NNNNNNN-NN- NNNNNNNNNNN-NNNNNNNN--ACCCGUCUU-GAAACACGG
Crocothemis_erythraea_GU196335 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACA-AG GGAUGGCGUUCU--CGC-
GGCC-G-UGGG--GCGA---CCCACG-GUC---CGG-GAGUGCCACUCCGCG-GGCG-CGG-UCU--G-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAGCCGAGC-GCGG-------UU-CG-------------CCGC---GCCC-GAC CCAGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------U-------GUAGGCGU---CCGCCCCUCCGCAA-GCACUC GCGGGAGAG GGAGG----U-CCGGGCC-CGGCCCGGCCUCUU-UCU-UCAUC-
GGGGCUGUU-UGCGAC-A---A-GGAG-GUGUGCUCGGACGGCGUC-G-------------UCUCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
FJ596590_Rhodothemis_rufa UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUAGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGUCA-AGGGAUGACGUUCU--CGC- GGCC-G-UGGG--GCGA---
CCCACG-GUC---CGG-GAGUGCCACCCCGCG-GGUG-CGG-UCU--G-UCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
CCCCUGGUG-GAGCCGAGU-GCGG-------UU-CG-------------CCGC---GCCC-GACCCAGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------U-------GCAGGCGU---CCGUCCCUCCGCAA-GCACUCGCGGGAGUCGGAGG----C-CCGGGCC- CGGCCCGGCCUCCU-UCU-UCAGC-
GAGGCUGUU-UGCGAC-U---A-GGAG-GUGUGCUCGGACGGCGUC-G-------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
Neurothemis_fulvia_ ????????????????????-??-???-??????????????????-??
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Neurothemis_ramburii_GU196339         UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGUGCGCCGGGCCGCUC--CCGCGACA-AG GGAUGGCGUUCU--CGC-
GGCC-G-UGGG--GCGA---CCCACG-GUC---CGG-GAGUGCCACCCCGCG-GGUG-CGG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAGCCGAGC-GCGG-------UU-CG-------------CCGC---GCCC-GAC CCAGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCNCCUCU---------A-------GUAGGCGU---CCGCCCCUCCGCAA-GCACCC GCGGGAGUC GGAGG----U-CCGGGCC-CGGCCCGGUCUCUU-UCU-UCAUC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUGCUCGGACGGCGUC-G-------------UCUCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCNGUCUU-GAARCACGG
Diplacodes_lefebvrii         ????????????????????-??-???-??????????????????-?????????????????????????????????????????????????
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Diplacodes_trivialis_GU196342         UAAGACUGAAUAUGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACA-AG GGAUGGUGUUCU--CGC-
GGCC-G-UGGG--GCGA---CCCACG-GUC---CGG-GAGUGCCACCCCGCG-GGUG-CGG-UCU--A-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAGCCGAGC-GCGG-------UU-CG-------------CCGC---GCCC-GAC CCAGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------U-------GUAGGCGU---CCGCCCCUCCGCAA-GCACCC GCGGGAGUC GGAGG----U-CCGGGCC-UGGCCCGGCCUCUU-UCU-UCAAC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUGCUCGGACGGCGUC-G-------------UCUCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
EF631462_348_257Bradinopyga_strachani---------------------------------------------------------------------GAAGANAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACA-AG GGAUGGCGUUCU--CGC-
GGCC-G-UGGG--GCGA---CCCACG-GUC---CGG-GAGCGCCACCCCGCG-GGCG-CGG-UCU--G-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCUGGAG-GAGCCGAGC-GCGG-------UU-CG------------NCCGC---GCCC-GAC CCAGGG GA-U-CCCGGC--CGGGUGG-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU--------CC-------GUAGGCGU---CCGCCCCUCCGCAA-GCACCC GCGGGAGUC GGAGG----U-CCGGGCC-CGGCCCGGCCUCCU-UCU-UCAAC-
GGGGCUGUU-UGCGUU-C---A-GGAG-GUGNGCUCGGAC-----------------------NNNNNNNNN- NNNNNNN-NN-NNNNNNNNNNN-NNNNNNNU--ACCCGUCUU-GAAACACGG
Brachydiplax_denticauda_BYBUAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-C-
UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACG-AGGGAUGGUGCACU--CGC- GGCC-G-UGGG--GCGA---CCCACG-
GUC---CGG-GAGCGCCACCCCGCG-GGCG-CGG-UGU--UUCCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-CCG-----CCGGCCU--AAGG-
UCCCGGGUG-GAGCC-UGC-GCGGAG-----UC-CC-------------UCCGC---GCAC-GACCCCGGGGU-U-CCCGGC--CGG GUGU-CCGACGGUACGAA-G-
AGAGGAAGGAGCCGGCGCGCCUCU---------C-------GCAGGCGU---CCGCCCCUCCGCAA-GCGCCCGCGGGAGUCGGGGGU---U-CCGGGCC- CGGCCCGGCCUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAUAC--GAUGGAG-GAGUGCUCGGACUGCGCC-G-----------CUUUUCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
FJ596585_Brachydiplax_chalybea_flavovit         UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAA CUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCG ACU-AGGGAUGGUGCACU--CGC-
GGCC-G-UGGG--GCGA---CCCACG-GUC---CGG-GAGCGCCACCCCGCG-GGCG-CGG-UGU--CUCCCCGGCGCCGGA-GUGAC-GCACU UCUC--CCC-CGGUAGAACGUCGCGAUCCGUCGG-CCG-
----CCGGCCU--GAGG-UCCCGGGUG-GAGCC-UGC-GCGGAG-----UC-CC-------------UCCGC---GCAC- GAC CCCGGGGU-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGCUGGCGCGCCCCU---------C-------GCGGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUCGGGGGU---U-CCGGGCC-CGGCCCGGCCUCCU-UCU-UGCGC-
GGGGCUGUU-UGCGAUCC--GA-GGAG-GAGAGCUCGGACUGCGCC-G-------------CUUCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
FJ596584_Chalcostephia_flavifrons      UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGUUC--CCGCGACA-AG GGAUGGUGCUUU--CGC-
GGCC-G-UGGG--GUAA---CCCUCG-GUC---CGG-GAGUGCCACCCCGCG-GGUG-CGG-UCA--G-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCC-UGC-GCGG-------UU-CG-------------CCGC---GCAC-GAC CCCGGG AA-U-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------U-------GCAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGAGG----U-CCGGGCC-CGGCCCGGCCUCUU-UCU-UCAAC-
GGGGCUGUU-UGCGAU-U---U-GGAG-GUGUGCUCGGACUGCGCC-G-------------CUUCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
EF631393_291_195_Micrathyria_aequalis-----------------------------------------------------------------------------------
-AGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACA-AGGGAUGGUGUUU
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U--CGC-GGCC-G-UGGG--GCGA---CCCACG-GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--U-UCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAA
CGUCGCGAUCCGUCGG-UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCC-U---GC---------UU-CG-------------CCGC---GCAC-GACCCCGGGAA-U-CCA GGC--CGGGUGU-
CCGACGGUAUGAA-G-AGAGGAAGGAGUCGGCGCGCCCCU-------UUCG------GCGGGCGU---CCGCCCCUCCGCAA-GCGCCCGCGGGAGUCGGAGGU---U- CCGGGCC-CGGCCCGGUCUCCU-
UNU-UCAGC-GGGGCUGUU-UGCGAU-C---A-GGAG-GUGCGCUCGGAC----------------------NNNNNNNNNN-NNNNNNN-NN- NNNNNNNNNNN-NNNNNNUU--ACCCGUCUU-
GAUACACGG
Micrathyria_atra_           ????????????????????-??-???-??????????????????-?????????????????????????????????????????????????
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Micrathyria_didyma_GU196361UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-C-
UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACA-AGGGAUGGCGUUUU--CGC- GGCC-G-UGGG--GCGA---CCCUCG-
GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--A-UCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
CCCCGGGUG-GAGCC-UGC-GCGG-------UU-CG-------------CCGC---GCAC-GACCCCGGGGA-U-CCAGGC--CGG GUGU-CCGACGGUAUGAA-G-
AGAGGAAGGAGUCGGCGCGCCCCU---------CU------GCGGGCGU---CCGCCCCUCCGCAA-GCGCCCGCGGGAGUCGGAGGU---U-CCGGGCC- CGGCCCGGUCUCCU-UUU-UCAGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUGCUCGGAnnnCGCC-G-------------CUUCUCCGGUUU-GCGACGC-UUCAAGCUUGGAUGG-C CUACCCG--ACCCGUCUU--AARCACGG
Uracis_imbuta_GU196363       UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGRACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGUGCGCCGGGCCGCGC--CCGCGACA-AGGGAUGGCGUUCU--CGC- GGCC-G-UGGG--GCGA---
CCCACG-GAC---CGG-GAGUGCCACCCCGCG-GGUG-CGG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
CCCCCGGUG-GAGCCGAGC-GCGG-------UU-CG-------------CCGC---GCCC-GACCCGGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------U-------GUAGGCGU---CCGCCCCUCCGCAA-GCACUCGGGGGAGUCGGAGG----U-CCGGGCC- UGGCCCGGCCUCCU-UCU-UCAAC-
GGGGCUGUU-UGCGAU-A---A-GGAG-GUGCGCUCGGACGGCGUC-G-------------UCUCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
Uracis_infumata             ????????????????????-??-???-??????????????????-?????????????????????????????????????????????????
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FJ596589_Nannophya_pygmaea   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACA-AGGGAUGGCGUUCU--CGC- GGCC-G-UGGG--GCGA---
CCCACG-GUC---CGG-GAGUGCCACCCCGCG-GGCG-CGG-UCU--G-UCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
CCCCUGGUG-GAGCCGCGC-GCGG-------UU-CG-------------CCGC---GCUC-GACCCAGGGGA-U-CCCGGC--CGG GUGC-UCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------U-------GUAGGCGU---CCGCCCCUCCGCAA-GCACCCGCGGGAGUCGGAGG----U-CCGGGCC- CGGCCCGGCCUCUU-UCU-UCAAC-
GGGGCUGUU-UGCGAU-A---A-GGAG-GUGUGCUCGGACGGCGUC-G-------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C GUACCCG--ACCCGUCUU-GAARCACGG
EF631412_307_210_Nannothemis_bella     ------------------------------------------------------------------------
AGUUCAAGAGUACGUGAAACUGU-U-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACA-AG GGAUGGCGUUCU--CGC-
GGCC-G-UGGG--GCGA---CCCACG-GUC---CGG-GAGUGCCACCCCGCG-GGUG-CGG-UCU--G-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAGCC-----GCGC-------UU-CG-------------CCGC---GCUC-GAC CCAGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------CG------UUAGGCGU---CCGCCCCUCCGCAA-GCACUC GCGGGAGUG GGAGG----U-CCGGGCC-CGGCCCGGCCUCCC-GCU-UCAAC-
GGGGCUGUU-UGCGAC-A---A-GAAG-GUGUGCUCGGACNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNNNNNNNNNNNNNNNNNNNNN-NNNNNNNN--NNNNNNNNN-NNNNNNNNN
EF631492_373_Paltothemis_lineatipes    ------------------------------------------------------------------GAAGAGAG-
GUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGUUC--CCGCGAUU-AG GGAUGGCGUUUU--CGC-
GGCC-G-UGGG--GCGA---CCCUCG-GUC---CGG-AGGCGCCACCCCGCG-GGUG-CGG-GCA--U-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC-CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGAG-GAGUC-UGU-GCGG-------UU-CG-------------CCGC---GCAU-GAC
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CCCGGGGA-U-CCGGGC--CGGGUGU-CCGACGGUAUGAA-G-AGAGGAAGGAGUCGACGCGCCUCU--------UCG------GUAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUG GGAGGC-
--U-CCGGGCC-CGGCCCGGCCUCUU-CCU-UCAGC-GGGGCUGUU-UGCGAU-C---C-GGAG-GUGUGCUCGGACNNNNNN------------------NNNNNNNN- NNNNNNN-NN-
NNNNNNNNNNNN-NNNNNNNN--ACCCGUCUU-GAAACACGG
EF631385_Brechmorhoga_mendax_58 ????????????????????-??-???-??????????????????-????????????????????????????????
?????????---GA-AG GGAUGGCGUCUU--CGC-
GGCC-G-UGGG--GCGA---CCCUCG-GUC---CGG-AGGCGCCACCCCGCG-GGUG-CGG-ACA--U-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCUU--AAGG-CCCCGGGUG-GAGCC-U---GU---------UU-CG--------------CCGC---GCAU-GAC CCCGGG GA-U-CCGGGC--CGGGUGU-CCGACGGUAUGAA-G-
AGAGGAAGGAGUCGACGCGCCUCG---------UU-----CGUAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUG GGAGGU---U-CCGGGCC-CGGCCCGGUCUCCU-CCU-UCAGC-
GGGGCUGUU-UGCGAU-C---C-GGAG-G----------??????????-?????-???-????????????-
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Brechmorhoga_praedatrix_GU196346 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCUC--CCGCGAGA-UG GGAUGGCGUCUU--CGC-
GGCC-G-UGGG--GCGA---CCCUCG-GUC---CGG-AGGCGCCACCCCGCG-GGUG-CGG-ACG--A-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCUU--AAGG-CCCCGGGUG-GAGCC-UGU-GCGG-------UU-CG--------------CCGC---GCAC-GAC CCCGGG GA-C-CCGGGC--CGGGUGU-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGACGCGCCUUA-------------------GGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUG GGAGGU---U-CCGGGCC-CGGCCCGGUCUCCU-CCU-UCAGC-
GGGGCUGUU-UGCGAU-C---C-GGAG-GUGUGCUCGGACGGCGUU---------------CUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
EF631387_Dythemis_fugax_65 ????????????????????-??-???-??????????????????-????????????????????????????????
?????????---CA-AG GGAUGGCGUUCU--MGC-
GACC-G-UGGG--GCGA---CCCUCG-GUC---CG--GAUCGCCACCCCGCG-GGUG-CGG-UCA--G-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGUC-U---GC---------UU-CG--------------CCGC---GCAC-GAC CUCGGG AG-U-CCGGGC--CGGGCGU-CCGACGGCACGAA-G-
AGAGGAAGGAGUCGACGCGCCUCC---------AU---UUGGUGGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUG GGAGUU---U-CCGGGCC-CGGCCCGGUCUCCU-UCU-UCAGC-
GGGGCU----------------------------------??????????-?????-???-????????????-
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A_FJ596580_Trithemis_auroraUAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGC-C-
UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAG-UCU-CGCCGUGCGCCGGGCCGUUC--CCGCGACA-AGGGAUGGUUUUCU--CGC- GGCC-G-UGGG--GCGA---CCCACG-
GUC---CGG-GAUCGCCACCCCGCG-GGUG-CGG-UUU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
UCCCCGGUG-GAGCC-UGU-GCGG-------UU-CG--------------CCGC---GCAU-GACCCGGGGAA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCCUC-----------------GCGGGCGU---CCGCCCCUCCGCAA-GCGCCCGCGGGAGUCGGGAG----U-CCGGGCC- CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-U---U-GGAG-GUGUGCUCGGACGGCGUC-G-------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
FJ596581_Trithemis_africana UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGC-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAG-UCU-CGCCGCGCGCCGGGCCGCUC--CCGCGACA-AG GGAUGGUGUUCU--CGC-
GGCC-G-UGGG--GCGA---CCCACG-GUC---CGG-GAACGCCACCCCGCG-GGUG-CGG-UUU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-UCCCCGGUG-GAGCC-UGC-GCGG-------UU-CG--------------CCGC---GCAU-GAC CCGGGG AA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCCUC-----------------GCGGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGGAG----U-CCGGGCC-CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-U---C-GGAG-GUGUGCUCGGACGGCGUC-G-------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Trithemis_arteriosa ????????????????????-??-???-??????????????????-??
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Perithemis_tenera_OPT UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGUGCGUCGGGCCGUGC--CCACGACC-AGGGAUGGCGUUUU--CGC- GGCU-G-UGGG--GCGA---
CCCUCG-GUC---CGG-AAUUGCCACCCCGUG-GGUG-CGG-UCA--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
CCCCUGGUG-GAGCC-UGU-GCGG-------CU-UU--------------CCGC---GCAU-GACCCAGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUAUGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------U-------GUAGGCGU---CCGCCCCUCCGCAA-GCGCCCGAAGGAGUCGGAGG----U-CCGGGCC-

CGGCCCGGCUUCUU-UCU-UCGGC-GGGGCUGUU-UGCGAU-U---A-GGAG-GUGUGCUUGGACGGCGUC-G------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C
CUAC???--?????????-?????????
A_EU055236_Perithemis_intensa UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGUGCGUCGGGCCGUGC--CCACGACC-AG GGAUGGCGUUUU--CGC-
GGCU-G-UGGG--GCGA---CCCUCU-GUC---CGG-AAUUGCCACCCCGUG-GGUG-CGG-UCA--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAGCC-UGU-GCGG-------UU-CU-------------CCGC---GCAU-GAC CCAGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------U-------GUAGGCGU---CCGCCCCUCCGCAA-GCGCCC GAAGGAGUC GGAGG----U-CCGGGCC-CGGCCCGGCUUCUU-UCU-UCGGC-
GGGGCUGUU-UGCGAU-U---A-GGAG-GUGUGCUUGGACGGCGUC-G------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
Perithemis_lais_GU196362 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCCGUUC--CCGCGACC-AGGGAUGGCGUUUU--CGC- GGCC-G-UGGG--GCGA---
CCCUCG-GUC---CGG-AGUCGCCACCCCGCG-GGUG-CGG-AUU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
CCCUCGGUG-GAGUC-UGC-GCGG-------UU-CG-------------CCGC---GCAC-GACCCGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUAGGCGCGCCUAU---------ACC----UAUAGGCGU---CCGCCCCUCCGCAA-GCGCCCGAAGGAGUCGGAGGU---U-CCGGGCC- CGGCCCGGCCUCCU-UCU-UCGGC-
GGGGCUGUU-UGCGAU-A---A-GGAG-GUGCGCUCGGACGGCGCC-G------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
Palpopleura_lucia_GU196337 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGWACUUUGAAGAGAGAGUUCAAGAGUACG
UGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACA-AGGGAUGGCGUUUU--CGC- GGCU-G-CGGG--
GCAA---CCCGCG-GUC---CGG-GAGCGUCACCCCGCG-GGCG-CGG-UUAU-C-AGCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU-
-AAGG-CCCCUGGUG-GAGCCGAGC-GCGG-------UU-CG-------------CCGC---GUCC-GACCCAGGGGA-U-CCCGGC--CGG GUGG-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUUU---------CC------AUAGGCGU---CCGCCCCUCCGCAA-GCACCCGCGGGAGAGUGGGG----U-CCGGGCC- CGGCCCGGCCUCUC-UCU-UCAAC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUGCUCGGACGGCGCU-G------------UCUCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG-ACACCGUCUU-GAARCACGG
FJ596579_Diastatops_pullataUAAGACUGAAUAUGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-C-
UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGUGCGCCGGGCCGGGC--CCGCGACA-AGGGAUGGCGCUCU--CGC- GGCC-G-UGGG--GCGA---CCCUCG-
GUC---CGG-GAUCGCCACCCCGCG-GGCU-CGG-UCU--U-UCCCGGUGUCGGA-GUGAC-GCAUUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
CCCUCGGUG-GAGUC-UGU-GCGGUUU----UC-CG-------------CCGC---GCAC-GACCCGAGGGA-U-CCCGGC--CGG GUGC-CCGACGGCACGAA-G-
AGAGGAAGGAGUCGGCGCGCCGAU--------UC-------GUCGGCGU---CCGCCCCUCCGCAA-GCGCUCGCGGGAGUCGGAGGU---U-CCGGGCC- CGGCCCGGCCUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-U---A-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Zenithoptera_fasciata_GU196364 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACA-AG GGAUGGCGUUCU--CGC-
GGCC-G-UGGG--GCGA---CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGCG-CGG-UCUU-G-CCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCCGAGC-GCGG-------UU-UU-U-----------CCGC---GCCC-GAC CCCGGG GA-C-CCGGGC--CGGGUGU-CCGACGGUAUGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU--------UUGGU----UUGGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGAGGC---U-CCGGGCC-CGGCCCGGUCUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---C-GGAG-GUGUGCUCGGACGGCGUC-U------------CUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
EF631486_368_279_Neodythemis_pauliani---GAGAG
AGUUCAAGANUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGAUGAAG GGAUGGCGUUUU--CGC-
GGCC-G-UGGG--GCGA---CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--U-UCCCGGCGU CGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CUGGCCU--AAGG-CCCCUGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAU-GAC CCAGGG GA-N-CCNGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU--------UU-------GCAGGCGU---CCGCCCCUCCGCAA-GCGCUC GCGGGAGUC GGAAG----U-CCGGGCC-CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-U---A-GGAG-GUGUGCUCGGAC----------------------NNNNNNNNNN- NNNNNNN-NN-NNNNNNNNNNN-NNNNNNU---ACCCGUCUU-GAAACACGG
Selysiothemis_nigra ????????????????????-??-???-??????????????????-???
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Trithetrum_navasi ????????????????????-??-???-??????????????????-??
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Porpax_risi_ ????????????????????-??-???-??????????????????-??
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Micromacromia_camerunica_GU196367 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCANNNNNNNNNNNNNNNNNN-N-NNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNN--NNNNNNNNNNN NNNNNNNNNNNN--NNN-
NNNN-N-NNNN--NNNN---NNNNNN-NNNNN---N-NNNNNNNNNNNNNNNNNNNN-NNN-NNNN-N-NNNNNNNNNNNNN-NNNNN-NNNNNNNNN-- NNN -NNNNNNNNNNNNNNNNNNNNNNNNN-
NNN-----NNNNNNN--NNNN-NNNNNNNNN-NNNNNNNNN-NNNN-------NN-NN-------------NNNN---NNNN-NNN NNNNNN NN-N-NNNNNN--NNNNNNN-NNNNNNNNNNNNN-N-
NNNNNNNNNNNNNNNNNNNNNNNN-------N----------NNNNNN---NNNNNNNNNNNNNN-NNNNNN NNNNNNNNN NNAAG----U-CCGGGCC-CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---C-GGAG-GUGCGCUCGGACGGCGUC-G------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
AFJ596594_Allorhizuch_preussi UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGAUGAAG GGAUGGCGUUUU--CGC-
GGCC-G-UGGG--GCGA---CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CUGGCCU--AAGG-CCCCUGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAC-GAC CCAGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCG-------UUU-------GCAGGCGU---CCGCCCCUCCGCAA-GCGCUC GCGGGAGUC GGAAG----U-CCGGGCC-CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGCGCUCGGACGGCGUC-G------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
Neodythemis_klingi ????????????????????-??-???-??????????????????-??
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FJ596575_Hadrothemis_infesta UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGC
GCGCCGGGCCGCGC--CCGCGAUGCAGGGAUGGCGUUUU--CGC-GGCC-G-UGGG--GCGA---CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGCG-CGG-UCU--G-UC
CCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGCGAUCCGUCGG-UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAGCC-UGC-GCGG-------UU-CG---
-----------CCGC---GCAC-GACCCAGGGGA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-AGAGGAAGGAGUCGGCGCGCCCCU---------CU------AAGGGCGU---
CCGCCCCUCCGCAA-GCGCUCGCGGGAGUCGGGAGUC--U-CCGGGCC-CGGCCCGGCUUCCU-UCU-UCAGC-GGGGCUGUU-UGCGAU-A---A-GGAG-GUGCGCUCGGACGGCGUC-G----
---------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
FJ596595_Thermorthemis_madagascariensisUAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGUGCGCCGGGCCGCGC--CCGCGAUAAAG GGAUGGCGUUUU--CGC-
GGCU-G-UGGG--GUAA---CCCUCG-GUC---CGG-AGGCGCCACCCCGUG-GGUG-CGG-UCU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CUGGCCU--AAGG-CCCCUGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAU-GAC CCAGGG GA-U-CCCGGC--CGGGUGC-UCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUGU--------UUUA-----UUAGGCGU---CCGCCCCUCCGCAA-GCGCUC GCGGGAGUG GGAAG----U-CCGGGCC-CGGCCCGGCUUCUU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
FJ596599_Agrionoptera_insignis UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGAUGAAG

GGAUGGCGUUUU--CGC-GGCC-G-UGGG--GCGA---CCCUCG-GCC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -
CGGUAGAACGUCGCGAUCCGUCGG-UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAC-GAC CCAGGG GA-U-CCCGGC--
CGGGUGC-CCGACGGUACGAA-G-AGAGGAAGGAGUCGGCGCGCCUGU--------UC-------GCAGGCGU---CCGCCCCUCCGCAA-GCGCUC GCGGGAGUC GGAGG----U-CCGGGCC-
CGGCCCGGCUUCUU-UCU-UCAAC-GGGGCUGUU-UGCGAU-A---A-GGAG-GUGUGCUCGGACGGCGUC-G------------CUUCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--
ACCCGUCUU-GAARCACGG
FJ596593_Cratilla_metallicaUAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-C-
UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGAUGAAGGGAUGGCGUUUU--CGC- GGCC-G-UGGG--GCGA---CCCACG-
GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
CCCCUGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAU-GACCCAGGGGA-C-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUGU--------CU-------UCAGGCGU---CCGCCCCUCCGCAA-GCGCUCGCGGGAGUCGGAGG----U-CCGGGCC- CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C GUACCCG--ACCCGUCU--GAARCACGG
Pseudoleon_superbus ????????????????????-??-???-??????????????????-??
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FJ596597_Orthemis_cultriformis UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGAUGAAG GGAUGGCGUUUU--CGC-
GGCC-G-UGGG--GUAA---CCCUCG-GUC---CGG-AGGCGCCACCCCGCG-GGCG-CGG-UCU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAU-GAC CCAGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-
AGAGGAAGGAGUCGGCGCGCCCCU--------U--------UCGGGCGU---CCGCCCCUCCGCAA-GCGCUC GCGGGAGUC GGAGG----U-CCGGGCC-CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---C-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
EF631471_265_Orthemis_ferruginea ---GAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGUGCGCCGGGCCGCGC--CCGCGAUGAAG GGAUGGUGUUUU--CGC-
GGCC-G-UGGG--GCGA---CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAU-GAC CCAGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUGU--------U--------UCAGGCGU---CCGCCCCUCCGCAA-GCGCUC GCGGGAGUC GGAAG----A-ACGGGCC-CGGCCCGGCUUUCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUGCUCGGAC----------------------NNNNNNNNNN- NNNNNNN-NN-NNNNNNNNNNNN-NNNNNNNN--NNNNNNNNN-NNNNNNNNN
FJ596601_Orthetrum_albistylum UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGUGCGCCGGGCCGCGC--CCGCGAUGAAG GGAUGGCGUUUU--CGC-
GGCC-G-UGGG--GCGA---CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--C-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAU-GAC CCAGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-
AGAGGAAGGAGUCGGCGCGCCUGU--------U--------UCAGGCGU---CCGCCCCUCCGCAA-GCGCUC GCGGGAGUA GGAAG----A-ACGGGCC-CGGCCCGGCUUUCU-GCCUUCAGC-
GGGGCUGUU-UGCGAU-A---A-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
EF631473_267_Orthetrum_pruinosum ---GAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGUGCGCCGGGCCGCGC--CCGCGAUGAAG GGAUGGUGUUUU--CGC-
GGCC-G-UGGG--GCGA---CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCUCUGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAU-GAC CCAGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUGU--------U--------UCAGGCGU---CCGCCCCUCCGCAA-GCGCUC GCGGGAGUA GGAAG----A-ACGGGCC-CGGCCCGGCUUUCU-GCU-UCAGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUGCUCGGACNNNNNN-N------------NNNNNNNNNNNN- NNNNNNN-NN-NNNNNNNNNNNN-NNNNNNNN--NNNNNNNNN-NNNNNNNNN
Orthetrum_coerulescens ????????????????????-??-???-??????????????????-??
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FJ596600_Lyriothemis_elegantissima   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGAUGAAG GGAUGGCGUUUU--CGC-
GGCC-G-UGGG--GCGA---CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAU-GAC CCAGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUGU--------U--------UCAGGCGU---CCGCCCCUCCGCAA-GCGCUC GCGGGAGUC GGAAG----A-GCGGGCC-CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGCGCUCGGACGGCGUC-G-------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
A_FJ596602_Ladona_fulva   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGUGCGCCGGGCCGCGC--CCGCGAUGAAGGGAUGGCGUUUU--CGC- GGCC-G-UGGG--GCAA---
CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
CCCCUGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAU-GACCCAGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUGU--------U--------UCAGGCGU---CCGCCCCUCCGCAA-GCGCUCGCGGGAGUCGGAAG----A-GCGGGCC- CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-U---A-GGAG-GUGUGCUCGGACGGCGUC-G-------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Ladona_julia   uaagacugaauacggccacg-ag-acc-gauagcgaacaaguaccg-ugagggaaaguugga???aacuuu?????????UUCAAGAGUANN
UGAAACCGU-N-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUNU-NNCCGUGCGCCGGGCCGCGC--CCGCGAUGAAGGGAUGNCNUUUU--NGC- GGCC-G-UGGG--
GCGA---CNCUUG-GUC---CNG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU-
-AAGG-CCCCUGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAU-GACCCAGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUGU--------U--------UCAGGCGU---CCGCCCCUCCGCAA-GCGCUCGCGGGAGUCGGAAG----A-GCGGGCC- CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUGCUCGGACGGCGUC-G-------------UUCCUCCGGUAU-GCGACGC-UU-CANNNNNNNNNN-N NNNNNNN--ACCCGUCUU-GCAACACGG
A_FJ596598_Ladona_depressa   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGUGCGCCGGGCCGCGC--CCGCGAUUAAGGGAUGGCGUUUU--CGC- GGCC-G-UGGG--GCAA---
CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
CCCCUGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAU-GACCCAGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUUU---------C-------GCAGGCGU---CCGCCCCUCCGCAA-GCGCUCGCGGGAGUCGGAAG----A-GCGGGCC- CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-A---A-GGAG-GUGUGCUCGGACGGCGUC-G-------------UCCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG
Plathemis_subornata   ????????????????????-??-???-???????????????????-???
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EF631438_330_234_Plathemis_lydia   --
-AGUACGUNAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCNNAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGAUUAAGGGAUGGUGUUU U--CGC-GGCC-G-
UGGG--GCGA---CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--U-UCCCGGCGU CGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAA CGUCGCGAUCCGUNGG-UCG-----
CCGGCCU--AAGG-CCCCUGGUG-GAGCC-UGU-----------UU-CG-------------CCGC---GCAU-GACCCAGAGGA-U-CCC GGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUGU--------U--------UCAGGCGU---CCGCCCCUCCGCAA-GCGCUCGAGGGAGUAGGGAG----A- GCGGGCC-CGGCCCGGCUUCCU-GCU-UCAGC-
GGGGCUGUU-UGCGAU-A---A-GGAG-NNNNNNNNNNNNNNNNNN------------------NNNNNNNN-NNNNNNN-NN- NNNNNNNNNNNN-NNNNNNNN--NNNNNNNNN-NNNNNNNNN
Libellula_quadrimaculata_GU196332   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGAUUAAG GGAUGGCGUUUU--CGC-
GGCC-G-UGGG--GCGA---CCCACG-GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC-CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAU-GAC CCAGGGGA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUGU--------U--------UCAGGCGU---CCGCCCCUCCGCAA-GCGCUC

GCGGGAGUCGGAAG----A-GCGGGCC-CGGCCCGGCUUCCU-UCU-UCAGC-GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU-
GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Libellula_Syntetrum_angelina????????????????????-??-???-??????????????????-???
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Libellula_Eolibellula_semifasciata   ????????????????????-??-???-??????????????????-?????????????????????????????????
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Libellula_Belonia_saturata_AY338674   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGAUGAAG GGAUGGCGUUUU--CGC-
GGCC-G-UGGG--GCGA---CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAGCC-UGU-GCGG-------CG-UU-------------CCGC---GCAC-GAC CCAGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUGU--------U--------UCAGGCGU---CCGCCCCUCCGCAA-GCGCUC GCGGGAGUC GGAAG----A-GCGGGCC-CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
Libellula_Eotainia_composita????????????????????-??-???-??????????????????-???
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Libellula_Neotetrum_pulchella_OLP   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGAUGAAG GGAUGGCGUUUU--CGC-
GGCC-G-UGGG--GCGA---CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAGCC-UGU-GCGG-------CG-UU-------------CCGC---GCAU-GAC CCAGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUUU-----------------UUAGGCGU---CCGCCCCUCCGCAA-GCGCUC GCGGGAGUC GGAAG----A-ACGGGCC-CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-A---A-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
Libellula_Holotania_comanche_   ????????????????????-??-???-??????????????????-?????????????????????????????????
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Libellula_Holotania_auripennis   ????????????????????-??-???-??????????????????-?????????????????????????????????
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Libellula_Holotania_axilena_????????????????????-??-???-??????????????????-??
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EF631392_Libellula_luctuosa_90 ????????????????????-??-???-??????????????????-????????????????????????????????
?????????GUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGUGCGCCGGGCCGCGC--CCGCGAUGAAG GGAUGGCGUUUU--CGC-
GGCC-G-UGGG--GCGA---CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAGCC-UGU-----------UU-CG-------------CCGC---GCAU-GAC CCAGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUGU--------U--------UCAGGCGU---CCGCCCCUCCGCAA-GCGCUC GCGGGAGUC GGAAGA-----GCGGGCC-CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUGCUCGGAC??????????-?????-???-????????????-
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Aethriamanta_rezia_GU196369UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-C-
UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACU-AGGGAUGGCGUUCU--CGC- GGCC-G-UGGG--GCGA---CCCUCG-
GUC---CGG-GAGCGCCACCCCGCG-GGCG-CGG-UCGA-A--CCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-CCG-----CCGGCCU--AAGG-
UCCCGGGAG-GAGCC-UCUCGCGGUU----UUU-CG-------------CCGC---GGGA-GACCCCGGGGA-C-CCCGGC--CGG GUGC-CCGACGGCACGAA-G-
AGAGGAAGGAGUCGGCGCGCCCUC--------UUUU---UCGCGGGCGU---CCGCCCCUCCGCAA-GCGCCCGCGGGAGUCGGAGGUU-CCACCGGGCC- CGGCCCGGCCUCCU-UCUUUCCGC-
GGGGCUGUU-UGCGAC-G-AGC--GAG-GUGUGCUCGGACGGCGCC-G------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGGC- CUACCCG--ACCCGUCUU-GAARCACGG
Tetrathemis_corduliformis_GU196368 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACU-AG GGAUGGUGUUCU--CGC-
GGCC-G-UGGG--GCGA---CCCACG-GUC---CGG-GAGUGCCACCCCGCG-GGCG-CGG-UCU--G-UCCCGGCGC CGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
CCG-----CCGGCCU--AAGG-UCCCGGGUG-GAGCC-UGC-GCGG-------UU-UU------------UCCGC---GCAC-GAC CCCGGG UC-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAUGAAGGAGUCGGCGCGCCUCU---------C-------GCAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCUGGAGCG GGAGGU---C-CCGGGCC-CGGCCCGGCCUCCU-CCU-UCGGC-
GGGGCUGUU-UGCGAU-U---C-GGAG-GUGUGCUCGGACGGCGCC-G------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Diplacina_ismene_GU196366 UAAGACUGAAUnnGGCCnnG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAnnnGAGAGUUCA-GAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCUC--CCGCGAUGAAGGGAUGGCGUUUU--CGC- GGCC-G-UGGG--GCUA---
CCCUCG-GUC---CGG-GAGAGCCACCCCGCG-GGUG-CGG-UCU--G-UCCCGGCGUCGGA-CAGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
CCCCUGGUG-GAGCC-UGC-GCGG-------UU-CG-------------CCGC---GCAC-GACCCAGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUGU--------UC-------GCGGGCGU---CCGCCCCUCCGCAA-GCGCUCGCGGGAGUCGGAGG----U-CCGGGCC- CGGCCCGGCUUCUU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---C-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU-GCGACGC-UAUCAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
Erythemis_vesiculosa_GU196360 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCUC--CCGCGACU-AG GGAUGGCGCUCU--CGC-
GGCC-G-UGGG--GCGA---CCCGCG-GUC---CGG-GAGUGCCACCCCGCG-GGUG-CGG-UCU--G-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----UCGGCCU--ACGG-CCCCCGGUG-GAGCCGGGC-GCGG-------CU-CG-------------CCGC---GCUC-GAC CCGGGG GA-U-CCCGGC--CGAGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCCCC---------C-------GCGGGCGU---CCGCCCCUCCGCAA-GCACUC GUCGGAGUC GGAGA----C-CCGGGCC-CGGCCCGGCCUCCU-UCU-UCGAC-
GGGGCUGUU-UGCGAU-U---C-GGAG-GUGAGCUCGGACGGCGUC-G------------UCUCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Nannophyopsis_clara_GU196358UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGYGRACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCCGCAC--CCGCGAUA-AGGGAUGGUGUUUU--CGC- GGCC-G-GGGG--GCGA---
CCCUCG-GUC---CGG-AAGCGCCACCCCGCG-GGUG-UGG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
CCCUGGGUG-GAGUC-UGC-GUGG-------AC-UU------------UCCAC---GCAU-GACCCCGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCC-------CUUGUGG---GUUGGCGU---CCGCCCCUCCGCAA-GCGCCUGCGGGAGUCGGAGUU---U-CCGGGCC- CGGCCCGGUCUCUU-UCU-UCAAC-
AGGGCUGUU-UGCGAU-U---A-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
Oligoclada_amphinome_GU196357 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGUCGGGCCGCGC--CCGCGACA-AG

GGAUGGCGCUCU--CGC-GGCC-G-UGGG--GCGA---CCCACG-GUC---CGG-GUUCGCCACCCCGCG-GGCG-CGG-UGU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -
CGGUAGAACGUCGCGAUCCGUCGG-UCG-----CCGGCCU--AAGG-CCCCCGGUG-GAGUCGUUC-GCGG-------UC-CU-------------CCGC---GAAC-GAC CCGGGG GA-U-CCCGGC--
CAGGUGC-CCGACGGCACGAA-G-AGAGGAAGGAGUCGGCGCGCCACG-------UUC-------GUUGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGAGGC---U-CCGGGCC-
CGGCCCGGCCUCCU-UCU-UCAGC-GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUGCUCGGACGGCGUC-G-------------ACCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-GCUACCCG--
ACCCGUCYU-GAARCACGG
Idiataphe_sp_HOL_2010_GU196356 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGAGCGCCGGGCCGUGC--CCGCGACG-UG GGAUGGCGUUUU--CGC-
GGCC-G-GGGG--GCGA---CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCC-CGC-GCGG-------UU-CG-------------CCGC---GCGU-GAC CCCGGG GG-U-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-
AGAGGAAGGAGUCGGCGCGCCGCU---------CG------UUCGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGAGGC---U-CCGGGCC-CGGCCCGGUCUCUU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-U---A-GGAG-GUGUGCUCGGACGGCGUC-G-------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Atoconeura_sp_HOL_2010_GU196355 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAG-UCU-CGCCGUGCGCCGGGCCGCGC--CCGCGACA-UG GGAUGGCGUUCU--CGC-
GGCC-G-UGGG--GCGA---CCCUCG-GUC---CGG-GAUCGCCACCCCGCG-GGCG-CGG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-UCCCCGGUG-GAGCC-UGU-GCGG-------UU-CU-------------CCGC---GCAU-GAC CCGGGG GU-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUAU---------U-------GCAGGCGU---CCGCCCCUCCGCAA-GCGCCC GCGGGAGUC GGGAG----U-CCGGGCC-CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---C-GGAG-GUGUGCUCGGACGGCGUC-G-------------UUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Elga_leptostyla_GU196354 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGAGCGCCGGGCCGCGC--CCGCGACA-AGGGAUGGCGUUCU--CGC- GGCC-G-UGGG--GCGA---
CCCACG-GUC---CGG-GAGCGCCACUCCGCG-GGUG-CGG-UCU--G-UCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUUGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
CCCCGGGUG-GAGCC-UUC-GCGG-------UC-UUGU-----------GCCGC---GUGA-GACCCCGGGGA-U-CCAGGC--CGG GUGU-CCGACGGUAUGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------CC------GCAGGCGU---CCGCCCCUCCGCAA-GCGCCCGCGGGAGUCGGAGGC---U-CCGGGCC- CGGCCCGGUCUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUGCUCGGACGGCGUC-G-------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
Fylgia_amazonica_GU196353 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAAAUUCAGGUCU-CGCCGCGCUCCGGGCCUCGC--CCGCGACA-AGGGAUGGCGUUCU--CGC- GGCC-U-UGGG--GCGA---
CCCUCG-GCC---CGA-GAGCGCCACCCCGCG-GGCG-CGG-UAC--U-UCUCGGAGCCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
CCUCGGGUG-UAGAC-UAC-GCGG-------UCCCGC------------GCCGC---GCAC-GACCCCGGGGA-C-CCAGGC--CGG GUGU-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------UU------AUAGGCGU---CCGCCCCUCCGCAA-GCGCCCGCGGGAGUCGGAGGU---U-CCGGGCC- CGGCCCGGCCUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GCGUGCUCGGACGGCGUC-G-------------AUCCUCCGGUCC-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
Hemistigma_albipunctatum_GU196352 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACA-AG GGAUGGCGUUCU--CGC-
GGCC-G-UGGG--GCAA---CCCACG-GUC---CGG-GAAUGCCACCCCGCG-GGUG-CGG-UCU--A-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAGCCGAGC-GCGG-------UU-CG-------------CCGC---GCCC-GAC CCAGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU---------A-------GUAGGCGU---CCGCCCCUCCGCAA-GCACCC GCGGGAGUC GGAGG----U-CCGGGCC-UGGCCCGGCCUCUU-UCU-UCAUC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGUGCUCGGACGGCGUC-G-------------UCUCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Porpacithemis_sp_GU196351 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGC-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAG-UCU-CGCCGCGCGCCGGGCCGCUC--CCGCGACA-AGGGAUGGCGUUCU--CGC- GGCC-G-UGGG--GCGA---
CCCACG-GUC---CGG-GAUCGCCACCCCGCG-GGUG-CGG-UUU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
UCCCCGGUG-GAGCC-UGC-GCGG-------UU-CG-------------CCGC---GCAU-GACCCGGGGAA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCCUC-----------------GCGGGCGU---CCGCCCCUCCGCAA-GCGCCCGCGGGAGUCGGGAG----U-CCGGGCC- CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-U---U-GGAG-GUGCGCUCGGACGGCGUC-G-------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
Thermochoria_equivocata_GU196350 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACA-AG GGAUGGCGUUCU--CGC-
GGCC-G-UGGG--GCGA---CCCACG-GUC---CGG-GAGUGCCACCCCGCG-GGCG-CGG-UUUU-A-ACCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC-CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAGCCGAGC-GCGG-------UU-UUU------------CCGC---GCCC-GAC

CCAGGGGA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-AGAGGAAGGAGUCGGCGCGCCUAU---------AA-----CGUAGGCGU---CCGCCCCUCCGCAA-GCACCC GCGGGAGUC GGAGG--
--U-CCGGGCC-UGGCCCGGCCUCUU-UCU-UCAUC-GGGGCUGUU-UGCGAC-A---A-GGAG-GUGUGCUCGGACGGCGUC-G------------UCUCUCCGGUCU- GCGACGC-UU-
CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Malgassophlebia_bispina_GU196349 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAG-UCU-CGCCGCGCGCCGGGCCGCUCUUCCGCGACA-UG GGAUGGCUUUCU--CGC-
GGCC-G-UGGG--GCGA---CCCUCG-GUC---CGG-GAUGGCCACUCCGCG-GGAG-CGG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC-CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-UCCCCGGUG-GAGCC-UGC-GCGG-------UU-CG-------------CCGC---GCAA-GAC CCGGGGGU-U-CCCGGC--CGGGUGC-CCGACGGU
ACGAA-G-AGAGGAAGGAGUCGGCGCGCCCCU---------UUUAUG-CGUGGGCGU---CCGCCCCUCCGCAA-GCGCCCGCGGGAGUCGGGAG----A-CCGGGCC-CGGCCCGGCUUCCU- UCU-
UCAUC-GGGGCUGUU-UGCGAU-A---C-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG-- ACCCGUCUU-
GAARCACGG
Micromacromia_zygoptera_GU196348UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG
UGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGAUGAAGGGAUGGCGUUUU--CGC- GGCC-G-UGGG--
GCGA---CCCUCG-GUC---CGG-AGGCGCCACCCCGCG-GGUG-CGG-UCU--U-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CUGGCCU-
-AAGG-CCCCUGGUG-GAGCC-UGU-GCGG-------UU-CG-------------CCGC---GCAC-GACCCAGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCU-------UUCU------GCAGGCGU---CCGCCCCUCCGCAA-GCGCUCGCGGGAGUCGGAAG----U-CCGGGCC- CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---C-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
Argyrothemis_argentea_GU196347 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACG-AG GGAUGGCGCACU--CGC-
GGCC-G-UGGG--GCGA---CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGCG-CGG-UCU--G-UCCCGGCGCCGGA-GUGAC-GCACUUCUC-- CCC -CGGUAGAACGUCGCGAUCCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCC-UGC-GCGG-------UC-CU-----------CACCGC---GCAC-GAC CCCGGG AG-U-CCGGGC--CGGGUGU-CCGACGGCACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUCC-------UCCGUG----GUAGGCGU---CCGCCCCUCCGCAA-GCGCUC GCGGGAGUG GGAGUC---U-CCGGGCC-CGGCCCGGUCUCCC-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---C-GGAG-GUGUGCUCGGACGGCGUC-U------------CUCCUCCGGUCU- GCGACGC-UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAARCACGG
Pseudothemis_zonata_GU196341UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACA-AGGGAUGGCUUUCU--CGC- GGCC-G-UGGG--GCGA---
CCCACG-GUC---CGG-GAGUGCCACCCCGCG-GGUG-CGG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-CCG-----CCGGCCU--AAGG-
CCCCGGGUG-GAGCC-UCC-GCGG-------UU-CG-------------CCGC---GGAC-GACCCCGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUAUGAA-A-
AGAGGAAGGAGUCGGCGCGCCUCU----------------CGCAGGCGU---CCGCCCCUCCGCAA-GCGCCCGCGGGAGUGGGAGG----C-CCGGGCC- CGGCCCGGCUUCCU-UCU-UCAGC-
GGGGCUGUU-UGCGAU-C---A-GGAG-GUGCGCUCGGACGGCGUC-G------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
Oxythemis_phoenicosceles_GU196338 UAAGACUGAAUAAGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCNN-N-NNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNN--NNNNNNNNNNN NNNNNNNNNNN--NNN-
NNNN-N-NNNN--NNNN---NNNNNN-NNN---NNN-NNNNNNNNNNNNNNNNNNNN-NNN-NNNN-N-NNNNNNNNNNNNN-NNNNN-NNNNNNNNN-- NNN -NNNNNNNNNNNNNNNNNNNNNNNNN-
NNN-----NNNNNNN--NNNN-NNNNNNNNN-NNNNNNNNN-NNNN-------NN-NN-------------NNNN---NNNN-NNN NNNNNN NN-N-NNNNNN--NNNNNNN-NNNNNNNNNNNN-N-
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Olpogastra_lugubris_GU196336UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG
UGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAG-UCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACU-CGGGAUGGCGUUCU--CGC- GGCC-G-UGGG--
GCGA---CCCUCG-GUC---CGG-GAUCGCCACCCCGCG-GGUG-CGA-UCU--C-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGGCU-
-AAGG-UCCCCGGUG-GAGCC-UGC-UCGG-------UU-CG-------------CUGA---GCAC-GACCCGGGGGU-U-CCUGGC-CUGG GUGU-CGGACGGUAUGAA-G-
AGAGGAAGGAGUCGGCGCGCCCCU-------UUU-------GUGGGCGU---CCGCCCCUCCGCAA-GCGCUCGCGGGAGUCGGGAG----U-CCGGGCC- CGGCCCGGCUUCCU-UCU-UCAGC-
GAGGCUGUU-UGCGAU-G---A-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAARCACGG
Misagria_parana_GU196331 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGAUGAAGGGAUGGCGUUUC--CGC- GGCC-G-UGGG--GCGA---
CCCUCG-GUC---CGG-AGGCGCCACCCCGCG-GGCG-CGG-UCU--C-UCCCGGCGCCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAUCCGUCGG-UCG-----CCGGCCU--AAGG-
CCCCUGGUG-GAGCC-UGC-GCGG-------UU-CG-------------CCGC---GCAC-GACCCAGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUGC---------C-------UCAGGCGU---CCGCCCCUCCGCAA-GCGCUCGCGGGAGUCGGAGG----U-CCGGGCC-

CGGCCCGGCUUCCU-UCU-UCAGC-GGGGCUGUU-UGCGAU-C---C-GGAG-GUGUGCUCGGACGGCGUC-G------------UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C
CUACCCG--ACCCGUCUU-GAARCACGG
Unaligned_Orders ????????????????????-??-???-??????????????????-??
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Ephemerella UAAGGCUAAAUAUGACCACG-AG-ACC-GAUAGCAAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-U-CAAGGAG-GUACGGGUGGA-CCCUAA-GGUCGAAC-GGGCAGAUUCAGUA-----UCUG-UUCGUGCCGC----CGCGGCUCUCG
CACCGGUGAAAGGGCCGUCCUUUUU-GGCU--UUCG---GGUCAGGGACGGUC-GCCGGUCGGGGGUUCAA----------UAGCGCGCGGACGA-CGGA-----GC-GCACUUCUC-- CCC-
UAGUAGGACGCCGCGACCCGCUGGAGUGACGAGCGGGCCU--AAGG-CCCGGUGGC-GAGUCCGUG-GCGCGCUUCG------------------GCGCGC---CGCG-GAG CCCCGG UG-UUCCCGGU--
CCGCUUC--CGGCGGUCGUAA--CUGACGGAGCCC-UCCCGCGCACUU-----------------UUGUGUGCGCCCGUGCCCCGCGCGA-GCGUAG GCCCGCUAG UCGCGC-----
GCGGACUUCGGUCCGCCGCGGUCGGG--UUUUCCUGCGUUGCCGGCGUG-----U-GGGG---AUUCUCGGGCAGGGAGUUCUAU-----------UUUCCGGUCU- GCGGCGC-UC-AAAACUGGGCGG-
CCCACCCG--ACCCGUCUU-GAAACACGG
Paraleptophlebia UAAGGCUAAAUACAACCACG-AG-ACC-GAUAGCAAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-U-CGGGGGU-AAACGGGUGGAGCCCUAAAGGUCGAAA-GGGGAGAUUCAGUA-----UCCA-GUCCUCACCGCC--GCUUCGCGCCGC CGGGUAUAA--CUUGGGAU--
--C-GCCC--CUCG---GGGUGGUCCCGGG--CCCGCGGCGCGUCUC--------------GCGCGCGGGAGG-UGGA-----GC-GCACUUCUC-- CCC -GAGUAGGACGUCGUGACCCGCUGG-GUG---
--UCGGUCU--GAGG-UCUGGGUGC-GAGCCCGGG-CCGCGGUUCG------------------CCGCGG---CCCG-GAG CCCCGG UG-U-CCCGAC--CGACUGC-CCGGCGGUAGAAC-
GUAAGGAAUCGGC---CCGCGGGACCUCUC-------------GGUCACGCGCCCGUGCCUCUUGCGA-GCGUCC GGUCGCGUU UCCCGU--CGUGCGGACU-UG-UCCGCCGCGGGCCGGC------
UGGCGUUGUCGGCUUG-------G--G-GAUUUCUCGGGCAGCGGCCU---------------UCUCCUGUUU- GCGACGC-UC-ACAACUGGGCGG-CCCACCCG--ACCCGUCUU-GAAACACGG
Anthopotamus_sp_AY338668 UAAGGCUAAAUACAACCACG-AG-ACC-GAUAGCAAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-CAGGGGN-NNNNNNNNNNNNNNNNNNNnNNNnAAA-GGGGAGAUUCAG????-????????????????????--??????????????????????????????
????????????????????????????????????-??C-GCACUUCUC--CCC-GAGUAGGACGCCGC GACCCGCUGG-
GUG-----UCGGUCU--ACGG-CCCGGGUGC-GAGC??CCCCGGAG-U-CUCGGC--CGA CCGC-CCGGCGG??????-
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AAAUCUGGGCGG-CCCACCCG--GCCCGUCUU-GAAACACGG
Caenis_sp_AY338667 UAAGGCUAAAUACAACCACG-AG-ACC-GAUAGUAAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-CUGGGGU-AAACGAGUGGAGCCCUAAAGGUCGAAC-GGGGAGAUUCAG????-????????????????????--??????????????????????????????
????????????????????????????????????-??C-GCACUUCUC--CCC-UAGUAGGACGCCGU GACCCGUUGG-
GUA-----UCGGUCU--ACGG-CAUGGUGAC-GAGC??UCCCAUUG-C-CCUGGC--CGA UUGCGCCGACGG??????-
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AAAGCUGGGCGG-CCCACUCG--GCCCGUCUU-GAAACACGG
Ephemera_guttulata ????????????????????-??-???-??????????????????-??
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?????-??????????????????????????????-??C-GCACUUCCC--CUC-AAGUAGGACGCCGU GACCCGUUGG-
GCG-----UCCGCCU--AAGG-CCGGGGUGG-GAGC??CCCCCGCG-A-CCCGGC--GGA ACGC-CCGACGG??????-
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GGGUGG-CCCACCCG--GCCCGUCUU-GAAACACGG
Callibaetis_sp_AY749925 AAAGGCUAAAUAUGACCACG-UG-ACC-GAUAGCAAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-CAGGGGU-AAACGGGUGGAGCCCUAAAGGUCGAAC-GGGGAGAUUCAUAUCCAGUCCGGCU---CGGCCGCA--CCGCGUCGU-----UG-GGAUU-UUGGGG- A----C-GGCC--UUCG---
GGUCGG----CCUCGGGCC-C-GCGG-CGCG-GU--UUUU----------GCGUGCUGGCGGGGGAGC-GCAAUUCUC--CCU-UAGUAGGACGUCGC GACCCGUUGG-GUG-----UCGGUCG--AAGG-
CCCGGGAUGCGAGCCCGUU-CCGCGGC--------------------AACGCGG---GGCG-GAGCCCUGGUUUUUCCCGGC--CGA CUGC-CCGACGGUAAUAA-GUUCCGGAAAAGGC--
CCGCGAGCCA--------------------CUCGCGCUCGUGCCCCGUGCAA-GCGUCCGGUCCGACUCGUCGU-----ACGGACU- CG-UCCGUGGCGGGUCGCC------CGGCGUUGUUGGCGCG----
---G--G--AUUUCUCGAGCAGCGGCCU---------------GCUCCGGUUC-GCGGCGC-UU-AAAACAGGGUGG-C CCACCCG--GCCCGUCUU-GAAACACGG

Callibaetis_ferrugineus_AY859557   AAAGGCUAAAUAUGACCACG-UG-ACC-GAUAGCAAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-U-CGGGGGU-AAACGGGUGGAGCCCUAAGUGCCGAGC-GGGGAGACUCAGUUCGGCCGCCGG--------GGCC--GGCGUCGCGC GCGGUGCUCGGU-GUCGAG----
--C-CGCC--CUCGU--GGCGGACGGCGCCGGGACCGCGCGCGGCGGCCGC-------------------GUCACGGU-CCGAGC-GCAAUUCUC-- CCC-UAGUAGGGCGUCGCGACCCGCUGG-GCG----
-UCGGCCG--ACGG-CCCGGGGAU-CAGUCCCGU-CCGC-CUC--------------------G-GCGG---ACGG-GGG CCCCGG UG-U-CCCGGU--CGACCGC-CCGGCGGUGGUGC-
ACGAGGAGCUGGC---CCGCGGGACGAACGU------------CGUCACGCGUCAUCGACCCGGGCGA-GCGUCG CGCCGGUGU CCGCGC-----UCGGGCU-UG-CCCGACGCGGCCCGUC------
GCGCGCUGUCGGCCCG-------GGAG-CCGCUCUGACGGGGUCGCCG---------------UCUCCCGUCC- GCGACGU-UA-GCAAGUGGGCGG-CCCACCCG--ACCCGUCUU-GAAACACGG
Baetis_sp_AY338652   AAAGGCUAAAUAUAACCACG-UG-ACC-GAUAGCAAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-CAGGGGU-AAACGGGUGGAGCCCUAAGUGCCGAGC-GGGGAGACUCAGUUCGGUGCGG-- --------GCCC--GGCGCAGUGCGCGGUGCCUGGC-GUCGAG--
----C-CGCC--CUCGU--GGCGGACGGCGCUGGGGCCGCGCGCGGCGGCCGG-------------------UGUUCGCU-CCGAGC-GCACUUCUC--CCC-UAGUAGGGCGUCGC GAC CCGCUGG-
GCG-----UCGGUCU--ACGG-CCCGGGGAU-CAGUCCCGU-CCGCUUGC--------------------GGGCGG---GUG-----CCCCGGUG-U-CCCGGC--CGA CCGC-UCGGCGGUGGUGC-
ACGAGGAGUUGGC---CCGCGGGA----CGU--------UCCGCGUCACGCGUCGGCGACCUGGGCGA-ACGUCCGCCUGGUGUCCGCGC-----UCGGGCU- UG-CCCGACGCGGCCCAGG---U--GGC-
GUUGUCGGCCCG-------GGAU-CCGCUUCGACAGGGCCGCCG---------------UCUCUCGUCC-GCGACGU-UA-ACAAGUGGGCGG-C CCACCCG--ACCCGUCUU-GAAACACGG
Hexagenia_sp_AY125276   UAAGGCUAAAUACAACCACG-AG-ACC-GAUAGUAAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG
UGAAACCGU-U-UUGGGGU-GAACGGUUGGAGCCCUAACGCUCGAAC-GAGGAGAUUCAGUAUCCAGUCCCGA-------CCGC--CGCACCGAGGCGCCGGAAC------UGCG UCGCA---CCGC--
CUCG---GCGGGAGGCGGCGUGA-CCGGCGUAGCGUUCUUG-----------------CGCGCGGCGGGUGGAGC-GCACUUCUC--CUC-UAGUAGGACGCCGC GACCCGUUGG-GUG-----UUCGCCU-
-ACGG-CCCCGGUGC-GAGUCCGCG-GUCCCGCCUUGGC----------------GGGAC---UGCG-GAGCCCGGGUG-U-CCCGAC--GGG CUGC-CCGACGGUGGGUU-AAUGGGUGCUCUGU--
CCGCGAGCAU--CGU---------------CUCGCGACCGCGCCUCUCGCGA-GCGUGCCUCGGAACCCCGCGU--G--GCGGACU- CGUUCCGCAGCGGAUCCGC-----GGCC-GCUGCC--UGAG----
---GGAG-GAAAUCUCGGUCAGUUGAC----------------AGUCCCGUCG-GCGNCGG-AG-AAAAA-GGGUGG-C CCACCCG--ACCCGUCUU-GAAACACGG
Cloeon   ????????????????????-??-???-??????????????????-???
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Leuc_maculipenAY749959   UAAGGCUAAAUAUAACCACG-AG-ACC-GAUAGUAAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-CAGGGGU-AAACGGGUGGAGCCCUAAAGGUCGAAC-GAGGAGAUUCAGUGUUCCAUCCACU-------------GGCCGCCCGCCGCCGUUGGGUA-AACUUC CGCUC---CCGG--CUUG---
CCGGUUCUCGCGGAGG---GCCCUCGGUGG--------------GGGUCUGCGCGCCGGUGGGGUUGC-GCACUUCUC--CUC-UAGUAGCACGCCGC GACCCGUUGG-GUG-----UCGGUCG--AAAG-
CCCGGGGGC-GAGCCCGUG-CCUC----------------------UUUCGAGG---UGCG-GAGUCCCGGUG-U-CUAGGC--CGA CAGC-CCGACGGUCUUAA-UUGAGGAAAAGGC---CCGC-----
UUCAUUGC-----------------GCU--CUUCCCUCCCGCGA-GCGUCCUGUCGCGUGCCGU-U--GU-GCGGACU- UG-UCCGCCGCGGCCCGGC-----CGGC-GUUGUCGGCGGG-------GGGG--
--CUCUAGAGCAGUGGCCU---------------GCUCCCGUCU-GCGGCGG-UA-ACACA-GGGCGG-C CCACCCG--GCCCGUCUU-GAAACACGG
Centropt_luteolum_AY749935 AAAGGCUAAAUAUAACCACG-UG-ACC-GAUAGCAAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-CGGGGGU-AAACGGGUGGAGCCCUAAGUGCCGAGC-GGAGAGACUCAGUUCGGCCCCCGCGGC--------C--GGCGUAGUGCGCGCUCCUUGCG-UCG-----
--AGCCGUCC---UCGU--GGCGGACGGCGUAGGGAGCGCGUGUUGCGUCCGC--GUCGCGGUCCGAGCGCAUUACCCGUCUUGAAA-CACGGUCUC--UCC-UAGUAGGGCGUCGC
GACCCGCUGG-GUG-----UCGGCUG--ACGG-CCUGGGGAU-UAGUCCGGC-UCGC----------------------UUUGGCGG---GCCG-GUCCCCCGGUG-U-CCCGGU--CGA UUGC-
CCGGCGGUGGUGC-ACGAUAAGCUGGC---CCGCGAGACGCU----------CCGCGUCACACGCC--AUCAACCCGGGCGA-GCGUUUCGCCGGUGUCCGCGC-----UCGGGCU- UG-
CCCGACGCGGCCCGUU-----GAGC-GCUGUCGGCCUG-------GGAA-GUGCUCUGGCGGGGUCAAC----------------GUCUUCGUCU-GCGACGU-UA-GCAAGUGGGCGG-C CCACCCG--
GCCCGUCUU-GAAACACGG
Stenonema_sp_AY749928   UAAGGCUAAAUACAACCACG-AG-ACC-GAUAGCAAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-CAGGGGU-AAACGGGUGGAGCCCUAAAGGUCGAAC-GGGGAGAUUCAGUGUUCCGUCCGCCGG--------C--CGCCCGCCUUCGUUGGGUAA-------AC CCGCGCUCCCGG--CUCGU--
CCGGUUCUCGCGUGGG-GCCCUCGUUGGCGGUUC----------------GCGCGCUGGUGGGGUUGC-GCACUUCUC--CCC-UAGUAGCACGCCGC GACCCGUUGG-GUG-----UCGGCCG--AAAG-
CCCGGGAGC-GAGCCCGCGAUCCUCCUC--------------------GGAGGGC--UGCG-GAGCCCUGGUG-A-CUAGGUC-CGA CUGC-CCGACGGUCUUGA-AAGCGGAAAAGGC---
CCGCGCUGCCGACCUC-------GGUCGAAAGCGCGCUCGUGCCCCGUGCGA-GCGUCCCGUCGCGUGUCGUUG--UU-GCGGACU- CGUUCCGCCGCGGCCCGAC-----UGGC-GUUGUCGGCGCG----
---GGGA-CUUCUCGAGCAGCGGCCU-----------------GCUCCCGUCC-GCGGCGG-UA-ACACA-GGGCGG-C CCACCCG--GCCCGUCUU-GAAACACGG
Trigonioptha lmus_altern   ????????????????????-??-???-??????????????????-??
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Allomachilis_froggart   ????????????????????-??-???-??????????????????-??
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EF199981_Machilis_hrabei   UAAGGCUAAAUAUGACCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAUAGUACG UGAAACCGU-
U-CAGGGGU-AAACGAGUGGAACCUAAAAGGUCGAAC-GGGGGGAUUCAGUUUCGAGGGAGUCGGU---------------CCGCGCGGCUGA------------- CGAUCCGACCG--GCAA---
CGGGAGGACGUCUGUUCGCGC--------------------------GGGCGCCGACGACCUGGGACC-GCACUUCUC--CCC-UAGUAGGACGCCGC GACCGAUUGG-AGA-----GCGAUCU--AAGG-
CCCGGUAGG-GAGCCUGCC-UCGCAAU--------------------UUUGUGG---AGCA-GACCUCCGG????????GGU--CGC ACUC-CGAUCGUAGGAGC-UGUGGGGACAAC----
CCGCGCUACGG------------------C-GCGCC---CGGCCCGUGGC???GCGGAG-GUC-ACUCCGGUC----- GUCGGACUCAGUGCCGGCACUGGAGCCC-----UCUC-GUUGUUGGCUGC----
---G-AU-GGUCUCGGGCUUUAGGGGACG--------------ACCCCGGUCA-GCGGCGC-UC-UUGAUU- GGUGG-UCCACUCG--ACCCGUCUU-GAAACACGG
Dilta_littoralis_AY859570   UAAGGCUAAAUACGACCACG-AG-ACC-GAUAGAGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGG-
U-CAGGGGU-AAACGAGUGGGGCCUAGAAGUUCGAAA-GG??GGAUUCAGUCCCGAGGUUCUCCGGCU-CGCGC--CCUGGGCCG------------------CU CGAUCCGUCUCU--CUCG---
GGAGGCGGGCG----GGCCCAGCGCGCGC-------------------GUGGCCGGGUCUCUGGGGCC-GCACUUCCC-ACCC--AGUAGGACGUCGC GACCGACUGG-AGA-----GCGGUCU-
CAGGGAACACACACC-GUGC----------GCGUGCCUGGCUCCGGCCUAUGCCAG----------C-CGGUGCGUGUC-U-CCCGGC--CGC ACUC--CGGUCGUAGCAG-CG--------------
CCGCGGGGAAAC------------------CCCGC--- GCCCAUCUCGGUGGGCGCCGGGGACUAAC------------------------
---AGACCCCGGCCA-GCGGCGAUCU--- UUGUCGGCGG-CCCACUCG--ACCCGUCUU-GAAACACGG
Ctenolepisma_longicaudata   UAAGGCUAAAUAUUCCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-CGGGGGU-AAACGGAUGGAACUUCAAACCUGAAUU---AGAGAUUCAGGGAGCAAUCUUACAGC------------------UUUCUAUUCAGGUU------- GAUCUUUGGUCC--AUUU---
GGAGCAAGGAC----GCUUGGGUAGAG--------------------UUCGGCUGUUUGGGAGCGCCC-GCAUUUCUC--CCU--UUUGGGACGUCAU GACUCGUUAG-GUG-----CCGGUCU-AUGGG-
UCCGAGGUG-GAGC--UUG-CCU-CUGUAAAAAU-----------------GGG---UGA---ACCCUCGG-U-U-CCCGGC--UGG
-CGC-CCGACGAUAUUUA-CAUGGAGUGAGC----CAGCA---------UUUUUUAA----A-----UGCGUUCAGACCUACGCAA--GUGGUGGGAAGGUGUCAGUU-----UGCGGAGU- UG-
UCUGCUUCUGUCCCAAC-----CU-CUCUGUUGGUGUAGUGUUCCUUGAACUU-------------------------CUGGCUAUCUCCUGUCA-GUGGCGUUAU----GAUGAAUGG-C CCAUCCG--
ACCCGUCUU-GAAACACGG
Lepisma_sp   UAAGGCUAAA??????????-??-???-??????????????????-??
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EU376048_Lepisma_saccharinaUAAGGCUAAAUAUCACCACG-AG-ACC-GAUAGCGAACAAGUACCG-CGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGC-C-
UGGGGGUCAAACGGAUGGAGCUCGAGAGUUCGAUG-GGGGAAGGUGAUUCAAGGGUUAAGGACCAAGUCUCC--GGCCCCCGAGCGGGUCGUCCCCUU------
--CCUUAGGG--ACUU---CCCGUCUGCGAGGGU---------------------------------GCGUCCGGGACGGUCCCCU-UCAUUCCGC-GCCC--GGUAGGGCACCGC GGC UCGUUGG-
GAU-----CCGUCCG-AAGGG-CCUGGGGUG-GAGC--UCU-CCGGCUC---------------------GUCCGG---AGA---ACCCCCGGUG-A-CCCGGA--CGG A-AC-CCGACGGCUCACG-
GGCAGGCCUGGGGA-UCCGCC-------GCCGUUUUAA----------GGC------------GGAAG-GCG---UAG----------A----
GGUCGCAGCUCGCUGCGGCGUGCCU----GGC-AG------UGUCCCCCCGUCCCCCGCUC---GUCCGGGGGUUUCGCGGGGGGCGUACUGUGAGCCCCGGGCCCGU-GCGGUGUUCA-ACGA---
-GUGG-CCCAUCCG--ACCCGUCUU-GAAACACGG
Thermobia_domestica   UAAGGCUAAAUACGACCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG
UGAAA??????-???????-???????????????????????????-????????????????-???????????????????--??????????????????????????????
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Tricholepidion_AY338685      UAAGGCUAAAUAUGACCACG-AG-ACC-GAUAGCGAACAAGUACCA-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-CGGGGGU-AAACAGAUAGAACCUACAAGGUUGAAA-GGGGAGACUCAAGCCGACAG------------------------AGUGAUGACUAUAU---------
---CUUUUGUU-AUAUAU-ACAUUAUGU------UAUAUGUCGUCA--------------------------GAUAUGUCCGCU-GCAUUUCUUAACCC-UAGUAAGACGUCGC AAC CCGUUGG-
GUG-----UCUGUCUC-AAGG-CACGGGAUG-AAG----------UCUGUAUUGAUCUGAUUUCAUUACAC-----------GGCUCCCGUUG-A-CCCGGC--AGA CUGC-CCGACGGUAUGUG-
AAAUGAGGUUGAC---CCGCAU-----AUA---------------AUGCGUCCGGU------------------------ACAUA------- UUAACAAAAAUUAAU-GUGUAGUCCUCG-------
-------------------------------------------GACGGGGUGACAUCCUCUGUUU-GCGACGAUAC- CAGAUUGGGUGG-UCUAUCUG--ACCCGUCUU-GAAACACGG
Gromph_laevigata_AY210819    UAAGGCUAAAUAUGACCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAACAGUACG UGAAACCGU-
U-CAGGGGU-AAACGGGAGAGAUCCGAAAGGUCGAAAGGGGGAGACUCAAUCCCGUCCGCGCCGUCCGGUGCCG--UUCUCGGUCCCAAAGGAUGUUG-CCGGCC GCCGUCCGCGUC--GCAA---
GGCGCGAGUCGGGCCGGAG---------UCGGCAGCACCGGGGUCGGAGGCCCGGCCGCGGCGAGGU-GCACUUCUCC-CCCCGAGUAGGACGUCGC GACCCGUUGG-GAG----UCCGGCCU--AAGG-
CCCGGCGU?????????????????????????????????????????????????????????CUUCGGAUGU-CCUGGC--CGG A-GC-CCGACGGCAUGCU-UCGCGGAGUAGGC---CCGCU-----
GCCUCUCA----GAGGG-----AGCGUCCGGCCCGGU-----------???????????????--
????GUGGCUUCCGCCAC------GUCCCCGUCCCC-------------CGUCGGCUGCUGGUACCCGGUGUC----------CCCGGACGGUGGCCUUCUCCCGUCU-GCGGCGCUUC--
UGCUUCGGAUG-CUUUCCCG--ACCCGUCUU-GAAACACGG
Isoperla_davisi_AY125288     UAAGGCUAAAUAUGACCACA-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
U-CGGGGGU-AAACGGGCGAGAUCUGGAAAAUCGAAG-CGAGUGAUUCACGUCCGCAUGCGCGUGCGUAUCGCG--GUCCCCGUCGAUGG-UCGGUGU-CGGCUA CCGUGUCGCGUC--GCAA---
GGCGCGCGCGAGUGUGUCG------CUCCGUCACGUGCGGUGUGGCCUGCGUUCGCCGGCGUCGGGCU-GCACUUCUC--UCG-UUGUAGUACGUUGC GACCCGUUGG-GCG-----
UGUGUCGACCAGGGCCCGUCGUG-GAG?????????????????????????????????????????????????????CGAUGGCC-C-CCCGUC--GUG
--UC--CAACCGUGCGGU-CGCCCGAC--------ACACUACAGC-CCGAC-----GGUAUUGAUGUGGUGA--------GUGG-AC-GCGGUUCCGC?AAGAGCCA--------CCGG--- UGAAUGG--
UGGUGGCGCGC----AAGCGCACGCGACCCGUCC-------------------------------------------------------GGCGACGAUCU----AACCGGAUG-C UUCUUCG--
ACCCGUCUU-GAAACACGG
EU414717_Isoperla_sp         UAAGGCUAAAUAUGACCACA-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAGAGAACUUUGUAGAGAGAGGUCAAGAGUACG UGAAACCGU-
U-CGGGGGU-AAACGGGCGAGAUCUGGAAAAUCGAAG-CGAGUCAUUCACGUCCGCAUGUCGUGCGUAACGUGG--UUCCCGUCGAUGG---UCGGUG-UCGGCU ACCGUUCGCGUC--GCAA---
GGCGCGCGCGAGUGUGUCG-----UUCCGUCACGAACGGCCCGAGUCUACGUUCGCCGGCGUCGGGCU-GCACUUCUC--UCG-UUGUAGUACGUUGC GACCCGUUGG-GCG-----
UGUGUCGCCUAGGGCCCGUCGUG-GAG?????????????????????????????????????????????????????CGAUGGCC-C-CCCGUC--GUG
--UC--CAACCGUGCGGU-CGCCCGACACACUA--CAGCC-------CGAC---------------GGUAUAUAAGUGAGUGGGAC-GUGGUUACGC?AAGAGCCA--------CCGUA- UGUUUUGG--
UGGUGGCGUGUUAA--AACGCACGCGACCC-------------------------------------------------------GUUCGGCGACGAUCU----AACCGGAUG-C UCUUCCG--
ACCCGUCUU-GAAACACGG
AY859546_Gomphocerinae       UGAGACUAAAUAUGACCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAAAGUACG UGAAACCGU-
U-CUGGGGU-AAACGUGAGAAGUCCGAAAGGUCGAACGGGUGAGAUUCACGCCCAUCCGGCCACUGGCCCCCGC--CCUCGGCAGAUGG---GGCCGG-CC----- GCCCGCGCGGA--GCAA---
UCCGCGGCGGGGUCGUGUCCGGUUGCCUUUCCA????GGGGUGGGGCCGUUCCAGUGUGCGGUGGGCC-GCACUUCUC--CCC-UAGUAGGACGUCGC GAC CCGCUGG-GUG-----CCGGCCU--ACGG-
CCCGGG-UG-??????????????????????????????????????????????????????CCCCGGUG-CCCCCGGC--UGG CUGC-UCGGCGGUACAUC-UCGAGGAGUCGAU---
UCGCCUACUUU-------------------UGGGCGCCCGGGCUCCCGGCAA-GCGCGCGCGG?UUC-CCGGAUGA----CGG- ACCUAC-CUGGCCCGGCCCCGGAC-
CCGCGCCGCUGUUGGCUCGGGAUG------------------------CUCUCGGGCGGAAUAAUCGCUCCCGUCA-GCGGCGCUUC-AGCUUU-GGACA-A UUUCACG--ACCCGUCUU-GAAACACGG


[
Neogomphus_edenticulatus_FJ712324      UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGCCGGGCGGCGG--ACGCGACC-AG AGAUGGCGUUUU--CGC-
GGUC-G-AGGG--GCAA---CUCUCG-GCC---CGG-AGGCGCCACUCCGCG-GCCG-CCG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCU--AAGG-UCCCGGGUG-GAGUC-UGU-GCGG-------UCUGUU--UCGGC---CGACCGC---GCAC-GAC CCCGGG AA-U-CCCGGC--CGGGUGC-ACGACGGUACGAA-G-
CACGGAAGGAGUCGACGCGCCA---------CUCUCUUGGGUUUGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGUAGUC CG-GGU---U-GCGGGCC-CGGCCCGAUUCCGG-UCC-UCCGC-
GGGGCUGUU-UGCGAU----CA-GGAG-GUGUCCUCGGACGGCGUU-G------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGGC-CUACCCG--ACCCGUCUU-GAARCACGG
Aeshna_mixta_FJ712315        UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GAGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCGG--ACGCGACC-AGGGAUGGCGUAAC--CGC-
```

GGUC-G-GAGG--GCAA---CCUUCG-GCC---CGG-GGGCGCCACUCCGCG-GCCG-CCG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CUC-GAGUAGGACGUCGC GACCCGUCGA-
GCG-----CCGGCCU--AAGG-CCCUGGGUG-GAGCC-UGC-GCAG-------CCCGUU--CACGC---AGGCUGC---GCAC-GACCCCGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCG---------CCU--------AAGGCGU---CCGGCCCUCCGCAA-GCGCCCGUGGGAGUGUGGG-U---U-ACGGACC- AGGUCUGAGCUCGU-ACCCUC-GC-
GGGGCUGUU-UGCGAC-A---A-GGAG-GUGUCCUCGGACGGCGUC-G-------------AUUCUCCGGUCG-GCGACGC-UU-CAGCUUGGAUGGC- CUACCCG--ACCCGUCUU-GAAGCACGU
Gomphaeschna_furcillata_FJ712314 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCGG--ACGCGACC-AG GGAUGGCACAAU--CGC-
GGUC-G-AGGG--GCAA---CCCUCG-UCC---CGG-AGGUGCCACUCCGCG-GCCG-CCG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC -GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCU--AAGG-CCUCGGGUG-GAGCC-UGC-GCAG-----UCCGCU--CACGC-----AGACUGC---GCAC-GAC CCCGGG GA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-
CGAGGAAGGAGUCGACGCGCCG---------CUUUU------UUGGCGU---CCGGCCCUCCGCAA-GCGCCC GCGGGAGUU CGGG-U---U-ACGGACC-CGGUCCGAUCUCGU-UCCCUCCGC-
GGGGCUGUU-UGCGAC-U---A-GGAG-GUGCCCUCGGACGGCGUC-G-------------AUUCUCCAGUCG- GCGACGC-UU-CAGCUUGGAUGGC-CUACCCG--ACCCGUCUU-GAARCACGG

Teinobasis_fortis_OD203 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGG CGAGGAUCGCUUGUGUGGAUGGCGCGCC-
GGCGGGCGGGGGGCAACCCU--------------------------------CGUCCCGGGCG--UGUCACCCGGCGAUUCUC-GAUUGACCGCCGUCGGU- G UGAC-GCACUUCUC--CCC-
GAGUAGGACGUCGCGACCCGUCGA-GCG-----CCGGCCA-CGAGGG-CCCGGGUG-GAGUCGAGAGCCGCU------------------------- CUCGAGUGGCUCCU-GACCCCGGGAU-C-
CCCGGC--CGGGAGC-CCGACGGUAGGAA-G-CGAGAA----GUCGACGCGCCGCAA-------------------GGCGU---CCGGCCCUC CGCGA-GCACCCGCGGGCGAUCGGGUU----CCGGA--
CCCGGUCCGAUCCCGAU--CUCGCCGA-GGGGCUGUC-CGCG--AUCAU--GGAG-GUGUCCUCGGACGGCGUCGAA---------- UCCU UCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGGU-
CCACCCG--ACCCGUCUU-GAAACACGG
Mecistogaster_modestaOD198 UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-U-UGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GCGUCGGG CGAGGGUCGCUUGUGCGGAUGGCGCGUC-
GGCGGGCGGGGGGCAACCCU--------------------------------CGUCCCGGGCG--CGUCACCCGGCGACUCUC-GAUUGACCGCCGUCGGU- G UGAC-GCACUUCUC--CCC-
GAGUAGGACGUCGCGACCCGUCGA-GCG-----CCGGCCA-CGAGGG-CCCGGGUG-GAGUCAAGAGCCGCU------------------------- CUCGAGUGGCCCCU-GACCCCGGGAU-C-
CCCGGC--CGGGAGC-CCGACGGUAGGAA-G-CGAGAA----GUCGACGCGCCGAAA-------------------GGCGU---CCGGCCCUC CGCGA-GCACCCGCGGGGGAUCGGGUU----CCGGA--
CCCGGUCCGAUCCCGUU--CCCACCGA-GGGGCUGUC-CGCG--AUCAU--GGAG-GUGUCCUCGGACGGCGUCGAA---------- UCCU UCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGGU-
CCACCCG--ACCCGUCUU-GAAACACGG
Anomisma_abnormeOD193 --- --

Lestes_sponsa -----------------------------------

Orthemis_discolor UAAGACUGAAUACGGCCACG-AGA-CC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGCGCGCCGGG
CCGCGCCCGCGAUGAAGGGAUGGCGUUUUCGCGGCCGUGGGGCGAC---C-------------------------------CACGGUCCGGAGGCGCCACCCCGCGGGUGCGGUCUUUCCCGGCGUCGGA- G
UGAC-GCACUUCUC--CCC-CGGUAGAACGUCGCGAUCCGUCGG-UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAG-CCUGUGCGG---UUCG-------------------------
--CCGCGCAU-GACCCAGGGGA-U-CCCGGC--CGGGUGC-CCGACGGUAUGAA-G-AGAGGAAGGAGUCGGCGCGCC--CCC---------------UUCGGGCG---UCCGCCCCU
CCGCA-AGCGCUCGCGGGAGUCGGAGG----UCC-GGGCCCGGCCCGGCUUCU-U--UCUUCAGC-GGGGCUGUU-UGCGAUCA----G-GAG-GUGUGCUCGGACGGCGUC-G-------------
UUCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGGC-CUACCCG--ACCCGUCUU-GAARCACGG
Leucorrhinia_dubia UAAGACUGAAUACGGCCACG-AGA-CC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-C-UGGGAGU-AAACGGGUGGUUCCCGAAAGGGCGAAA-GGGGAGAUUCAGGUUU-CGCCGCGCGCCGGGCCGCGCCCGAAG-
CAAGGGAUGGCGUUCUCGCGGCCGGUGGGGUGACCCC-------------------------------CGGUCCGGGAGC--GCCACCCUUCGAGGCGCUGUUCGUCCGGCGUCGGA-GUGAC-GCACU

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UCUC--CCC-CGGUAGAACGUCGCGAUCCGUCGG-UCG-----CCGGCCU--AAGG-CCCCGGGUG-GAG-CCGUUGGCGGUUUUU----------------------------CCGCGAAC-
GACCCCGGGGA-U-CCCGGC--CGGGUGC-CCGACGGCAUGAA-G-AGAGGAAGGAGUCGGCGCGCC--UCUUUU-----------GGUAGGCG---UCCGCCCCUCCGCA-AGCGCC
CGCGGGAGUCGGGGA----UCC-GGGCCCGGCCCGGUCUCC-U--UCUUCAGC-GGGGCUGUU-UGCGACG-----AGGAG-GUGUGCUCGGACGGCGCC-G-------------UUCCUCCGGUCU-
GCGACGC-UU-CAGCUUGGAUGGC-CUACCCG--ACCCGUCUU-GAARCACGG
]
[
                                                                                                                                                 D1-24
D1-2                D1-1â€šÃ„Ã´             D2-1a            D2-1b         D2-2a                      D2-2b          D2-2c                D2-2d
D2-2e                         D2-2dâ€šÃ„Ã´          D2-2câ€šÃ„Ã´                        D2-2bâ€šÃ„Ã´                     D2-2aâ€šÃ„Ã´
D2-3       D2-4                 D2-5a            D2-5b                               D2-5c                              D2-5bâ€šÃ„Ã´
D2-5aâ€šÃ„Ã´      D2-4â€šÃ„Ã´                                                     D2-7a                                7b
D2-7b                                    7bâ€šÃ„Ã´                         D2-7c?                                          D2-3â€šÃ„Ã´
D2-1bâ€šÃ„Ã´         D2-1aâ€šÃ„Ã´
Unaligned         ????????????????????-??-???-??????????????????-?????????????????????????????????????????????????????????
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444444????555555??????????666666666666???-??????????777777777777777777777777777777777xxxXXXXXXxXXXXXXX8888888???-??????????-
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Lestes_eurinus_OLE          UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGGUUCAAGUCU-CGCCG-GCUUCGGACGGCGGCCGCGACC-AGGGAUGGUGUCUU--CGC- GGUC-G-GGGG--GCAA---CCCUCG-
GCC---CGU-GGGCGCCACCCCGCG-ACUG-UC---------UUCCGCCGUCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGACU--GAGG-
GCCCGGGUG-GAGCC-UGU-GCCGCUCGUUCU-------------GCGAGAGGC--GCAC-GACCCCGGGAU-U-CCCGGC--CGG
GUGC-CCGACGGUAUGAA-G-CGA-GAAG---UCGACGCGCCGA--------AUUC-------UCGGCGU---CCGGCCCUCCGCAA-GCGCCCACGG---GAGUUUGGGUUC---CGGACC-
UGGUCCGAUCCCGUUCCC-UCCGU-GGG-GCUGUUUGCGAU-C---A-GGAG-GUGUCCUCGGACGGCGUC-G-----------UUUGUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG-C CUACCCG--
ACCCGUCUU-GAAACACGG
Hemiphlebia_mirabilis_OHM    UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAUUUCGAAA-GGGGAGAUUCAAGUCU-CGCCG-GUGGUGGGCGGCGGCCGCGACC-AGGGAUGGUUCUUU--CGC- GGUC-G-GGGG--GCAA---CCCUCG-
GCC---CGG-GGGAGCCACUCCGCG-GCUG-CCG-CUU--C-CGCCGCCUCCGGU-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCU--GAGG-
GCCCGGGUG-GAGCC-GGU-GACGC--------------------GCAAGCGUC--GCC--GACCCCGGGAU-C-CCCGGC--CGG
GUGC-CCGACGGUACGAA-A-CGA-GAAG---UCGACGCGCCGU---------AAA-------ACG-CGU---CCGGCCCUCCGCAA-GCGCCCGCGG---GAGUUCGGUUUC---CGGACC-
CGGUCCGAUCCCGUUCUC-AC-GUCGGG-GCUGUUUGCGAU-A---A-GGAG-GUGUCCUCGGACGGCGUC-G-----------UUUCUCUCCGGUCC-GCGACGC-UA-CGGCUUGGAUGG-C CUACCCG--
ACCCGUCUU-GAAACACGG
Epiophlebia_superstes_OES             UAAGACUGAAUAUGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-U-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCGGCCGCGACC-AG GGAUGGCGUCUU--CGC-
GGCG-G-GGGG--GCAA---CCCUCC-GUC---CGG-GGGCGCCACUCCGCGGGCUG-CCG-UCC--C-UCCCGGCGUCGGA-GUGAC-GCACUUCUC-- CCC-GAGUAGGACGUCGCGACCCGUCGA-
GCG-----CCGGCCU--AAGG-CCCCGGGUG-GAGCC-UGU-GCAGUUCUCG-UCC--------G-CGCGAACUGC--GCAC-GAC
CCCGGGGA-U-CCCGGC--CGGGUGC-CCGACGGUACGAA-G-CGAGGAAGGAGUCGACGCGCCGC--------CCAG-------UCGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGG---
GAGUCCGGGUUG---CGGACC-CCGUCCGAUCCCGGUCCC-UCCGC-GGG-GCUGUUUGCGAC-U---A-GGAG-GUGUCCUCGGACGGCGUC-g-------------AUUCUCCAGUCC- GCGACGC-
UU-CAGCUUGGAUGG-CCUACCCG--ACCCGUCUU-GAAACACGG
Unaligned_Aeshnoid
Archipetia_auriculata_AAAu   uaagacugaauacggccacg-ag-acc-gauagcgaacaaguACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-GGGGAGU-AAACGGGUGGUACCCGAAAGUUCGAAA-GGGGAGAUUCAAGUCU-CGCCGCGCGUCGGGCGGCUGCCGCGACC-AGGGAUGGCGUCUU--CGC- GGUC-U-GGGG--GCAA---CCCUCG-
AAC---CGG-AGGUGCCACUCCGCG-GCUG-CCG-UCU--G-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-GAGUAGGACGUCGC GACCCGUCGA-GCG-----CCGGCCU--AAGG-
CCCCGGGUG-GAGCC-UGU-GCAGUCCGCUCA------------CGCCGACUGC--GCAC-GACCCCGGGAA-U-CCCGGC--CGG
GUGC-CCGACGGUACGAA-G-CGAGGAAGGAGUCGACGCGCCG---------CCUA--------AGGCGU---CCGGCCCUCCGCAA-GCGCCCGCGG---GAGUCCGGGUUA---CGGACC-
CGGUCCGAUCCCGUUCCC-UCCGC-GGG-GCUGUUUGCGAU-C---C-GGAG-GUGCCCUCGGACGGCGuc-g-------------auucuccagucg-gcgacgc-uu-cagcuuggaugg-c cuacccg--
acccgucu?-?????????
A_FJ596598_Ladona_depressa   UAAGACUGAAUACGGCCACG-AG-ACC-GAUAGCGAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
C-UGGGAGU-AAACGGGUGGUUCCCGAAAGUGCGAAA-GGGGAGAUUCAGGUCU-CGCCGUGCGCCGGGCCGCGCCCGCGAUUAAGGGAUGGCGUUUU--CGC-
```

GGCC-G-UGGG--GCAA---CCCUCG-GUC---CGG-GAGCGCCACCCCGCG-GGUG-CGG-UCU--A-UCCCGGCGUCGGA-GUGAC-GCACUUCUC--CCC-CGGUAGAACGUCGC GAU CCGUCGG-
UCG-----CCGGCCU--AAGG-CCCCUGGUG-GAGCC-UGU-GCGGUUCG---------------------CCGC--GCAU-GACCCAGGGGA-U-CCCGGC--CGG GUGC-CCGACGGUACGAA-G-
AGAGGAAGGAGUCGGCGCGCCUUU------------CG---CAGGCGU---CCGCCCCUCCGCAA-GCGCUCGCGG---GAGUCGGAAG-A--GCGGGCC- CGGCCCGGCUUCCU-UCU-UCAGC-GGG-
GCUGUUUGCGAU-A---A-GGAG-GUGUGCUCGGACGGCGUC-G------------UCCCUCCGGUCU-GCGACGC-UU-CAGCUUGGAUGG-C CUACCCG--ACCCGUCUU-GAAACACGG

Ephemerella UAAGGCUAAAUAUGACCACG-AG-ACC-GAUAGCAAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
AGUUCAAGAGUACGUGAAACCGU-U-CAAGGAG-GUACGGGUGGA-CCCUAA-GGUCGAAC-GGGCAGAUUCAGUA----UCUGUUCGUGCCGC-CGC--GGCUCUCGCACCGGU-------
-GAAAGGGCCGUCCUUUUU-GGCU--UUCG---GGUCAGGGACGGUC---------GCCGGUCGGGGGUUCAA---------UAGCGCGCGGACGACGGA----GC-GCACUUCUC--CCC-
UAGUAGGACGCCGCGACCCGCUGGAGUGACGAGCGGGCCU--AAGG-CCCGGUGGC-GAGUCCGUG-GCGCGCUUCG-----------------GCGCGC--CGCG-GAGCCCCGGUG- UUCCCGGU--
CCGCU-U-CCGGCGGUCGUAA-CUGACGGAGCCC-UC-CCGCGCACUU----------------UUGUGUGCGCCCGUGCCCCGCGCGA-GCG-UAGGCCC--GCUAGUCGC GC---
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Paraleptophlebia UAAGGCUAAAUACAACCACG-AG-ACC-GAUAGCAAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAG
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GAGUAGGACGUCGUGACCCGCUGG-GUG-----UCGGUCU--GAGG-UCUGGGUGC-GAGCCCGGG-CCGCGGUUCG-----------------CCGCGG--CCCG-GAGCCCCGGUG- U-CCCGAC--
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ACCCGUCUU-GAAACACGG
Callibaetis_sp_AY749925 AAAGGCUAAAUAUGACCACG-UG-ACC-GAUAGCAAACAAGUACCG-UGAGGGAAAGUUGAAAAGAACUUUGAAGAGAGAGUUCAAGAGUACG UGAAACCGU-
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--C-GGCC--UUCG---GGUCGG-----------CCUCGGGCCCGCGG-CGCG-GU-UUUU---------GCGUGCUGGCGGGGGAGC-GCAAUUCUC--CCU-UAGUAGGACGUCGCGAC CCGUUGG-
GUG-----UCGGUCG--AAGG-CCCGGGAUGCGAGCCCGUU-CCGCGGC-------------------AACGCGG--GGCG-GAGCCCUGGUUUUUCCCGGC--CGACUGC- C
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UAGUAGGGCGUCGCGACCCGCUGG-GCG-----UCGGCCG--ACGG-CCCGGGGAU-CAGUCCCGU-CCGC-CUC--------------------G- GCGG--ACGG-GGGCCCCGGUG-U-CCCGGU--
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[D3]
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Unaligned D3-???????????????-?????--???
bbbbbbbbbbb???????----???????????????ccccccccc???????cccccccccccccccccccccccccccc??????-cccc???????????-??????????-
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Unaligned_Zygoptera D3-???????????????-?????--???-11-
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Protosticta_sp_A_ZPA acCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGAUCCGCG-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- CC----
AGGGCGGCC----GAGGGAGGACGGGGCCG-------CGAGC------------UU-CC--------------GCUCGA----GGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--GUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Protosticta_curiosa_ZPCs_BPCp ??????????????????-?????--???
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Protosticta_sanguinostigma    ??????????????????-?????--??????????????????????????????????????????????????????????????????????
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??????-????????-????????????????????????????????????????????????????[-            ]
Sinosticta_ogatai_ZSOg        ??caaggagucuaacaug-cgCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- AC-----
GGGCGGCC----GAGGGAGGACGGGGCCGA--AG-UGCCGGGC-----------CCCGU-------------GCCCGGC----CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--GUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUaggggcgaaagacuaaucga
Palaemnema_paulicoba_ZPP      ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGAUCCGCG-AAACCCACAGGCGAAAUGAAAGUGAAGGCCGCCG-- UC----
CGGGCGGCC----GAGGGAGGACGGGACCG---------------GAG-------------------------------GA----GGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--GUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                      ]
Palaemnema_domina_ZPDm        ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--CGACGAUCCGCG-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC----
CGGGCGGCC----GAGGGAGGACGGGGCCC------GCUCCGGC----------UU-CG-------------GCCUCGGC---GGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--GUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Palaemnema_melanostigma_BPM   ??caaGGAGUCUAACACG-CGCGC--AAGUCGUUGGGUCGGA--C-GUGAUCCGCG-AAACCCAGAGGCGAAAUGAAAGUGAAGGCCGCCG-- UC----
CGGGCGGCC----GAGGGAGGACGGGGCCG-------C------GUG--------UG-CU---------CGC--------A----GGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--GUCGC--
GAGGGGAGAGGCGCACCCA-GAG-CGCGCACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Isosticta_robustior_BIR       ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGUCG-- CA----
UGGGCGGCC----GAGGGAGGACGGGGCCGC-----UCGGGCGU----------UC-CG-------------GCGCUCGG---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUUGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Rhadinosticta_simplex_ZRS     ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGUCG-- CA----
UGGGCGGCC----GAGGGAGGACGGGGUCGU-------UCGGA------------AU--U--------------UCCGG-----CGAUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Amphisticta_silvarum_ZAS      ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGUCG-- CA----
UGGGCGGCC----GAGGGAGGACGGGGCCGC-----UCGGGCGU----------UC-CG-------------GCGCUCGU---CGGUCC
CC-GC-ACCCCCGGGG-CGUCU-GAUCCCUC--ACUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA
GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAagacuaaucga[-           ]
Labidosticta_vallisi_OLVa     acCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGUCG- AUU-----
GGGCGGCC----GAGGGAGGACGGGGCCGA-UC--UCGGGCGC----------UC-CG-------------GCGCCCGA---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--ACUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                      ]
Orosticta_filicicola_ZOF      ??caaggagucuaacaug-cgcgc--gagucguugggucGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGUCG- CUC-----
GGGCGGCC----GAGGGAGGACGGGGCCGA-----UCGAGCGU----------UC-CG-------------GCGCCCGA---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--ACCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGAcuaaucga
Platycnemis_pennipes_OPPp     ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCUGCCG-- UC-----
CGGUGGCC----GAGGGAGgACGGGGCCGU-----UCGGGCGC----------UC-CG-------------GCGCCCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCnA[-                      ]
Copera_annulata_OCAn          ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCUGCCG-- UC-----
CGGUGGCC----GAGGGAGGACGGGGCCGC-----UCGGGCGC----------UC-CG-------------GCGCCCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                      ]
Copera_vittata_BCV            ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC-----
CGGUGGCC----GAGGGAGGACGGGGCCGC-----UCGGGCGC----------UC-CG-------------GCGCCCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU-
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GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-           ]
Copera_marsoupipes_ZCM         ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC-----
CGGUGGCC----GAGGGAGGACGGGGCCGC-----UCGGGCGC----------UC-CG------------GCGCCCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                     ]
Coeliccia_albicauda_OCAL       ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCUGCCG-- UC-----
CGGUGGCC----GAGGGAGGACGGGGCCGC--A--GAGGGCGU----------UC-CG------------GCGUCCUC---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                     ]
Coeliccia_cyanomelas_BCC       ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCUGCCG-- UC-----
CGGUGGCC----GAGGGAGGACGGGGCCGC--A--GAGGGCGC----------UC-CG------------GCGUCCUC---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                     ]
Calicnemia_miles_OCMi          ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG--
UC-----CGGUGGCC----GAGGGAGGACGGGGCCGC--A--GGGGGCGC----------UC-CG------------GCGCCCUC---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--
AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                     ]
Prodasineura_vitatta_OPV       ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCU-- UC-----
CGGUGGCC----GAGGGAAGACGGGGCCGCU--CUUCGGUCGU----------UC-CG------------GCGACCGA---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                     ]
Chlorocnemis_abboti_ZCAb       ACCAAGGAGUCUAACAUG-CGCGC--GAgucguugguucGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCU-- CC-----
CGGCGGCC----GAGGGAAGACGGGGCCGCG--CCUCGGUCGU----------UC-CG------------GCGACCGA---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                     ]
Nososticta_solida_ZNSo         acCAAGGAGUCUAACAUG-CGCGC--GAGCCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- CU-----
GGGCGGCC----GAGGGAGGACGGGGCCGUU----UCGGGCGC----------UC-CG------------GCGCCCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUUGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCGCACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                     ]
Phylloneura_westermanni_BPW   ACCAAGGAGUCUAACAUG-CGCGC--GAGCCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- CU-----
GGGCGGCC----GAGGGAGGACGGGGCCGU----UUCGGGCGC----------UC-CG------------GCGCCCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUUGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Onychargia_atrocyana_ZOA       ??caaggagucuaacaug-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCU-- UA-----
CGGUGGCC----GAGGGAGGACGGGGCCGG----CCCGGGCGC----------UC-CG------------GCGCUCGA---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGguauaggggcgaaagacuaaucga
Argia_moesta_OAM               acCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG--
CU-----GGGCGGCC----GAGGGAGGACGGGGCCGU------------UUC--------UU-GC---------GA---------U---CGGCCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--
AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Argia_nahuana_BAN              ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- CU-----
GGGCGGCC----GAGGGAGGACGGGGCCGC-------------UC--------UUUUC---------GA---------U---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Argiocnemis_rubescens_ZAR     ??????????????????-?????--????????????????--?-??????????-??????????????????????????????????--
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Mortonagrion_binocellata_BMBACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCUGA--A-GCGCUACGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UU----
CGGGCGGCC----GAGGGAGGAUCGGGC--------------------------UG-CG--------------------------GCCCUC-GC-ACUCCCGGGG-CGUCU- GAUCUCUC--AUCGC--
GAGAGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Agriocnemis_pygmaea_OAP   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCUGA--A-GCGCUACGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UU----
CAGGCGGCC----GAGGGAGGAUCGGGC--------------------------UG-CG--------------------------GCCCUC-GC-ACUCCCGGGG-CGUCU- GAUCUCUC--AUCGC--
GAGAGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Austroagrion_watsoni_ZAW   ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UU----
CGGGCGGCC----GAGGGAGGACGGGGC--C-----------------------UC-UG--------------------------GCCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Archibasis_viola_ZAV   ??caaggagucuaacaUG-CGCGC--GAGUCGUUGGGUCGGA--U-GCGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UA----
UCGGUGGCC----GAGGGAGGACGGGGCGGG------------CGGA-------UU-UU---------UCUC-----------CCGCCCCC-GC-ACCCCCGGGG-CGUCU- GAUCUCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Coenagrion_puella_AJ488546   ??????????????????-?????--??
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Coenagrion_resolutum_JQ966593   ACCAAGGAGUCUAACAUG-UGCGC--GAGUCGUUGGGUCGGA--C-GCGAUCCGCU-AAACCCAUAGGCACAAUGAAAGUGAA
GGCCGCCU--UA-----GGGCGGCC----GAGGGAGGACGGAGC--------------------------UC-CG--------------------------GCUCCC-GC-ACUCCCG
GGG-CGUCU-GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA
GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Pseudagrion_cingillum_OAAL   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--U-GCGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- CA----
UCGGUGGCC----GAGGGAGGACGGGGCGGG------------CGGA-------UU-UU---------UCUC-----------CCGCCCCC-GC-ACCCCCGGGG-CGUCU- GAUCUCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Pseudagrion_aureofrons_BPA   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--U-GCGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCCG--UA----UCGGUGGCC----GAGGGAGGACGGGGCGGG------------CGGA-------UU-UU---------UCUC-----------CCGCCCCC-GC-ACCCCCG GGG-CGUCU-
GAUCUCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Pseudagrion_ignifer_OPi   accaaGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--U-GCGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- CA----
UCGGUGGCC----GAGGGAGGACGGGGCGGG------------CGGA-------UU-UU---------UCUC-----------CCGCCCCC-GC-ACCCCCGGGG-CGUCU- GAUCUCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUaaucga
Erythromma_najas_EU055009   ??????????????????-?????--??
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Cercion_plagiosum_AJ488552_   ??????????????????-?????--??
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Cercion_lindenii_AJ488550_   ??????????????????-?????--??
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????????????????????????????????-??????-????????-???[-   ]
Paracercion_hieroglyphicum_AJ488551   ??????????????????-?????--??
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????????????????????????????????-??????-????????-??[-   ]
Acanthagrion_quadratum_ZAQ   ??????????????????-?????--???
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Leptobasis_vacillans_ZLV   ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAAGGCCCCUU-- UU------
GGGUGCC----GAGGGAGGACGGAGCGG-------------GUCCC-C----UA-GU-------GGGA------------CGGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA
Amphiagrion_saucium_OAS   accaaggagucuaacaug-CGCGC--GAGUCGUUGGGUACGC--U---------CU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- CU----
ACGGUGGCC----GAGGGAGGACGGGGC--------------------------CA-C--------------------------GCCCCC-GC-ACUCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGacuaaucga
Amphiagrion_abbreviatum_BAAb   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUACGC--U---------CU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCCU--CU----ACGGUGGCC----GAGGGAGGACGGGGC--------------------------CA-C--------------------------GCCCCC-GC-ACUCCCG GGG-CGUCU-
GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Xiphiagrion_cyanomelas_ZXC   ??????????????????-?????--????????????????--?-??????????-??????????????????????????????????---
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????????-??????--????????-?-????????-???-?????????????????????????????????-?UGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Hesperagrion_sp_AY749911   ACCAAGGA??????????-?????--???
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?????????????--?????--????????-?-????????-???-?????????????????????????????????-?UGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CC GUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Ischnura_elegans_1239   ??---AGGCACAAUGAAAGUGAAGGCCGCCG-- UU----
CCGGCGGCC----GAGGGAGGACGGGGC--------------------------CU-C--------------------------GCCCCC-GC-ACUCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Ishnura_barberi   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUUCGC--U---------CU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- CU----
CCGGCGGCC----GAGGGAGGACGGGGC--------------------------CU-C--------------------------GCCCCC-GC-ACUCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Ischnura_graellsi_AJ488545_   ??????????????????-?????--???
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Anomalagrion_hastatum   acCAAGGAGUcuaacaug-cgugc--gAnUUGUUGGGUUCGC--U---------CU-AAACCCACAGGCACAAUGGAAGUGAAGGCC-------
----------AGCC----GAGGGAGGACGGUGC--------------------------CU-C--------------------------GCCCCC-GC-ACUCCUGGGG-CGUCU- GAUCCCUC--
AUCGC--AAGGGGAG-G-CGCACCCA-GAG-UGCACACGUUGGGACCCGAAAGAUGGGGAACU-AUGCCUGACCAGGACGAAGUCAGGGGAAACCGUGAUGGAGGU-CCGUA G-CGAUUCUG-
CCGUGCAAAUCGAUCGUCGGAucuggguguaggggcgaaagacugaucga[-   ]
Amphiallagma_parvum_AJ420939_   ??????????????????-?????--???
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Azuragrion_granti_AJ420937_   ??????????????????-?????--???
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Azuragrion_nigridorsum_AJ420938 ??????????????????-?????--???
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Enallagma_cyathigerum_0110 ??????????????????-?????--????????????????--?-???????????????CCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UU----
CCGGCGGCC----GAGGGAGGACGGGGC---------------------------C----------------------------CCGCCCCC-GC-ACUCCCGGGG-CGUCU- GAUCCCUC--AUCGN--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Enallagma_sp ACCAAGGAGUUUAACAUG-CGCGC--GAGUCGUUGGGUUCGC--------GAUGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UU----
CCGGCGGCC----GAGGGAGGACGGGGC---CCC--GCCCCC-GC-ACUCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
E_aspersum_DQ087506 ??????????????????-?????--??
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Aciagrion ??????????????????-?????--??
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??????-????????-??[-   ]
Aciagrion_borneense_ZAB ??caaGGAGUCUAACAUG-CGCGC--GAGUCCUCGGGUUUUC--G------------AAACCCGUAGGCGCAAUGAAAGUGAAGGCCGC-----
--------GAGGCC----GAGGGAGGAAGGGGC---------------------------CU-C---------------------------GCCCCC-GC-ACUCCCGGGG-CGUCU- GAUCCCUC--
GUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Protoneura_capillaris ACCAAGGAGnnnnnnNnnnnnnnn--NNnnnnnUGGGUnnnnnnnnnnnnnnnnnnnAAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UA-----
CGGUGGCC----GAGGGAGGACGGGGUCGU-----UCGGGCGC-----------UC-CG-------------GCGCUCGU---CGGCCUCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ][Bybeeâ€šÃ„Ã´ssequencereducedtoNs]
Protoneura_cara_ZPC ??caaggaguCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC-----
GGGCGGCC----GAGGGAGGACGAGGACGU-----UCGGGCGC-----------UC-CG-------------GCGCCCGU---CGGCCUUC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Psaironeura_remissa_PRN accaAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC-----
GGGCGGCC----GAGGGAGGACGAGGACGU-----UCGGGCGC-----------UC-CG-------------GCGCCCGU---CGGCCUUC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Elattoneura_analis_glauca ??????????????????-?????--??
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Neoneura_aaroni_ONA ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCUCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCU-- CC-----
CGGCGGCC----GAGGGAGGACGGGGUCGA-----UCGAGCGC-----------UC-CG-------------GCGCGCGU---CGGCCCUC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Neaneura_amelia_ZNA accaAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCUCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCU-- CC-----
CGGCGGCC----GAGGGAGGACGGGGUCGA-----UCGAGCGC-----------UC-CG-------------GCGCGCGU---CGGCCCUC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Neoneura_maria_BNM ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCUCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCU-- CC-----
CGGCGGCC----GAGGGAGGACGGGGUCGAU---CUCGGGCGC-----------UC-CG-------------GCGCCCGU---CGGCCCUC-GC-ACCCCCGGGG-CGUCU-

GAUCCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Ceriagrion_aeruginosum_ZCAe ??caaggagucuaacaug-cGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCUC-- UU-----
UGGCGGCC----GAGGGAGGACGGGGCCCG--------------------CCGCU-CG---------CGA-------C---GGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Telebasis_salva_ZTS ??CAAGGAGUAUAACAUG-GGUGG--GAGUCGUUGGGUCGGA--C-ACCCUGGGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCC--- UU--A--
CGGUGGCC----GAGGGAGGACGGGGUCGC------------AAAAUU------------------UU--------U---CGAUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-------------G-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAUCUGGGUAUAGGGGCGAAAGACUAAUCGA
Leptagrion_elongatum_ZLE ??????????????????-?????--???
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??????-????????-??[-][Eliminatedcontaminant]
Leptagrion_sp_JQ966595 ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCGCC--- GU----
CGGGCGGCC----GAGGGAGGACGGGGCCUC------CGCGCGU----------UC-CG------------GCGCGCGU---GGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Metaleptobasis_manicaria_ZMMr ??caaggagucuaACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAA GGCCCCU-
--UU-----UGGGUGCC----GAGGGAGGACGGAGCGGG-------------U-CCCC----UA-GU---------GGGA----------CGGCUCCC-GC-ACUCCCC GGG-CGUCU-GAUUCCUC-
-AGUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Diceratobasis_sp_A_ZDA ACcaaGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC-----
GGGCGGCC----GAGGGAGGACGGGGUCGC-----CCGCGCGU----------UC-CG------------GCGCGCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
FJ596559_Pyrrhosoma_nymphula ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCUC--UU-----UGGCGGCC----GAGGGAGGACGGGGCCGC-----UCGGGCGC----------UC-CG------------GCGCUCGU---CGGUCCCC-GC-ACCCCCG
GGG-CGUCU-GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-
CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-] Chromagrion_conditum_OCCn acCAAGGAGUCUAACAUG-
CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCUU-- CU-----GGGCGGCC----GAGGGAGGACGGGGCCGC-----UCGGGCGC---------
--UC-CG------------GCGCUCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUUGC--GAGGGGAG-G-CGCACCCA-GAG-
CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Teinobasis_alluaudi ??????????????????-?????--???
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??????-????????-??[-][Eliminatedcontaminant]
Nehalennia_gracilis_ONG ACcaaggagucuaacaUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCACC--- CU-----
GGGUGGCC----GAGGGAGGACGGGGCCGC-----------------------UC--G----------------------CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCUCUC--AUCGC--
GAGAGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Coryphagrion_grandis_ZCG acCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC----
GGGCCGGCC----GAGGGAGGACGAGGCCGC-----ACCCGCGU----------UC-CG------------GCGCGG-U---CGGCCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Microstigma_rotundatum_OMRt accaaggagucuaaCAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC-----
GGGCGGCC----GAGGGAGGACGGGGCCGG-----UCGCGCGU----------UC-CG------------GCGCGCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGAcuaaucga

Microstigma_anomalum_BMA   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCCG--UC-----GGGCGGCC----GAGGGAGGACGGGGCCG-----GUCGCGCGU----------UC-CG------------GCGCGCGU---CGGUCCCC-GC-ACCCCCG GGG-CGUCU-
GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Mecistogaster_ornata_ZMO   accaAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC-----
CGGUGGCC----GAGGGAGGACGGGGCCGC-----UCGCGCGU----------UC-CG------------GCGCGCGA---CGGUCUCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGA
AAGACUAAUCGA[-   ]
Mecistogaster_linearis_BML   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC-----
GGGCGGCC----GAGGGAGGACGGGGCCG-----CUCGCGCGU----------UC-CG------------GCGCGCGA---CGGUCUCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Megaloprepus_coerulatus_ZMC   ACcaaGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG--
UC-----CGGCGGCC----GAGGGAGGACGGGGCCGG-----CCGCGCGU----------UC-CG------------GCGCGCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--
AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Haplostigma_modesta_ZHM   accaAGGAGUCUAACAUG-CGCGC--GAnUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC-----
GGGCGGCC----GAGGGAGGACGGGGCCGC-----UCGCGCGU----------UC-CG------------GCGCGCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Pseudostigma_aberrans_OPA   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC-----
GGGCGGCC----GAGGGAGGACGGGGCCGC-----UCGCGCGU----------UC-CG------------GCGCGCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Rhinagrion_mima_ZRM   accaaggagucuaacaug-CGCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGCACAAUGAAAGUGAAGGCCGCCU- CCU-----
GGGCGGCC----GAGGGAGGACCGGGCCGC--ACAUCGGACGC----------UC-CG------------GCGUCCGA---CGGUCCGC-GC-ACCCCCGGGG-CGUCU- GUUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGUGCACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGa
Sciotropis_cyclanthorum_BSC   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--A-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC----
GGGGUGGCC----GAGGGAGGACGGGGCCGA--UC-UCGUGCGC----------UC-CG------------GCGCACGU---CGGUCCCC-GC-ACCCCCGGGG- CGUCUCGUUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU- CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Heteragrion_mitratum_ZHMt   ACcaaggaGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC-----
GGGUGGCC----GAGGGAGGACGGGGCCGU--U--UCGGGCGU----------UC-CG------------GCGCUCGG---CGGUCCCC-GC-ACCCCCGGGG- CGUCUCGUUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU- CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Heteragrion_sp_BH   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG--
UA-----CGGUGGCC----GAGGGAGGACGGGCCCG--CUU--CGGGCGC----------UC-CG------------GCGCUCGG---CGGUCCCC-GC-ACCCCCGGGG- CGUCUCGUUCCCUC--
AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU- CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Oxystigma_cyanifrons_ZOC   ??????????????????-?????--???
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????????????????????????????????-??????-????????-??[-   ]
Dimeragrion_percubitale_ZDP   ??caaggagucuaacauG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC----
GGGGCGGCC----GAGGGAGGACGGGGCCG--UU--UCGGGCGC----------UC-CG------------GCGCCCGG---CGGUUCCC-GC-ACCCCCGGGG- CGUCUCGUUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU- CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGaaagacuaaucga
Tatocnemis_malgassica_ZTMa   ??caaggagucuaacauG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG- CUC----
GGGGCGGCC----GAGGGAGGACGGGGCCG--CACAUCGGGCGC----------UC-CG------------GCGCCCGA---CGGUCCCC-GC-ACCCCCGGGG-CGUCU-

GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUaaucga
Philogenia_cassandra_BPCs ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG- CAC-----GGGCGGCC----GAGGGAGGACCGGGCCG--UUUU-CGGUCGC----------UC-CG------------GCGACCGA---CGGUCCGC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUUGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Philogenia_terraba_ZPBn_ZPT ??????????????????-?????--?? ??????????-???????----?????????????????--????????????----------------------------??????-??--???????????-??????????-??????????????--?????--????????-?-????????-???-??????????????????????????????????-???-??????-????????-???[-]
Philogenia_berennice_ZPBn accaaggagucuaacAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG- CAC-----GGGCGGCC----GAGGGAGGACCGGGCCG--UUUU-CGGUCGC----------UC-CG------------GCGACCGA---CGGUCCGC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUUGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACC CGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCuggguauaggggcgaaagacuaaucga
Teinopodagrion_venale_ZMV_BTV ACcaaggaGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA GGCCGCCG-CUC-----GGGCGGCC----GAGGGAGGACGGGGCCG--A---GCGGGCGC----------UC-CG------------GCGCCCGG---CGGUCCCC-GC-ACCCCCG GGG-CGUCU-GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Teinopodagrion_lepidum_ZTL accaaggagucuaacaug-cgCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG- CUC-----GGGCGGCC----GAGGGAGGACGGAGCCG--A---CCGGGCGC----------UC-CG------------GCGCCCGG---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGgcgaaagacuaaucga
Amanipodagrion_gilliesi_ZAG ACCAAGGAGUCUAACAUG-CGCGC--GAgucguugggucgga--c-acgcuccgcu-aaacCCAUAGGCgcaAUGAAAGUGAAGGCCnnnn-n- n-----nnnnnnnn----nnnnnnnnnnnnnnnnn--n---nnnnnnnn------------------------nnnn----ccga---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGggcgaaagacuaaucga[-]
Nesolestes_elizabethae_ZNE ??caaggagucuaaCAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCU- UUC-----CGGCGGCC----GAGGGAGGACGGGGCCG--U---CCGGACGU----------UC-CG------------GCGCUCGG---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAaucga
Protolestes_kerckhoffae_ZPKc[?] ??caaggagucuaacaug-cgcgc--gagucGUUGGGUCGGAA-A-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA GGCCGCCG-CUG-----GGGCGGCC----GAGGGAGGACGGGGCCGGCCUUCGCGCCUGAUCGCGC-----UC-CAGGGCGCC------UCAGGCGCGA-CGGUCCCC-GC-ACCCCCG GGG-CGUCU-GAUCCCUC--ACCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGAcuaaucgaArgiolestes_ochrostomas_ZAOcACcaaggaGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-UUG-----GGGCGGCC----GA GGGAGGACGGGGCCG--G---CCGGGUGC----------UC-CG------------GUGCUCGG---CGGUCCCC-GC-ACCCCCGGGG-CGUCU-GAUCCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Argiolestes_sidonia_BAS ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG- UUG-----GGGCGGCC----GAGGGAGGACGGGGCCG--G---CCGGGUGC----------UC-CG------------GUGCUCGG---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Caledopteryx_maculata_BCM ACCAAGGAGUCUAACAUG-CGCGC--AAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCUCAAUGAAAGUGAAGGCCGCCG- UUC-----GGGCGGCC----GAGGGAGGACGGGGCCG--G---CCGGGCGC----------UC-CG------------GUGCUCGG---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGUCUAAUCGA[-]
Trineuragrion_percostale_BTPACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCUCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG- CUC-----GGGCGGCC----GAGGGAGGACGGGGCCG--G---CCGGGUGC----------UC-CG------------GUGCUCGG---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA

Caledargiolestes_uniseries_BCU   ACCAANG-GUCUAACAUG-CGCGC--GAGUCGUCGGGUCGGA--C-ACGCUCCGCU-AAACCCGCAGGCCCAAUGAAAGUGAA GGCCGCCG-
CUC-----GGGCGGCC----GAGGGAGGAAGGGGC-G--G---CCGGGCGC---------CUUCGCG------------GCGCCCGG---AUGCCCCC-GC-ACCCCCG GGG-CGUCU-GAUCCCUC--
AACGC--GAGGGGAG-G-CGCACCCA-GAG-CGCGCACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Podopteryx_roseonotata_ZPR   accaaggagucuaacaug-cgcgc--gagucguugggucgga--c-acgcuccgcu-aaacccauaggcgcaaugaaagugaAGGCCGCCG- UUC-----
CGGCGGCC----GAGGGAGGACGGGGCCG--U---CCGGGCGC----------UC-CG------------GCGCUCGG---CGGUCCCC-GC-ACCCCCGGGG-CGUCU-
GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGgggcgaaagacuaaucga
Austroargiolestes_icteromelas_OAIc   ??????????????????-?????--???
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Griseargiolestes_albescens_BGA   ?CCAAGGAGUCUAACAUG-CGCGC--AAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCCG-UUC-----GGGCGGCC----GAGGGAGGACGGGGCCG--G---CCGGGCGC----------UC-CG------------GUGCUCGG---CGGUCCCC-GC-ACCCCCG GGG-CGUCU-
GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Grisagriolestes_eboracus_ZGE   accaagGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCCG-UUC-----GGGCGGCC----GAGGGAGGACGGGGCCG--G---CCGGGCGC----------UC-CG------------GUGCUCGG---CGGUCCCC-GC-ACCCCCG GGG-CGUCU-
GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGAMiniargiolestes_minimus_ZMMnaccaaggagucuaacaug-cgcgc--gagucguugggucgga--c-
acgcuccgcu-aaacccauaggcgcaaugaaagugaaggccgccg-cuc-----cggcgGCC----GA GGGAGGACGGGGCCG--G---CCGGGCGC----------UC-CG------------
GUGCUCGG---CGGUCCCC-GC-ACCCCCGGGG-CGUCU-
GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAagacuaaucga
Lestomima_flavostigma_OPBc3   accaaggagucuaacaug-cgCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGCGCAAUGAAAGUGAAGGCCGCCG-- UC----
GGGGCGGCC----GAGGGAGGACUGGGCCG--C--UUCGGACGC----------UC-CG------------GCGUCCGA---CGGUCCAC-GC-ACCCCCGGGG-CGUCU- GUUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGUGCACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAaagacuaaucga
Rhipidolestes_hiraoi_ORH   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC----
GGGGCGGCC----GAGGGAGGACGGGUCCG--A--UUCGGGCGC----------UC-CG------------GCGCCCGA---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Rhipidolestes_aculeata_BRA   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC----
GGGGCGGCC----GAGGGAGGACGGGUCCG--A--UUCGGGCGC----------UC-CG------------GCGCCCGA---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Paraphlebia_zoe   gaCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC----
GGGGCGGCC----GAGGGAGGACGGGUCCG--U-UCG-GGGCGC----------UC-CG------------GCGUCCGA---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGU?????????????????????????????????[-   ]
Thaumatoneura_inopinata_OTI   ??????????????????-?????--??
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Hypolestes_clara_OHC   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC----
GGGGCGGUC----GAGGGAGGACGGUGCCG--A-CCG-UGGCGU----------UC-CG------------GCGCUCGG---CGGUUCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACUUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Hypolestes_sp   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC----
GGGGCGGUC----GAGGGAGGACGGUGCCG--A--CUGUGGCGU----------UC-CG------------GCGCUCGG---CGGUUCCC-GC-ACCCCCGGGG-CGUCU-

GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACUUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Agriomorpha_fusca_ZAF6 acCAAGGAGUCUAACAUG-CGCGC--AAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UU----
GGGACGGCC----GAGGGAGGACGGAUCCG--A--CUCGGGCGC----------UC-CG------------GCGCCCGA---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
ZSY_Sinocnemis_yangbingi ??????????????????-?????--??
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Miocora_peraltica_ZMP ??caaggagucuaacaug-cgcgc--gagucguugggucgga--c-acgcuccgcu-aaacccauaggcgcaaugaaagugaaggccgccg-- uu----
ggggcggcc----gagggaggacggggccg--u---ccgggugc----------uc-cg------------gugcugga---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAggggcgaaagacuaaucga
Cora_marina_OCMr acCAAGGAGUCUAACAUG-CGCGC--AAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG--
UC----AGGGCGGCC----GAGGGAGGACGGUGCCG-----UUCGGGCGC----------UC-CG------------GCGCCCGA---CGGUUCCC-GC-ACCCCCGGGG-CGUCU- GAUCGCUC--
AUCGC--GAGUGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Cora_cyane_BCC ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCCG--UC----AGGGCGGCC----GAGGGAGGACGGUGCCG--C---UCGGGCGC----------UA-CG------------GCGCCCGU---CGGUCCCC-GC-ACCCCCG GGG-CGUCU-
GAUCGCUC--AUCGC--GAGUGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Polythore_sp_Z_ZPZ ??????????????????-?????--??
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Polythore_boliviana ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC----
AGGGCGGCC----GAGGGAGGACGGUGCCG--U---UCGGGCGC----------UC-CG------------GCGCCCGA---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCGCUC--AUCGC--
GAGUGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Euthore_fasciata_ZEF3_BEFs ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC----
AGGGCGGCC----GAGGGAGGACGGUGCCG--U---UCGGGCGC----------UC-CG------------GCGCCCGA---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCGCUC--AUCGC--
GAGUGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Rimanella_arcana_ORA accaaggagucuaacaug-cgcgc--gagucguugggucgga--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC----
GGGGCGGCC----GAGGGAGGACGGGGCCG--U--CUCGGGCGC----------UC-CG------------GCGCCCGG---CGGUCCCC-GC-ACCCCCGGGG- CGUCUCGUUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU- CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Pentaphlebia_stahli_OPSt accaaggagucuaacaug-cgcgc--gagucguugggucgga--c-acgcuccgcu-aaacccauaggcgcaaugaaagugaaggccgccg--
uu----cggguggcc----gagggaggacggggccg--u--uccgggcgc----------uc-cg------------gcgcucGG---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--
AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Devadatta_podolestoides_BDP ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCCG--UC----GGGGCGGCC----GAGGGAGGACGGUGCCG--GU-UUCGGGCGC----------UC-CG------------GCGCCCGU---CGGCCCCC-GC-ACCCCCG GGG-CGUCU-
GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Amphipteryx_longicaudata_ZAL5 accaaggagucuaaCAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCCG--UC----GGGGCGGCC----GAGGGAGGACGGGGCCG--A--UUCGGGCGC----------UC-CG------------GCGCCCGA---CGGUCCCC-GC-ACCCCCG GGG-CGUCU-
GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGG CGAAAGACUaaucga

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Pseudolestes_mirabilis_OPMb   acCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGAAAC-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- CA----
CGGGCGGCC----GAGGGAGGACGGGGCCG-------UGGGCGU----------UC-CG------------GCGCCCGG---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--ACCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                        ]
Philoganga_vetusta_OPVt_BPVtACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- CU----
CGGGCGGCC----GAGGGAGGACGGGGCCG--C--UUCGGGCGC----------UC-CG------------GCGCCCGA---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAn-nGCACACGUUG-GACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Philoganga_robusta_OPRb2      ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- CU----
CGGGCGGCC----GAGGGAGGACGGGGCCG--C--UUCGGGCGC----------UC-CG------------GCGCCCGA---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                        ]
Lestoidea_conjuncta_ZLC       accaaggagucuaacaug-cgCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC----
GGGGCGGCC----GAGGGAGGACGGGGCCG--C---ACGGGAGC----------UC-CG------------GUUCCCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAgacuaaucga[-                        ]
Diphlebia_lestoides_ZDL       UCCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC----
GGGGCGGCC----GAGGGAGGACGGGGCCG--C---CCGGGAGC----------UC-CG------------GCUCCCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                        ]
Diphlebia_coerlescens_ODC     gcCAAGGAGUCUAACAUG-CGCGC--AAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC----
GGGGCGGCC----GAGGGAGGACGGGGCCG--C---CCGGGAGC----------UC-CG------------GCUCCCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                        ]
Bayadera_melanopteryx_ZBM     accaaggagucuaacaug-cgcgc--gagucguugGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC----
GGGGCGGCC----GAGGGAGGACGGGGCCG--C---CCGGGGAU----------UU-CG------------GUCCCCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUcga
Bayadera_brevicauda_BBB                 ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCCG--UC----GGGGCGGCC----GAGGGAGGACGGGGCCG--C---CCGGGGAU----------UU-CG------------GUCCCCGU---CGGUCCCC-GC-ACCCCCG GGG-CGUCU-
GAUCCCUC--AUUGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                ]
Dysphaea_gloriosa_ODG         acCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG--- C---
AGGGGCGGCC----GAGGGAGGAUGGGGCCG--A---GACGGGGC----------UC-UC------------GCUCCCCU---CGGUCCCC-GC-ACCCCUGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAA CU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA
G-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-         ]
Euphaea_formosa_BEFm          ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC----
AGGGCGGCC----GAGGGAGGACGGGGCCG--C---CCGGGGGC----------UU--G-------------CCCCCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Anisophaea_decorata_ZAD_OED   acCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UC----
AGGGCGGCC----GAGGGAGGACGGGGCCG--A---CCGGGGAC----------UU---------------GUCCCCGU---CGGUCCUC-GC-ACGCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGAGAG-G-CGCUCUCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                        ]
Anisopleura_sp_A_ZAA          accaAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCUG-- UC----
AGGGCGGCC----GAGGGAGGACGGGGCCU--C---CC-GGGGG----------UU-CG------------CCCCC-GU---AGGUCCCC-GC-ACCCCUGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                        ]
Disparocypha_biedermanni_ZDB??caaggagucuaacaUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- CG----
AGGGCGGCC----GAGGGAGGACGGGGCCG--C---------------------GG-GA-------------------G---CGGUCCCC-GC-ACCCCCGGGG-CGUCU-
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GAUCCCUC--ACCGC--GAGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGAcuaaucga
Libellago_semiopaca_BLS   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCG-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGUCG-- CA----
CGGUCGGCC----GAGGGAGGACGGGGCCG--C----------------------AC-GU--------------------U---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Heliocypha_biseriata_BHB   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--A-ACGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAAGGCCACCG-- UA----
CGGGCGGCC----GAGGGAGGACGGGGCCG--C----------------------UG-AC-------------------G----CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Platycypha_caligata_OPC   acCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- CA----
CGGGCGGCC----GAGGGAGGACGGGGCCG--C----------------------UU-CG--------------------U---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGgCGAAAGACUAAUCGA
Chlorocypha_curta_AJ746319_ZCC   ??????????????????-?????--???
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Sundacypha_petiolata   ??????????????????-?????--??
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??????-????????-??[-   ]
Rhinocypha_fenestrella_ORF   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--A-ACGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAAGGCCACCG-- UA----
CGGGCGGCC----GAGGGAGACCGGGGCCG--C----------------------UGACG------------------------CGGUCCCU-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Rhinocypha_tincta_BRT   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCUU--UU----CGGGCGGCC----GAGGGAGGACGGGGCCG--C--UA------------------UUCCG--------------------G---CGGUCCCC-GC-ACCCCCG GGG-CGUCU-
GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Heliocharis_amazona_ZHAz3   ??????????????????-?????--??
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Hetaerina_americana_OHA2   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UU----
CCGGCGGCC----GAGGGAGGACGGGGUCG--U---UCGCUCGC-----------UC-CG------------GCGGGCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUUGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGG
 GACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGG
CGAAAGACUAAUCGA[-   ]
Caliphaea_confusa_ZCC   ACcaaggagucuaacaug-cgcGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UU----
UGGGCGGCC----GAGGGAGGACGGGGUCG--U---UCGCGUGC-----------UC-CG------------GUGCGCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Noguchiphaea_yoshikoae_AJ459228   ??????????????????-?????--???
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Vestalis_beryllae_BVB   ACCAAGGAGUCUAACAUG-UGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCCU--UC----GCGGCGGCC----GAGGGAGGACGGGGUCG--U---CGGCGCGC-----------UC-CG------------GCGCGCCC---CGGUCCCC-GC-ACCCCCG GGG-CGUCU-
GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-UGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]

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Matrona_basilaris_BMB                ACCAAGGAGUCUAACAUG-CGCGC--AAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCCU--UC-----UGGCGGCC----GAGGGAGGACGGGGUCG--U---UCACGUGC----------UC-CG------------GCGCGCGU---CGGUCCCC-GC-ACCCCCG GGG-CGUCU-
GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                              ]
FJ596560_Atrocalopteryx_atrata          ACCAAGGAGUCUAACAUG-CGCGC--AAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCCU--UC-----UGGCGGCC----GAGGGAGGACGGGGUCG--U---UCGAGUGC----------UC-CG------------GCGCGCGU---CGGUCCCC-GC-ACCCCCG
GGG-CGUCU-GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA
GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-          ]
Echo_modesta_BEM                     ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCCG--UC----AGGGCGGCC----GAGGGAGGACGGGGUCG--U---UCGCGUGC----------UC-CG------------GUGCGCGU---CGGUCCCC-GC-ACCCCCG GGG-CGUCU-
GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                              ]
Neurobasis_ianthinipennis_BNI        ACCAAGGAGUCUAACAUG-CGCGC--AAGUCGUUGGGUCGGA--C-ACGAUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGUCU--UA-----UGGUGGCC----GAGGGAGGACGGGGUCG--U---UCGC--------------AC-UU----------------GCGU---CGGUCCCC-GC-ACCCCCG GGG-CGUCU-
GAUCCCUC--AUUGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                              ]
Sapho_orichalcea_OSO           accaaggagucuaacaug-cgcgc--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- CA----
UGGGCGGCC----GAGGGAGGACGGGGUCG--C---UCGCGCGC----------UC-CG------------GCGCGCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Calopteryx_amata_OCAm          ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCU-- UC-----
UGGUGGCC----GAGGGAGGACGGGGUCG--U---UCGCGCGC----------UC-CG------------GCGCGCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                    ]
DCS_Calopteryx_splendens       ??????????????????-?????--?????????????????????????????????????????????????????????????????????
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Calopteryx_aequabilis          ACCAAGGAGUCUAGCAUG-CGCGC--AAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCU-- UC-----
UGGUGGCC----GAGGGAGGACGGGGUCG--U---UCGCGCGC----------UC-CG------------GCGCGCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGG CGAAAGACUAAUCGA[-                    ]
Iridictyon                     ??????????????????-?????--?????????????????????????????????????????????????????????????????????
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??????-????????-?????????????????????????????????????????????????[-          ]
Iridictyon_trebbaui_ZIT        ??caaggagucuaacaug-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG-- UG----
AGGGCGGCC----GAGGGAGGACGGGGUCG--U---UCGCGUGC----------UC-CG------------GUACGCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGacuaaucga
Unaligned_lestoid              D3-????????????????-?????--?????????????????????????????????????????????????????????????????????----
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??????-????????-?????????????????????????????????????????????????[-          ]
Nubiolestes_diotima_OND        aCcaaGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAAGGC-ACCU-- CU----
UGGGU-GCC----GAGGGAGGACGGAGC----G---G-GUCCC-----------CU-CGC------------GGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA
Perilestes_kahli_ZPK2_BPK      ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAAGGC-CCCU-- CU-----
UGGGUGCC----GAGGGAGGACGGAGC----G---A-GUCCC-----------CU-CGU------------GGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU-
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GAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA
Perissolestes_remotus_BPR ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAAGGC-CCCC-- CC-----
UGGGUGCC----GAGGGAGGACGGAGC----G---A-GUCCCG-----UCGUUCCG-CGU-----------CGGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--ACUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA[-]
Perissolestes_magellenae ??????????????????-?????--???
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??????-????????-???[-][probablyacontaminantdumped] Chlorolestes_umbrata_OCU
ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAAGGC-CCCU-- CU-----
UGGGUGCC----GAGGGAGGACGGAGC----G---G-GUCCC-----------CU-AGC------------GGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA[-]
Euchlorolestes_tessellata_OET ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCAAAAUGAAAGUGAA
GGC-CCCU--UU-----UGGGUGCC----GAGGGAGGACGGAGC----G---G-GUCCC-----------CU-UGU------------GGGAC------GGCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA[-] Phylolestes_ethelae_OPE acCAAGGAGUCUAACAUG-
CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAAGGC-CCCU-- CC-----UGGGUGCC----GAGGGAGGACGGAGC----G---G-GUCCC---------
--CUUUGC------------GGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AAUGC--GAGGGAAG-G-CGCACCCA-GAG-
CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA[-]
Synlestes_weyersii_ZSW ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAAGGC-CCCU-- CU-----
UGGGUGCC----GAGGGAGGACGGAGC----A---A-GUCCC-----------CU-CGU------------GGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA[-]
Synlestes_tropicus_ZST ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAAGGC-CCCU-- CU-----
UGGGUGCC----GAGGGAGGACGGAGC----A---A-GUCCC-----------CU-CGC------------GGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA[-]
Chorismagrion_risi_ZCRi ACcaaggagucuaacauG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAAGGC-CCCU-- UU-----
UGGGUGCC----GAGGGAGGACGGAGC----G---G-GUCCC-----------CU-AGU------------GGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA[-][thisoneaddedMay07]
Episynlestes_cristatus_ZEC accaag-agu????????-?????--???
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??????-????????-???[-]
Episynlestes_albicauda_BEA ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAAGGC-CCCU-- CU-----
UGGGUGCC----GAGGGAGGACGGAGC----G---G-GUCCCC-----------U-UGU------------GGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA[-]
Megalestes_micans_ZMMc acCAAGGAGUCUAACAUG-CGCGC--GAgucGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAAGGC-CCCU-- UC-----
UGGGUGCC----GAGGGAGGACGGAGC----G---G-GUCCC-----------CU-CGC------------GGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- AAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGgauaggggcgaaagacuaaucga[-]
Megalestes_kurahashii ??????????????????-?????--???
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??????-????????-?????????????????????????guauaggggcgaaagaCUAAUCGA[-]

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Orolestes_octomaculatus_ZOO   accaaggagucuaacaug-cGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGC-CCCG-- UU-----
UGGGUGCC----GAGGGAGGAUGGAGCCG--C------UCCC-----------CU-CGC------------GGGA------CGGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA[-                       ]
Austrolestes_annulosus_BAA    ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAAGGC-CCCU-- UC-----
UGGGUGCC----GAGGGAGGACGGAGCCG--C------UCCC-----------CU-CGC------------GGGA------CGGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA[-                       ]
Sympecma_paedisca_BSP         ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGUAAUGAAAGUGAAGGC-CCCU-- UU-----
UGGGUGCC----GAGGGAGGACGGAGCCG--C------UCCC-----------CU-CGU------------GGGA------CGGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA
Sympecma_fusca_ZSF            ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGUAAUGAAAGUGAAGGC-CCCU-- UU-----
UGGGUGCC----GAGGGAGGACGGAGCCG--C------UCCC-----------CU-CGU------------GGGA------CGGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA
Austrolestes_analis_OAAn      ACcaaGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAAGGC-CCCU-- UU-----
UGGGUGCC----GAGGGAGGACGGAGCCG--C------UCCC-----------CU-CGC------------GGGA------CGGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAaagacuaaucga
Indolestes_pergrinus_OIP      ACcaaggagUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAAGGC-CCCU-- UU-----
UGGGUGCC----GAGGGAGGACGGAGCCG--C------UCCC-----------CU-CGC------------GGGA------CGGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA
Indolestes_cyanea             ??????????????????-?????--??????????????????????????????????????????????????????????????????????
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??????-????????-??????????????????????????guauaggggcgaaagaCUAAUCGA[-           ]
Chalcolestes_viridis_ZCV               accaaggagucuaacauG-CGCGC--GAGUCGUUGGGUCGGA--C-UCGCUCCGCU-AAACCCAUAGGCGUAAUGAAAGUGAA GGC-
CCCU--CA-----UGGGUGCC----GAGGGAGGACGGAGACG--C------UCCC-----------CU-CGU------------GGGA------CGGCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGAcuaaucga
Archilestes_grandis_OAG       accaaggagUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGUAAUGAAAGUGAAGGC-CCCU-- UU-----
UGGGUGCC----GAGGGAGGACGGAGCCG--C------UCCC-----------CU-CGU------------GGGA------CGGUUCCC-GC-ACUCCCGGGG-CGUCU- AAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA
Lestes_rectangularis_OLR      acCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGUAAUGAAAGUGAAGGC-CCCU-- UU-----
UGGGUGCC----GAGGGAGGACGGAGCCG--C------UCUC-----------CUUUGU------------GGGA------CGGUUCCC-GC-ACUCCCGGGG-CGUCU- AAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA
Lestes_eurinus_OLE            A?CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGUAAUGAAAGUGAAGGC-CCCU-- UU-----
UGGGUGCC----GAGGGAGGAAGGAGCCG--C------UCCC-----------CUCUGU------------GGGA------CGGUUCCC-GC-ACUCCCGGGG-CGUCU- AAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA[-                       ]
Hemiphlebia_mirabilis         ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGC-CCCU-- CCC---
GUGGGGGCC----GAGGGAGGACGGAGGCG--C---A--CC---GCUC-------CU-CG-------GAGCC-GGGA------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                       ]
Unaligned_Anisoptera          ??????????????????-?????--??????????????????????????????????????????????????????????????????????
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Epiophlebia_superstes_OES   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCACCU-- UCU---
GCGG--GCC----GAGGGACGAAGGAGC----G---G-GUCCCC----------UC-GC------------GGGGAC------GGuUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
Epiophlebia_laidlawi_JQ943592   ??????????????????-?????--???????????UCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCACCU--UCU---GGGG--GCC----GAGGGAGGACGGAGC----G---G-GUCCCC----------UC-GC------------GGGGAC------GGCUCCC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGG???????????????????-???????????
???????????????????????????????-??????-????????-??[-   ]
Unaligned_Aeshnoid   ??????????????????-?????--???--
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Archipetia_auriculata   ??????????????????-?????--??
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??????-????????-??????????????????????????guauaggggcgaaagaCUAAUCGA[-   ]
Austropetalia_victoria   accaaggagucuaacaug-cgcgc--gagucguugggucgga--c-acgCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCACCU-- CA----
GCGGG-GCC----GAGGGAGGACGGAGC----G---A-GUCCCC----------UC-AC------------GGGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCgaaagacuaauCGA[-   ]
Hypopetalia_pestilens   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--U-ACGCUCCGCU-AAACCCAUAGGCGUAAUGAAAGUGAAGGC-ACCU-- CA----
GCGGG-GCC----GAGGGAGGACGGAGC----G---A-GUCCCC----------UA-GC------------GGGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
A_FJ596639_Phyllopetalia_apicalis   ACCAAGGAGUCUAACAUG-CGCGC--AAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCACCU--CA----GCGGG-GCC----GAGGGAGGACGGAGC----G---A-GUCCCC----------UA-AC------------GGGGAC------GGCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
A_EU055322_Phyllopetalia_apollo   ACCAAGGAGUCUAACAUG-CGCGC--AAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCACCU--CA----GCGGG-GCC----GAGGGAGGACGGAGC----G---A-GUCCCC----------UC-AC------------GGGGAC------GGCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Eurypetalia_altarensis_OEA   ??CAAGGAGUCUAACAUG-CGCGC--AAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCACCU-- CA----
GCGGG-GCC----GAGGGAGGACGGAGC----G---A-GUCCCC----------UA-AC------------GGGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Ophiopetalia_diana_OOD   acCAAGGAGUCUAACAUG-CGCGC--AAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCACCU--
CA----GCGGG-GCC----GAGGGAGGACGGAGC----G---A-GUCCCC----------UA-AC------------GGGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--
AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Gomphaeschna_furcilata_OGF   ??CAAGGAGUCUAACAUG-UGCGC--GAGUCGUUGGGUCGGA--A-ACGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAAGGCCACCU-- UC----
GCGGG-GCC----GAGGGAGGAAGGAGC----G---A-GUCCCU----------UA-AC------------GGGGAC------GGCCCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CUCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Oligoaeschna_pryeri   ??????????????????-?????--???
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Austroaeschna_parvistigma_AAPs         AGCAAGGAGUCUAACAUG-ugcgc--GAgucguuggguCGGA--g-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCACCU--UC----GCGGG-GCC----GAGGGAGGAAGGAGC----G---A-GUCCCC----------UUUAC-------------GGGGC------GGUUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CACACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUcggagcuggguauaggggcgaaagacuaaucga
Telephlebia_tillyardi_ATT     ??caaggaguguaacaug-ugcgc--gagucguugggucgga--g-acgcuccgcu-aaacccauaggcgcaAUGAAAGUGAAGGCCACCU-- UC----
GCGGG-GCC----GAGGGAGGAAGGAGC----G---A-GUCCCC----------UU-UC------------GGGGAC------GGUUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CACACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUcggagcuggguauaggggcgaaagacuaaucga[-                    ]
Boyeria_vinosa_OBV            AGCAAGGAGUCUAACAUG-UGCGC--GAGUCGUUGGGUCGGA--G-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCACCG- UUA----
UAGGG-GCC----GAGGGAGGAAGGAGC----G---A-GUCCCCCCUUU-----UA-UC---------GGGGGGGC------GGUUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CACACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                    ]
FJ596627_Boyeria_irene        ACCAAGGAGUCUAACAUG-UGCGC--GAGUCGUUGGGUCGGA--G-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCG- UUA----
UAGGG-GCC----GAGGGAGGAAGGAGC----G---A-GUCCCCCCUUU-----AA-UC---------GGGGGGGC------GGUUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CACACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                    ]
EU424323_Brachytron_pratenseACCAAGGAGUCUAACAUG-UGCGC--GAGUCGUUGGGUCGGA--G-ACGCUCCGCU-AAACCCAUAGGCACAAUGAAAGUGAAGGCCACCU-- UC----
GCGGG-GCC----GAGGGAGGAAGGAGC----G---A-GUCCCC----------UC-GC------------GGGGAC------GGUUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CACACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                    ]
Epiaeschna_heros_OEH          ACCAAGGAGUCUAACAUG-UGCGC--GAGUCGUUGGGUCGGA--G-ACGCUCCGCU-AAACCCAUAGGCACAAUGAAAGUGAAGGCCACCU-- UC----
GCGGG-GCC----GAGGGAGGAAGGAGC----G---A-GUCCCC----------UC-GC------------GGGGAC------GGUUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CACACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                    ]
FJ596626_Caliaeschna_microstigma       ACCAAGGAGUCUAACAUG-UGCGC--GAGUCGUUGGGUCGGA--G-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCACCU--CA----GCGGG-GCC----GAGGGAGGAAGGAGC----G---A-GUACCC----------UC-AC------------GGGGAC------GGUUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CACACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                       ]
FJ596628_Anaciaeschna_isoceles         ACCAAGGAGUCUAACAUG-UGCGC--GAGUCGUUGGGUCGGA--G-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUAAA
GGCCACCU--UC----GCGGG-GCC----GAGGGAGGAAGGAGC----G---G-GUCACC----------UC-UU------------GGUGAC------GGUUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CACACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                       ]
Oplonaeschna_sp               ??????????????????-?????--???????????????????????????????????????????????????????????????????
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Aeshna_canadensis_OAC         acCAAGGAGUCUAACAUG-UGCGC--GAGUCGUUGGGUCGGA--G-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUAAAGGCCACCU-- UC----
GCGGG-GCC----GAGGGAGGAAGGAGC----G---A-GUCACU----------UC-GC------------GGUGAC------GGUUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CACACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                    ]
A_EU055242_Rhionaeschna_multicolor     ACCAAGGAGUCUAACAUG-UGCGC--GAGUCGUUGGGUCGGA--G-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUAAA
GGCCACCU--UC----GCGGG-GCC----GAGGGAGGAAGGAGC----G---A-GUCGCU----------UC-GC------------GGCGAC------GGUUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CACACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                       ]
A_AF461203_Aeshna_cyanea      NNNNNNNNNNNNNNNNNN-NNNNN--NNNNNNNNNNNN----------------U-AAACCCAUAGGCGCAAUGAAAGUAAAGGCCACCU-- UC----
GCGGG-GCC----GAGGGAGGAAGGAGC----G---A-GUCACU----------UC-GC------------GGUGAC------GGUUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CACACACGUUGGGACC CGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                    ]
FJ596630_Aeshna_grandis       ACCAAGGAGUCUAACAUG-UGCGC--GAGUCGUUGGGUCGGA--G-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUAAAGGCCACCU-- UC----
GCGGG-GCC----GAGGGAGGAAGGAGC----G---A-GUCACU----------UC-GC------------GGUGAC------GGUUCCC-GC-ACUCCCGGGG-CGUCU-
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GAUUCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CACACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
FJ712316_Gynacantha_japonica_or_bullata   ACCAAGGAGUCUAACAUG-UGCGC--GAGUCGUUGGGUCGGA--G-ACGCUCCGCU-AAACCCAUAGGCGCA
AUGAAAGUAAAGGCUACCU--UC----GCGGG-GCC----GAGGGAGGAAGGAGC----G---A-GUCACC----------UC-CG------------GGUGAC------GGUUCCC- GC-
ACUCCCGGGG-CGUCU-GAUUCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CACACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA
GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Austrogynacantha_heterogen_BYB   ACCAAGGAGUCUAACAUG-UGCGC--GAGUCGUUGGGUCGGA--G-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUAAA GGCCACCU-
-UC----GCGGG-GCC----GAGGGAGGAAGGAGC----G---A-GUCACU----------UC-GC------------GGUGAC------GGUUCCC-GC-ACUCCCG GGG-CGUCU-GAUUCCUC--
AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CACACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Hemianax_ephippiger   ??????????????????-?????--??
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Anax_junius_OAJ   ACCAAGGAGUCUAACAUG-UGCGC--GA
GUCGUUGGGUCGGA--G-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUAAAGGCCGCCU--UC----GCGGG-GCC----GAGGGAGGAAGGAGC----G---G-GUCACC-----
------UC-AC------------GGUGAC------GGUUCCC-GC-ACUCCCGGGG-CGUCU-GAUUCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CACACACGUUGGGACC
CGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGG CGAAAGACUAAUCGA[-
]
FJ596632_Anax_imperator   ACCAAGGAGUCUAACAUG-UGCGC--GAGUCGUUGGGUCGGA--G-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUAAAGGCCACCU-- UC----
GCGGG-GCC----GAGGGAGGAAGGAGC----G---G-GUCACC----------UC-AC------------GGUGAC------GGUUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CACACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Unaligned_Gomphid   ??????????????????-?????--??
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Sinogomphidia_kruegeri_ASK   accaaggagucuaacaug-cgcgc--aagucguugggucgga--c-acgcuccgcu-aaacccauagGCGCAAUGAAAGUGAAGGCUACCU- UUU----
UUGGA-GCC----GAGGGAGGACGGAGUU-------U-GUCCCU----------UA-AC------------GGGGAC------GGCUCUU-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUcug-
acgugcaaaucgaucgucggagcuggguauaggggcgaaagacuaaucga[-   ]
A_EU055258_Ictinogomphus_australis   ACCAAGGAGUCUAACAUG-CGCGC--AAGUCGUUGGGUCGGA--U-ACGCUCCGCU-AAACCCAUAGGCGUAAUGAAAGUGAA
GGCUACAU-UUU----UUGGA-GCC----GAGGGAGGACGGAGUU-------U-GUCCCU----------UA-AC------------GGGGAC------GGCUCUU-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Ictinogomphus_sp   ??????????????????-?????--??
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FJ712322_Onychogomphus_sp_mistake   ACCAAGGAGUCUAACAUG-CGCGC--AAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
AGCUACCU-UUU----UUGGA-GCC----GAGGGAGGACGGUGUU-------G-GUCCCU----------UC-AC------------GGGGAC------GGCUCUU-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--AUUGU--GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-
CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA Phyllogomphoides_stigmatus_APS   accaaggagucuaacaug-
cgcgc--gaguCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCAAAAUGAAAGUGAA GGCUACCU--UU----UUGGG-GCC----GAGGGAGGACGGAGUU-------G-GUCCCC------
-----UC-AC------------GGGGAU------GGCUCCU-GC-ACUCCCG GGG-CGUCU-GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCAA-GAG-
CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Progomphus_Neaprogomphus_obscurus_OPO ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUUCUCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCUACCU--UU----CCGGA-GCC----GAGGGAGGACGGAGUU-------U-GUUCAACUUG-------------------UUUUGGGGGAC------GGCUCUU-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUCGC--GAGGGGAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]

EU055271_Progomphus_Neaprogomp_borealis ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCA
AUGAAAGUGAAGGCUACCU--UU----CCGGA-GCC----GAGGGAGGACGGAGUU-------U-GUUCCACUUG-------------------UUUUGGGGGAC------GGCUCUU- GC-
ACUCCCGGGG-CGUCU-GAUUCCUC--AUCGC--GAGGGGAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA
GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Hagenius_brevistylus_OHB ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAAGGCUGCCU-- AC----
UGGGA-GCC----GAGGGAGGACGGAGUU-------U-GUUCCC----------UC-GC------------GGGGAC------GGCUCUU-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCGA-GAG-CGCGCACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Lanthus_vernalis_OLV ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAAGGCUACCU-- UU----
UCGGA-GCC----GAGGGAGGACGGAGUU-------U-GUUCCC----------UC-GC------------GGGGAC------GGCUCUU-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Davidius_nanus ??????????????????-?????--??
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Neogomphus_edenticulatus_ONEACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAAGGCUACCU-- UC----
UCGGA-GCC----GAGGGAGGACGGAGUU-------U-GUUCCC--------UC-UC-GG------------GGGGAC------GGCUCUU-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Armagomphus_armiger_AAAr accaaggaGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAAGGCUACCU-- UC----
UCGGA-GCC----GAGGGAGGACGGAGUU-------U-GUUCCC----------UC-GC------------GGGGAC------GGCUCUU-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Hemigomphus_comitans_AHC ??????????????????-?????--??
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AFJ596622_Hemigomphus_heteroclytus ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCAUG-AAACCCAUAGGCGAAAUGAAAGUGAA GGUUGCCU--
UC----UCGGA-GCC----GAGGGAGGACGGAGUU-------U-GUUCCC----------UC-GC------------GGGGAC------GGCUCUU-GC-ACUCCCG GGGUCGUCU-GAUCCCUC--
AUCGC--GAGGGAAG-GUCGCACCAA-GAGUCGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-] Hemigomphus_magela_BYB ACCAAGGAGUCUAACAUG-
CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCUGUG-AAACCCAUAGGCGAAAUGAAAGUGAAGGUUGCCU-- UC----UCGGA-GCC----GAGGGAGGACGGAGUU-------U-GUUCCC---------
--UU-GC------------GGGGAC------GGCUCUU-GC-ACUCCCGGGG-CGUCU- GAUCCCUC--AUCGC--GAGGGAAG-G-CGCACCAA-GAG-
CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Trigomphus_sp ??????????????????-?????--??
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FJ596615_Stylogomphus_Lanth_albistylusACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAA GGCCACCU-
-UC----UCGGG-GCC----GAGGGAGGACGGAGUC-------U-GUUCCC----------UC-GC------------GGGGAC------GGCUCUC-GC-ACUCCCG GGG-CGUCU-GAUUCCUC--
AUCGC--GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
FJ712325_Stylogomphus_shirizui ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAA
GGCCACCU--UC----UCGGG-GCC----GAGGGAGGACGGAGUC-------U-GUUCCC----------UC-GC------------GGGGAC------GGCUCUC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EU055286_Davidioides_martini ACCAAGGAGUCUAACAUG-CGCGC--AAGUCGUUGGGUCGGA--C-ACGCUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAA
GGCUACCU--UC----UCGGA-GCC----GAGGGAGGACGGAGUU-------U-GUUCCC----------UU-AC------------GGGGAC------GGCUUUU-GC-ACUCCCG

GGG-CGUCU-GAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-
CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ] Burmagomphus_collaris_ABC   accaaggagucuaacaug-
cgcgc--gagucguuggguCUGA--U-ACGCUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAAGGCUUCCU- UUA----ACGGA-GCC----GAGGGAGGACGGAGUG-------U-GUUAAC-CUC-
UCU-C-UC-UG-------UAGA--GGGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCAA-GAG-
CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCuggguauaggggcgaaagacuaaucga[-   ]
EU055285_Cyclogomphus_heterostylus   ACCAAGGAGUCUAACAUG-CGCGC--AAGUCGCUGGGUCUGA--U-ACGCUCAAUG-AAACCCAUAGGCAAAAUGAAAGUGAA
GGCUACCU-UUA----ACGGA-GCC----AAGGGAGGAUGGAGUG-------U-GUAAAA--CC-UCU-C-UC-UG-------UGGA--GGGUAC------GGCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Anisogomphus_pinratani_not_pinratanai ??????????????????-?????--???
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Dromogomphus_spinosus   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCUGA--U-ACGCUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAAGGCUACUU- UUU----
ACGGA-GCC----GAGGGAGGACUGAGUC-------U-GUCGUCUCCC-------UC-GU-------UGGA--GGUGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Arigomphus_villosipes_OAV   ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCUGA--C-ACGCUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAAGGCUACCU- CUUUU--
AUGGA-GCC----GAGGGAGGACGGAGUC-------U-GUUGCCUCCCUUU----UC-AUC----GGGGGA--GGGGAC------GGCUCCU-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Arigomphus_cornutus_   ??????????????????-?????--??
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FJ712319_Stylurus_intricatusACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCCGA--U-ACGCUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAAGGCUACC UUUUA----
ACGGA-GCC----GAGGGAGGACGGAGUC-------U-GUGACCUCCC-------UC-CG-------UGGA--GGGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACC CGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Stylurus_amnicola   ??????????????????-?????--??
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FJ596610_Stylurus_nagoyanus   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCCGA--U-ACGCUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAAGGCUACC UUUUA----
ACGGA-GCC----GAGGGAGGACGGAGUC-------U-GUGACCUCCC-------UC-UG-------UGGA--GGGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
FJ596612_Gomphurus_Gomphus_externus   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCCGA--U-ACGCUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAA
GGCUACCU-CUU----ACGGA-GCC----GAGGGAGGACGGAGUC-------U-GUCGCCUCCC-------UC-GUU------UGGA--GGGGAC------GGCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
J596611_Asiagomphus_melaenops   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCCGA--U-ACGCUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAA
GGCUACCU-CUU----ACGGA-GCC----GAGGGAGGACGGAGUC-------U-GUUGCCUCCC-------UC-GU-------UGGA--GGGGAC------GGCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
FJ596614_Gomphus_Phanogomphus_exilis   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCCGA--U-ACGCUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAA
GGCUACCU-CUUU---ACGGA-GCC----GAGGGAGGACGGAGUC-------U-GUCGCC----------UU-UC--------GG---GGGGAC------GGCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]

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Gomphus_Gomphus_graslini_             ??????????????????-?????--?????????????????????????????????????????????????????????????
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Gomphus_Hylogomphus_adelphus_OGA       ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCCGA--U-ACGCUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAA
GGCUACCU-CUU----ACGGA-GCC----GAGGGAGGACGGAGUG-------U-GUCGCCUCCA-------CU-CG-----UUUGGA--GGGGAC------GGCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                  ]
FJ712320_Gomphus_Gomphus_vulgatissimusACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCCGA--U-ACGCUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAA GGCUACCU-
CUUU---ACGGA-GCC----GAGGGAGGACGGAGUC-------U-GUUUGCC----------UC-CC-----UAGAGG--GGUGAC------GGCUCCC-GC-ACUCCCG GGG-CGUCU-GAUUCCUC--
AUUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                          ]
Megalogomphus_sommeri         ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCAGCG-AAACCCAUAGGCGAAAUGAAAGUGAAGGCUACCU-- UC----
UCGGA-GCC----GAGGGAGGACGGAGUU-------U-GUUCCU-----------UC-GC-------------GGGGAC------GGCUCUU-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                         ]
Onychogomphus_uncatus_FJ712321         ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCAGCG-AAACCCAUAGGCGAAAUGAAAGUGAA GGCUACCU-
-UC----UCGGA-GCC----GAGGGAGGACGGAGUUU--------GUUCCU-----------UC-GC-------------GGGGAC------GGCUCUU-GC-ACUCCCG GGG-CGUCU-GAUUCCUC--
AUCGC--GAGGGAAG-G-CGCACCAA-GAGC-GCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                          ]
FJ596620_Onychogomphus_Onych_forcipatus          ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCAGCG-AAACCCAUAGGCGAAAUGAAAGUGAA
GGCUACCU--UC----UCGGA-GCC----GAGGGAGGACGGAGUU-------U-GUUCCU-----------UC-AC-------------GGGGAC------GGCUCUU-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                  ]
FJ596617_Lindenia_tetraphylla_mistake  ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCAGCG-AAACCCAUAGGCGAAAUGAAAGUGAA GGCUACCU-
-UC----UCGGA-GCC----GAGGGAGGACGGAGUU-------U-GUUCCU-----------UC-AC-------------GGGGAC------GGCUCUU-GC-ACUCCCG GGG-CGUCU-GAUUCCUC--
AUYGY--GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                          ]
Ophiogomphus_carolus_OOC      ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCAACG-AAACCCAUAGGCGAAAUGAAAGUGAAGGCUACCU-- UC----
UCGGA-GCC----AAGGGAGGACGGAGUU-------U-GUUCCU-----------UC-AC-------------GGGGAC------GGCUCUU-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                         ]
FJ596618_Ophiogomphus_severus          ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCAACG-AAACCCAUAGGCGAAAUGAAAGUGAA
GGCUACCU--UC----UCGGA-GCC----AAGGGAGGACGGAGUU-------U-GUUCCU-----------UC-AC-------------GGGGAC------GGCUCUU-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                  ]
Ophiogomphus_Ophiogomphus_caecilia     ??????????????????-?????--?????????????????????????????????????????????????????????????
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Leptogomphus_elegans_OLEg     ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGCUGGGUCGGA--C-ACGAUCCGUG-AAACCCAUAGGCAAAAUGAAAGUGAAGGCUACCU- CUC----
AAGGA-GCC----GAGGGAGGACUGAGUU--CA---C-GUCGCC-----------UC-UU------UGUGG--GGGGAC------GGCUCUC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                         ]
Leptogomphus_sauteri_FJ596609          ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGCUGGGUCGGA--C-ACGAUCCGUG-AAACCCAUAGGCGAAAUGAAAGUGAA
GGCUACCU-CUC----AAGGA-GCC----GAGGGAGGACUGAGUU-------C-GUCGCC-----------UC-UU------UGUGG--GGGGAC------GGCUCUC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                  ]
Epigomphus_compactus_AEC      accaaggagucuaacaug-cgcgc--gagucgcugggucgga--c-acGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAAGGCUACCU-- UC----
UCGGA-GCC----GAGGGAGGACGGAGUC-------U-GUUUCC-----------UC-UG-------------GGCGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU-
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GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUauaggggcgaaagacuaaucga[-          ]
Microgomphus_chelifer_FJ712323          ACCAAGGAGUCUAACAUG-CGCGC--AAGUCGCUGGGUCGGA--C-AUGCUCCGCU-AAACCCAUUCGCAAAAUGAAAGUGAA
GGCUACCUUUUAA---AAGGA-GCC----AAGGGAGGACUGAGUU-------C-GUUGCC-----------UU-UU-------AGGA--GGGGAC------GGCUCUC-GC-ACUCCCG GGG-CGUCU-
AAUUCCUC--AUUGC--GAGGAAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUUUAGGGGCGAAAGACUAAUCGA[-                                              ]
Heliogomphus_retroflexus                ??????????????????-?????--????????????????????????????????????????????????????????????
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Macrogomphus_parallelogramma??????????????????-?????--????????????????????????????????????????????????????????????????
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Ceratogomphus_pictus_OCH      ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGAUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAAGGCUACCU-- UU----
AUGGA-GCC----GAGGGAGGACGGAGUU-------U-GUUCCU----------UC-UU-------------GGGAC------GGCUCUU-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCAA-GAG-CGUACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                    ]
Lestinogomphus_angustus_ALA   ??????????????????-?????--????????????????????????????????????????????????????????????????
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Austrogomphus_guerini_AAG     acCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCAAAAUGAAAGUGAAGGCUACCU-- UU----
ACGGA-GCC----GAGGGAGGACGGAGUU-------U-GUUCCU----------UC-GC------------GGGGAC------GGCUCUU-GC-ACUCCCGGGG-CGUCU- AAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                    ]
EU055267_Austrogomphus_amphiclitus      ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCAAAAUGAAAGUGAA
GGCUACCU--UU----ACGGA-GCC----GAGGGAGGACGGAGUU-------U-GUUCCU----------UC-GC------------GGGGAC------GGCUCUU-GC-ACUCCCG GGG-CGUCU-
AAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                              ]
EU055261_Antipodogomphus_acolythus      ACCAAGGAGUCUAACAUG-CGCGC--AAGUCGUUGGGUCGGA--U-ACGCUCCGCU-AAACCCAUAGGCAAAAUGAAAGUGAA
GGCUACCU--UU----ACGGA-GCC----GAGGGAGGACGGAGUU-------U-GUUCCC----------UC-CC------------GGGGAC------GGCUCUU-GC-ACUCCCG GGG-CGUCU-
AAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                              ]
Unaligned_petalurid           ??????????????????-?????--????????????????????????????????????????????????????????????????
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Tanypteryx_hageni             ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCACCC-- CC----
GAGGG-GCC----GAGGGAGGACGGGUCG-------A-GUCCCCGCGGC------GC-CC--------GUCGCGGGGAC------CGCUCCG-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AACGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                    ]
Tanypteryx_sp                 ??????????????????-?????--????????????????????????????????????????????????????????????????
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FJ712330_Tanypteryx_pryeri    ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCC-- CC----
GAGGG-GCC----GAGGGAGGACGGGUCG-------A-GUCCCCGCGGC------GC-CC--------GCCGCGGGGAC------CGCUCCG-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AACGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                    ]
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Tachopteryx_thoreyi           ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCC-- UC----
GAGGG-GCC----GAGGGAGGACGGGGUG-------A-GUUCCC----------UC-GC------------GGGGAC------CGCUCCA-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                      ]
Phenes_raptor_OPR             ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCGAUGAAAGUGAAGGCCACCC-- UC----
GAGGG-GCC----GAGGGAGGACGGGGUG-------A-GUCUCC----------UC-UU----------GCGGGGAC------CGCUCCA-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                      ]
Phenes_centralis              ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCGAUGAAAGUGAAGGCCACCC-- UC----
GAGGG-GCC----GAGGGAGGACGGGGUG-------A-GUCUCC----------UC-UU----------GCGGGGAC------CGCUCCA-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
FJ596625_Uropetalia_carovei   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCGAUGAAAGUGAAGGCCACCC-- UC----
GAGGG-GCC----GAGGGAGGACGGGGUG-------A-GUUCCCGUU----------------------GCGGGGAC------CGCUCCA-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                      ]
Petalura_hesperia             ??????????????????-?????--?????????????????????????????????????????????????????????????????????
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Petalura_gigantea_BYB         ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCGAUGAAAGUGAAGGCCACCC- UUCC---
GAGGG-GCC----GAGGGAGGACGGGGUG-------A-GUUCCCGCGGA-------------------CGCGGGGGC------CGCUCCA-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                      ]
Petalura_litorea_OPG2         ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGAUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCGAUGAAAGUGAAGGCCACCC- UUCC---
GAGGG-GCC----GAGGGAGGACGGGGUG-------A-GUUCCCGCGGA-------------------CGCGGGGGC------CGCUCCA-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                      ]
Petalura_ingentissima         ??????????????????-?????--?????????????????????????????????????????????????????????????????????
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Zoraena_bilineata             ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCACCU-- CG----
ACGGG-GCC----GAGGGAGGACGGGGC--G-----G-GUCCCC----------UC-AC------------GGGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCCGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                      ]
Taeniogaster_obliqua          acCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCACCU-- CG----
ACGGG-GCC----GAGGGAGGACGGGGC--G-----G-GUCCCC----------UC-GC------------GGGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCCGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                      ]
Kalyptogaster_erronea         ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCA
 AUGAAAGUGAAGGCCACCU--CG----ACGGG-GCC----GAGGGAGGACGGGGC--G-----G-GUCCCC----------UC-GC------------GGGGAC------GGCUCCC- GC-
ACUCCCGGGG-CGUCU-GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCCGGCCA
GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-          ]
FJ712317_Cordulegaster_maculata        ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA GGCCACCU--
CG----ACGGG-GCC----GAGGGAGGACGGGGC--G-----G-GUCCCC----------UC-GC------------GGGGAC------GGCUCCC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCCGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-
CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                  ]
EU055277_Cordulegaster_dorsalis        ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCACCU--CG----ACGGG-GCC----GAGGGAGGACGGGGC--G-----G-GUCCCC----------UC-GC------------GGGGAC------GGCUCCC-GC-ACUCCCG
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GGG-CGUCU-GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCCGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-
CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                              ]
FJ596634_Cordulegaster_boltonii          ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCACCU--CG----ACGGG-GCC----GAGGGAGGACGGGGC--G-----G-GUCCCC----------UC-GC------------GGGGAC------GGCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCCGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-                                                  ]
FJ596637_Cordulegaster_picta             ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCACCU--CG----ACGGG-GCC----GAGGGAGGACGGGGC--G-----G-GUCCCC----------UC-GC------------GGGGAC------GGCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCCGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                  ]
FJ596638_Anotogaster_sieboldii           ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCACCU--CG----ACGGG-GCC----GAGGGAGGACGGGGC--G-----G-GUCCCC----------UC-GC------------GGGGAC------GGCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCCGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                  ]
Neopetalia_punctata_ONP        ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCACCU-- AA----
ACGGG-GCC----GAGGGAGGAAGGAGCC-------C-GUCCCC----------UC-GC------------GGGGA-------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCCGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                     ]
Chloropetalia_soarer           acCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUUGGCGCAAUGAAAGUGAAGGCCGCCU-- UU----
GCGGG-GCC----GAGGGAGGACGGGGUC-G-------GUUCCC---------UUC-GC------------GGGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCCGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                     ]
Sinorogomphus_nasutus_OSN      acCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCAAAAUGAAAGUGAAGGCUACCU-- UU----
UUGGG-GCC----GAGGGAGGACGGAGUU-G-------GUCCCC----------UC-AC------------GGGGAU------GGCUCCU-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
FJ596635_Chlorogomphus_brunneus          ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUUGGCGCAAUGAAAGUGAA
GGCCGCCU--UU----GCGGG-GCC----GAGGGAGGACGGGGUC-G-------GUUCCC---------UUC-GC------------GGGGAC------GGCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCCGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                  ]
Chlorogomphus_sp               ??????????????????-?????--??????????????????????????????????????????????????????????????????
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??????-????????-??????????????????????????????????????????????????????[-            ]
Synthemis_eustalacta_OSE       ??CAAGGAGUCUAACAUG-CGCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGCGAAAUGAAAGUGAAGGCCACCU-- UU----
GCGGG-GCC----GAGGGAGGACGGAGACG-------------------------------------GAAA------------CGCCUCCU-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                     ]
Archaeosynthemis_marcrostigma            ??????????????????-?????--??????????????????????????????????????????????????????????????????
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????????????????????????????????-??????-????????-??????????????????????????????????????????????????????[-          ]
EF631297_Synthemis_leachii_93              ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGNGAAAUGAAAGUGAA
GGCCACCU--UU----GCGGG-GCC----GAGGGAGGACGGAGACG-------------------------------------GAAA------------CGCCUCCU-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AU-------------------------------------
--------------------------------------------------------------------[-          ]
EF631323_Eusynthemis_brevistyla_16         ACCAAGGAGUCUAACAUG-CGCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGCGAAAUGAAAGUGAA
GGCCACCU--UU----GCGGG-GCC----GAGGGAGGACGGAGACG-------------------------------------GAGA------------CGCCUCCU-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--ACUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAG-UGGUGAACU-AU-------------------------------------
--------------------------------------------------------------------[-          ]
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FJ596573_Eusynthemis_guttata ACCAAGGAGUCUAACAUG-CGCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGCGAAAUGAAAGUGAA
GGCCACCU--UU----GCGGG-GCC----GAGGGAGGACGGAGACG-------------------------------------GAGA------------CGCCUCCU-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EU055262_Eusynthemis_nigra ACCAAGGAGUCUAACAUG-CGCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGCGAAAUGAAAGUGAAGGCCACCU-- UU----
GCGGG-GCC----GAGGGAGGACGGAGACG-------------------------------------GAGA------------CGCCUCCU-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--ACUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EU055263_Choristhemis_flavoterminata ACCAAGGAGUCUAACAUG-CGCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGCGAAAUGAAAGUGAA
GGCCACCU--UU----GCGGG-GCC----GAGGGAGGACGGAGACG-------------------------------------GAGA------------CGCCUCCU-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--ACUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Synthemiopsis_gomphomacromioides_ASG accaaggagucuaacaug-cgcgc--GAGUUGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGCGAAAUGAAAGUGAA
GGCCACCU--UU----GCGGG-GCC----GAGGGAGGACGGAGACG-------------------------------------GAAA------------CGCCUCCU-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Gomphomacromia_chilensis_OGPACCAAGGAGUCUAACAUG-CGCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGCGAAAUGAAAGUGAAGGCCACCU-- UU----
GCGGG-GCC----GAGGGAGGACGGAGACG-------------------------------------GAAA------------CGCCUCCU-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GGG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
FJ712318_Gomphomacromia_paradoxa ACCAAGGAGUCUAACAUG-CGCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGCGAAAUGAAAGUGAA
GGCCACCU--UU----GCGGG-GCC----GAGGGAGGACGGAGACG-------------------------------------GAAA------------CGCCUCCU-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCCA-GGG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
A_GQ329652_Syncordulia_serendipator NNNNNNNNNNNNNNNNNN-NNNNN--NNNNNNNNNNNNNNNN--N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNN-------NNNNNN----NNNNNNNNNNNNNNNNN--NNN---NNNNN-NN-NNNNNNN NNN-NNNNN-
NNNNNNNN--NNNNN--NNNNNNNN-N-NNNNNNNN-NNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNN NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--
NNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-]
A_GQ329654_Syncordulia_venator NNNNNNNNNNNNNNNNNN-NNNNN--NNNNNNNNNNNNNNNN--N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNN-------NNNNNN----NNNNNNNNNNNNNNNNN--NNN---NNNNN-NN-NNNNNNN NNN-NNNNN-
NNNNNNNN--NNNNN--NNNNNNNN-N-NNNNNNNN-NNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNN NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--
NNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-]
EU055287_Idionyx_imbricata ACCAAGGAGUCUAACAUG-CGCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGCAAAAUGAAAGUGAAGGCCGCCU-- UA----
GCGGG-GCC----GAGGGAGGACGGAGACG-------------------------------------GAG----------UCUCGCCUCCU-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--ACUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EF631290_Idionyx_selysi_80 ACCAAGGAGUCUAACAUG-CGCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGCAAAAUGAAAGUGAA
GGCCGCCU--UU----GCGGG-GCC----GAGGGAGGACGGAGACG-------------------------------------GAGA------------CGCCUCCU-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--ACUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGA-GGUGAACU-AU---------------------------------------
---[-]
Macromidia_rapida ACCAAGGAGUCUAACAUG-CGCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGCGAAAUGAAAGUGAAGGCCACCU-- UU----
GCGGG-GCC----GAGGGAGGACGGAGGCG-------------------------------------GAGA------------CGCCUCCU-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--ACUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EU424325_Oxygastra_curtisii ACCAAGGAGUCUAACAUG-CGCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCG-AAACCCAUAAGCGAAAUGAAAGUGAAGGCCACCC-- UU----
GCGGG-GCC----GAGGGAGGACGGAGACG-------------------------------------GAGA------------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EU055244_Cordulephya_pygmaea ACCAAGGAGUCUAACAUG-CGCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGCGAAAUGAAAGUGAA
GGCCACCU--UU----GCGGG-GCC----GAGGGAGGACGGAGACG-------------------------------------GAAA------------CGCCUCCU-GC-ACUCCCG

GGG-CGUCU-GAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-
CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EF631342_Pseudocordulia_circularis_8 ACCAAGGAGUCUAACAUG-CGCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGCGAAAUGAAAGUGAA
GGCCACCU--UU----GCGGG-GCC----GAGGGAGGACGGAAACG------------------------------------GAGA------------CGCCUCCU-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAA--
---[-]
Hesperocordulia_berthoudi ACCAAGGAGUCUAACAUG-CGCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGCGAAAUGAAAGUGAAGGCCACCU-- UU----
GCGGG-GCC----GAGGGAGGACGGAGACG------------------------------------GAAA------------CGCCUCCU-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EF631334_Lathrocordulia_metallica_6 ACCAAGGAGUCUAACAUG-CGCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGCGAAAUGAAAGUGAA
GGCCACCU--UU----GCGGG-GCC----GAGGGAGGACGGAGACG------------------------------------GAAA------------CGCCUCCU-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AU------------------------------------
---[-]
Micromidia_convergens ACCAAGGAGUCUAACAUG-CGCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGCGAAAUGAAAGUGAAGGCCACCU-- UC----
GCGGG-GCC----GAGGGAGGACGGAGACG------------------------------------GAAA------------CGCCUCCU-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Micromidia_atrifrons ??????????????????-?????--???
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???????????????????????????????-??????-????????-???[-]
EF631332_Austrophya_mystica_3 ACCAAGGAGUCUAACAUG-CGCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAAGCGAAAUGAAAGUGAA
GGCCACCU--UU----GCGGG-GCC----GAGGGAGGACGGAGACG------------------------------------GAAA------------CGCCUCCU-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AU------------------------------------
---[-]
EF631336_Austrocordulia_refracta_36 -----------------------------UGUUGGGUCGGA--N-ACGCUCCGCU-A-ACCCAUAAGCGAAAUGAAAGUGAA
GGCCACCU--UU----GCGGG-GCC----GAGGGAGGACGGAGACG------------------------------------GAAA------------CGCCUCCU-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGUGGGUGAACU-AU------------------------------------
---[-]
EF631356_Archaeophya_magnifica_19 ---
---A---------------------CGCCUCCU-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--ACUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAG-UGGUGAACU-AU------------------------------------
---[-]
Epophthalmia_elegans ??????????????????-?????--???
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??????-????????-??[-]
Didymops_transversa_ODT ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCC- UUU----
GCGGG-GCC----GAGGGAGGACGGACGCU-------------C---------UU-UC--------GA------------GGCGUCCC-GC-ACUCCCGGGG-CGUCU- GACUCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Macromia_illinoiensis_OMi ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCGCCC- UUU----
GCGGG-GCC----GAGGGAGGACGGACGCU-------------C---------UU-UC--------GA------------GGCGUCCC-GC-ACUCCCGGGG-CGUCU- GACUCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
FJ596570_Macromia_amphigena ACCAAGGAGUCUAACAUG-CGCGM--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCCC-UUU----GCGGG-GCC----GAGGGAGGACGGACGCU-------------C---------UU-UC--------GA------------GGCGUCCC-GC-ACUCCCG
GGG-CGUCU-GACUCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA
GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]

Macromia_eurynome_BYB   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCACCC-UUU----GCGGG-GCC----GAGGGAGGAGGGGCGCU-------------C---------UU-UC---------GA------------GGCGUCUC-GC-ACUCCCG GGG-CGUCU-
GACUCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCAAACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Macromia_magnifica   ??????????????????-?????--???
??????????-???????----?????????????????--????????????------??????????-------??--??????-??--???????????-??????????-
??????????????--?????--????????-?-????????-???-?????????????????????????????????-???-
??????-????????-???[-   ]
FJ712329_Macromia_splendens   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCCC-UUU----GCGGG-GCC----GAGGGAGGACGGGCGCU-------------C---------UU-UC---------GA------------GGCGUCCC-GC-ACUCCCG
GGG-CGUCU-GACUCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-
CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
EF631293_Phyllomacromia_bifasciata_OPBi-----------UAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCGCAGGCGCAAUGAAAGUGAA GGCUUCCC-
UUU----GCGGG-GCC----GAGGGAGGACGGAGGCC-------------C--------CUCC-UC-------GGAG------------GGCCUCCU-GC-ACUCCCG
GGG-CGUCU-GACCCCUC--AUUGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUA------------------------------------
--[-   ]
FJ596572_Idomacromia_proavita   ACCAAGGAGUCUAACAUG-CGCGC--GAGUUGUUGGGUCGGA--C-ACGCUCCGCG-AAACCCAUAAGCGAAAUGAAAGUGAA
GGCCACCC--UA----GCGGG-GCC----GAGGGAGGACGGAGACG------------------------------------GAGA------------CGCCUCCU-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--ACUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-
CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
EF631319_Aeschnosoma_forcipula_29   ------------????????????--???UGCUUGGGUCGGA--N-ACGCUCCGCG----ACCCUAGGCAGAAUGAAAGUGAA
GGCCGCCC--UC----UACGG-GCC----GAGGGAGGACGGGGG--------------------AGGC------------------------------CCCCCCC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCCG-GAG-CGCACACAUUGGGACCUCAAAGAUGGUGAACU-AUA?-----------------------------------
--[-   ]
EF631308_Pentathemis_membranulata_15   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCG-AAACCCUAAGGCAGAAUGAAAGUGAA
GGCCGCCC--UC----GAGGG-GCC----GAGGGAGGACGGGGGCG-----------------CCGCCUNNNNN------AGCGCG----N----NNCGUGCCUCCC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--ACUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAG-UGGUGAACU-AU-------------------------------------
--[-   ]
Tetragoneuria_cynosure   ACCAAGGAGUCUAACAUG-CGCGC--UAGUCGUUGGGUCGGA--U-ACGCUCCGCU-AAACCCGCAGGCGCAAUGAAAGUGAAGGCCACCC- UUAA---
GCGGG-GCC----GAGGGAGGAAGGGGGCC------------------------CC-CA--------GAG------------GGUCCCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--ACUGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUUGGUAUAGGUGCGAAAGACUAAUCGA[-   ]
Tetragoneuria_costalis   ??????????????????-?????--???
??????????-???????----?????????????????--????????????-----------------------------??????-??--???????????-??????????-
??????????????--?????--????????-?-????????-???-?????????????????????????????????-???-
??????-????????-???[-   ]
FJ596567_Tetragoneuria_canis   ACCAAGGAGUCUAACAUG-CGCGC--UAGUCGUUGGGUCGGA--U-ACGCUCCGCU-AAACCCGCAGGCGCAAUGAAAGUGAA
GGCCACCC-UUAA---GCGGG-GCC----GAGGGAGGAAGGGGGCU------------------------CC-UA--------GAG------------GGUCCCCC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--ACUGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-
CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUUGGUAUAGGUGCGAAAGACUAAUCGA[-   ] FJ596565_Epitheca_princeps   ACCAAGGAGUCUAACAUG-
CGCGC--UAGUCGUUGGGUCGGA--U-ACGCUCCGCU-AAACCCGCAGGCGCAAUGAAAGUGAAGGCCACCC- UUAA---GCGGG-GCC----GAGGGAGGAAGGGGGCU---------------------
---CC-CA--------GAG-----------C-GUCCCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--ACUGC--GAGGGGAG-G-CGCACCCA-GAG-
CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUUGGUAUAGGUGCGAAAGACUAAUCGA[-   ]
FJ596561_Epitheca_marginata   ACCAAGGAGUCUAACAUG-CGCGC--UAGUCGUGGGGUCGGA--C-ACGCUCCGCU-AAACCCGCAGGCGCAAUGAAAGUGAA
GGCCACCC-UUAA---GCGGG-GCC----GAGGGAGGACGGGGGUC------------------------CU-CG--------AGG------------GCUCCCUC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--AUUGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-
CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGUGCGAAAGACUAAUCGA[-   ]
FJ596564_Epitheca_bimaculata   ACCAAGGAGUCUAACAUG-CGCGC--UAGUCGUUGGGUCGGA--U-ACGCUCCGCU-AAACCCGCAGGCGCAAUGAAAGUGAA
GGCCACCC-UUAA---GCGGG-GCC----GAGGGAGGAAGGGGGCU------------------------CC-CA--------GAG-----------C-GUCCCCC-GC-ACUCCCG

GGG-CGUCU-GAUUCCUC--ACUGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-
CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUUGGUAUAGGUGCGAAAGACUAAUCGA[-]
EF631364_Rialla_villosa_83 --CCCGCAGGCACAAUGAAAGUGAA
GGCCACCC-UUAA---GCGGG-GCC----GAGGGAGGACGGGGGUC-------------------------CU-AG--------AGA-------------ACCUCCC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--AUUGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAG-UGGUGAACU-AUUA-----------------------------------
--[-]
Cordulia_aenea_1236 ??---U-AAACCCGCAGGCGCAAUGAAAGUGAAGGCCGCCC- UUCA---
GCGGG-GCC----GAGGGAGGACGGGGGCC-------------------------CC-UU--------GAG------------GGCCCCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--NCUGC--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGUGCGAAAGACUAAUCGA[-]
Cordulia_shurtleffii_BYB ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGUCGGGUCGGA--C-ACGCUCCGCU-AAACCCGCAGGCGCAAUGAAAGUGAA
GGCCGCCC-UUCA---GCGGG-GCC----GAGGGAGGACGGGGGCC-------------------------CC-UC--------GAG------------GGCCCCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--ACUGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGUGCGAAAGACUAAUCGA[-]
FJ596568_Somatochlora_alpestris AMCAAGGAGUCUAACAUG-CGCGC--GAGUCGUCGGGUCGGA--U-ACGCUCCGCU-AAACCCGCAGGCGCAAUGAAAGUGAA
GGCCACCC-UUCA---GCGGG-GCC----GAGGGAGGACGGGGGCU--------------C----------CU-UC-------AAAG------------GGCCCCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUUGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGUGCGAAAGACUAAUCGA[-] Somatochlora_flavomac_1242 ??--AGGAGUCUAACAUG-
CGCGC--GAGUCGUCGGGUCGGA--U-ACGCUCCGCU-AAACCCGCAGGCGCAAUGAAAGUGAAGGCCACCC- UUCA---GCGGG-GCC----GAGGGAGGACGGGGGCU--------------C-------
---CU-CC-------AAAG------------GGCCCCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--GAGGGGAG-G-CGCACCCA-GAG-
CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGUGCGAAAGACUAAUCGA[-]
FJ596569_Somatochlora_metallica ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUCGGGUCGGA--U-ACGCUCCGCU-AAACCCGCAGGCACAAUGAAAGUGAA
GGCCACCC-UUCA---GCGGG-GCC----GAGGGAGGACGGGGGCU--------------C----------CU-CC-------AAAG------------GGCCCCCC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--AUUGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-
CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGUGCGAAAGACUAAUCGA[-] Somatochlora_tenebrosa_OSTn ACCAAGGAGUCUAACAUG-
UGCGC--GAGUCGUCGGGUCGGA--U-ACGCUCCGCU-AAACCCGCAGGCACAAUGAAAGUGAAGGCCACCC- UUCA---GCGGG-GCC----GAGGGAGGACGGGGGCU--------------C-------
---CU-CC-------AAAG------------GGCCCCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUUGC--GAGGGGAG-G-CGCACCCA-GAG-
CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGUGCGAAAGACUAAUCGA[-]
FJ596562_Hemicordulia_mindana ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUCGGGUCGGA--C-ACGCUCCGCU-AAACCCGCAGGCGCAAUGAAAGUGAA
GGCCGCCC-UUCA---GCGGG-GCC----GAGGGAGGAGGUGGGCU-------------------------CC-CA--------GAG------------GGCCCCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--ACUGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGUGCGAAAGACUAAUCGA[-]
EU055266_Hemicordulia_australiae ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUCGGGUCGGA--C-ACGCUCCGCU-AAACCCGCAGGCGCAAUGAAAGUGAA
GGCCGCCC-UUCA---GCGGG-GCC----GAGGGAGGACGUGGGCU-------------------------CC-CA--------GAG------------GGCCCCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--ACUGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGUGCGAAAGACUAAUCGA[-]
EU055254_Procordulia_jacksoniensis ACCAAGGAGUCUAACAUG-CGCGCGCGAGUCGUCGGGUCGGA--C-ACGCUCCGCU-AAACCCGCAGGCGCAAUGAAAGUGAA
GGCCGCCC-UUCA---GCGGG-GCC----GAGGGAGGACGGGGGCU-------------------------CC-UA--------GAG------------GGCCCCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--ACUGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGUGCGAAAGACUAAUCGA[-]
Unaligned_Libellulid ??????????????????-?????--??
?11??1111?????????----???????????????---------???????cccccccccccccccccccccccccccccc??????-----???????????-??????????-
??????????????--?????--????????-?-????????-???-??????????????????????????????????-??-
??????-????????-??[-]
FJ596583_Notiothemis_robertsi ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCGCCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGCG--------------U----------UC-CC----------G------------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]

FJ596578_Tetrathemis_irregularis ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGANGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUAAA
GGUCGCCC--UCG---CCGGG-ACC----GAGGGAGGACGGAGGCG-------------U---------CC-CC---------G------------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--ACUUC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUNGGGACCCGAAAGAUGGUGAACU-AUGCCNGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCNGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EF631495_318_222_Tetrathemis_polleni ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCGCCC--UCC---GCGGG-ACC----GAGGGAGGACGGAGUCC------------------------GA-UU-----------------------GGACUCCC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAGC-GCACACGUUGGGACCCGAAAGAUGGUGAACU-AU------------------------------------
--[-]
FJ596587_Urothemis_signata ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCGCCC-- UCC---
GCGGG-ACC----GAGGGAGGACGGAGGCG-------------AAG--------CU-CU-----------------------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UCUCU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EF631421_313_217_Urothemis_assignata ACCAAGGAGUGUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCGCCC--UCC---GCGGG-ACC----GAGGGAGGACGGAGGCG-------------AC--------CCUUUAGU---------------------CGCCUCCC-GC-ACUCCCG
GGG-GGUCU-GAUUCCUC--UCUCC--GAGGGAAG-G-AGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AU------------------------------------
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---[-]
FJ596588_Macrodiplax_cora ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCGCCC-- UUU---
GCGGG-ACC----GAGGGAGGACGGAGGCU------------------------CA-UU-----------------------UGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UCUCU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EU055229_Macrodiplax_balteata ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCGCCC--UCC---GCGGG-ACC----GAGGGAGGACGGAGGCU--U----------G---------GC--UU-----------------------GCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UCUCU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EF631458_344_253_Zyxomma_elgneri GGCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCGCCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------CG---------CU-CG----------CG----------CGCCUCCC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AU------------------------------------
--[-]
Zyxomma_petiolatum_GU196340 ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGU--GGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCACCC-- UC----
GCGGG-ACC----GAGGGAGGACGGAGGCG-------------CG---------CU-CG----------CG----------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UCUUU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
FJ596576_Zygonyx_torridus ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUUUCCC-- UCC---
GCGGG-ACC----GAGGGAGGACGGAGGCG-------------UUUU---------CA--------AAGGG----------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UGCUU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EU055233_Nannophlebia_sp ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUGGGCGCAAUGAAAGUGAAGGUCGCCC--
UC----GCGGG-ACC----GAGGGAGGACGGAGGCG------------------------CA-UC-----------G----------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUCCCUC--
UUUCU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Bironides_sp_HOL_2010_GU196365 ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGG------------CU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCGCCC---CA---GCGGG-ACC----GAGGGAGGACGGAGGUC-------------------------------------GU------------CGCCUCCU-GC-ACUCCCG GGGUCGUCU-
GAUUCCUC--CAUUU--GAGGGAAG-GUCGCACCCA-GAGUCGCACACGUUGGGACCCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-
CCGUAGUCGAUUCUGCACGUnnAAAUCGAUCGnnGnnnCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Huonia_epinephela_ ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCGCCC-- UCC---
GCGGG-ACC----GAGGGAGGACGGAGGCU-------------CGGU-----------------------------------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UUUUU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA
EF631477_361_270_Huonia_oreophila ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCGCCC--UA----GCGGG-ACC----GAGGGAGGACGGAGG--------------------------CU-AG-------------------------CCUCCC-GC-ACUCCCG

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GGG-CGUCU-GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUN-------------------------------------
----------------------------------------------------------------------[-            ]
A_EF631485_367_278Onycothemis_testaceaACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA GGUUUCCC-
-UU----GUGGG-ACC----GAGGGAGGACGGAGGU------------------------G-UGAUUA-------------------------GCCUCCC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--UCGCU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AU--------------------------------------
----------------------------------------------------------------------[-            ]
FJ596582_Rhyothemis_variega_imperatrixACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA GGUCGCCC-
-UUU---GCGGG-ACC----GAGGGAGGACGGAGGCG-------------UCU------CUCU-GC---------GGG----------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-GAUUCCUC--
UCUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                              ]
Rhyothemis_fuliginosa_GU196333         ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCACCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------UCU------CUCU-GC---------GGG----------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UCUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                   ]
Miathyria_marcella            ??????????????????-?????--???????????????????????????????????????????????????????????????????
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??????-????????-???????????????????????????????????????????????????????[-            ]
Miathyria_simplex_GU196345    ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCGCCC-- UA----
GCGGG-ACC----GAGGGAGGACGGAGGCG-------------C----------CU---------CAACCGG-----------CGCGUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UGCUU--
GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                    ]
FJ596577_Tholymis_citrina     ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUUUCCC-- UUU---
GCGGG-ACC----GAGGGAGGAAGGAGGCG------------------------CU-GA------------------------GCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUCCCUC--
UCUCUCAGAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                    ]
EF631298_Tholymis_tillarga_86          -------------------------------------------------------------------------------
-----------------------------------------------------------------------------C-----------G-----------CUCCUCCC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--UCUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCCAAAGAUGGAGAACU-AU--------------------------------------
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EF631487_369_280_Pantala_flavescens    ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC--UC----GAGGG-ACC----GAGGGAGGACGGAGGCG-------------C----------CU-CG---------UCG----------CGUCUCCC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AU--------------------------------------
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Tramea_lacerata_OTL           ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCGCCC-- UC----
GCGGG-ACC----GAGGGAGGACGGAGGCG-------------CC---------CUUCG----------CG--------G--CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UCUCU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                    ]
FJ596586_Tramea_calverti                ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------CA--------CGCACG----------CG--------G--CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUUCU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                   ]
Sympetrum_Kalosympetrum_janeae_OSJ     ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC--UU----GCGGG-ACC----GAGGGAGGACGGAGGCC-------------U----------CG-UG----------CG-----------GGCCUCCU-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                   ]
Sympetrum_Kalosympetrum_obtrusum       ??????????????????-?????--????????????????????????????????????????????????????????????
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FJ596606_Sympetrum_Sympetrum_vulgatum ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC--UU----GCGGG-ACC----GAGGGAGGACGGAGGCC-------------U---------CG-UG----------CG----------GGCCUCCU-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Sympetrum_Sympetrum_pedemontanum_   NNNNNNNNNNNNNNNNNN-NNNNN--NNNNNNNNNNNNNNNN--N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNN-NNN----N-NNN-NNN----NNNNNNNNNNNNNNNNN--NNN---NNNNN-NN-NNNNNNN NNN-NNNNN-
NNNNNNNN--NNNNN--NNNNNNNN-N-NNNNNNNN-NNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNN NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-   ]
Sympetrum_Nesogonia_blackburni   ??????????????????-?????--??
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FJ596607_Sympetrum_Sympetrum_sanguineum   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC--UU----GCGGG-ACC----GAGGGAGGACGGAGGCC-------------U---------CG-UG----------CG----------GGCCUCCU-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
EU055230_Sympetrum_Tarnetrum_corruptumACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA GGUUUCCC--
UU----GCGGG-ACC----GAGGGAGGACGGAGGCC-------------U---------CG-UG----------CG----------GGCCUCCU-GC-ACUCCCG GGG-CGUCU-GAUUCCUC--
UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Sympetrum_fonscolombei_GU196359   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA GGUUUCCC-
-UU----GCGGG-ACC----GAGGGAGGACGGAGGCC-------------U---------CG-UG----------CG----------GGCCUCCU-GC-ACUCCCG GGG-CGUCU-GAUUCCUC--
UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUGCACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Sympetrum_Tarnetrum_illotum_??????????????????-?????--???
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Sympetrum_Tarnetrum_infuscatum   ??????????????????-?????--??
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EU424330_Sympetrum_danae   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC--UU----GCGGG-ACC----GAGGGAGGACGGAGGCC-------------U---------CG-UG----------CG----------GGCCUCCU-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-
CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Sympetrum_meridionale_GU196334   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC--UU----GCGGG-ACC----GAGGGAGGACGGAGGCC-------------U---------CG-CG----------CG----------GGCCUCCU-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
FJ596605_Leucorrhinia_pectoralis   ACCAAGGAGUCUAACNUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCGCCC-UUC----GCGGG-ACC----GAGGGAGGACGGAGGCC-------------GU--------CGCUCG-------CGGC----------GGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUUCU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
EF631304_Leucorrhinia_glacialis_OLF   ---------------------------UCGUUGGGUCGGA--C-ACGCUCCGCU--AACCCAUAGGCGCAAUGAAAGUGAA
GGUCGCCC--UCU---GCGGG-ACC----GAGGGAGGACGGAGGCG-------------GU--------CGCUCG-------CGGC----------CGCCUCCC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--UUUCU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AU-------------------------------------
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Celithemis_elisa_OCE   ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCGCCC-- UC----
GCGGG-ACC----GAGGGAGGACGGAGGCG-------------CC--------CGCUCG-------CGGG----------CGCCUCCC-GC-ACUCCCGGGG-CGUCU-

GAUUCCUC--UUUCU--GAGGGAAG-G-CGCACCCA-GAG-CGCUCACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Celithemis_eponina_1233 ??--AGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCGCCC-- UU----
GCGGG-ACC----GAGGGAGGACGGAGGCG-------------UC---------CGCUCG--------CGGG-----------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UUUCU--
GAGGGAAG-G-CGCACCCA-GAG-CGCUCACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Brachymesia_gravida_ ??????????????????-?????--??
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Brachymesia_herbida_GU196344ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUGGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCGCCC-- UCC---
GUGGG-ACC----GAGGGAGAACGGAGGAA-------------CC----------CUCG--------CGG-----------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GACUCCUC--UCUCU--
GAGGGAAG-G-CGCACACA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EF631463_349_258_Brachythemis_leucostic ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGNUCCGCU-AAACCCAUAGGNGCA
AUGAAAGUGAAGGUCGCCCUUUA----GCGGG-ACC----GAGGGAGGACGGAGGCG--GCNNNN--N----------NNNC------------A--------------GCCUCCC-
GC-ACUCCCGGGG-CGUCU-GAUUCCUC--UCUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AU-------------------------
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Brachythemis_contaminata_ ??????????????????-?????--??
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Deielia_phaon_GU196343 ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUUGCCC-- UC----
GCGGG-ACC----GAGGGAGGACGGAGGCG------------------------CGCUUG--------CCG-----------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UCUUU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EF631398_294_198_Pachydiplax_longipenni ACCAAGGAGUGUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGNGCA
AUGAAAGUGAAGGUCACCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------------------CCUCNCA---------G-----------CGCCUCCC-
GC-ACUCCCGGGG-CGUCU-GAUUCCUC--UUUUU--GACGGAAG-G-CGCACCCA-GAG-CGCACACAUUGGGACCCGAAAGUUGGUGAACU-AU-------------------------
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AY750042_Erythemis_sp ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--A-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUUUCCC- UUC----
GCGGG-ACC----GAGGGAGGACGGUGGCG-------------U-----------CUUUAAC---CGGU--A-----------CGCCACCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UCUUU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGUCCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
FJ596592_Acisoma_panorpoidesACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUUUCCC- UUC----
GCGGG-ACC----GAGGGAGGACGGUGGUG-------------CCU------------UAAC----GGC--G-----------CACCACCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UUUUU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EU055239_Erythrodiplax_minuscula ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGUCGCAACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC-UUC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------CUU-----------CUCG-------AGG-----------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UCUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Erythrodiplax_basalis_ ??????????????????-?????--??
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EF631390_289_192_Crocothemis_servilia ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC-UUU----GCGGG-ACC----GAGGGAGGACGGAGGAG---------------------------CUCUAA-----CA-GG-----------CUCCUCCC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--UCUUU--GAGGGAAG-GCCCCCCCC--GAG-CGCACACCUUGGGGCCCCAAAUAUGGUGAACU-AU-------------------------------------
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Crocothemis_erythraea_GU196335 ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA GGUUUCCC-
UUU----GCGGG-ACC----GAGGGAGGACGGAGGAG---------------------------CUCUAA-----CA-GG-----------CUCCUCCC-GC-ACUCCCG GGG-CGUCU-GAUUCCUC--
UCUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-
ACGUGCAAAUCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-]
FJ596590_Rhodothemis_rufa ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUUUCCC- UCC----
GCGGG-ACC----GAGGGAGGACGGUGGAG--------------------------GCCCUCG---CGG--CG-----------CUCCACCC-GC-ACUCCCGGGG-CGUCU-
GAUUCCUC--UCUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Neurothemis_fulvia_ ??????????????????-?????--???
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Neurothemis_ramburii_GU196339 ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC-UUU----GCGGG-ACC----GAGGGAGGACGGAGGCG--------------CUU----------CUUC----------GG-----------CGCAUCUC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UCCUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Diplacodes_lefebvrii ??????????????????-?????--???
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Diplacodes_trivialis_GU196342 ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC-UUU----GCGGG-ACC----GAGGGAGGACGGAGGCG--------------CU---------------------CAUCGG-----------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EF631462_348_257Bradinopyga_strachani ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC-UUC----GCGGG-ACC----GAGGGAGGACGGAGGCG--------------CG---------GGGUUCACCC-----GUG-----------CGCCUCCC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--UUCUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUANNNNNNNNNNNNNNNNNNNNNNNNN-----------
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Brachydiplax_denticauda ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCGCCC-- UC----
GCGGG-ACC----UAGGGAGGACGGGGGCC--------------U----------------GGC--------A-----------GGCCCCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--CUCCG--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
FJ596585_Brachydiplax_chalybea_flavovit ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCA
AUGAAAGUGAAGGUCGCCC--UC----GCGGG-ACC----GAGGGAGGACGGGGGCC-------------------------CCGUGCA----------------------GGCCCCCC- GC-
ACUCCCGGGG-CGUCU-GAUUCCUC--CGCCG--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA
GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
FJ596584_Chalcostephia_flavifrons ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA GGUUACCC-
-UC----GCGGG-ACC----GAGGGAGGACGGAGGCG--------------CUCUU-----UAUGGU------------------------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-GAUUCCUC--
UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EF631393_291_195_Micrathyria_aequalis ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA GGUCGCCC-
-UC----GCGGG-ACC----GAGGGAGGACGGAGGCG--------------UC------------UCUC---------GG-----------CGCCUCCA-GN-NCUCCCG
GGG-CGUCU-GAUUCCUC--UUUUU--GAGGGAAG-G-ACUCCCCC-GAG-UGUACAACUCGGUGCCCCAUAGAUGGAGAACU-AUAANNNNN-------------------------------
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Micrathyria_atra_ ??????????????????-?????--???
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Micrathyria_didyma_GU196361 ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCACCC-- UUU---
GCGGG-ACC----GAGGGAGGACGGAGGCU--UGCCUCCC-GC-ACUCCCGGGG-CGUCU-

GAUUCCUC--UCUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Uracis_imbuta_GU196363 ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--S-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUUUCCC- YUC----
GCGGG-ACC----GAGGGAGGACGGMGGCC-------------CUY-------------------YUUGWG----------CGCCKCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UYUYU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Uracis_infumata ??????????????????-?????--???
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FJ596589_Nannophya_pygmaea ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUUUCCC- UUU----
GCGGG-ACC----GAGGGAGGACGGAGGCU-------------CU------------UA---GC-----GG----------GGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UCUUU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EF631412_307_210_Nannothemis_bella NNCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC--UUC---GCGGG-ACC----GAGGGAGGACGGAGGCU-------------CUNNNNNNN------UC---GC-----GG----------AGGCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UGCUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EF631492_373_Paltothemis_lineatipes ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUACCC--UU----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------UCGAA-------UUC----------GG----------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUCUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUNNNNNNNNN NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--
NNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-]
Brechmorhoga_mendax_ ??????????????????-?????--???
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Brechmorhoga_praedatrix_GU196346 ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--A-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------UC--------GUCUUC---------GG----------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UCCUU--GAGGGAAG-G-CGCACCCA-GAGC-GCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Dythemis_fugax_ ??????????????????-?????--???
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A_FJ596580_Trithemis_aurora ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUUUCCC-- UU----
GCGGG-ACC----GAGGGAGGACGGAGCCG-------------C---------CU-AG----CC-----G----------CGGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UUUUU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
FJ596581_Trithemis_africana ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC--UU----GCGGG-ACC----GAGGGAGGACGGAGCCG-------------C---------CU-AG----CC-----G----------CGGCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Trithemis_arterios ??????????????????-?????--???
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Perithemis_tenera_OPT ??CAAGGAGUCUAACAUG-CGAGC--AAGUCGUUGGGUCGGA--A-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUUACCC- UUU----
GCGGG-ACC----GAGGGAGGACGGAGGCG-------------CGU--------CU-CG---------AUG----------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UUUUU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]

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A_EU055236_Perithemis_intensa          ACCAAGGAGUCUAACAUG-CGCGC--AAGUCGUUGGGUCGGA--A-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA GGUUACCC-
UUU----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------CGU--------CU-CG----------AUG-----------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-GAUUCCUC--
UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                        ]
Perithemis_lais_GU196362      ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCGCCC- UUUA---
GCGGG-ACC----GAGGGAGGAGGGAGGCG--------------GU---------------------GGCU-----------CGCCUCCC-GC-ACUCCCGGGG-CGUCU-
GAUUCCUC--UUUCU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-            ]
Palpopleura_lucia_GU196337    ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUUUCCC- UUC----
GCGGG-ACC----GAGGGAGGACGGAGUCG------------------------CGA-----------GAG-----------CGGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UUUUU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                   ]
FJ596579_Diastatops_pullata   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGNAAUGAAAGUGAAGGUUGCCC-- UCC---
GCGGG-ACC----GAGGGAGGACGGAGGUG-------------CCG--------UC-GCU-----------G-----------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UCUCA--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                   ]
Zenithoptera_fasciata_GU196364         ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCGCCC-CUC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------CGC--CGU--------U----CGCGGCGG-----------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UCUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                        ]
EF631486_368_279_Neodythemis_pauliani  ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------C----------CU-CA----CA------G-----------CGCCUCCC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--UUCUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AU--------------------------------------
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Selysiothemis_nigra           ??????????????????-?????--??????????????????????????????????????????????????????????????????
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Trithetrum_navasi             ??????????????????-?????--??????????????????????????????????????????????????????????????????
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Porpax_risi_                  ??????????????????-?????--??????????????????????????????????????????????????????????????????
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Micromacromia_camerunica_GU196367      ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCGCCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------C----------UU-CAC----------GG-----------UGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUUCU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                        ]
AFJ596594_Allorhizuch_preussi          ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCGCCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------C----------CU-CGC----------GG-----------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUCUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                        ]
Neodythemis_klingi            ??????????????????-?????--??????????????????????????????????????????????????????????????????
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FJ596575_Hadrothemis_infesta           ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCGCCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------CU--------UCU-UCGGC--------GG-----------CGCCUCCC-GC-ACUCCCG
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GGG-CGUCU-GAUUCCUC--UCACU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-
CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
FJ596595_Thermorthemis_madagascariensis ACCAAGGAGUCUAACAUG-CGCGN--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCA
AUGAAAGUGAAGGUCACCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGUG-------------C---------CU-CA----CA------G-----------CGCCUCCC- GC-
ACUCCCGGGG-CGUCU-GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA
GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
FJ596599_Agrionoptera_insignis ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA GGUCACCC-
-UC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------C---------CU-CA----CA------G-----------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-GAUUCCUC--
UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
FJ596593_Cratilla_metallica ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCGCCC-- UC----
GCGGG-ACC----GAGGGAGGACGGAGGCC-------------C---------CU-CC---GCG------G-----------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UUUUU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Pseudoleon_superbus ??????????????????-?????--??
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FJ596597_Orthemis_cultriformis ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCGCCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------C---------CU-CA----CC------G-----------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EF631357_Orthemis_ferruginea_26 ---
--GAGGCG-------------C---------CU-C-----CC------G-----------CGCCUCCC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUUA------------------------------------
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FJ596601_Orthetrum_albistylum ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCACCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------C---------CU-CA----CA------G-----------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EF631473_267_Orthetrum_pruinosum ??????????????????-?????--???
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Orthetrum_coerulescens_ ??????????????????-?????--??
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FJ596600_Lyriothemis_elegantissima ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCGCCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------C---------CU-CA----CA------G-----------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUCUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
A_FJ596602_Ladona_fulva ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCACCC-- UC----
GCGGG-ACC----GAGGGAGGACGGAGGCG-------------C---------CU-CA----CA------G-----------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UUUUU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EF631382_Ladona_julia_100 ??????????????????-?????--???
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A_FJ596598_Ladona_depressa    ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCACCC-- UC---
GCCGGG-ACC----GAGGGAGGACGGAGGCG-------------C----------UU-CA----CG------G-----------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UUUUU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                    ]
Plathemis_subornata_          ??????????????????-?????--?????????????????????????????????????????????????????????????????
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EF631438_330_234_Plathemis_lydia       NNNNNNNNNNNNNNNNNN-NNNNN--N-------------------ACGCUCCGCU-A-ACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC-UUC----GCGGG-ACC----GAGGGAGGACGGUGGCG----------------------UCUUUAANNNNGGNN---------------NGCCACCC-GC-ACUCCUN
GGG-CGUCU-GAUUCCUC--UCUUU--GAGGGAAG-G-CGCACCCA-GAG-CGUNNNNNNNNNNNNNNNNNNNNN-------------------NNNNNNNNNNNNNNN-----------
----------------------------------------------------------------------[-          ]
Libellula_quadrimaculata_GU196332       ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUACCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGCG------------------------CUU-CA----CG------G-----------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                  ]
Libellula_Syntetrum_angelina??????????????????-?????--?????????????????????????????????????????????????????????????????
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Libellula_Eolibellula_semifasciata      ??????????????????-?????--??????????????????????????????????????????????????????????
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Libellula_Belonia_saturata_AY338674     ACCAAGGAGUCUAGCAUG-UGCGC--AAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCGCCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------C----------CU-CA----CG------G-----------CUCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                  ]
Libellula_Eotainia_composita_           ??????????????????-?????--??????????????????????????????????????????????????????????
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Libellula_Neotetrum_pulchella_OLP       ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCACCC--UU----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------C----------CU-CA----CG------G-----------UUCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                  ]
Libellula_Holotania_comanche_           ??????????????????-?????--??????????????????????????????????????????????????????????
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Libellula_Holotania_auripenni           ??????????????????-?????--??????????????????????????????????????????????????????????
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Libellula_Holotania_axilena_??????????????????-?????--?????????????????????????????????????????????????????????????????
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??????-????????-???????????????????????????????????????????????????[-           ]
Libellula_Holotania_luctuosa??????????????????-?????--?????????????????????????????????????????????????????????????????
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??????-????????-???[-   ]
Aethriamanta_rezia_GU196369   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCGCCC-- UCC---
GCGGG-ACC----GAGGGAGGACGGAGGCG-------------AG---------A---A----------GU----------CUCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UCUCU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Tetrathemis_corduliformis_GU196368   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA GGUCACCC-
-UCC---GCGGG-ACC----GAGGGAGGACGGAGGCG-------------U---------UC-CC---------G------------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-GAUUCCUC--
AUUUC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Diplacina_ismene_GU196366   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--G-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCGCCC- UUC----
GCGGG-ACC----GAGGGAGGACGGAGGCG-------------U---------CU-GA---------CGG----------CGCCUCCC-GC-ACUCCCGGGG-CGUCU-
GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Erythemis_vesiculosa_GU196360   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC-CUC----GCGGG-ACC----GAGGGAGGACGGCGGCC-------------C-----------UCC-------GU-------------GGCCGCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UCUCU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Nannophyopsis_clara_GU196358ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUUACCC-- UU----
GUGGG-ACC----GAGGGAGGACGGAGGCG-------------AGGGUUUU---CC-UC-------U--------------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UUUUU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Oligoclada_amphinome_GU196357   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGCUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAA
GGUCGCCC--UCU---GCGGG-ACC----GAGGGAGGACGGAGGCU--G----------CGCCUCCG-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--ACCAC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Idiataphe_sp_HOL_2010_GU196356   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-CCGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCACCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------G---------CGUCCG---------CG-------C---CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UCUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Atoconeura_sp_HOL_2010_GU196355   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------C---------CU-AG----UC------G----------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Elga_leptostyla_GU196354   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCGCCC-- UC----
GCGGG-ACC----GAGGGAGGACGGAGGCG--------------------------CUCG---------CG----------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--USUUU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Fylgia_amazonica_GU196353   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCG-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCGCCC--
UUUA--GCGGG-GCC----GAGGGAGGACGGAGGCG-----------------------------U----------------------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--
UCCUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Hemistigma_albipunctatum_GU196352   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC-UUU----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------CUU---------CUCG---------AG----------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Porpacithemis_sp_GU196351   ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUUUCCC-- UC----
GCGGG-ACC----GAGGGAGGACGGAGCCG-------------C---------CU-AG----CC------G----------CGGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UUUUU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]

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Thermochoria_equivocata_GU196350       ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCGCCC--UUU---GCGGG-ACC----GAGGGAGGACGGAGGCC-------------A-------------------------GG----------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACUCAUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                   ]
Malgassophlebia_bispina_GU196349       ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAA
GGUUUCCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------A-------------------------G----------AGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UCCUC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                   ]
Micromacromia_zygoptera_GU196348                                ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-
AAACCCAUAGGCGCAAUGAAAGUGAAGGUCGCCC-- UC----GCGGG-ACC----GAGGGAGGACGGAGGCG-------------C---------UU-CA---------CGG----------
CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UUUCU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-
AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-       ]
Argyrothemis_argentea_GU196347         ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUKGKSKMGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCGCCC--UC----GCGGG-ACC----GAGGGAGGACGGAGGCG------------------------G-CU----------------------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UCACC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                   ]
Pseudothemis_zonata_GU196341ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCGCCC-- UC----
GCGGG-ACC----GAGGGAGGACGGAGGCG-------------CG--------CU-CG----CC------G----------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--UCUUU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                    ]
Oxythemis_phoenicosceles_GU196338      ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUUCCC-UUC----GCGGG-ACC----GAGGGAGGACGGUGGCG-------------CC--------CUUCA-------CGGCC----------CGCCACCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UACUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                   ]
Olpogastra_lugubris_GU196336ACCAAGGAGUCUAACACG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUUUCCC-- UU----GCGGG-
ACC----GAGGGAGGACGGAGGUU-------------U---------CA-UG-----------A----------AGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUGCUC--UCGCAC-GAGGGAAG-
G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                    ]
Misagria_parana_GU196331      ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCUCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGUCGCCC- UUU----
GCGGG-ACC----GAGGGAGGACGGAGGCG-------------C---------CU-CG---------CGG----------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GGUUCCUC--UUUCU--
GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                    ]


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Neogomphus_edenticulatus_FJ712324      ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAA
GGCUACCU--UC----UCGGA-GCC----GAGGGAGGACGGAGUUU-------------GUUCCCUC-------U----CGGGGGGA----------CGGCUCUU-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCAA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                   ]
Aeshna_mixta_FJ712315         ACCAAGGAGUCUAACAUG-UGCGC--GAGUCGUUGGGUCGGA--G-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUAAAGGCCACCU-- UC----
GCGGG-GCC----GAGGGAGGAAGGAGCGA-------------GUC-ACUU-------C-----GCGGUGA----------CGGUUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAG-CACACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                    ]
Gomphaeschna_furcillata_FJ712314       ACCAAGGAGUCUAACAUG-UGCGC--GAGUCGUUGGGUCGGA--A-ACGCUCCGCU-AAACCCAUAGGCGAAAUGAAAGUGAA
GGCCACCU--UC----G-GGG-GCC----GAGGGAGGAAGGAGCGA-------------GUCCCUUA--------A------CGGGGA----------CGGCCCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CUCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-                                                   ]
Teinobasis_fortis_OD203                  ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCCG--UC-----GGGCGGCC----GAGGGAGGACGGGGCCGG--UCGCGCGUUUCGGCG-----------------------------------CGCGUCGGUCCCC-GC-ACCCCCG
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GGG-CGUCU-GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA
GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAGC-GAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Mecistogaster_modestaOD198 ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCCG--UC-----GGGCGGCC----GAGGGAGGACGGGGCCGC--UCGCGCGUUCCGGCG-----------------------------------CGCGUCGGUCCCC-GC-ACCCCCG
GGG-CGUCU-GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA
GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAGC-GAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Anomisma_abnormeOD193 ---------------------GC--AAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGCCGCCG--UC-----GGGCGGCC----GAGGGAGGACGGGGCCGG--UCGCGCGUUCCGGCG-----------------------------------CGCGUCGGUCCCC-GC-ACCCCCG
GGG-CGUCU-GAUCCCUC--AUCGC--GAGGGGAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA
GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAGC-GAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Lestes_sponsa ----AGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGUAAUGAAAGUGAA
GGCCCCUUUU--------GGGUGCC----GAGGGAGGACGGAGCCGCU-------CUCCUCUG-----------------------------------UGGGACGGUUCCC-GC-ACUCCCG
GGG-CGUCU-AAUUCCUC--AUUGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA
GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAGC-GAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA[-]
Asiagomphus_melaenops ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCCGA--U-ACGCUCCGCG-AAACCCAUAGGCGAAAUGAAAGUGAA
GGCUACCUCUU-----ACGGA-GCC----GAGGGAGGACGGAGUCUGUUGCCUCCCUCGUUGGA-----------------------------------GGGGACGGCUCCC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--AUCGC--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA
GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAGC-GAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Orthemis_discolor ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA GGUUUCC
CUCG------CGGG-ACC----GAGGGAGGACGGAGGCGCCU--CACCGCGCCUCCC-GC-ACUCCCGGGG-CGUCU-
GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA GC-
GAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Leucorrhinia_dubia ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUCGCCCUCC-----GCGGG-ACC----GAGGGAGGACGGAGGCCGUC----------GCUC-----------------------------------GCGGCGGCCUCCC-GC-ACUCCCG
GGG-CGUCU-GAUUCCUC--UUUCU--GAGGGAAG-G-CGCACCCA-GAG-CGCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA
GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAGC-GAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]

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??????-????????-??[-]
Copera_annulata_OCAn ??CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCUGCCG-- UC-----
CGGUGGCC----GAGGGAGGACGGGGCCGC-----UCGGGCGC-----------UCCG------------GCGCCCGU---CGGUCCCC-GC-ACCCCCGGGG-CGUCU- GAUCCCUC--AUCGC--
GAGGGGAG-G-CGCACCCA-GAGC-GCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Lestes_eurinus_OLE A?CAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGUAAUGAAAGUGAAGGC-CCCU--
UU-----UGGGUGCC----GAGGGAGGAAGGAGCCG--C------UCCC-----------CUCUGU------------GGGA------CGGUUCCC-GC-ACUCCCGGGG-CGUCU- AAUUCCUC--
AUUGC--GAGGGAAG-G-CGCACCCA-GAGC-GCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGGAUAGGGGCGAAAGACUAAUCGA[-]
Hemiphlebia_mirabilis ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-GCGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGC-CCC UCCCG-----
UGGGGGCC----GAGGGAGGACGGAGGCG--C---A--CC---GCUC-------CUCG---------GAGCC-GGGA------CGCCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAGC-GCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Epiophlebia_superstes_OES ACCAAGGAGUCUAACAUG-CGCGC--GAGUCGUUGGGUCGGA--C-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCACCUU- C---UG-
CGG--GCC----GAGGGACGAAGGAGC----G---G-GUCCCC-----------UCGC------------GGGGAC------GGuUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAGC-GCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA

Epiophlebia_laidlawi_JQ943593 ??????????????????-?????--????????????111111111111111?????????????????????????????
???????2222222222222???????----???????????????333333333???????ccccccccccccccccccccccccccccc??????-cccc???????????-???????
???-??????????????--?????--????????-?-????????-????-????????????????????????????????-???????????
????????????????????????????????-??????-????????-???[-]
Austropetalia_victoria accaaggagucuaacaug-cgcgc--gagucguugggucgga--c-acgCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAAGGCCACCU-- CA--G--
CGGG-GCC----GAGGGAGGACGGAGC----G---A-GUCCCC-----------UCAC------------GGGGAC------GGCUCCC-GC-ACUCCCGGGG-CGUCU- GAUUCCUC--AUCGC--
GAGGGAAG-G-CGCACCCA-GAGC-GCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCgaaagacuaauCGA[-]
A_EU055236_Perithemis_intensa ACCAAGGAGUCUAACAUG-CGCGC--AAGUCGUUGGGUCGGA--A-ACGCUCCGCU-AAACCCAUAGGCGCAAUGAAAGUGAA
GGUUACCC-UUU--G--CGGG-ACC----GAGGGAGGACGGAGGCG-------------CGU-------CUCG----------AUG----------CGCCUCCC-GC-ACUCCCG GGG-CGUCU-
GAUUCCUC--UUUUU--GAGGGAAG-G-CGCACCCA-GAGC-GCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
]
Unaligned_Orders ??????????????????-?????--????????????111111111111111???????????????????????????????????
22222222222???????----???????????????333333333???????ccccccccccccccccccccccccccccc??????-cccc???????????-??????????-
??????????????--?????--????????-?-????????-????-????????????????????????????????-???-
??????-????????-??[-]
Ephemerella_sp_AY749918 ACCAAGGAGUCUAACAUG-UACGC--GAGUCAUUGGGCACCA-----------CG-AAACCCAAAGGCGCAUUGAACGAAAAGGCGGGC--- UUAAUU--
GACCGCC----GAGGGGAGAUGGGGCGG----------------------CGCUCGCG----------------------UCGCCCCC-GC-AUCCCCGGGG-CGUCU-CA-
CCCUACCCGGGC???AGGAGAG-G-CGCACCAA-GAGC-GUACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG- CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Paralept_vaciva_AY749922 ACCAAGGAGUCUAACAUG-UGCGC--GAGUCAUUGGGUCCCACUAC------------ACCCAAGGGCGUAUUGAACGAAAAGGCGGGC--- CUUCGC--
GCCCGCC----GAGGGAAGAUGGGGUGC----------------------CGCUCGCG----------------------GCGCCCCC-GC-AUUCCCGGGG-CGUCU-CG-
UCCUACCGCCGC???AGGUGAG-G-CGCACCAA-GAGC-GCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG- CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Anthopotamus_sp_AY338668 ACCAAGGAGUCUAACACG-CGCGC--GAGUCGUCGGGUACCA-----------CU-ACACCCGAAGGCGCAUUGAACGAGAAGGCCGGC--- CUCCGC--
GCCGGCC----GAGGGAAGAUGGAGUCU----------------------CCCGCGGG----------------------GGACUCCC-GC-AUUCCCGGGG-CGUCU-CG-
UCCUACCGCCGC???AGGUGAG-G-CGCACCAA-GAGC-GCGCGCGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG- CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Caenis_sp_AY338667 ACCAAGGAGUCUAACACG-UGUGC--GAGUCAUUGGGU????????????????CU-AAACCCAAAGGCGUAUUGAACGAAAAGGCCGUC--- CUUAGU--
GUCGGCU----GAGGGAGGAUGAAGC??--????????????-------??????????????????---?????????--??GCUUCC-GC-ACUCCCGGGG-CAUCU-CG- UCCU?--?????--
?AGGUGAG-G-UGCACCAA-GAGC-ACACGCGUUGGUACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG- CGAUUCUG-
ACGUGCAAAUCGAUCGUCAGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Ephemera_guttulata ACCAAGGAGUCUAACACG-CACGC--GAGUCGUCGGGC????????????????CU-AAACCCGAGGGCGCAUUGAACGAAAAGGCAGGU- CCUCCGCG--
GCCGGCC----GAGGGAUGAUGGGAG??--????????????-------??????????????????---?????????--??CUCCUC-GC-AAUCCCGGGG-CGUCU- CG-
UCCU???????????AGGUGAG-G-CGCACCAU-GAGC-GUGCGCGUUGGUACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCAGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Callibaetis_sp_AY749925 ACCAAGGAGUCUAACAUG-UGCGC--GAGUCAUUGGGCACCA-----------CG-AAACCCAAAGGCGUAUUGAACGAAAAGGCCGAUCCA-
-------AUCCGCU----GAGGGAAGAUGGAGGCG----------------------CGCUCGCG----------------------CGCCUCCC-GC-AUUCCCGGGG-CGUCU-CG-
UCCUACUUCCGC--?AGGUGAG-G-CGCACCAA-GAGC-GCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG- CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGNNNNNNNNNUCGA[-]
Callibaetis_ferrugineus_AY859557 ACCAAGGAGUCCAGCAUG-CGCGC--GAGUCGUCGGGAUCAA-----------CU-AGACCCGAAGGCGCAUUGAACGAGAA GGCACGC-
--CUCG-C--GCGGGCC----GAGGGGCGACGGCGGCU----------------------UC----------------------------GGCCGCCC-GC-AGCCCCG GGG-CGUCU-CG-
AUCUACCGCCGC???AGGCGAG-G-CGCACCUA-GAGC-GCGCACGCUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG-CGAUUCUG-
ACGUGCAAAUCGAUCGUCAGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Baetis_sp_AY338652 ACCAAGGAGUCCAGCAUG-CGCGC--GAGUCGACGGGAAUCU-----------CG-AAACCCGAAGGCGUAUUGAACGAAAAGGCCCGC--- CUCG-C--
GCGGGCU----UAGGGGAGAUGGCGGCC---------------------CUC----------------G----------GGCCGCCC-GC-ACCCCCGGGG-CGUCU-CG- AUCUACCGCCGC--
?AGGCGAG-G-CGCACCAA-GAGC-GCGCACGCUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG- CGAUUCUG-
ACGUGCAAAUCGAUCGUCAGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Hexagenia_sp_AY125276 ACCAAGGAGUCUAACACG-UAUGC--GAGUCGUCGGGCACCA-----------CA-AAAACCGAAGGCGCAUUGAACGAAAAGGCGGAC-- CCUAGUG--
GCUCGGC----GAGGGAUGAUGAGGUCC----------------------UCCUCGGA----------------------GGACCUCC-GC-AAUCCCGGGG-CGUCU-CG-

UCUU?--?????--?????GAG-G-CGCACCAA-GAGC-AUACGCGUUGGUACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG- CGAUUCUG-
ACGUGCAAAUCGAUCGUCAGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Cloeon ??----------AGCAUG-CGCGC--GAGUCGUCGGGACGCA-----------CU-AGACCCGAAGGCGUAUUGAACGAGAAGGCCCGC---CUCG-C-- GCGGGCC----
GAGGGGUGAUGGCGGCC------------------------CCACGCG----------------------GGCCGCCC-GC-AACCCCGGGG-CGUCU-CG- AUCUACCGCGGC--?AGGCGAG-G-
CGCACCAA-GAGC-GCGCACGCUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGUCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG- CGAUUCUG-
ACGUGCAAAUCGAUCGUCAGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Leucrocuta_maculipennis ACCAAGGAGUCUAACAUG-UGCGC--GAGUCAUUGGGUCCCA-----------CU-ACACCCAAAGGCGUAUUGAACGAAAAGGCAGGC--- CUCCGC--
GUCAGCC----UAGGGAAGAUGGGGGCU----------------------CGCUCGCG----------------------GGCCCCCC-GC-AUUCCCGGGG-CGUCU-CG-
UCCUACCGUCGC???AGGUGAG-G-CGCACCAA-GAGC-GCACACGUUGGUACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGCCAGGGGAAACCCUGGUGGAGGU-CCGUAG- CGAUUCUG-
ACGUGCAAAUCGAUCGUCAGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Centroptilum_luteolum ACCAAGGAGUCCAGCAUG-CGCGC--GAGUCGUCGGGAAAGCA----------CUAGAACCCGAAGGCGUAUUGAACGAAAAGGCACGC--- UUCG----
GUGGGCC----GAGGGGUGAUGGCGGUU------------------------UC------------------------GGCCGCCC-GC-AACCCCGGGG-CGUCU-CG-
AUCUACCGUAGC???AGGCGAG-G-CGCACCUA-GAGC-GCGCACGCUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGUCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG- CGAUUCUG-
ACGUGCAAAUCGAUCGUAAGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Stenonema_sp_AY749928 ACCAAGGAGUCUAACAUG-UGCGC--GAGUCAUUGGGUCCCA-----------CU-ACACCCAAAGGCGUAUUGAACGAAAAGGCCGUC---
CUCCGC--GUCGGCU----GAGGGAAGAUGGGCGUC----------------------CGCUCGCG----------------------GGCGCCCC-GC-AUUCCCGGGG-CGUCU-CG-
UGCUACCGUCGC???AGCUGAG-G-CGCACCCA-GAGC-GCACACGUUGGUACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGCCAGGGGAAACCCUGGUGGAGGU-CCGUAG- CGAUUCUG-
ACGUGCAAAUCGAUCGUCAGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Trigonioptha lmus_altern --CAAGGAGUCUAACAUG-UGCGC--GAGUCAUUGAGC????????????????CU-AAACUCAAAGGCGCAAUGAAAGUGAAGGUUCGCG--
CAUUUUCGGCGAACC----GAGGGGAGAUCCGCG??--????????????--------??????????????????---?????????--?????????GC-AUCCCCGGGG-CGUCU-CG- U--??--
?????--???---AG-G-CGCACCUA-GAGC-GCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGCCAGGGGAAACCCUGGUGGAGGU-CCGUAG- CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUUGGUAUAGGGGCGAAAGACUAAUCGA[-]
Allomachilis_froggart ??CAAGGAGUCUAACACG-UGCGC--GAGUCGUAGGGU????????????????CU-AAACCCGAAGGCGCA????????????????--
?????????-????????----?????????????????--????????????--------??????????????????---?????????--???????????-??????????-
??????????????--?????--????????-?-??????UA-GAGC-GCACGCGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCUAGGACGAAGCCAGGGGAAACCCUGGUGGAGGU- CCGAAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCAAAGUUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
EF199981_Machilis_hrabei ACCAAGGAGUCUAACAUG-UGCGC--GAGUCAUUGAGU-----------GUGACU-AAACUUAAAGGCGUAAUGAAAGUGAAGGUUCG- CAUCAAGU----
CGAACC----GAGGGGAGAUCCGAU------------------GCCGUUCGCGG--------------------------CUCGGC-GC-AUCCCCGGGG-CGUCU- CG-UCCGC--AUCG----
CGGUGAG-G-CGCACCCA-GAGC-GUACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGCCAGGGGAAACCCUGGUGGAGGU-CCGUA G-CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Dilta_littoralis_AY859570 ACCAAGGAGUCUAACAUG-UGCGC--AAGUCAUUGAGU-----------GUGACU-AAACUCAGAGGCGUAAUGAAAGUGAAGGUUCG-- AUGCAGG---
ACGAACUU--UGAGGGGAGAUCCGGACC------------------------UCGC-------------------CCAGAGGCCGGC-GC-AUCCCCGGGG-CGCCU- CG--ACUU----------
CGGUGAGGG-CGCACCCA-GAGC-GCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGGUGAAGCCAGGGGAAACCCUGGUGGAGGC-CCGUA G-CGGUUCUG-
ACGUGCAAAUCGAUCGUCUGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-]
Ctenolepisma_longicaudata ACCAAGGAGUCUAACAUG-UGCGC--GAGUCAUUGGGUCACUA----------CU-AAACCUAAAGGCGUAAUGAAAGUAAAGAUCCCUU--- GUUU---
AGGGAUU----AAGGGAUGAUGGAGU--AACCUUU-------AACUGGUUC?????UCGAAGCUCGCUGAG-------AGGC--ACUCUC-GC-AAUCCCGGGG-CGUCU-CG- UUCUC--AUUGC--
GAGAUGAG-G-CGCACCUU-GAGC-GUACAUGUUGGGACCCGAAAGAUGGUGAACU-AUGCCCGGCCAGGACGAAGCCAGGGGAAACCCUGGUGGAGGU-CCGUAG- CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUAGGUAUAGGGGCGAAAGACUAAUCGA[-]
X93401_Lepisma_sp[IDtoThermobia] ??????????????????-?????--?????????????????????????????????AAACCUAAAGGCGUAAUGAAAGUAAA
??????????????????????????????GAGGGAAGAUGGAGUUU???AUACUCCC-GC-ACUCCCA GGG-CGUCU-
CG-UUCUC--AUUGC--GAGAUGAG-G-CGCACCUA-GAGC-GUACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCCGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGAAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAGCUAGGUAUAGGGGCGAAAGACUAAUCGA[-]
Lepisma_saccharina[checkedOK] ACCAAGGAGUCUAGCGCG-UGGGC--GAGUCUAAGGGAAUCA-----------CU-AAACCCGAAGGCGCAGUCAAAGCGAC
UGGGACGAUCG----AGGUGACCCG----GAGUCGC???CGAA----------------GGGCC-------------------------------------CUCGC-GC-AGUCCCG GGG-CGAUC-
?????????????????????????????CGUACCUAAGAGC-CCACUCGCUGGGACCCGAAAGAUGGUGAACU-AUGCUCGGCCA GGACGAAUCCAGGGGAAACCCUGGUGGAAGU-CCGAAC-
CGCCUCUG-ACGUGCAAAUCGACCGUCUGAGCUAAGCAUAGUGGCGAAAGGCCAAUCGA[-]
AF370808Thermobia_domestica[IDtoLep] -CCAAGGAGUCUAACAUG-UGCGC--AAGUCAUUGGGUGUUUA----------CG-AAACCUAAAGGCGUAAUGAAAGUAAA
??????????????????????????????GAGGGAAGAUGGAGUUU???AUACUCCC-GC-ACUCCCA GGG-CGUCU-
CG-UUCUC--AUUGC--GAGAUGAG-G-CGCACCUA-GAGC-GUACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCCGGCCA GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGAAG-
CGAUUCUG-ACGUGCAAAUCGAUCGUCGGAACUAGGUAUAGGGGCGAAAGACUAAUCGA[-]

Tricholepidion_AY338685   ACCAAGGAGUCUAACAUG-UACGC--GAGUUAUUGGGAAUUU-----------CU-AAACCUAAAGGCAUAAUGAAAGUAAAAAAAUCU--
UAUAUUCUAAGAUUUU----AAUGGAAGAUGACAUUA--------------------------UAUAUU-------------------AUAAUGUUCGC-AUUCCAAGGG-CGUCU-
C??????????????????????????G-CGAACCUA-GAGC-GUACACGUUGGGACCCGAAAGAUGGUGAACU-AUUCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUA A-
CGAUUCUG-ACGUGCAAAUCGAUCGUUGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Gromph_laevigata_AY210819   ACCAAGGAGUCUAACAUG-UGCGC--GAGUCGCUGGGAGCACUCG---------CU-AAACCCGGAGGCGCAGUGAAAGCGGGGCG-CGG-- UCGUCAGG-
CCGCCGU----C-GGGAGGAUGCCGUGC-----------------------GGAGAACCC--------------------GCGCGGCC-GC-ACUCCCGGGG-CGCCU-CG-
????????????????????AG-G-CGCACCCC-GAGC-GCACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGUCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGCAG- CGAUUCUG-
ACGUGCAAAUCGAUCGUCAGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
Isoperla_davisi_AY125288   ACCAAGGAGUCUAACAUG-UACGC--GAGUCAUUGGACCGCA-----------AU-AAACCUAAAGGCGUAAUGAAAGUAAAGGUCGCG-- GCGCGAG-CC-
CGGCCCAAAGAGGGGAGAUGUCCGUG--GCGUA-----------C--CCUAGCGUCGCCGA-------------------CGGAUC-GC-AUCCCCGGGG-CGUCU-CG- UUGUC--
AUUGCGACACAGUAG-G-CGCACCCA-GAGC-GUACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGUCAGGUCGAAGUCAGGGGAAACCCUGAUGGAGGA-CCGUAG- CGAUUCUG-
ACGUGCAAAUCGAUCGUCAGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
EU414717_Isoperla_sp   ACCAAGGAGUCUAACAUG-UGCGC--GAGUCAUUGGGACCGC----------ACU-AAACCUAAAGGCGAAAUGAAAGUAAAGGUCGCG-- GCGCAAG-CC-
CGGCCCACAGAGGGGAGAUGUCCGUG--GCGCA-----------C--CACAGUGUCGCCGA-------------------CGGAUC-GC-AUCCCCGGGG-CGUCU-CG- UUGUC--
AUUGCGACACAGUAG-G-CGCACCCA-GAGC-GUACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGUCAGGUCGAAGUCAGGGGAAACCCUGAUGGAGGA-CCGUAG- CGAUUCUG-
ACGUGCAAAUCGAUCGUCAGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]
AY859546_Gomphocerinae   ACCAAGGAGUCUAACAUG-UGCGC--GAGUCAUUGGGC----------UCUUACG-AAACCUAAAGGCGUAAUGAAAGUGAAGGUCUCG-- CCUUGCG--C-
GGGCC----GAGGGAGGAUGGGGCUUCCCCGCC-----------CUUCACGGGGCGGCG---------------------GCCUCC-GC-ACUCCCGGGG-CGUCU-CG- UCCUC--AUUGC--
GAGGUGAG-G-CGCACCUA-GAGC-GUACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CCGUAG- CGAUUCUG-
ACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGA[-   ]

[
Ephemerella_sp_AY749918   ACCAAGGAGUCUAACAUG-UACGC--GAGUCAUUGGGCACCA-----------CG-AAACCCAAAGGCGCAUUGAACGAAAAGGCGGGC--- UUAAUU--
GACCGCC-----GA-GGGGAGAUGGGGCGG-------------CGCUCGCG-------------------------------UCGCCCCC-GC-AUCCCC-GGGG-CGUCU-CA-
CCCUACCCGGGCCAGUCUCGGGAAGGAGAG-G-CGCACCAA-GAGCGUACACGUUGGGACCC
GAAAGAUGGUGAACUAUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGUCCGUAGCGAUUCUGACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCGAAAGACUAAUCGAACCAUCUAGUAGC
UGGUUCCCUCCGAAGUUUCCCUCAGGAUAGCUGGCGCUCGUAUAUACGAGUCCCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGUCGAAACGAUCUCAACCUAUUCUCAAACUUUAAAUGGGUGGGACCUG
CGGCUUGCUUGAAUUGGUGAAGCCGC
Paralept_vaciva_AY749922   ACCAAGGAGUCUAACAUG-UGCGC--GAGUCAUUGGGUCCCACUAC------------ACCCAAGGGCGUAUUGAACGAAAAGGCGGGC--- CUUCGC--
GCCCGCC-----GA-GGGAAGAUGGGGUGC-------------CGC--------------------UCGCG----------GCGCCCCC-GC-AUUCCCGGGG-CGUCU-CG-
UCCUACCGCCGCUCGUCGGCGGAAGG
Anthopotamus_sp_AY338668   ACCAAGGAGUCUAACACG-CGCGC--GAGUCGUCGGGUACCA-----------CU-ACACCCGAAGGCGCAUUGAACGAGAAGGCCGGC--- CUCCGC--
GCCGGCC----GAGGGAAGAUGGAGUCU-------------CCCGCGGG-------------------------------GGACUCCC-GC-AUUCCCGGGG-CGUCU-CG-
UCCUACCGCCGCCCGUCGGCGGAAGGUGAG-G-CGCACCAA-GAGCGCGCGCGUUGGGACCCGAA
Callibaetis_ferrugineus_AY859557   ACCAAGGAGUCCAGCAUG-CGCGC--GAGUCGUCGGGAUCAA-----------CU-AGACCCGAAGGCGCAUUGAACGAGAA GGCACGC-
--CUCG-C--GCGGGCC-----GA-GGGGCGACGGCGGCU--------------UC------------------------------------GGCCGCCC-GC-AGCCCC-G GGG-CGUCU-CG-
AUCUACCGCCGCUCGUCGGCGGAAGGCGAG-G-CGCACCUA-GA
GCGCGCACGCUGGGACCCGAAAGAUGGUGAACUAUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGUCCGUAGCGAUUCUGACGUGCAAAUCGA
Callibaetis_sp_AY749925   ACCAAGGAGUCUAACAUG-UGCGC--GAGUCAUUGGGCACCA-----------CG-AAACCCAAAGGCGUAUUGAACGAAAAGGCCGAUCCA-
-------AUCCGCU----GAGGGAAGAUGGAGGCG--------------CGCUCGCG-----------------------------CGCCUCCC-GC-AUUCCC-GGGG-CGUCU-CG-
UCCUACUUCCGCUCGUCGGUCGAAGGUGAG-G-CGCACCAA-GA
GCGCACACGUUGGGACCCGAAAGAUGGUGAACUAUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGUCCGUAGCGAUUCUGACGUGCAAAUCGAUCGUCGGAGCUGGGUAUAGGGGCG
Baetis_sp_AY338652   ACCAAGGAGUCCAGCAUG-CGCGC--GAGUCGACGGGAAUCU-----------CG-AAACCCGAAGGCGUAUUGAACGAAAAGGCCCGC--- CUCG-C--
GCGGGCU-----UA-GGGGAGAUGGCGGCC-------------CUC------------------------G----------GGCCGCCC-GC-ACCCCC-GGGG-CGUCU-CG-
AUCUACCGCCGCUCGUCGGCGGAAGGCGAG-G-CGCACCAA-GAGC-
GCGCACGCUGGGACCCGAAAGAUGGUGAACUAUGCCUGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGUCCGUAGCGAUUCUGAC
Cloeon   -----------AGCAUG-CGCGC--GAGUCGUCGGGACGCA-----------CU-AGACCCGAAGGCGUAUUGAACGAGAA GGCCCGC-
--CUCG-C--GCGGGCC-----GA-GGGGUGAUGGCGGCC------------------CCACGCG----------------------------GGCCGCCC-GC-AACCCC-G
GGG-CGUCU-CG-AUCUACCGCGGCUCGUCCGCGGAAGGCGAG-G-CGCACCAA-GAGCGCGCA

Leucrocutamaculipennis ACCAAGGAGUCUAACAUG-UGCGC--GAGUCAUUGGGUCCCA------------CU-ACACCCAAAGGCGUAUUGAACGAAAAGGCAGGC--- CUCCGC--
GUCAGCC-----UAGGGAAGAUGGGGGCU------------------CGCUCGCG----------------------------GGCCCCCC-GC-AUUCCC-GGGG-CGUCU-CG-
UCCUACCGUCGCUCGUCGGCGGAAGGUGAG-G-CGCACCAA-GAGCGCACACGUUGGUACCCGAAAGAUGGUGAACUAUGCCUGGCCAGGACGAAGCCAGGGGAAACCCUGGUGGAGGUCCG
Centroptilumluteolum ACCAAGGAGUCCAGCAUG-CGCGC--GAGUCGUCGGGAAAGCA-----------CUAGAACCCGAAGGCGUAUUGAACGAAAAGGCACGC--- UUCG----
GUGGGCC-----GA-GGGGUGAUGGCGGUU--------------UC--------------------------------------GGCCGCCC-GC-AACCCC-GGGG-CGUCU-CG-
AUCUACCGUAGCUUGUCUGCGGAAGGCGAG-G-CGCACCUA-GAGCGCGCACGCUGGGACCCGAAAGAUGG
Stenonemasp. ACCAAGGAGUCUAACAUG-UGCGC--GAGUCAUUGGGUCCCA------------CU-ACACCCAAAGGCGUAUUGAACGAAAAGGCCGUC--- CUCCGC--
GUCGGCU-----GA-GGGAAGAUGGGCGUC---------------CGCUCGCG--------------------------------GGCGCCCC-GC-AUUCCC-G-GGG-CGUCU-CG-
UGCUACCGUCGCUCGUCGGCGGAAGCUGAG-G-CGCACCCA-GA
GCGCACACGUUGGUACCCGAAAGAUGGUGAACUAUGCCUGGCCAGGACGAAGCCAGGGGAAACCCUGGUGGAGGUCCGUAGCGAUUCUGACGUGCAAAUCGAUCGUCAGAGCUGGGUAUAGGGGCGAAAGACUA
AUCGAACCAUCUAGUAGCUGGUUCCCUCCGAAGUUUCCCUCAGGAUAGCUGGCGGUUCGGAGAUUCGAGUUCCCACUCCGGUAAAGCGAAUGAUUACAGGCCAUGGGGUCGAAACCACCUCAAC
Diltalittoralis ACCAAGGAGUCUAACAUG-UGCGC--AAGUCAUUGAGU------------GUGACU-AAACUCAGAGGCGUAAUGAAAGUGAAGGUUCG-- AUGCAGG---
ACGAACU-U--UGA-GGGGAGAUCCGGACC---------------------------UCGC--------------------CCAGAGGCCGGC-GC-AUCCCCG-GGG-CGCCU- CG-ACUU----------
CGGUGAGG-G-CGCACCC-A-GA-GC-GCACACGUUGG-GA-CC-CGAA-AGAUGGU-GAA-CU-AUGCCUGGC-
CAGGGUGAAGCCAGGGGAAACCCUGGUGGAGGCCCGUAGCGGUUCUGACGUGCAAAUCGAUCGUCUGAGCUGGGUAUAGGGGCGAAAGACUAAUCGAACUAUCUAGUAGCUGGUUCCCUCCGAAGUUUCCCUCA
GGAUAGCUGGUACUCAGAGGAGGAAUGUCAUCCGGUAAAGCGAAUGACUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGACGCCCGGCUUCCUUGAACCUGAAGCCGGG
C
Ctenolepisma ACCAAGGAGUCUAACAUG-UGCGC--GAGUCAUUGGGUCACUA-----------CU-AAACCUAAAGGCGUAAUGAAAGUAAAGAUCCCUU--- GUUU---
AGGGAUU-----AA-GGGAUGAUGGAGUAA---------------CCUUUAACUGGUUCUUUUGGUCUCGAAGCUCGCUGAGAGGCACUCUC-GC-AAUCCCGGGG-CGUCU-CG- UUCUC--AUUGC--
GAGAUGAG-G-CGCACCUU-GAGC-GUACAUGUUGG-GA-
CCCGAAAGAUGGUGAACUAUGCCCGGCCAGGACGAAGCCAGGGGAAACCCUGGUGGAGGUCCGUAGCGAUUCUGACGUGCAAAUCGAUCGUCGGAGCUAGGUAUAGGGGCGAAAGACUAAUCGAACCAUCUAGU
AGCUGGUUCCCUCCGAAGUUUCCCUCAGGAUAGCUGGUGCUCAUUACAUAAUACAAACGAGUCUCAUCCGGUAAAGCGAAU
Lepismasaccharina ACCAAGGAGUCUAGCGCG-UGGGC--GAGUCUAAGGGAAUCA------------CU-AAACCCGAAGGCGCAGUCAAAGCGACUGGGACG AUCG----
AGGUGACCCG----GAGUCGCUCAACGAA----------------GGGCC--------------------------------------CUCGC-GC-AGUCCCGGGG-CGAUC- CCCCACCU--CCGGG---
UGCGGGGAU-CGUACCUAAGA-GC-CCACUCGCUGG-GA-CC-
CGAAAGAUGGUGAACUAUGCUCGGCCAGGACGAAUCCAGGGGAAACCCUGGUGGAAGUCCGAACCGCCUCUGACGUGCAAAUCGACCGUCUGAGCUAAGCAUAGUGGCGAAAGGCCAAUCGAACCGUCUAGUAG
CUGGUUCCCUCCGAAGUGUCCCUCAGGACAGCUGGCG
X93401_Lepisma_sp ??????????????????-?????--???????????????????????????????AAACCUAAAGGCGUAAUGAAAGUAAAGUGUUUU
CGAUUACUUCGGUGGUCGAGAACCGAGGGAAGAUGGAGUUUGUCAAGUUUGUUCUGAUCCUUUUCGGAGGUGAGGUCGGGCUUGGCAACUUGAUCCGAGUCAAUUUGGCAAAGGAUACUCCC- GC-
ACUCCCAGGG-
CGUCUCGUUCUCAUUGCGAGAUGAGGCGCACCUAGAGCGUACACGUUGGGACCCGAAAGAUGGUGAACUAUGCCCGGCCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGUCCGAAGCGAUUCUGACGUGCAAA
UCGAUCGUCGGAGCUAGGUAUAGGGGCGAAAGACUAAUCGAACCAUCUA
GUAGCUGGUUCCCUCCGAAGUUUCCCUCAGGAUAGCUGGUGCUCAUUAAACGAUACGGAACGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAA
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UGGUAAGCAGAACUGGCGCUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCUCAAUCGAAGCUUAUUUUGAUCCC
AF370808Thermobia_domestica -CCAAGGAGUCUAACAUG-UGCGC--AAGUCAUUGGGUGUUUA-----------CG-AAACCUAAAGGCGUAAUGAAAGUAAA
GUGUUUUCGAUUACUUCGGUGGUCGAGAACCGAGGGAAGAUGGAGUUUGUCAAGUUUGUUCUGAUCCUUUUCGGAGGUGAGGUCGGGCUUGGCAACUUGAUCCGAGUCAAUUUGGCAAA GGAUACUCCC-
GC-ACUCCCAGGG-CGUCU-CGUUCUCA---UUGC--GAGAUGAG-G-CGCACCUA-GAGC-GUACACGUUGGGACCCGAAAGAUGGUGAACU-AUGCCCGGCCA
GGACGAAGUCAGGGGAAACCCUGAUGGAGGU-CC-GAAGCGAUUCUGACGUGCAAAUCGAUCGUCGGAACUAGGUAUAGGGGCGAAAGACUAAUCGAACCAUCUA
Tricholepidionsp -CCAAGGAGUCUAACAUG-UACGC--GAGUUAUUGGGAAUUU------------CU-AAACCUAAAGGCAUAAUGAAAGUAAAAAAAUCU--
UAUAUUCUAAGAUUUU-----AAUGGAAGAUGACAUUA----------------------------UAUAUU--------------------AUAAUGUUCGC-AUUCCAAGGG-CGUCU-
CAUAAUUACUGAUCAUUGAUUUAUUUCUUUGAUAAAGAAUAGAGGCGAACCUA-GAGC-GUACACGUUGGGACCCGAAAGAUGGUGAACUAUUCCUGGCCAGGACG
Gromphadorhinalaevigata ACCAAGGAGUCUAACAUG-UGCGC--GAGUCGCUGGGAGCACUCG---------CU-AAACCCGGAGGCGCAGUGAAAGCGGGGCG-CGG-- UCGUCAGG-
CCGCCGU-----C--GGGAGGAUGCCGUGC------------------------GGAGAACCC---------------------GCGCGGCC-GC-ACUCCC-G-GGG-CGCCU- CGGCUCCGGCCGC----
------AG-G-CGCACCCC-GAGC-GCACACGUUGGGACCCGAAAGAUGGUGAACU-
AUGCCUGGUCAGGACGAAGUCAGGGGAAACCCUGAUGGAGGUCCGCAGCGAUUCUGACGUGCAAAUCGAUCGUCAGAGCUGGGUAUAGGGGCGAAAGACUAAUCGAACCAUCUAGUAG
Isoperladavisi ACCAAGGAGUCUAACAUG-UACGC--GAGUCAUUGGACCGCA------------AU-AAACCUAAAGGCGUAAUGAAAGUAAAGGUCGCG-- GCGCGAG-
CC-CGGCCCAAAGAGGGGAGAUGUCCGUG--GCGUA------------C--CCUAGCGUCGCCGA--------------------CGGAUC-GC-AUCCCC-G-GGG-CGUCU- CGUUGUCAUUGC---
GACACAGUAG-G-CGCACCCA-GA-GC-GUACACGUUGG-GACCCGAAAGAUGGUGA

Isoperla_sp ACCAAGGAGUCUAACAUG-UGCGC--GAGUCAUUGGGACCGC-----------ACU-AAACCUAAAGGCGAAAUGAAAGUAAA GGUCGCG-
-GCGCAAG-CC-CGGCC-CACAGA-GGGGAGAUGUCCGUG--GCGCA-----------C--CACAGUGUCGCCGA-------------------CGGAUC-GC-AUCCCC-G- GGG-CGUCU-
CGUUGUCAUUG---CGACACAGUAG-G-CGCACCCA-GA-GC-GUACACGUUGG-GA-CC-CGAA-AGAUGGU-G
]

[ProtostictacuriosaisactuallyProteuracap.
Palaemnemamelanostigmaislongbranch,andgroupsawayfromotherPalaemnema
MegaloprepuscoerulatusZMC=DiceratobasisspAZDA
PodopteryxwithHypolestes
IsPetalura_litoreaPetalura_litolae??
FJ596579_DiastatopswithMAcromia

D4]
[28sD4-6 15bâ€šÃ„Ã´ 15aâ€šÃ„Ã´ 20 21 22
23 24 25
22â€šÃ„Ã´ 26 27 28 z
29 30 31 32 29â€šÃ„Ã´ z
28â€šÃ„Ã´ D6 20â€šÃ„Ã´]
[32â€šÃ„Ã´31aâ€šÃ„Ã´ 36 37 38
D4 D5a D5b
38â€šÃ„Ã´ 39 40
41 42 43 44 42â€šÃ„Ã´
41â€šÃ„Ã´ D6 36â€šÃ„Ã´]
Unaligned D4-??????-??????????????-?-?-?-????????????????-???????-???
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Unaligned_Zygoptera D4-??????-??????????????-?-?-?-????????????????-???????-???
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Protosticta_sp_A_ZPA ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUGC-CGCCGU----CUCGG----CGGCG-GCG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC
Protosticta_curiosa_ZPCs_BPCp ?????????-??????????????-?-?-?-????????????????-???????-???
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Protosticta_sanguinostigma    ACCMUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUKGCR-CUC----GKAG----------------------------
------------------KWGAGUMUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-CGAUCGAAGCCG-GAGG-CGGGGC------------CCGGGC--------------------------------------------------------GCCCUCA---A---AAGCGCC--
-CGGGCCACCGGGAUCGGAAUGCA-AACUGGCG-CUCUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-GCUUAAGACAGCAGG A
CGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGCCGUCGC- GGCAGGGCGGGCCGC-
CGCC------UUUC------GGCG-GCG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-                          ]
Sinosticta_ogatai_ZSOg        ?????????-??????????????-?-?-?-????????????????-???????-???
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Palaemnema_paulicoba_ZPP      ACCAUCUAG-UAGCU
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UCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------CGAUCGAAGCCG-GAGG-C
GGGGCACCCGUGCGGCCCGCGACCGGCGGCG---CCGUCAAAAAGCGCCGCCGUGCCCGCGGUCCGCGCCAGCGGG----GCCCCGG-GGAUCGGAGUGCAUAGUGGGCCACUU---
UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-GCUUAAGACAGCAGGA
CGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGCCGUCGC- GGCAGGGCGGGCCGC-
GCGUCCGC-UUCGCG-GCGGGCGC-CCG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGG
Palaemnema_domina_ZPDm        ACcaucUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC--ACCUUG----------------------------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCGC-CCUCUCCCGUCUCGGCGGGGGCUCGGCG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGG
Palaemnema_melanostigma       ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----------
-NNNNNNNNNNNN-NNNN-NNNNNNNNNNNNNNNNNNNNN-------------------------------------------------------NNNNNNNNNNN-NNNNNNNNNNNN
NNNNNNNNNNNNN---NNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNN-NNNNN--NNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCGC-GCGCCGG--GAGA--CC--GGCGG-GCG-GUGCCGCUUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGG[-                  ]
Isosticta_robustior_BIR       ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
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GGCAGGGCGGACCCG-GC--------CUCGC-------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-                  ]
Rhadinosticta_simplex_ZRS     ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
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GGCAGGGCGGACCCG-GC--------CUCGC-------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC
Amphisticta_silvarum_ZAS      accaucuag-uagcugguucccuc-c-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
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GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GC--------CUCGA-------GU-CGG-GUGCCGCUUGAUGCGGCGACGAguaggagggucgcggcggcgu[-   ]
Labidosticta_vallisi_OLVa   ACcaucuag-uagcugguucccuc-c-G-A-AGUUUCCCUcaggaua-gcuugcg-cuc----ggag------------------------------
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GGCAGGGCGGACCCA-GC--------CUCGC-------GCCUGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-   ]
Orosticta_filicicola_ZOF   acCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------------------
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GGCAGGGCGGACCCG-GC--------CUCGC-------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU
Platycnemis_pennipes_OPPp   AccaucUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------------------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
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GGCAGGGCGGACCCG-GC--------CUCGU-------GU-CGG-GUGCCGUUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-   ]
Copera_annulata_OCAn[different]   ACcaucuag-uagcuGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-------------------
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-----------UUAUCGAAGCCG-GAGA-CGGGGUCCGUCC--------------------CUC-------------------------------------GGGGCGGGCCCCCG-GGAUCG
GAGUGCAUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
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GGCAGGGCGGACCCG-GC--------CUCGU-------GU-CGG-GUGCCGUUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC
Copera_vittata_BCV   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------------------
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GGCAGGGCGGACCCG-GC--------CUCGC-------GC-CGG-GUGCCGUUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-   ]
Copera_marsouipes_ZCM   ACcaucuag-uagcugguucccuc-c-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------------------
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GGCAGGGCGGACCCG-GC--------CUCGC-------GC-CGG-GUGCCGUUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-   ]
Coeliccia_albicauda_OCAL   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------------------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-AC--------CUCG--------GU-CGG-GUGCCGUUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-   ]
Coeliccia_cyanomelas_BCC   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-UUAUCGAAGCCG-GAGA-CGGGGUCCGCUC--------------------UUC-------------------------------------GGGGCGGGCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-AC--------CUCG--------GU-CGG-GUGCCGUUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-   ]

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Calicnemia_miles_OCMi         ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-UUAUCGAAGCCG-GAGA-CGGGGUCCGCUC---------------------CUC--------------------------------------GGGGCGGGCCCCUG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAGGGCGGACCCG-AC--------CUCG--------GU-CGG-GUGCCGUUUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-                 ]
Prodasineura_vitatta_OPV      ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-UUAUCGAAGCCG-GAGA-CGGGACCCGUCC-------------------ACCCCUCG---------------------------------GGGGGGGCGGCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGAC CGUCGC-
GGCAGGGCGGACCCG-GC--------CUCGC-------GC-CGG-GUGCCGUUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-                 ]
Chlorocnemis_abboti_ZCAb      ACcaucuag-uagcugguucccuc-c-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-UUAUCGAAGCCG-GAGA-CGGGACCCGUCC---------------------CUUUCG----------------------------------GGGGGCGGGCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGCGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGAC CGUCGC-
GGCAGGGCGGACCCG-GC--------CUCGC-------GC-CGG-GUGCCGUUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-                 ]
Nososticta_solida_ZNSo        ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU----------
-UUAUCGAAGCCG-GAGA-CGGGGUCCGCU---------------------------------C---------------------------------GCGGGCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GC--------CUCGC-------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-                 ]
Phylloneura_westermanni_BPW   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-UUAUCGAAGCCG-GAGA-CGGGGUCCG--------------------------CUUG----------------------------------------CGGGCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GU--------CUCGC-------GC-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC
Onychargia_atrocyana_ZOA      accAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-CUAUCGAAGCCG-GAGA-CGGGGUCCGUCC-----------------------CUCG------------------------------------GGGCGGGCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GC--------CUCGA-------GC-CGG-GUGCCGUUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC
Argia_moesta                  ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUCAUGCGGAU-----------------------------
------------------G-GAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-UUGUCGAAGCCG-GAGA-C---------G----------------------------------------------------------------CC---------CG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAGGGCGGAC---------------UU----------------GUGCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-                 ]
Argia_nahuana_BAN             ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUCAUGCGGAU-----------------------------
------------------G-GAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-UUGUCGAAGCCG-GAGA-CGGGGC-----------------------------UUUUU-----------------------------------------GCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCU-CC--------GCGA--------GG-GGG-GUGCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC
Argiocnemis_rubescens_ZAR     ?????????-??????????????-?-?-?-????????????????-???????-???
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Mortonagrion_binocellata_BMBACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAGCUCCGGCUUGCUCGAU----------
--UAACGAAGCCG-GAGA-C--U-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGACCC-GA--------GCAA--------UC-GGG-UCUCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU
Agriocnemis_pygmaea_OAP   ACcaucUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAGCUCCGGCUUGCUCGAU----------
--UCACGAAGCCG-GAGA-C--U-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGACUC-GGGA-----CCUC---------UC-GAG-UUUCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Austroagrion_watsoni_ZAW   acCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAGCUCCGGCUUGCUCGAU----------
--UAACGAAGCCG-GAGG-C--U-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCGGGGCGGAU---------------UC----------------GUUCCGUUCGAUGCUGCGACGAGUAGGAGGGUCGCggcggcgu
Archibasis_viola_ZAV   AC???????-??????????????-?-?-?-????????????????-???????-???----????-----------------------------
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Coenagrion_puella_AJ488546   ?????????-??????????????-?-?-?-????????????????-???????-???
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Coenagrion_resolutum_JQ966593   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------
-------------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUnnnCAAACUUUAAAUGGGUGAGAG CUCCGGCUUGCUCGAU-
----------ACGUCGAAGCCG-GAGA-C--
------U-GGAUCGGAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA
AGGUGUUGGUU-GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA
AGCGUCGUGCCUAUACCCGACCGUCGC-GGCGGGGCGGACCCG-GUC-------UCGA--------AU-CGG-GUGCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU
Pseudagrion_cingillum_OAAL   ACCaucuag-uagCuGGUUCCcUC-C-G-A-AGUUuCCCUcAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAGCUCCGGCUUGCUCGAU----------
-ACGUCGAAGCCG-GAGA-C--U-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCGGGGCGGACCCG-GUC-------UCGA--------AC-CGG-GUGCCGUUCGAUGCGGCGACGAGUAGAAGGGUCGCGGCGGCGU[-   ]
Pseudagrion_aureofrons_BPA   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAGCUCCGGCUUGCUCGAU
-----------ACGUCGAAGCCG-GAGA-C---U-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-

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GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCGGGGCGGACCCG-GUC-------UCGA--------AU-CGG-GUGCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-                 ]
Pseudagrion_ignifer_OPi       accaucuag-uagcugguucCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAGCUCCGGCUUGCUCGAU----------
-ACGUCGAAGCCG-GAGA-C-------------------------------------------------------------------------------------U-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCGGGGCGGACC-G-GUC-------UCGA--------AC-CGG-GUGCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-                 ]
Erythromma_najas_1238         ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAGCUCCGGCUUGCUCGAU----------
-ACGUCGAAGCCG-GAGA-C-------------------------------------------------------------------------------------U-GGAU?????????
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Cercion_plagiosum_AJ488552_   ?????????-??????????????-?-?-?-????????????????-???????-???
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Cercion_lindenii_AJ488550_    ?????????-??????????????-?-?-?-????????????????-???????-???
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Paracercion_hieroglyphicum_AJ488551_   ?????????-??????????????-?-?-?-????????????????-???????-???
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Acanthagrion_quadratum_ZAQ    ??caucuag-uagCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAA-----------------------------
------------------AGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAGCUCCGGCUUGCUCGAU----------
--UAACGAAGCCG-GAGG-C-------------------------------------------------------------------------------------U-G-AUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCGGGGCGGAU---------------UC----------------GUUCCGUUCGAUGCUGCGACGAGUAGGAGGGUCGCGGCGGCGU
Leptobasis_vacillans_ZLV      ?????????-??????????????-?-?-?-????????????????-???????-???
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Amphiagrion_saucium_OAS       acCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAA-----------------------------
------------------AGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAGCUCCGGCUUGCUCGAU----------
--UAACGAAGCCG-GAGG-C-------------------------------------------------------------------------------------U-GGAUCGGAGUGCC
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCGGGGCGGAU---------------UC-?--------------GUUCCGUUCGAUGCUGCGACGanuaggagggucgcggcggcgu[-   ]
Amphiagrion_abbreviatum_BAAb   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAA-------------------
-----------------------------AGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAGCUCCGGCUUGCUCGAU
------------UAACGAAGCCG-GAGG-C---U-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCGGGGCGGAU---------------UC----------------GUUCCGUUCGAUGCUGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Xiphiagrion_cyanomelas_ZXC   ?????????-??????????????-?-?-?-????????????????-???????-???
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Hesperagrion_sp_AY750044   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------UCGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAGCUCCGGCUUGCUCGAU----------
--UAACGAAGCCG-GAGG-C--U-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCGGGGCGGAU---------------UC----------------GUUCCGUUCGAUGCUGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Ischnura_elegans_1239   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------UCNAGUCUCAUCCGGUAAAGCGAAUGAUUANAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAGCUC-----------------------
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Ishnura_barberi   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------UCGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAGCUCCGGCUUGCUCGAU----------
--UAACGAAGCCG-GAGG-C--U-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCGGGGCGGAU---------------UC-?--------------GUUCCGUUCGAUGCUGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Ischnura_graellsi_AJ488545   ?????????-??????????????-?-?-?-????????????????-???????-???
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Anomalagrion_hastatum_OAH   accaucuag-uagcugguucccuc-c-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------UCGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAGCUCCGGCUUGCUCGAU----------
--UAACGAAGCCG-GAGG-C--U-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCGGGGCGGAU---------------UC-?--------------GUUCCGUUCGAUGCUGCGACGAGUAGGAGGGUCGcggcGGCGU[-   ]
Amphiallagma_parvum_AJ420939_   ?????????-??????????????-?-?-?-????????????????-???????-???
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Azuragrion_granti_AJ420937_   ?????????-??????????????-?-?-?-????????????????-???????-???
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Azuragrion_nigridorsum_AJ420938   ?????????-??????????????-?-?-?-????????????????-???????-???
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Enallagma_cyathigerum_0110   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------UCGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAGCUCCGGCUUGCUCGAU
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Enallagma_sp   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------UCGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAGCUCCGGCUUGCUCGAU----------
--UAACGAAGCCG-GAGG-C--U-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCGGGGCGGAU---------------UC----------------GUUCCGUUCGAUGCUGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
E_aspersum_DQ087506   ?????????-??????????????-?-?-?-????????????????-???????-???
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Aciagrion   ?????????-??????????????-?-?-?-????????????????-???????-???
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Aciagrion_borneense_ZAB   accaucuag-uagCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------UCGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAGCUCCGGCUUGCUCGAU----------
--UAACGAAGCCG-GAGG-C--U-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCGGGGCGGAU---------------UC----------------GUUCCGUUCGAUGCUGCGACGAGUAGGAGGGUCGCGGCGGCGU

Protoneura_capillaris   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCCACCUAUUCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----------
-NNNNNNNNNNNN-NNNN-NNNNNNNNNNN----------NNNNNN--NNNNNNNNNN-NNNNNNNNNNNN
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NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGAGCGGACUCG-GCC-------UUCG-------GGU-CGG-GUGCCGUUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-   ]
Protoneura_cara_ZPC   accaucuag-uagcugguucccuc-c-g-a-aguuucccucagGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-UUGUCGAAGCCG-GAGU-C--U--GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGAGCGGACUCG-GCC-------CUCG-------GGU-CGG-GUGCCGUUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-   ]
Psaironeura_remissa_PRN   ACcaucuag-uagcugguucccuc-c-g-a-????????????????-???????-???
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Elattoneura_analis_glauca   ?????????-??????????????-?-?-?-????????????????-???????-???
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Neoneura_aaroni_ONA   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-UCGUCGAAGCCG-GAGU-C--U--GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAGGGCGGACUCG-ACC-------CCCG-------GGU-CGG-GUGCCGUUUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCgc
Neaneura_amelia_ZNA   ?????????-??????????????-?-?-?-????????????????-???????-???
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Neoneura_maria_BNM   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC------ UCGAC--
-UCGAAGCCG-GAGU-C--U--GGAUCGGAGUGC A UAGUGGGCCACUU-
--UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAGGGCGGACCCG-ACC-------CCCGG-------GU-CGG-GUGCCGUUUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-   ]
Ceriagrion_aeruginosum_ZCAe   ACcaucuag-uagcugguucccuc-c-g-a-aguuucccucaggaua-gcuuGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-UCGUCGAAGCCG-GAGA-CGGGGC---------------------------UCCG---GCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG--U--------UUAA--------G--CGG-GUGCCGUUCGAUGCGGCGACGAGUaggagggucgcggcggcgc

Telebasis_salva_ZTS   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG------------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU--------
AUUUUUAUGAAGCCG-GAGA-UGGGGC----C--------------------UAGA--GCCCUGU-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGACGGG-------uU-----CUUCGGAUCG--------------GUUUGAUGCGGCGACGAGUAGGAGGGUCACGGCGGCGC
Leptagrion_elongatum_ZLE   ACcaucuag-uagCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-CAGUCGAAGCCG-GAGA-CGGGGC--------------------------UACG--GCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG----------UUUA----------CGG-GUGCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC
Leptagrion_sp_JQ966595   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-UUGUCGAAGCCG-GAGA-CGGGGC--------------------------UCCG--GCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCC-------------GCGA----------GG-GUGCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC
Metaleptobasis_manicaria_ZMMr   ACcaucuag-uagcugguucccuc-c-g-a-????????????????-???????-???----????------------------
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Diceratobasis_sp_A_ZDA   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-UUGUCGAAGCCG-GAGA-CGGGGC--------------------------UCCG--GCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCC-------------GCGA----------GG-GUGCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC
FJ596559_Pyrrhosoma_nymphula   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------
------------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC---
--------UUGUCGAAGCCG-GAGA-CGGGGC--------------------------UCCG--GCCCCCG-GGAUCG
GAGUGCAUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGGGCGGACCCG-GCC--------UCG-------CGU-CGG-GUGCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Chromagrion_conditum_OCCn   ACcaucuag-uagcugGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-UUGUCGAAGCCG-GAGA-CGGGGC--------------------------UCCG--GCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GC--------CUCG-------CGU-CGG-GUGCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Teinobasis_alluaudi   ?????????-???????????????-?-?-?-????????????????-???????-???
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Nehalennia_gracilis_ONG   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------

-UUGUCGAAGCCG-GAGA-CGGGGC---------------------------UCCG---GCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCC------------GUCA-------A----GG-GUGCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC
Coryphagrion_grandis_ZCG   ACcaucuag-uagcugguucccuc-c-g-a-????????????????-???????-???
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Microstigma_rotundatum_OMRt   acCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-UUGUCGAAGCCG-GAGA-CGGGGC---------------------------UCCG---GCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCC------------GCGA------------GG-GUGCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC
Microstigma_anomalum_BMA   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-UUGUCGAAGCCG-GAGA-CGGGGC---------------------------UCCG---GCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCC------------GCGA------------GG-GUGCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-   ]
Mecistogaster_ornata_ZMO   ACcaucuag-uagcugguucccuc-c-g-a-????????????????-???????-???
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Mecistogaster_linearis_BML   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUCGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-UUGUCGAAGCCG-GAGA-CGGGGC---------------------------UCCG---GCCCCCG-GGAUCGGAGUGCG
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCC------------GCGA------------GG-GUGCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-   ]
Megaloprepus_coerulatus_ZMC   ACcauCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-UUGUCGAAGCCG-GAGA-CGGGGC---------------------------UCCG---GCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCC------------GCGA------------GG-GUGCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC
Haplostigma_modesta_ZHM   AC???????-??????????????-?-?-?-????????????????-???????-???----????-----------------------------
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Pseudostigma_aberrans_OPA   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-UUGUCGAAGCCG-GAGA-CGGGGC---------------------------UCCG---GCCCCCG-GGAUCGGAGUGCA

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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCC------------GCGA-----------GG-GUGCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-                ]
Rhinagrion_mima_ZRM          ac???????-??????????????-?-?-?-????????????????-???????-???----????----------------------------
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Sciotropis_cyclanthorum_BSC   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAA----------
-CGAACGAAGCCG-GAGA-CGGGGUCC--G------------------UCCCUCG-----------------------------------GGGG--GGGCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGUGGGCCCG-GCC-------UCGU--------GU-CGG-GUGCCGCUUGAAGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-                ]
Heteragrion_mitratum_ZHMt     ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCCUGAC----------
-CGAUCGAAGCCG-GAGA-UGGGGUCCGCUC--------------------UUCG-------------------------------------GGGCGGGCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCACGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAAGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC
Heteragrion_sp                ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCCUGAC----------
-CGAUCGAAGCCG-GAGA-UGGGGUCCGCUC--------------------UUCG-------------------------------------GGGCGGGCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCACGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUCGAAGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-                ]
Oxystigma_cyanifrons_ZOC      ??caucuag-uagCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCCUGAC----------
-CGAUCGAAGCCG-GAGA-UGGGGUCCGCUC--------------------CUCG-----------------------------------UUGGGCGGGCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCACGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAAGCGGCGACGAGUAUGAGGGUCGCGGCGGCGC
Dimeragrion_percubitale_ZDP   accaucuaG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCCUGAC----------
-CGAUCGAAGCCG-GAGA-CGGGGUCCGCUC--------------------CUCG-------------------------------------GGGCGGGCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAAGCGGCGACGAGUAGGAGGGUCGCggcggcgc
Tatocnemis_malgassica_ZTMa    ac???????-??????????????-?-?-?-????????????????-???????-???----????----------------------------
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Philogenia_cassandra_BPCs     ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-CGAUCGAAGCCG-GAGA-CGGGGUCCGC----------------------CUCG---------------------------------------GCGGGCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
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GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCACGGCGGAUCCG-GCC-------UCGA--------GC-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Philogenia_terraba_ZPBn_ZPT   ?????????-??????????????-?-?-?-????????????????-???????-???----????------------------------------
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ZPBn_Philogenia_bernice   accaucuAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGACGCCCUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU----------
-AGAUCGAAGCCG-GAGA-CGGGGUCCGC----------------------CUCG--GCGGGCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCACGGCGGAUCCG-GCC-------UCGA--------GC-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU
Teinopodagrion_venale_ZMV_BTV   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC
-----------CGAUCGAAGCCG-GAGA-CGGGGUCCGUCC--------------------CUCG------------------------------------GGACGGAUCCCCG-GGAUCG
GAGUGCAUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCA???????????????????????????????????-?????-?????--??????????????-
?????AGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAUCAACCAGCCCUGAA-AAUG????????????????????????????????
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Teinopodagrion_lepidum_ZTL   ac???????-??????????????-?-?-?-????????????????-???????-???----????------------------------------
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Amanipodagrion_gilliesi_ZAG   acCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-CGAUCGAAGCCG-GAGA-CGGGGC-CGCCCUCC------------------CUCGGG------------------------------------UGGGCGAGCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-   ]
Nesolestes_elizabethae_ZNE   accauCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-CUAUCGAAGCCG-GAGA-CGGGG-CCGUCC--------------------UUCG--------------------------------------GGGCGGACCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU
Protolestes_kerckhoffae_ZPKcac???????-??????????????-?-?-?-????????????????-???????-???----????----------------------------
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Argiolestes_ochrostomas_ZAOcACcAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-CGAUCGAAGCCG-GAGA-CGGGG-CCGUCC--------------------CUCG--------------------------------------GGGCGGACCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUCAUGCGGCGACGAGUAGGAGGGUCGCGGCGACGC

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Argiolestes_sidonia_BAS       ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-CGAUCGAAGCCG-GAGA-CGGGG-CCGUCC---------------------CUCG--------------------------------------GGGCGGACCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUCAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-                 ]
Caledopteryx_maculata_BCM     ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-CGAUCGAAGCCG-GAGA-CGGGG-GCGUCC---------------------CUCG--------------------------------------GGGCGGACCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------CCGC--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGA[-                 ]
Trineuragrion_percostale_BTPACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-CGAUCGAAGCCG-GAGA-CGGGG-CCGUC-ACCCACCCU-----------UUCG------------------------------GGGGGGGGCGGCGGACCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------CCGC--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC
Caledargiolestes_uniseries_BCU          ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAGAU----------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC
-----------CGAUCGAAGCCG-GAGA-CGGGGCCCC-C----------------------UCA-------------------------------------AAA-GGGGCCCCG-GGAUCA
GAGUGCACAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUACACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------CCGC--------GU-CGG-GUGCCGCUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGA[-                 ]
Podopteryx_roseonotata_ZPR    accaucuag-uagcugguucccuc-c-g-a-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-CGAUCGAAGCCG-GAGA-CGGGG-CCGUCC---------------------CUCG--------------------------------------GGGCGGACCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------UCGA--------GC-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGgagggucgcggcggcgc Austroargiolestes_icteromelas_OAIc
                                        ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC
-----------CGAUCGAAGCCG-GAGA-CGGGG-CCGUCC---------------------UUC---------------------------------------GGGCGGACCCCCG-GGAUCG
GAGUGCAUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------UCGU--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGAAGGGUCGCGGCGGCGC
Griseargiolestes_albescens_BGA          ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC
-----------CGAUCGAAGCCG-GAGA-CGGGG-CCGUCC---------------------CUCG--------------------------------------GGACGGACCCCCG-GGAUCG
GAGUGCAUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA
AGGUGUUGGUUUGCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA
AGCGUCGUGCCUAUACCCGGCCGUCGC-GGCAGGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-              ]
Grisagriolestes_eboracus_ZGE            ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-????????????????-???????-???
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Miniargiolestes_minimus_ZMMn2           accAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC
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-----------CGAUCGAAGCCG-GAGA-CGGGG-CCGUCC--------------------CUCG-------------------------------------GGGCGGACCCCCG-GGAUCG
GAGUGCAUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------UCGC--------GC-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC
Lestomima_flavostigma_OPBc3   accaucuAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
-----------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-CGAUCGAAGCCG-GAGA-CGGGGUCCGUCC--------------------CUCG-------------------------------------GGGCGGGCCCCCG-GGAUCGGAGUGCA
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GGCAAGGCGGACCCG-GCC-------UCGA--------GU-CUG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU
Rhipidolestes_hiraoi_ORH   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
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GGCAGGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGNGU[-   ]
Rhipidolestes_aculeata_BRA   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
-----------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU----------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGG[-   ]
Paraphlebia_zoe_OPZ   ACcauguag-uagcugguucCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
-----------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------CAGC--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCgcggcggcga
Thaumatoneura_inopinata_OTI3??cauguag-uagcugguucccuc-c-g-a-aguuucccucaggaua-gcuugcg-cuc----ggAG-----------------------------
-----------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-CGAUCGAAGCCG-GAGA-CGGGGUCCCCU---------------------CUCG--------------------------------------GGGGGGCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
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GGCAGggcggacccg-gcc-------ucgc--------gu-cgg-gugccgcuugaugcggcgacgaguaggagggucgcggcggcga
Hypolestes_clara_OHC   ACcAUCUAG-UAGCUGgUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
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GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCCG-GCC-------UCCA--------GC-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC
Hypolestes_sp   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
-----------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCCG-GCC-------UCCA--------GC-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-   ]
Agriomorpha_fusca_ZAF6   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
-----------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU----------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-

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GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGG
Sinocnemis_yangbingi_ZSY      ?????????-??????????????-?-?-?-????????????????-???????-???----????-----------------------------
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Miocora_peraltica_ZMP         ACcAucuAg-uAgcuGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU----------
-ACGUCGAAGCCG-GAGA-CGGGGCCCGCCC---------------------CUCG--------------------------------------GGACGGGCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAAGCGGCGACGAGUAGGAGGGUCGCGGCGGCGA
Cora_marina_OCMr              ACcAucuAg-uAgcugguucccuc-c-g-A-AguuucccucAggAuA-gcuugcg-cuc----ggAg-----------------------------
------------------gAgAgucucAuCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU----------
-ACGUCGAAGCCG-GAGA-CGGGGUCUGCCC---------------------CUCG--------------------------------------GGACGGGCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAAGCGGCGAcgAguAggAgggucgcggcggcgA
Cora_cyane_BCC                ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU----------
-ACGUCGAAGCCG-GAGA-CGGGGUCCGCCC---------------------CUCG--------------------------------------GGACGGGCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAAGCGGCGACGAGUAGGAGGGUCGCGGCGGCGA
Polythore_sp_Z_ZPZ_BPB        ?????????-??????????????-?-?-?-????????????????-???????-???----????-----------------------------
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Polythore_boliviana           ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAAGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-                 ]
Euthore_fasciata_ZEF3_BEFs    ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU----------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
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GGCAGGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAAGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC
Rimanella_arcana_ORA          ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUUGAA----------
-ACGUCGAAGCCG-GAGA-CGGGGUCCGUCC---------------------CUCG--------------------------------------GGGCGGGCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCACGGCGGGCCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAGGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-                 ]
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Pentaphlebia_stahli_OPSt   ACcaucuag-uagcugguucccuc-c-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-CUAUCGAAGCCG-GAGA-CGGGGCCCGUCU---------------------CUCG--------------------------------------GGGCGGGCUCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-   ]
Devadatta_podolestoides_BDP   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC
-----------CGAUCGAAGCCG-GAGA-CGGGGCC--------------------------UUCG---GGCCCCCG-GGAUCG
GAGUGCAUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAGGGCGGGCCCG-GCA-------CCGC----------CGG-GUGCCGCUUGAAGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-   ]
Amphipteryx_longicaudata_ZAL5   accauCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC
-----------CGAUCGAAGCCG-GAGA-CGGGGUCCCCC---------------------UUCGG--------------------------------------GGGGAGGCCCCCG-GGAUCG
GAGUGCAUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC
Pseudolestes_mirabilis_OPMb   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU----------
-CGAACGAAGCCG-GAGA-CGGGGU---------------------------CUCC--GCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCACGGCGGACCCG-UU--------UCUU--------GG-CGG-GUGCCGCUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGgcgc[-   ]
Philoganga_vetusta_OPVt3   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC
Philoganga_robusta_OPRb2   ACcaucuAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-CGAUCGAAGCCG-GAGA-CGGGGUCCGUCU---------------------CUCG--------------------------------------GGGCGGGCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAUGCGGCGACG??????????????????????[-   ]
Lestoidea_conjuncta_ZLC   accAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-CGAUCGAAGCCG-GAGA-CGGGGUCCGCCC---------------------CUCG--------------------------------------GGGCGGGCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-   ]
Diphlebia_lestoides_ZDL   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-CGAUCGAAGCCG-GAGA-CGGGGUCCGUCU---------------------CUCG--------------------------------------GGGCGGGCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCACGGCGGACCCG-GCC-------UCGC--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-   ]
Diphlebia_coerlescens_ODC   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC----------
-CGAUCGAAGCCG-GAGA-CGGGGUCCGUCC---------------------CUCG--------------------------------------GGGCGGGCCCCCG-GGAUCGGAGUGCA

UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAU
GGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGCCGUCGC-GGCACGGCGGACCCG-GC C-------
UCGC--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-]
Bayadera_melanopteryx_ZBM accauCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAA----------
-CGAACGAAGCCG-GAGA-CGGGGU----GU--------------------C--------------------------------------AAA----ACCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAGGGCGGGCCCG-----------AAAG-----------CGG-GUGCCGCUUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-]
Bayadera_brevicauda_BBB ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAA
-----------CGAACGAAGCCG-GAGA-CGGGGU----GU--------------------C--------------------------------------AAA----ACCCCCG-GGAUCG
GAGUGCAUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAGGGCGGGCCCG-----------GAAA-----------CGG-GUGCCGCUUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-]
Dysphaea_gloriosa_ODG accaucuag-uagcugguucccuc-c-g-a-aguuucccucaggaua-gcuugcg-cuc----ggag----------------------------
--------------------gagucucauccgguaaagcgaaugauuagaggccuuggggccgaaacggcuucaaccuauucucaaacUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAA----------
-CGAACGAAGCCG-GAGA-CGGGGU----GU--------------------C-C-------------------------------------AA----ACCCCUG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCgaagcaacuagcccugaa-aauggauggcgcugaagcgucgugccuacacccggc cgucgc-
cgcaggacgggcccg-----------gaga-----------cgg-gugcugcuugacgcggcgacgaguaggagggucgcggcggcgc
Euphaea_formosa_BEFm ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAA----------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAGGGCGGGCCCG-----------GAAA-----------CGG-GUGCCGCUUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGG[-]
Anisophaea_decorata_ZAD_OED ACcauCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC-----GA-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAA----------
-CGAACGAAGCCG-GAGA-CGGGGUUU-------------------------UC-------------------------------------AA--AAACCUCUG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACUCGCC CGUCGC-
CGCAGGGCGGGCCCG-----------GAAA-----------CGG-GUGCCGCUUGAAGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU
Anisopleura_sp_A_ZAA ACcaucuag-uagcugguucccuc-c-g-a-????????????????-???????-???
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???????????????????????????????????-?????????????????????????????????????gagggucgcggcGGCGC[-]
Disparocypha_biedermanni_ZDBaccaucuag-uagcugguucccuc-c-g-a-agnuucccucaggaua-GCUUGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU----------
-UACUCGAAGCCG-GAGA-CGGGGA----CC--------------------CUCG-------------------------------------UG----UCCCCCG-GGAUCGGAGUGCA
CAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCuauacccggc cgucgc-
cgcaagacggacccg-gcc-------ccgc--------gc-cgg-gugccgccugacgcggcgacgaguaggagggucgcggcggcga
Libellago_semiopaca_BLS ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU----------
-UACUCGAAGCCG-GAGA-CGGGGA----CA--------------------C--G----UCCCCCG-GGAUCGGAGUGCA
CAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-

GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAAGACGGACCCG-GUC-------UCGC--------GC-CGG-GUGCCGCCUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGA[-]
Heliocypha_biseriata_BHB ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU----------
-UACUCGAAGCCG-GAGA-CGGGGA----CA--------------------C--G----UCCCCCG-GGAUCGGAGUGCA
CAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAAGACGGACCCG-GCC-------CCGC--------GC-CGG-GUGCCGCCUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGA[-]
Platycypha_caligata_OPC ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU----------
-UACUCGAAGCCG-GAGA-CGGGGA---------------------------UCC---------------------------------------G----UCCCCCG-GGAUCGGAGUGCA
CAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAAGACGGACCCG-GCC-------CCGC--------GC-CGG-GUGCCGCCUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-]
Chlorocypha_curta_AJ746319_ZCC ?????????-??????????????-?-?-?-????????????????-???????-???----????------------------
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Sundacypha_petiolata_CHL ?????????-??????????????-?-?-?-????????????????-???????-???
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Rhinocypha_fenestrella_ORF ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU----------
-UACUCGAAGCCG-GAGA-CGGGGA--------------------------CAC--G----UCCCCCG-GGAUCGGAGUGCA
CAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAAGACGGACCCG-GCC-------CCGC--------GC-CGG-GUGCCGCCUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGA[-]
Rhinocypha_tincta_BRT ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
-----------UACUCGAAGCCG-GAGA-CGGGGACCCU----------------------CUC-------------------------------------GGGGGUUCCCCG-GGAUCG
GAGUGCACAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAAGACGGACCCG-GCCC------UCGA-------AGC-CGG-GUGCCGCCUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGA[-]
Heliocharis_amazona_ZHAz ACcaucuag-uagcugguucccuc-c-g-a-aGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCCUGAC----------
-CCAUCGAAGCCG-GAGA-CGGGGUCCGCUC--------------------CUCGC-------------------------------------GGGCGGGCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCG-GCC-------CAGA--------GU-CGG-GUGCCGCUUGAUGCGGCGACUAGUAGGAGGGUCGCGGCGGCGC[-]
Hetaerina_americana_OHA2 ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG------------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU----------
-UUAUCGAAGCCG-GAGA-CGGGGUCCCCUC---GGGGGCCCCUG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAGGGCGGACUCG-GCU-------CCGA--------GU-CGA-GUGCCGCUUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-]

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Calaphaea_confusa_ZCC        ACcaucuag-uagcugguucccuc-c-g-a-aguuucccUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU----------
-UUAUCGAAGCCG-GAGA-CGGGGUCCCCUC-----------------------------------------------------------------GGGGGCCCCCG-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCGGGGCGGACCCG-GCU-------CCGA--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAguaggagggucgcggcggcgc[-                 ]
Noguchiphaea_yoshikoae       ?????????-??????????????-?-?-?-????????????????-???????-???
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Vestalis_beryllae_BVB                  ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAA
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GAGUGCAUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAUGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCGGGGCGGACCCG-GCC-------CCGA--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-                 ]
Matrona_basilaris_BMB                  ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
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GCUUAUGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCGGGGCGGACCCG-GCU-------CCGA--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-                 ]
FJ596560_Atrocalopteryx_atrata        ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCC[C]UCAGGAUA-GCUUGCG-CUC----GGAG-----------------
------------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU---
--------UUAUCGAAGCCG-GAGA-CGGGGUCCCCUC----------------------------------------------------------------GGGGGCCCCCG-GGAUCA
GAGUGCAUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAUGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
CGCGGGGCGGACCCG-GCU-------CCGA--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-                                        ]
Echo_modesta_BEM                       ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
-----------GAAUCGAAGCCG-GAGA-CGGGGUCCCC-U---------------------CUCG----------------------------------------GGGGGCCCCCG-GGAUCA
GAGUGCAUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAUGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCGGGGCGGACCCG-GCU-------CCGA--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-                 ]
Neurobasis_ianthinipennis_BNI          ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
-----------UUAUCGAAGCCG-GAGA-CGGGGUUCCU-------------------------CG---------------------------------------UAUGGGCCCCCG-GGAUCA
GAGUGCAUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAUGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCGGGGCGGACCCG-GCU-------CUAA--------GU-UGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGGGU[-                 ]
Sapho_orichalcea_OSO         ACcaucuag-uagcugguucccuc-c-g-a-aguuucccucaggaua-gcuugcg-cuc----ggag-----------------------------
------------------gagagucucauccgguaaagcgaaugauuagaggccuuggggccgaaacggcuucaaccuaUucucaaacuuuaaaugggugagaacuccggcuugcucgau----------
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gcuuaugacagcaggacgguggccauggaagucggaauccgcuaaggaguguguaauaacucaccugccgaagcaacuagcccugaa-aauggauggcgcugaagcgucgugccuauacccggc cgucgc-
cgcggggcggacccg-gcu-------ccga--------gu-cgg-gugccgcuugaugcggcgacgaguaggagggucgcggcggcgu[-                 ]
Calopteryx_amata_OCAm_BCS    ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU----------
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-UUAUCGAAGCCG-GAGA-CGGGGUCCCCUC--GGGGGCCCCCG-GGAUCAGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAUGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCGGGGCGGACCCG-GCU------CCCGA--------GU-CGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
DCS_Calopteryx_splendens   ?????????-??????????????-?-?-?-????????????????-???????-???
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Calopteryx_aequabilis   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU----------
-UUAUCGAAGCCG-GAGA-CGGGGUCCCCUC--GGGGGCCCCCG-GGAUCAGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUUGCG-CUGUUGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAUGACAGCAGGACGGUGGCCAUGGGAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC UGUCGC-
CGCGGGGCGGACCCG-GCU------CCCGA--?-----GU-CAG-GUGCCGCUUGAUGCGGCGACGAGUAGGAUGGUCGCGGCGGCGU[-   ]
Iridictyon   ?????????-??????????????-?-?-?-????????????????-???????-???
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Iridictyon_trebbaui_ZIT   ac???????-??????????????-?-?-?-????????????????-???????-???----????-----------------------------
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Unaligned_lestoid   D4-??????-??????????????-?-?-?-????????????????-???????-???
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Nubiolestes_diotima_OND   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------AAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUGAA-------
UUUUAUGAAGCCG-GAGU-CGGGGC---------------------------CACG--------------------------------------A----GCCCCCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCCC-----------GUGA-----------GGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU
Perilestes_kahli_ZPK2_BPK   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUGAA-------
UUCAAUGAAGCCG-GAGA-CGGGGC---------------------------CACG--------------------------------------A----GCCCCCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCCC-----------GUGA-----------GGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU
Perissolestes_remotus_BPR   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUGAAC------

UUGUUUGAAGCCG-GAGA-CGGGGC---------------------------CACG--------------------------------------A----GCCCCCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCCC-----------GCGA-----------GGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Perissolestes_magellenae   ?????????-??????????????-?-?-?-????????????????-???????-???
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Chlorolestes_umbrata_OCU   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUAA-------
UUUUAUGAAGCCG-GAGU-CGGGGC---------------------------CACG--------------------------------------A----GCCCCCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCCC-----------GUGA-----------GGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Euchlorolestes_tessellata_OET   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-------------------
----------------------------AAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU GAA-
------CUUUAUGAAGCCG-GAGU-CGGGGC---------------------------CACG--------------------------------------A----GCCCCCA-GGAUCG
GAGUGCAUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCCC-----------GU-A-----------GGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Phylolestes_ethelae_OPE   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUGAA-------
UUUAAUGAAGCCG-GAGU-CGGGGC---------------------------CACG--------------------------------------A----GCCCCCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCCC-----------GUGA-----------GGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Synlestes_weyersii_ZSW   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------AAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUGAA-------
CUUUAUGAAGCCG-GAGU-CGGGGC---------------------------CACG--------------------------------------A----GCCCCCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCCC-----------GU-A-----------GGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Synlestes_tropicus_ZST   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------AAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUGAA-------
CUUCAUGAAGCCG-GAGU-CGGGGC---------------------------CACG--------------------------------------A----GCCCCCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCCC-----------GU-A-----------GGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Chorismagrion_risi_ZCRi   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUGAA-------
UUUAAUGAAGCCG-GAGU-CGGGGC---------------------------CACG--------------------------------------A----GCCCCCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCCC-----------GUGA-----------GGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Episynlestes_cristatus_ZEC   ??CAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUGAA-------
UUUAGUGAAGCCG-GAGU-CGGGGC---------------------------CACG--------------------------------------A----GCCCCCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-

GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCCC-----------GUGA-----------GGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Episynlestes_albicauda_BEA   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUGAA-------
UUUAGUGAAGCCG-GAGU-CGGGGC--------------------------CACG--------------------------------------A----GCCCCCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCCC-----------GUGA-----------GGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Megalestes_micans_ZMMc   accaucuag-uagcugguucccuc-c-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
------------------AAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU----------
-UUAAUGAAGCCG-GAGU-CGGGGC--------------------------CACG--------------------------------------A----GCCCCCA-GGAUCGGAGUGCA UAGUGGGCCA
CUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-GCUUAAGACAGCAGGA
CGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGGGCGGGCCCC-----------GUGA-----------GGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Megalestes_kurahashii   ?????????-??????????????-?-?-?-????????????????-???????-???
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Orolestes_octomaculatus_ZOO   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUCAA-------
UUUAAUGAAGCCG-GAGU-CGGGGC--------------------------CACG--------------------------------------A----GCCCUCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAGGGCGGGCCCC-----------GUGA-----------GGG-GUGCCGCUUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Austrolestes_annulosus_BAA   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUCAA-------
UUAAAUGAAGCCG-GAGU-CGGGGC--------------------------CACG--------------------------------------A----GCCCUCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAGGGCGGGCCCC-----------GUGA-----------GGG-GUGCCGCUUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Sympecma_paedisca_BSP   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUCAA-------
UUUAAUGAAGCCG-GAGU-CGGGGC--------------------------CACG--------------------------------------A----GCCCUCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAGGGCGGGCCCC-----------GUGA-----------GGG-GUGCCGCUUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Sympecma_fusca_ZSF   AC???????-??????????????-?-?-?-????????????????-???????-???----????----------------------------
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Austrolestes_analis_OAAn   acCAUCUAG-UAGCUGGUUCCcUC-c-G-A-AGUUuCCcUCAGGAUA-GCUUGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUCAA-------
UUAAAUGAAGCCG-GAGU-CGGGGC--------------------------CACG--------------------------------------A----GCCCUCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-

GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAGGGCGGGCCCC-----------GUGA-----------GGG-GUGCCGCUUGACGCGGCGACGAGUAGAAGGGUCGCGGCGGCGU
Indolestes_pergrinus_OIP   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUCAA-------
UUAAAUGAAGCCG-GAGU-CGGGGC---------------------------CACG--------------------------------------A----GCCCUCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAGGGCGGGCCCC-----------GUGA-----------GGG-GUGCCGCUUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Indolestes_cyanea   ?????????-??????????????-?-?-?-????????????????-???????-???
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Chalcolestes_viridis_ZCV   acCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUCAA-------
UUUAAUGAAGCCG-GAGU-CGGGGC---------------------------CAAG--------------------------------------A----GCCCUCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAGGGCGGGCCCC-----------GUGA-----------GGG-GUGCCGCUUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU
Archilestes_grandis_OAG   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUCAA-------
UCUAAUGAAGCCG-GAGU-CGGGGC---------------------------CACG--------------------------------------A----GCCCUCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAUU-GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAGGGCGGGCCCC-----------GUGA-----------GGG-GUGCCGCUUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Lestes_rectangularis_OLR   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUCAA-------
UUUAAUGAAGCCG-GAGU-CGGGGC---------------------------CACG--------------------------------------A----GCCCUCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAGGGCGGGCCCC-----------GUGA-----------GGG-GUGCCGCUUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Lestes_eurinus_OLE   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUCAA-------
UUUAAUGAAGCCG-GAGU-CGGGGC---------------------------CACG--------------------------------------A----GCCCUCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
CGCAGGGCGGGCCCC-----------GUGA-----------GGG-GUGCCGCUUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-   ]
Hemiphlebia_mirabilis_OHM   acCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU---
AGAGAUCUGUUGUGAAGCCG-GAGU-CGGGGCCUC------------------------UUCG---GGGGCCCCCA-GGAUCG GAGUGC
AUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCC-----------GCGA-----------GGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU
Unaligned_Anisoptera   D4-??????-??????????????-?-?-?-????????????????-???????-???
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Epiophlebia_superstes_OES   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UGAAUGAAGCCG-GAGA-UGGGGC---------------------------CACG--------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCC---C----CUCGAAA-----------GGG-GUGCCCCUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU
Epiophlebia_laidlawi_JQ943593   ?????????-??????????????-?-?-?-????????????????-???????-???
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??????CCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU---------UGAAUGAAGCCG-GAGA-U
GGGGC---------------------------CACG--------------------------------------A----GCCCCGU-GGAUCGGAGUGCCUAGUGGGCCACUU---
UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-GCUUAAGACAGCAGGA
CGGUGG???????????GGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGCCGUCGC- GGCAGGGCGGACCCC-
--C----CUCGAAA----------GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU
Unaligned_Aeshnoid   D4-??????-??????????????-?-?-?-????????????????-???????-???
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Archipetia_auriculata   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG----------------------------
------------------AAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------AUCU--------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-----------GUAU-----------GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Austropetalia_victoria   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG----------------------------
------------------AAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------AUCU--------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-----------GUAU-----------GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Hypopetalia_pestilens   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------AUUU--------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-----------GUAU-----------GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
A_FJ596639_Phyllopetalia_apicalis   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
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GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-----------GUAU-----------GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
A_EU055322_Phyllopetalia_apollo   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU-
--------UCAAUGAAGCCG-GAGA-UGGGGC---------------------------AUUU--------------------------------------A----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-

GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-----------GUAU-----------GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Eurypetalia_altarensis_OEA   AC???????-??????????????-?-?-?-????????????????-???????-???
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Ophiopetalia_diana_OOD   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------AUUU--------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-----------GUAU-----------GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Gomphaeschna_furcilata_OGF   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CUCG--------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UC--------UUCC--------GA-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Oligoaeschna_pryeri   ?????????-??????????????-?-?-?-????????????????-???????-???
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Austroaeschna_parvistigma_AAPs   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU--
-------UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CUCG--------------------------------------A----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC---UUUUA------------------GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Telephlebia_tillyardi_ATT   accaucuag-uagcugguucccuc-a-g-a-????????????????-???????-???
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Boyeria_vinosa_OBV   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CUCG--------------------------------------U----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UC-UUUA-------------CCGG-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
FJ596627_Boyeria_irene   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CUCG--------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-

GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-C---------GCAU---------G-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGA[-   ]
EU424323_Brachytron_pratenseACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC--------------------------C---?????????????
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Epiaeschna_heros_OEH   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CUCG--------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-C-UUC-A--------------C-G-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
FJ596626_Caliaeschna_microstigma   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
AU---------UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CUCG--------------------------------------A----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC---UUUUA------------------GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
FJ596628_Anaciaeschna_isoceles   ACCAUCUAGAUAGCUGGUUCCCUC-CUGUA-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU--
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GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCGACUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAAGACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-C---------GCAU---------G-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGA[-   ]
Oplonaeschna_sp   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CUCG--------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-C---------GAAC---------G-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Aeshna_canadensis   ACcaucuag-uagcUGGUUCCCUC-C-G-A-AGUUUCCCUCAGAAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGC-UGGGGC--------------------------CUCG--------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-C---------GUUU---------G-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGA[-   ]
A_EU055242_Rhionaeschna_multicolor   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
AU---------UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CUCG--------------------------------------A----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-C---------UUAC---------G-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGA[-   ]
Aeshna_cyanea_1203   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAG???-???????????????-------------??????????????---?----------------------------------?????????????????????????
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FJ596630_Aeshna_grandis       ACCAUCUAG-UAGCUGGUUCCCUCUC-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGNNN-NNNN-NNNNNN--------------------------NNN-N-NN----------------------------------------NNNNNNN-NNNNNNNNNNNN
NNNNNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU- GCUUAAGACAGCAGG
ACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-GGCAGGGCGGGCUCC-C-
--------GUUU---------G-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGA[-                                   ]
FJ712316_Gynacantha_japonica_or_bullata          ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG----------
-------------------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAA
CUCCGGCUUGCUCGAUAU---------UCAAUGAAGCCG-GAGC-UGGGGC---------------------------CUCG---------------------------------------A---- GCCCCGU-
GGAUCGGAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGGGCGGGCUCC-C-UUCGU----------------G-GGG-GUGCCGUUUAAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGA[-                                         ]
Austrogynacantha_heterogen_BYB         ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
AU---------UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CUCG---------------------------------------A----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCG-
CGGCAGGGCGGGCUCC-C---------GCAA---------G-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGA[-                 ]
Hemianax_ephippiger           ?????????-??????????????-?-?-?-????????????????-???????-???
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Anax_junius_OAJ               ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCC-UCAGGAUA-GCUGGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--
-------UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CUCG---------------------------------------A----GCCCCGU-GGAUCGGAGUGC
CUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-C---------GAAC---------G-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                 ]
FJ596632_Anax_imperator       ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CUCG---------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-C---------GAAC---------G-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                 ]
Unaligned_Gomphid             D4-??????-??????????????-?-?-?-????????????????-???????-???
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Sinogomphidia_kruegeri_ASK    accaucuag-uagcugguucccuc-c-g-a-aguuucccucaggaua-gcuggcg-cuC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGA---------------------------CACG---------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC---U-------UCAAU----------GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                 ]
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A_EU055258_Ictinogomphus_australis     ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU--
-------UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CAUG--------------------------------------A----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC---U-------UCAA-------C---GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                  ]
Ictinogomphus_sp              ?????????-??????????????-?-?-?-????????????????-???????-???
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FJ712322_Onychogomphus_sp_mistake       ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----GGAG-----------------
------------------------------GGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
AU---------UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CAAG--------------------------------------A----GCCCCGU-GGAUCA
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGGGCGGGCUCC---U-------UCA-------CU---GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU Phyllogomphoides_stigmatus_APS
                                       ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU--
-------UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CACG--------------------------------------A----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UU---------CAA--------AA-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                  ]
Progomphus_obscurus           ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCGCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UUUAUGAAGCCG-GAGA-UGGGGC---------------------------CAUG--------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU- GCUUAAGACAGCAGG
UCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-GGCAGGACGGGCUCA---
---AA---UCAA------AG---UGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                                    ]
EU055271_Progomphus_Neaprogomp_borealis          ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG----------
-------------------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAA
CUCCGGCUUGCUCGAUAU--------UUUUAUGAAGCCG-GAGA-UGGGGC---------------------------CUAG--------------------------------------A---- GCCCUGU-
GGAUCGGAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGGACGGGCUCA------AA---UCAA------AG---UGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                                      ]
Hagenius_brevistylus_OHB      ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGUCG-CUC----GGAG-----------------------------
------------------AAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAGUU--------
-UCUUUGAAGCCG-GAGA-UGGGGC---------------------------CUCG--------------------------------------A----GUCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGAC CGUCGU-
GGCAGGGCGGGCUCC---U-U-----UG--------AC---GGA-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                  ]
Lanthus_vernalis_OLV          ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CACG--------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGUCAUGGAAGUCGAAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGU-
GGCAGGGCGGGCUCC---C-U-----UCA------AAA---GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                  ]
Davidius_nanus                ?????????-??????????????-?-?-?-????????????????-???????-???
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Neogomphus_edenticulatus_ONEACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG----------------------------
-------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CACG----------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC---U-U------AA-------AC---GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                  ]
Armagomphus_armiger_AAAr      accaucuag-uaGCUGGUUCC-UC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG----------------------------
-------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CUCG----------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CU-------CCCUAAC---GAGAG-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                  ]
Hemigomphus_comitans_AHC      ?????????-??????????????-?-?-?-????????????????-???????-???
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??????????????????-------------------------------------------GCGACGAGUAGGAGGGUCGCGGCGGUGU[-           ]
AFJ596622_Hemigomphus_heteroclytus     ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG------------------
-----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGCGAGAACUCCGGCUUGCUCGAU AU--
-------UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CAAG----------------------------------------A----GUCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCCC-
GGCAGGGCGGGCUCC---U-------UCA-------UU---GGG-GUGCCGUUUGAUGCCGUGACGAGUAGGAGGGUCGCGGCGGUGU[-                  ]
Hemigomphus_magela_BYB        ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG----------------------------
-------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CACG----------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC---U-------U--------GAA---GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                  ]
Trigomphus_sp                 ?????????-??????????????-?-?-?-????????????????-???????-???
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FJ596615_Stylogomphus_Lanth_albistylusACCAUCUAG-UAGCUGGUUCCYUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCGACUC----GGAG------------------
-----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU--
-------UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CACG----------------------------------------A----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGAC CGUCGU-
GGCAGGGCGGGCUCC-----------UCAA------UU---GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                  ]
FJ712325_Stylogomphus_shirizui         ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG------------------
-----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
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AU---------UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CACG---------------------------------------A----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGAC CGUCGU-
GGCAGGGCGGGCUCC-----------UCAA------UU---GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
EU055286_Davidioides_martini   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU--
-------UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CACG---------------------------------------A----GCCCUGU-GGAUCA
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC---U-------UCA-------UU---GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Burmagomphus_collaris_ABC   accaucuag-uagcuGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCCGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CUUG--------------------------------------GA----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-U-U-------UU--------UU-G-GGA-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
EU055285_Cyclogomphus_heterostylus   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU--
-------UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CAUA--------------------------------------GA----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGU-
GGCAGGGCGGGCUCC---U----------------AUG---GGG-GUGCCGUUUGAUGCCAUGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Anisogomphus_pinratani_not_pinratanai ?????????-??????????????-?-?-?-????????????????-???????-???
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FJ596613_Dromogomphus_spinosus   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----GGAG-----------------
------------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
AU---------UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CUUG--------------------------------------GA----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGGGCGGGCUCCUUG------CGUAACU------GCG-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Arigomphus_villosipes_OAV   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----GGAGAUA--------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UGAAUGAAGCCG-GAGA-UGGGGC---------------------------CUUG--------------------------------------GA----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCCUUG------CGUAACU------GCG-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Arigomphus_cornutus   ?????????-??????????????-?-?-?-????????????????-???????-???
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FJ712319_Stylurus_intricatusACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CUCG--------------------------------------GA----GCCCCGU-GGAUCGGAGUGCC

UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCCUUG------CGUAACA------GCG-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Stylurus_amnicola   AC???????-??????????????-?-?-?-????????????????-???????-???
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FJ596610_Stylurus_nagoyanus   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCACUCAGGAUA-GCUGGUG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCUGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAAUGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCUGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CUCG-------------------------------------GA----GCCCCGU-GGAUUGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUUGGAAUCUACUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUUGC-
GGCAGGGCGGGCUCCUUG------UGUAACA------ACG-GGA-GUGCCGUUUGAUGCCGUGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
FJ596612_Gomphurus_Gomphus_externus   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU--
-------UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CUCG-------------------------------------GA----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCCUUG------CAUUGU-------GCG-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
J596611_Asiagomphus_melaenops   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----GGAG-------------------
----------------------------AAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU--
-------UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CUCG-------------------------------------GA----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCCUUG------CGUAACA------GCG-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
FJ596614_Gomphus_Phanogomphus_exilis   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU GU--
-------UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CUCG-------------------------------------GA----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGU CGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCCUUG------CGUAACA------GCG-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ] Gomphus_Gomphus_graslini
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Gomphus_Hylogomphus_adelphus_OGA   ACCAUCUAG-UA-CUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----GGAGAUA----------------
---------------------------AGAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
AAUU---UUUUUAAAUGAAGCCG-GAGA-UGGGGC--------------------------CUCG-------------------------------------GA----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UU--------GAAU-------AGA-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
FJ712320_Gomphus_Gomphus_vulgatissimusACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----GGAG-------------------
----------------------------AAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU-
--------UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CUCG-------------------------------------GA----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-

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GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UUUU---------------UUGAA-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                    ]
Megalogomphus_sommeri         AC???????-??????????????-?-?-?-????????????????-???????-???
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Onychogomphus_uncatus_FJ712321          ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-------------------
-----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU---
------UCAAUGAAGCCG-GAGA-UGGGGA---------------------------CAUG----------------------------------------A----GCCCUGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGU-
GGCAGGGCGGGCUCC---U-------UUA-------UU---GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                    ]
FJ596620_Onychogomphus_Onych_forcipatus          ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG----------
--------------------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAA
CUCCGGCUUGCUCGAUAU---------UUAAUGAAGCCG-GAGA-UGGGGA---------------------------CAUG----------------------------------------A---- GCCCUGU-
GGAUCGGAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGU-
GGCAGGGCGGGCUCC---U-------UUA-------UU---GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                                           ]
FJ596617_Lindenia_tetraphylla_mistake  ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGYG-CUC----GGAG-------------------
-----------------------------GRGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCSGGCUUGCUCGAU AU--
-------UUAAUGAAGCCG-GAGA-UGGGGA---------------------------CAUG----------------------------------------A----GCCCUGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGU-
GGCAGGGCGGGCUCC---U-------UUA-------UU---GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCG CGGCGGUGU[-                  ]
Ophiogomphus_carolus_OOC      ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGA---------------------------CAUG----------------------------------------A----GCCCUGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGU-
GGCAGGGCGGGCUCC---U-------UCA-------UU---GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                    ]
FJ596618_Ophiogomphus_severus          ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-------------------
-----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU--
-------UCAAUGAAGCCG-GAGA-UGGGGA---------------------------CAUG----------------------------------------A----GCCCUGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGU-
GGCAGGGCGGGCUCC---U-------UC
A-------UU---GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-          ]
Ophiogomphus_Ophiogomphus_caecilia      ?????????-??????????????-?-?-?-????????????????-???????-???
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Leptogomphus_elegans_OLEg     AC???????-??????????????-?-?-?-????????????????-???????-???
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Leptogomphus_sauteri_FJ596609   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU GU--
-------UCUUUGAAGCCG-GAGA-UGGGGC---------------------------GUAG---------------------------------------A----UCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGUCAUGGAAGUCGAAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAUGGCGGGCUCC---U-----CCUCA-------AA---GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Epigomphus_compactus_AEC   accaucuag-uag???????????-?-?-?-????????????????-???????-???
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Microgomphus_chelifer_FJ712323   ACCAUCUAG-UAGCUGGUUCCUUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGUCG-CUC----GGAG-------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCG-U UU--
-------UUAAUGAAGCCG-GAGA-UGGGGC---------------------------CUCG---------------------------------------A----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUAGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-U-U--------AA-------AA-A-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Heliogomphus_retroflexus   ?????????-??????????????-?-?-?-????????????????-???????-???
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Macrogomphus_parallelogramma?????????-??????????????-?-?-?-????????????????-???????-???
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Ceratogomphus_pictus_OCH   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG------------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGCGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CAAG---------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-U---------UCA--------A-A-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Lestinogomphus_angustus_ALA   ?????????-??????????????-?-?-?-????????????????-???????-???
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?????????????????????----????????-????-------------------------ACGAGUAgcAgAgUCGCGGCGGUGU[-   ]
Austrogomphus_guerini_AAG   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG------------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGCGAGAACUCCGGCUUGCUCGAUAU--------

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-UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CAAG--------------------------------------A----GUCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCCC-
GGCAGGGCGGGCUCC---U-------UCA-------UU---GGG-GUGCCGUUUGAUGCCGUGACGAGUAGGAGGGUCGCGGCGGUGU[-                ]
EU055267_Austrogomphus_amphiclitus      ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGCGAGAACUCCGGCUUGCUCGAU AU--
-------UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CAAG--------------------------------------A----GUCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCCC-
GGCAGGGCGGGCUCC---U-------UCA-------AU---GGG-GUGCCGUUUGAUGCCGUGACGAGUAGGAGGGUCGCGGCGGUGU[-                ]
EU055261_Antipodogomphus_acolythus      ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAU------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGCGAGAACUCCGGCUUGCUCGAU AU--
-----UCUAUUUGAAGCCG-GAGA-UGGGGC--------------------------CAAG--------------------------------------A----GUCCCGU-GGAUCA
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCCC-
GGCAGGGCGGGCUCC---U-------UCA-------UU---GGG-GUGCCGUUUGAUGCCGUGACGAGUAGGAGGGUCGCGGCGGUGU[-                ]
Unaligned_Petalurid           D4-??????-??????????????-?-?-?-????????????????-???????-???
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A_EU055268_Tanypteryx_h       ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAAAU--------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CGCG--------------------------------------A----GCCCCGC-GGAUCGGAGUGCC
UAGUGGSCCACUU---UUGGUAAGC-----------CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-GCCUCCCCC-UCG---GGAGGGGC-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                ]
Tanypteryx_sp                 ?????????-??????????????-?-?-?-????????????????-???????-???
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FJ712330_Tanypteryx_pryeri    ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAGAU--------------------------
------------------AAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CGCG--------------------------------------A----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-GCCUCCCCC-UCG---GGGGGGGC-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                ]
Tachopteryx_thoreyi           ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CGCG--------------------------------------A----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-GCCUC--UU-UCG-------GGGC-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGU-A[-                ]
Phenes_raptor_OPR             ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CGAG--------------------------------------A----GCCCCGC-GGAUCGGAGUGCC
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-GCCUCCCUC-UCG---GGGGGGAC-GGG-GUGCCGUUUGACGCCGCGACG??????????????????????[-   ]
Phenes_centralis   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CGAG---------------------------------------A----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-GCCUCCCUC-UCG---GGGGGGAC-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGgCGgu-a
FJ596625_Uropetalia_carovei   ACCAUCUAG-UAGCUGGUUCC-UC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CCAG---------------------------------------A----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-GCCUCCCUC--------GGGGGGC-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGA[-   ]
Petalura_hesperia   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CGAG---------------------------------------A----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-GCCUCCCUCCACCGCGGGGGGGGC-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGA[-   ]
Petalura_gigantea_BYB   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CGAG---------------------------------------A----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-GCCUCCCUCCACCGCGGGGGGGGC-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGA[-   ]
Petalura_litorea_OPG2   AC???????-??????????????-?-?-?-????????????????-???????-???
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Petalura_ingentissima   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CGAG---------------------------------------A----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-GCCUCCCUCCACCGCGGGGGGGGC-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGA[-   ]
Zoraena_bilineata   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------AGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CAAG---------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCCUC--UC-------------GG-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Taeniogaster_obliqua   AC???????-??????????????-?-?-?-????????????????-???????-???
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Kalyptogaster_erronea         ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------AGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CAAG--------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCCUC--UC----------GGGGG-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                 ]
FJ712317_Cordulegaster_maculata        ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUAAGCUGGCG-CUC----GGAG------------------
----------------------------AGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU--
-------UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CAAG--------------------------------------A----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCCUC--UC----------GGGGG-GGA-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                 ]
EU055277_Cordulegaster_dorsalis        ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG------------------
----------------------------AGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
AU---------UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CAAG--------------------------------------A----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCCUC--UC----------GGGGG-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                 ]
FJ596634_Cordulegaster_boltonii        NNNNNNNNN-NNNNNNNNNNNNNN-N-N-N-NNNUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG------------------
----------------------------AGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU--
-------UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CAAG--------------------------------------A----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCCUC--UC----------GGGGG-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                 ]
FJ596637_Cordulegaster_picta           ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG------------------
----------------------------AGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU--
-------UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CAAG--------------------------------------A----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCCUC--UC----------GGGGG-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                 ]
FJ596638_Anotogaster_sieboldii         ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG------------------
----------------------------AGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
AU---------UCAAUGAAGCCG-GAGA-UGGGGC--------------------------CAAG--------------------------------------A----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCCUC--UC----------GGGGG-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                 ]
Neopetalia_punctata_ONP       ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------AGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UAAAUGAAGCCG-GAGA-UGGGGC--------------------------CGCG--------------------------------------U----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CC-UC--UC-----------GGGG-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                 ]
Chloropetalia_soarer          AC???cuag-uagcugguucccuc-c-g-a-aguUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------AGGAGUCUCAUCCGGUACAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCGACCUUUAAAUGGGUGAGAACUCCGGCUUGCUCGACUC-------
UCUCUGUGAAGCCG-GAGA-UGGGGC--------------------------CUCG--------------------------------------A----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCCUCCCUC--------GGGAGGG-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                 ]
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Sinorogomphus_nasutus_OSN   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------AGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGACUC-------
UCUCUGUGAAGCCG-GAGA-UGGGGC--------------------------CUCG--------------------------------------A----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CC-U-CCUC---------GGAGGG-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUgu[-   ]
FJ596635_Chlorogomphus_brunneus   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG------------------
----------------------------AGGAGUCUCAUCCGGUAAAGCGAAUGAUUAKAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC UC--
-----UCUCUGUGAAGCCG-GAGA-UGGGGC--------------------------CUCG--------------------------------------A----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCCUCCCUC--------GGGAGGG-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Chlorogomphus_sp   ?????????-??????????????-?-?-?-????????????????-???????-???
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Synthemis_eustalacta_OSE   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-CGGGGC--------------------------CUAG--------------------------------------A----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CUC--------CUUC-----GGGG-GGA-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Archaeosynthemis_marcrostigma_   ?????????-??????????????-?-?-?-????????????????-???????-???
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Archaeosynthemis_leachii_   ?????????-??????????????-?-?-?-????????????????-???????-???
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Eusynthemis_brevistyla   ?????????-??????????????-?-?-?-????????????????-???????-???
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???????????????-??????----??????????????-????????????????GCGGCnnCnAnUAgnAGGGUCgnGGCGGnGU[-   ]
FJ596573_Eusynthemis_guttata   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------AUGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU-
--------UCAAUGAAGCCG-GAGA-CGGGGC--------------------------CUCG--------------------------------------A----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-

GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAACCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUUC-CUCCUCC-------------GGGG-GAA-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
EU055262_Eusynthemis_nigra   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-CGGGGC--------------------------CUCG--------------------------------------A----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGAC
GCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAACCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-
AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGCCGUCGC-GGCAGGGCGGGCUUC-CUCCUCCU----------AUGGGG-GAA-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCG CGGCGGUGU[-
]
EU055263_Choristhemis_flavoterminata   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU--
-------UCAAUGAAGCCG-GAGA-CGGGGC--------------------------CUCG--------------------------------------A----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAACCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUUC-CUCCUCCU----------AUGGGG-GAA-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Synthemiopsis_gomphomacromioides_ASG   ACcaucuag-uagCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
AU---------UCAAUGAAGCCG-GAGA-CGGGGC--------------------------CUCG--------------------------------------A----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCCUCU----CU----------UUGGGG-GGA-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCggugu[-   ]
Gomphomacromia_chilensis_OGPACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UGAAUGAAGCCG-GAGA-UGGGGC--------------------------CUCG--------------------------------------A----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUCGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CUCUGCCUC---------UUCGGG-GGA-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGNUCGCGGCGGUGU[-   ]
FJ712318_Gomphomacromia_paradoxa   ACCAUCUAG-UAGCUGGUUCCUUC-C-G-A-ANNNNNNNNNNNNNNN-NNNNNNN-NNN----NNNN-N----------------
----------------------------NNNNNNNNNNUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU--
-------UAAAUGAAGCCG-GAGA-CGGGGC--------------------------CUCG--------------------------------------A----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CUCUCCCUCG--------GGGGGG-GGA-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
A_GQ329652_Syncordulia_serendipator   ?????????-??????????????-?-?-?-????????????????-???????-???
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A_GQ329654_Syncordulia_venator   ?????????-??????????????-?-?-?-????????????????-???????-???
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EU055287_Idionyx_imbricata   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UAAAUGAAGCCG-GAGA-UGGGGC--------------------------CUCG--------------------------------------A----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-

GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UCCCUCUCCG--------GGGGGG-GGA-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-]
Idionyx_selysi_ ?????????-??????????????-?-?-?-????????????????-???????-???
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Macromidia_rapida AC???????-??????????????-?-?-?-????????????????-???????-???
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EU424325_Oxygastra_curtisii ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-CGGGGC---------------------------CUCG---------------------------------------A----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UCCCCUCG------------CGGGCGGA-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-]
EU055244_Cordulephya_pygmaea ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AU--
-------UAAAUGAAGCCG-GAGA-UGGGGC--------------------------CUUG--------------------------------------A----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UCCCUCU-------------GGGG-GGA-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-]
Pseudocordulia_circularis ?????????-??????????????-?-?-?-????????????????-???????-???
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Hesperocordulia_berthoudi ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CUCG---------------------------------------A----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CUC-------CUCU------GGGG-GGA-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-]
Lathrocordulia_metallica ?????????-??????????????-?-?-?-????????????????-???????-???
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Micromidia_convergens ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAU--------
-UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CUUG---------------------------------------A----GCCCCGC-GGAUCGGAGUGCC

UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UCU-------CUCU------GGGG-GGA-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Micromidia_atrifrons   ?????????-??????????????-?-?-?-????????????????-???????-???
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Austrophya_mystica   ?????????-??????????????-?-?-?-????????????????-???????-???
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Austrocordulia_refra   ?????????-??????????????-?-?-?-????????????????-???????-???
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Archaeophya_magnifica   ?????????-??????????????-?-?-?-????????????????-???????-???
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Epophthalmia_elegans   ?????????-??????????????-?-?-?-????????????????-???????-???
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Didymops_transversa   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUGU--------
UUUUAUGAAGCCG-GAGA-UGGGGC---------------------------CUCG--------------------------------------A----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCC--------UCGC------GGG-GGA-GCGCCGUUUGAAGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Macromia_illinoiensis   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUGU--------
UUUUAUGAAGCCG-GAGA-UGGGGC---------------------------CUCG--------------------------------------A----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCC--------UCGC------GGG-GGA-GCGCCGUUUGAAGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]

FJ596570_Macromia_amphigena   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAKGAUA-KCUGGCU-CUC----GGAG-----------------
------------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
GU--------UUUUAUGAAGCCG-GAGA-UGGGGC---------------------------CUCG--------------------------------------A----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGGGCGGGCUCC-CCC--------UCGC------GGG-GGA-GCGCCGUUUGAAGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Macromia_eurynome_BYB   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACCCCGGCUUGCUCGAU GC--
--UCUUUUUCAUGAAGCCG-GGGA-CGGGGC---------------------------CUCG--------------------------------------A----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UCUCGC----CUCGC-----GGGG-GGA-GCGCCGUUUGAAGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Macromia_magnifica   ?????????-??????????????-?-?-?-????????????????-???????-???
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FJ712329_Macromia_splendens   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------
------------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
GU--------UUUUAUGAAGCCG-GAGA-UGGGGC---------------------------CUCG--------------------------------------A----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGGGCGGGCUCU-CCC--------UCGC------GGG-GGA-GCGCCGUUUGAAGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
FJ596571_Phyllomacromia_sp   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------
------------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
AU-------UUUCUAUGAAGCCG-GAGA-UGGGGC---------------------------CUCAG-------------------------------------A----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGGGCGGGCUCC-CCCC-------UCAG----ACGGG-GGA-GCGCCGUUUGAAGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
FJ596572_Idomacromia_proavita   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------
------------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAA CUCCGGCUUGCUCGAU
AU---------UCAAUGAAGCCG-GAGA-UGGGGC---------------------------CUCG--------------------------------------A---- GCCCCGC-
GGAUCGGAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGGGCGGGCUCC-UCUCCUUUC----------GGGGA-GGA-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Aeschnosoma_forcipula   ?????????-??????????????-?-?-?-????????????????-???????-???
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Pentathemis_membranulata   ?????????-??????????????-?-?-?-????????????????-???????-???
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FJ596566_Tetragoneuria_cynosura   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------
------------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAA CUCCGGCUUGCUCGAU
CAAGUAUCUUAUCAAUGAAGCCG-GAGAUUGGGGA---------------------------CUUG-- UCCCCGC-
GGAUCGGAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCAC-
GGCAGGGCGGGCCGU-CUCUCCCC---UCG-----GGGGGAACG-GGGCCGUUUGAGGCCGUGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Tetragoneuria_costalis   ?????????-??????????????-?-?-?-????????????????-???????-???
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FJ596567_Tetragoneuria_canis   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------
------------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
CAAGUAUCUUAUCAAUGAAGCCG-GAGAUUGGGGA---------------------------CUUG--UCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCAC-
GGCAGGGCGGGCCGU-CUCUCCCC---UCG-----GGGGGAACG-GGGCCGUUUGAGGCCGUGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
FJ596565_Epitheca_princeps   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------
------------------------------AGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
CAAGUAUAUUUUCAAUGAAGCCG-GAGAUUGGGGA---------------------------CUUG--UUCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCAC-
GGCAGGGCGGGCCGU-CUCUCCCCUC--------GGGGGGAACG-GGGCCGUUUGAGGCCGUGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
FJ596561_Epitheca_marginata   ACCAUCUAG-UAGCUGGUUCCYUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------
------------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
CAAGUAUUUUAUCAAUGAAGCCG-GAGAUUGGGGA---------------------------UUCG--UCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCAC-
GGCAGGGCGGGCCGU-CUCUCCCCUCG--------GGGUGAGCG-GGGCCGUUUGAGGCCGUGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
FJ596564_Epitheca_bimaculata   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------
------------------------------AGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAA CUCCGGCUUGCUCGAU
CAAGUAUAUUUUCAAUGAAGCCG-GAGAUUGGGGA---------------------------CUUG-- UUCCCGU-
GGAUCGGAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCAC-
GGCAGGGCGGGCCGU-CUCUCCCCUCG--------GGGGGAACG-GGGCCGUUUGAGGCCGUGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Rialla_villosa   ?????????-??????????????-?-?-?-????????????????-???????-???
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?????????????????????----????????-???[-   ]
Cordulia_aenea_1236   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUANAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
CGAGUAUCUUGUCAAUGAAG---??????
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Cordulia_aenea_shurtleffii   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUANAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
CGAGUAUCUUGUCAAUGAAG--??????
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??????-???????????????-??????----??????????????-???-???????????????????????????AGGGUCgCggCGGUGC[-   ]
FJ596568_Somatochlora_alpestris   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUAAGCUGGCU-CUC----GGAG-----------------
----
AGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUCAAGUAUUUUGUCAAUGAAGCCG-
GAGAUUGGGGA---------------------------UUCG--UCCCCGC-GGAUCG GAGUGCCUAGUGGGCCACUU---
UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACUCGGCCGUCGC-
GGCAGGGCGGGCCGU-CUCUCCAUCGU---------GGGGAGCG-GGGCCGUUUGAGGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Somatochlora_flavomac_1242   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------AGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
CAAGUAUUUUGUCAAUGAAGCCG-GAGAUUGGGGA---??????
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??????-???????????????-??????----??????????????-???-???[-   ]
FJ596569_Somatochlora_metallica   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------
------------------------------AGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
CAAGUAUUUUGUCAAUGAAGCCG-GAGAUUGGGGA---------------------------UUCG--UCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACUCGGCCGUCGC-
GGCAGGGCGGGCCGU-CUCUCUCUUGU---------AGGGAGCG-GGGCCGUUUGAGGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Somatochlora_tenebrosa   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------AGGAGUCU
CAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUCAAGUAUUUUGUCAAUGAAGCCG-GAGAUU
GGGGA---------------------------UUCG--UCCCCGC-GGAUCGGAGUGCCUAGUGGGCCACUU---
UUGGUAAGCAGAACUGGCG-CUGUGGGAUGNACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-GCUUAAGACAGCAGGA
CGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACUCGGCCGUCGC-
GGCAGGGCGGGCCGU-CUCUCU----CUUGU-----AGGGAGCG-GGGCCGUUUGAGGCCGCGACGAGUAGGAAGGUCGCGGCGGUG-[-   ]
FJ596562_Hemicordulia_mindana   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
CAAGUAUUUUUUCAAUGAAGCCG-GAGAUUGGGGA----------------------------UU---------------------------------------UA----UCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGUCCGU-CUCUCCCUCU-UCGC-GGGGGGGGAGCG-GGGCCGUUUGAGGCCUCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
EU055266_Hemicordulia_australiae   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------AAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
CAAGUAUUUUUUCAAUGAAGCCG-GAGAUUGGGGA----------------------------UU---------------------------------------UA----UCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCGU-CUCUCCCUCU-UCGC--GGGGGGGAGCG-GGGCCGUUUGAGGCCUCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
EU055254_Procordulia_jacksoniensis   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
CAAGUAUAUUUUCAAUGAAGCCG-GAGAUUGGGGA----------------------------UU---------------------------------------UA----UCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCGU-CUCUCUCCCU-UCGC-GGGGGGGGAGCG-GGGCCGUUUGAGGCCUCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Unaligned_Libellulid   D4-??????-??????????????-?-?-?-????????????????-???????-???
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FJ596583_Notiothemis_robertsi          ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
-----------------------------AUGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGA- AU--
-----UAUAUGUGAAGCCG-GAGA-UGGAGC----------------------------CUUC---------------------------------------GG----GCUCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGCUU-
GCUUAAGACAGCAGGUCGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CUCUCCUC----------GGGGGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                 ]
FJ596578_Tetrathemis_irregularis       ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
-----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UC--
--------UUGUGAAGCCG-GAGA-CGGGGC----------------------------CUUC---------------------------------------GG----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCU-CCCUCC--------------GGGG-GGA-GCUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                 ]
EF631495_318_222_Tetrathemis_polleni   ?????????-??????????????-?-?-?-????????????????-???????-???
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FJ596587_Urothemis_signata    ACCAUCUAG-UAGCUGGUUCCYUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG----------------------------
-------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUC--------
--UUGUGAAGCCG-GAGA-UGGGGC----------------------------CUUC---------------------------------------GG----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCU-CCCGC--------------GAGGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                 ]
EF631421_313_217_Urothemis_assignata   ?????????-??????????????-?-?-?-????????????????-???????-???
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FJ596588_Macrodiplax_cora     ACCAUCUAG-UAGCUGGUUCCYUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG----------------------------
-------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUU--------
--AUGUGAAGCCG-GAGA-UGGGGC----------------------------CUUC---------------------------------------GG----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCU-CCCGC--------------GAGGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                 ]
EU055229_Macrodiplax_balteata          ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
-----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
UU---------CACGUGAAGCCG-GAGA-UGGGGC----------------------------CUUC---------------------------------------GG----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCCUCGCUCCG------------G--CG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                 ]
EF631458_344_253_Zyxomma_elgneri       NNNNNNNNNNNNNNNNNNNNNNNN-N-N-N-NNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNN------------------
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NNNNNNNNNNNNNNN--UCGCGUCGGUGC[-   ]
Zyxomma_petiolatum_GU196340   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUU--------
--AUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC-------------------------------------GG----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-GUUC----------------GCGC-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
FJ596576_Zygonyx_torridus   ACCAUCUAG-UAGCUGGUUCCYUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUGU--------
UUAAGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC-------------------------------------GG----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCGC-CGUCCCCUCC-------GGGGGCG-GCG-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
EU055233_Nannophlebia_sp   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGACUC--------
--GUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC-------------------------------------GG----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGG-------------UCC------------------------UCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Bironides_sp_HOL_2010_GU196365   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UC--
------UCUCGUGAAGCCG-GAGA-CGGGGC--------------------------CUAC-------------------------------------GG----GUCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGAAGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACUCC-CCCUC---------------GAGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGA[-   ]
Huonia_epinephela_GU196370   ACCAUCUAG-UAGCUGGUUCCCUC-C-N-N-NNNNNNNNNNAGGAUA-GCUGGCU-CUC----GGAG----------------------------
----------------A-UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUC--------
--UCGUGAAGCCG-GAGA-CGGGGC--------------------------CUUC-------------------------------------GG----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCCU-CCUUU--------------GCGGG-GGG-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
EF631477_361_270_Huonia_oreophila   NNNNNNNNNNNNNNNNNNNNNNNNN-N-N-N-NNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNN------------------
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NNNNNNNNNNNNNNN--UCGCGGCGGUGG[-   ]
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NNNNNNNNNNNNNNN--UCGCGGCGGUGC[-   ]
FJ596582_Rhyothemis_variega_imperatrixACCAUCUAG-UAGCUGGUUCCYUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UC-
---------AUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC-------------------------------------GG----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-

GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CGUU--CUCG------------CG-GGA-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Rhyothemis_fuliginosa_GU196333   ACCAUCUAG-UAGCUGGUUCCYUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
-----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UU--
--------AUGUGAAGCCG-GAGA-UGGGGC---------------------------CUUC---------------------------------------GG----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CGUU--AUCG------------CG-GGA-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Miathyria_marcella   ?????????-??????????????-?-?-?-????????????????-???????-???
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Miathyria_simplex_GU196345   ACCAUCUAG-UAGCUGGUUCC-UY-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUC--------
UCUCGUGAAGCCG-GAGA-UGGGUC-------------------------CCGCUC--------------------GC---------------GG----GACCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGAC CGUCGC-
GGCAGGGCGGGCUCC-CUCCCUC----------GCGGGGG-GGA-GUUCCGUUUGAGGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
FJ596577_Tholymis_citrina   ACCAUCUAG-UAGCUGGUUCCUUN-N-N-N-NNNNUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAGAC-----
UUGUUGUGUGAAGCCG-GAGA-UGGGGC-------------------------AUAUUA---------------------------------------GU----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-GCGUUC--------------GCGC-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
EF631403_298_202_Tholymis_tillarga   ?????????-??????????????-?-?-?-????????????????-???????-???
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EF631487_369_280_Pantala_flavescens   ?????????-??????????????-?-?-?-????????????????-???????-???
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Tramea_lacerata_OTL   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUGU--------
UCUUGUGAAGCCG-GAGA-UGGGGC---------------------------CUUC---------------------------------------GG----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCCG-----------CUCGU----------CGG-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
FJ596586_Tramea_calverti   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG----------------
------------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAA CUCCGGCUUGCUCGAU
UC----------UUGUGAAGCCG-GAGA-UGGGGC---------------------------CUUC---------------------------------------GG---- GCCCCGU-
GGAUCGGAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA

AGGUGUUGGUU-GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA
AGCGUCGUGCCUAUACCCGGCCGUCGC-GGCAGGGCGGGCCCG-CC-----CCACUCG-------GGG-CGG-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-]
Sympetrum_Kalosympetrum_janeae_OSJ ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UU--
--------AUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC--------------------------------------GG----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGUUCGGGCUCCCCA-----CCCGUG--G------UGUGGA-GUUCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGA[-]
Sympetrum_Kalosympetrum_obtrusum ?????????-??????????????-?-?-?-????????????????-???????-???
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FJ596606_Sympetrum_Sympetrum_vulgatum ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UU--
--------AUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC--------------------------------------GG----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGUUCGGGCUCCCCA-----CCCGUG--G------UGUGGA-GUUCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGA[-]
Sympetrum_Sympetrum_pedemontanum_ ?????????-??????????????-?-?-?-????????????????-???????-???
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Sympetrum_Nesogonia_blackburni_ ?????????-??????????????-?-?-?-????????????????-???????-???
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FJ596607_Sympetrum_Sympetrum_sanguineum ACCAUCUAG-UAGCUGGUUCCYUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG----------
-----------------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAA
CUCCGGCUUGCUCGAUUU----------AUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC--------------------------------------GG---- GCCCCGC-
GGAUCGGAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGUUCGGGCUCCCCA-----CCCGUG--G------UGUGGA-GUUCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-]
EU055230_Sympetrum_Tarnetrum_corruptumACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
UC----------UUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC--------------------------------------GG----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGUUCGGGCUCCCCA-----CCCGUG--G------UGUGGA-GUUCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGA[-]
Sympetrum_fonscolombei_GU196359 ACCAUCUAG-UAGCUGGUUCCCUC-C-G-AAAGUUUCCCUCAGnnUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UC-
---------UUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC--------------------------------------GG----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-

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GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGUGCGGGCUCCGCA-----CCCGCG--G------UGCGGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                 ]
Sympetrum_Tarnetrum_illotum_?????????-??????????????-?-?-?-????????????????-???????-???
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Sympetrum_Tarnetrum_infuscatum         ?????????-??????????????-?-?-?-????????????????-???????-???
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EU424330_Sympetrum_danae                ACCAUCUAG-UAGCUGGUUCCYUC-N-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------
------------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
UU----------AUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC-------------------------------------GG----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGUUCGGGCUCCCCA-----CCCGUG--G------UGUGGA-GUUCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                                         ]
Sympetrum_meridionale_GU196334         ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UC--
--------UUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC-------------------------------------GG----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGUUCGGGCUCCCCA-----CCCGUG--G------UGUGGA-GUUCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGA[-                 ]
FJ596605_Leucorrhinia_pectoralis       ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AC--
------UCUUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC-------------------------------------GG----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGUGCGGGCCCCCCG-----CCGGCG--G------UGGGGG-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                 ]
Leucorrhinia_glacialis       ?????????-??????????????-?-?-?-????????????????-???????-???
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Celithemis_elisa             ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUC--------
--UUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC-------------------------------------GG----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUCGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGUGCGGGCCCC---GCCA-CCCGUG--G---UGA---GGG-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                 ]
Celithemis_eponina_1233      ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUC--------
--UUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUAU-------------------------------------GG----GCCCCGC-GGAUCGGAGUGCC
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UAGUGGGCCACU-----???????????????????-?????????????????????????????????????????????????????????????-??????-??????????????-
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Brachymesia_gravida_          ?????????-??????????????-?-?-?-????????????????-???????-???
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Brachymesia_herbida_GU196344ACCAUCUAG-UAGCUGGUUCCCNN-N-N-N-NNNNNNNNUCAGGAUA-GCUGGCU-CUC----GGAG----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGGGAACUCCGGCUUGCUCGAUUU--------
--UUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC-------------------------------------GG----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU- GCUUAAGACAGCAGG
ACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-GGCAGGGCGGGCCCU-
CCCCC--CUCUUG--G---GGGGG-CGG-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                                 ]
EF631463_349_258_Brachythemis_leucostic          NNNNNNNNNNNNNNNNNNNNNNNN-----N-NNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNN----------
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Brachythemis_contaminata_     ?????????-??????????????-?-?-?-????????????????-???????-???
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Deielia_phaon_GU196343        ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUU--------
--AUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC-------------------------------------GG----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU- GCUUAAGACAGCAGG
ACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-GGCAGGGCGGGCUCC-
GUUC-C----------------GC-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                                 ]
EF631398_294_198_Pachydiplax_longipenni          NNNNNNNNNNNNNNNNNNNNNNNN-----N-NNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNN----------
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NNNNNNNNNNNNNNN--------------------------------------------------------------------------UGU[-                                   ]
AY750042_Erythemis_sp         ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG----------------------------
------------------AUGAGUCUCACCUGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUU--------
--AUGUGAAGCCG-GAGAAUGGGCC---------------------------UUA-------------------------------------GG----GUCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UCCUCG---------------CGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCAGCGGUGU[-                  ]
FJ596592_Acisoma_panorpoidesACCAUCUAG-UAGCUGGUUCCYUC-C-N-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG----------------------------
------------------NGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUC--------
--UUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC-------------------------------------GG----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
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GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCU-CCUCUC--------------GGGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                ]
EU055239_Erythrodiplax_minuscula       ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UU--
--------GUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC--------------------------------------GG----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UCUUCUUCGG-----------AGA-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                ]
Erythrodiplax_basalis_        ?????????-??????????????-?-?-?-????????????????-???????-???
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EF631390_289_192_Crocothemis_servilia  NNNNNNNNNNNNNNNNNNNNNNNNNN-----N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNN------------------
----------------------------NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
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NNNNNNNNNNNNNNN-------------------------NNN-NNNNNNNNNN--------------------UCGCGGCGGUGA[-                ]
Crocothemis_erythraea_GU196335         NNNNNNNNNN-NNNNNGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UU--
--------AUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUUA-------------------------------------UG----GCUCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCCCUU---CCCUCG-G--G------GAGGGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGA[-                ]
FJ596590_Rhodothemis_rufa     ACCAUCNAG-UAGCUGGUUCCYUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------AGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUU--------
--AUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC--------------------------------------GG----GCCCCCU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCCCCA--------------AAGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                ]
Neurothemis_fulvia_           ?????????-??????????????-?-?-?-????????????????-???????-???
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Neurothemis_ramburii_GU196339          ACCAUCUAG-UAGCUGGUUCCCNN-N-N-N-NNNNNNNNUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UU--
--------AUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC--------------------------------------GG----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCUUUC--------------CCGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                ]
Diplacodes_lefebvri           ?????????-??????????????-?-?-?-????????????????-???????-???
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Diplacodes_trivialis_GU196342   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UU--
--------AUGUGAAGCCG-GAGA-UGGGGC---------------------------CUUC-------------------------------------GG----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCU-CCCUCG---------------UGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
EF631462_348_257Bradinopyga_strachani ---NNNNNNNNNNNNNNNNNNNNN----------NNNNNNNNNNNNNNNNNNNNNNNNN----NNNN------------------
----------------------------NNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
-----------NNNNNNNNNNNN-NNNN-NNNNNN---------------------------NNNN------------------------------------N-------NNNNNNN-NNNNNN
NNNNNNNNNNNNNNNNNNNN---NNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNN-NNNNN--NNNNNNNNNNNNNN-
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NNNNNNNNNNNNNNN---UCGCGGCGGUGC[-   ]
Brachydiplax_denticauda   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUCU-------
-CUCGUGAAGCCG-GAGA-UGGGGC---------------------------CUUC-------------------------------------GG----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU- GCUUAAGACAGCAGG
ACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-GGCAGGGCGGGCCCC-
CCCU------CUC---------GG-GGG-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
FJ596585_Brachydiplax_chalybea_flavovit   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG----------
-------------------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAA
CUCCGGCUUGCUCGAUUCU--------CUCGUGAAGCCG-GAGA-UGGGGC---------------------------CUUC-------------------------------------GG---- GCCCCGC-
GGAUCGGAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGGGCGGGCCCC-GUUCAU---------------CGC-GGG-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
FJ596584_Chalcostephia_flavifrons   ACCAUCUAG-UAGCUGGUUCCYUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UU--
--------UUGUGAAGCCG-GAGA-UGGGGC---------------------------CUUC-------------------------------------GG----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UCUCUCUUUU----------GGGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
EF631393_291_195_Micrathyria_aequalis ---NNNNNNNNNNNNNNNNNNNNN----------NNNNNNNNNNNNNNNNNNNNNNNNN----NNNN------------------
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-N----------NNNNNNNNNNN-NNNN-NNNNNN---------------------------NNNN------------------------------------N-------NNNNNNN-NNNNNN
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NNNNNNNNNNNNNNN--------------------------NNN-NNNNNNNNNN-NNNNNNNNNNNNNNNNNNN-UCGCGGCGGUGC[-   ]
Micrathyria_atra_   ?????????-??????????????-?-?-?-????????????????-???????-???
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Micrathyria_didyma_GU196361   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUU--------
--AUGUGAAGCCG-GAGA-CGGGGC---------------------------CCCU--------C------------G---------------GG----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCG-CGUUCCCCUC------GGGGGGCG-CGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]

Uracis_imbuta_GU196363   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------AUGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUU--------
--AUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC-------------------------------------GG----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU- GCUUAAGACAGCAGGA
CGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-GGCAGGGCGGGCUCU-
CCU-----------------CUGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Uracis_infumata   ?????????-??????????????-?-?-?-????????????????-???????-???
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FJ596589_Nannophya_pygmaea   ACCAUCUAG-UAGCUGGUUCCYUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUU--------
--GUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC-------------------------------------GG----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCU-CCCUCG--------------CGGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
EF631412_307_210_Nannothemis_bella   AACNNNNNNNNNNNNNNNNNNNNN---------NNNNNNNNNNNNNNNNNNNNNNNNN----NNNN------------------
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NNNNNNNNNNNNNNN--------------------------NNN-NNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN-GCGGUGC[-   ]
EF631492_373_Paltothemis_lineatipes   ?????????-??????????????-?-?-?-????????????????-???????-???
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Brechmorhoga_mendax_   ?????????-??????????????-?-?-?-????????????????-???????-???
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Brechmorhoga_praedatrix_GU196346   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU GC--
--------UCGUGAAGCCG-GAGA-UGGGGC---------------------------CUUC--------------------------------------GG----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCG-CGCUCCCUC--------GGGGGCG-CGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Dythemis_fugax_   ?????????-??????????????-?-?-?-????????????????-???????-???
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A_FJ596580_Trithemis_aurora   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUU--------
--AUGUGAAGCCG-GAGA-UGGGGC---------------------------CUUC--------------------------------------GG----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CUCC--UCGG------------GG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                 ]
FJ596581_Trithemis_africana             ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------
------------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAA CUCCGGCUUGCUCGAU
UC----------UUGUGAAGCCG-GAGA-UGGGGC---------------------------CUUC--------------------------------------GG---- GCCCCGC-
GGAUCGGAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGGGCGGGCUCC-CUCC--UCGG------------GG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                                          ]
Trithemis_arteriosa           ?????????-??????????????-?-?-?-????????????????-???????-???
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Perithemis_tenera_OPT         ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUU--------
--AUGUGAAGCCG-GAGA-UGGGGC---------------------------CUUC--------------------------------------GG----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCGU-UCUCU-----CUCG-----GGAGG-AUG-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                 ]
A_EU055236_Perithemis_intensa          ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UU--
--------AUGUGAAGCCG-GAGA-UGGGGC---------------------------CUUC--------------------------------------GG----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCGU-UCUCUCUCGG----------GAGG-AUG-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                 ]
Perithemis_lais_GU196362      ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUG--------
--ACUUGAAGCCG-GAGA-UGGGACCCUCCUC--------------------CCUC---------------GG---------------------GGGGAGGGCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCUC-
GGCAGGGCGGGCUCC-GGGAUUUWU------------UUC-GGA-GUUCCGUUUGAAGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                 ]
Palpopleura_lucia_GU196337    ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUU--------
--AUGUGAAGCCG-GAGA-UGGGGC---------------------------CUUC--------------------------------------GG----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCU-CCCCUC--------------GGGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                 ]
FJ596579_Diastatops_pullata   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUU--------
--UCUUGAAGCCG-GAGA-UGGGGCCCC------------------------CUUC------------------------------AACC-------GGGGCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UCCUCUAAAG-----------GGG-GGA-GCUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                 ]
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Zenithoptera_fasciata_GU196364   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCG
AAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUC----------UUGUGAAGCCG-GAGA-UGGGGC-----------
----------------CUUC-------------------------------------GG----GCCCCGC-GGAUCGGAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUG
UGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAG
GAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGCCGUCGC-GGCAGGGCGGGCUCG-CGUCUCCCCUUCGCGGGGAGGCG- CGG-
GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
EF631486_368_279_Neodythemis_pauliani NNNNNNNNNNNNNNNNNNNNNNNN-----N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNN-------------------
----------------------------NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
-N----------NNNNNNNNNN-NNNN-NNNNNN------------NNNN--N----NNNNNNN-NNNNNN
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NNNNNNNNNNNNNNN---------------------------NNNNNNNNNNNN-NNNNNNNNNNNNNNN----------------[-   ]
Selysiothemis_nigra   ?????????-??????????????-?-?-?-????????????????-???????-???
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Trithetrum_navasi   ?????????-??????????????-?-?-?-????????????????-???????-???
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Porpax_risi_   ?????????-??????????????-?-?-?-????????????????-???????-???
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Micromacromia_camerunica_GU196367   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UU--
--------AUGUGAAGCCG-GAGA-UGGGGC-------------------------CUUC-------------------------------------GG----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CUCUCCCUCN-----------NNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-   ]
AFJ596594_Allorhizuch_preussi   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-------------------
----------------------------AUGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
UU----------GUGUGAAGCCG-GAGA-UGGGGC-------------------------CUUC-------------------------------------GG----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UCCCUCUC------------GGGG-GGG-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Neodythemis_klingi   ?????????-??????????????-?-?-?-????????????????-???????-???
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FJ596575_Hadrothemis_infesta   ACCAUCUAG-UAGCUGGUUCCYUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU AC---
-------UCGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC-------------------------------------GG----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCCC--C-GUUCC-GUCA-AAGG---GG--GGG-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
FJ596595_Thermorthemis_madagascariensis   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG----------
-------------------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAA
CUCCGGCUUGCUCGAUUU----------AUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC-------------------------------------GG---- GCCCCGU-
GGAUCGGAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGGGCGGGCUUC-UCCACUAC-------------GGG-GAACGUUCCGUUUGAGGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
FJ596599_Agrionoptera_insignis   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
UU----------AUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC-------------------------------------GG----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCU-------CUCG-------GGG-GGA-GCUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
FJ596593_Cratilla_metallica   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUU--------
--GUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC-------------------------------------GG----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCU-------CUCG-------GGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Pseudoleon_superbus   ?????????-??????????????-?-?-?-????????????????-???????-???
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FJ596597_Orthemis_cultriformis   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UC--
--------UUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC-------------------------------------GG----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UCCCU-----CUCGG-----GGGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
EF631471_265_Orthemis_ferruginea   ---NNNNNNNNNNNNNNNNNNNN---------NNNNNNNNNNNNNNNNNNNNNNNNN----NNNN------------------
----------------------------NNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
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NNNNNNNNNNNNNNN---UCGCGGCGGUGU[-   ]
FJ596601_Orthetrum_albistylum   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UU--
--------AUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC-------------------------------------GG----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CU--------CUC--------GGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]

EF631473_267_Orthetrum_pruinosum --

--UCGCGNCGGUGU[-   ]
Orthetrum_coerulescens_ ?????????-??????????????-?-?-?-????????????????-???????-???
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FJ596600_Lyriothemis_elegantissima ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC---GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UU--
--------GUGUGAAGCCG-GAGA-UGGGGC---------------------------CUUC--------------------------------------GG----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UC--------CUC-------UGGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
A_FJ596602_Ladona_fulva ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------AUGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUU--------
--AUGUGAAGCCG-GAGA-UGGGGC---------------------------CUUC--------------------------------------GG----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCU-------CUCG-------GGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Ladona_julia ?????????-??????????????-?-?-?-????????????????-???????-???
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A_FJ596598_Ladona_depressa ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------------------
------------------NGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUU--------
--AUGUGAAGCCG-GAGA-UGGGGC---------------------------CUUC--------------------------------------GG----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCCC-UCUCC-----CUCGG-----GGGA-GGG-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Plathemis_subornata_ ?????????-??????????????-?-?-?-????????????????-???????-???
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EF631438_330_234_Plathemis_lydia ---NNNNNNNNNNNNNNNNNNNNN---------NNNNNNNNNNNNNNNNNNNNNNNNN----NNNN------------------
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NNNNNNNNNNNNNNN---UCGVGGCGGUGU[-   ]

Libellula_quadrimaculata_GU196332   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UU--
--------AUGUGAAGCCG-GAGA-UGGGGC---------------------------CUUC--------------------------------------GG----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCU-------CUCG-------GGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Libellula_Syntetrum_angelina   ?????????-??????????????-?-?-?-????????????????-???????-???
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Libellula_Eolibellula_semifasciata   ?????????-??????????????-?-?-?-????????????????-???????-???
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Libellula_Belonia_saturata_AY338674   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UU--
--------AUGUGAAGCCG-GAGA-UGGGGC---------------------------CUUC--------------------------------------GG----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCU-------CUCG-------GGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Libellula_Eotainia_composita_   ?????????-??????????????-?-?-?-????????????????-???????-???
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Libellula_Neotetrum_pulchella_OLP   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-------------------
----------------------------AUGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UU--
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GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCU-------CUCG-------GGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Libellula_Holotania_comanche_   ?????????-??????????????-?-?-?-????????????????-???????-???
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??????????????????????-??---??????????????????????????????????????---
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?????????????????????----????????-??[-   ]
Libellula_Holotania_auripennis_   ?????????-??????????????-?-?-?-????????????????-???????-???
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??????????????????????-??---??????????????????????????????????????---
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????????????????????----????????-??[-   ]
Libellula_Holotania_axilena_?????????-??????????????-?-?-?-????????????????-???????-???
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??????????????????????-??--????????????????????????????????????---
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????????????????????----????????-??[-   ]
Libellula_Holotania_luctuosa_   ?????????-??????????????-?-?-?-????????????????-???????-???
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??????????????????????-??--????????????????????????????????????---
???????????????????-??-??????-??????????????-????????????????
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????????????????????----????????-??[-   ]
Aethriamanta_rezia_GU196369   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGnnUA-GCUGGCU-CUC----GGAG----------------------------
-----------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUU--------
-GUUGUGAAGCCG-GAGA-AGGGGCCGCC-----------UUCUAUGCGCUCCUC-----------CUCCGGGGGGAGGG----------UCGGGCGGCCUCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCUC-CGGGCGUUUC---------GUCCGCGAG-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Tetrathemis_corduliformis_GU196368   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
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GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCUCCCUCG----------GGGGG-GGA-GCUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGG[-   ]
Diplacina_ismene_GU196366   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG----------------------------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCGC-CUUCCC----CUCG----GGGGGG-GCG-GUUCCGUUUGAAGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Erythemis_vesiculosa_GU196360   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
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GGCAGGGCGGGCUCC-UCCUCG--------------CGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCAGCGGCGU[-   ]
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-UAUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC------------------------------------GG----GCCCCGC-GGAUCGGAGUGCC
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GGCAGGGCGGGCUCC-CGUUUU-------------UACG-GGG-GUGCCGUUUGACGCCGCGACRAGUAGGAGGGUCGCGGCGGUGU[-   ]
Oligoclada_amphinome_GU196357   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
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---------UCGUGAAGCCG-GAGA-UGGGGC----------------------CCCCUUCUU---------------GGGG---------------GU----GCCCCGC-GGAUCG
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GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCCCU-CUCCUCUC------------GGGG-AGG-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Idiataphe_sp_HOL_2010_GU196356   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAG AU--
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GGCAGGGCGGGCUCU-CU-----CCCUCAC-G----GGGG-AGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Atoconeura_sp_HOL_2010_GU196355   ACCAUCUAG-UAGCUGGUUCCCNN-N-N-N-NNNNNNNNUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UC--
--------UUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC--------------------------------------GG----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGA CGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-GUCUCCGG-------------GC-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Elga_leptostyla_GU196354   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUC--------
--UUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC--------------------------------------GG----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGAC
GGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGGGCGGGCCGG-CGUCCCUC-----------GGGGCGACG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]
Fylgia_amazonica_GU196353   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUnnCCCUCAGnnUA-GCUGGCU-CUC----GGAG----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUC--------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCG-CGGGCUUUUC---------GCUCG-CGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Hemistigma_albipunctatum_GU196352   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU UU--
--------AUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC--------------------------------------GG----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CUUUUCAU------------CGGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Porpacithemis_sp_GU196351   ACCAUCUAG-UAGCUGGUyyCYUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG----------------------------
------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUC--------
--UUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUC--------------------------------------GG----GCCCCGC-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
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GGCAGGGCGGGCUCC-CCUCUCUCG----------GGGGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Thermochoria_equivocata_GU196350   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
UU----------AUGUGAAGCCG-GAGA-UGGGGC--------------------------CUUCAG------------------------------------GG----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-GU-------------------UGUUGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-   ]
Malgassophlebia_bispina_GU196349   ACCAUCUAG-UAGCUGGUUCCCUC-C-A-N-NNNNNNNNNNNGGAUA-GCUGGCU-CUC----GGAG------------------
----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU GC--
--------UUGUGAAGCCG-GAGA-CGGGGC--------------------------CUUUCG------------------------------------GG----GCCCCGC-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UCUCCGUCUC---------AGGGG-AGGCGUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-   ]

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Micromacromia_zygoptera_GU196348     ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG---------------------------
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GGCAGGGCGGGCUCU-CCUCC-----CUCG-----GGGGG-AGG-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                ]
Argyrothemis_argentea_GU196347          ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------
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GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCU-CGCCGUCCCCU-nnnGGGAGGGCG-CGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-
][@nnn=CUCUCUCCCUCGGGGGGGGUG]
Pseudothemis_zonata_GU196341ACCAUCUAG-UAGCUGGUUCCCUC-C-G-AAAGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG---------------------------
-----------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUU--------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-GUUC----------------CGC-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                ]
Oxythemis_phoenicosceles_GU196338       ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG-----------------
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GGCAGGGCGGGCUCC-CUCGC--------------AAGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                ]
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GGCAGGGCGGGCUCC-ACCUCCAAGG---------GGGUC-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                ]
Misagria_parana_GU196331      ACCAUCUAG-UAGCUGNNNNNNNN-N-N-N-NNNNNNNNNNNNNNN-NNNNNNN-NNN----NNNN---------------------------
-----------------NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUUC--------
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GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCCCCAC-----------GGGGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                ]

[Neogomphus_edenticulatus_FJ712324     ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUn----nGAG-----------------
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GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UUA-----------------AAC-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                ]
Aeshna_mixta_FJ712315         ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG---------------------------
-----------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU---------
AUUCAAUGAAGCCG-GAGA-UGGGGC-------------------------CUC------------------------------------GA----GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CG-C----------------AUG-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGA[-                ]
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Gomphaeschna_furcillata_FJ712314       ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------
----------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
---------AUUCAAUGAAGCCG-GAGA-UGGGGC--------------------------CUC----------------------------------------GA----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-UCUUCC----------------GA-GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                ]
Teinobasis_fortis_OD203                 ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------
------------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC
UU-----------GUCGAAGCCG-GAGA-CGGGGC-------------------------UCC-----------------------------------------G----GCCCCCG-GGAUCG
GAGUGCAUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGGGCGGACCCG-----------------------CG-AGG-GUGCCGUUAGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-                                        ]
Mecistogaster_modestaOD198              ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------
------------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAA
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GGAUCGGAGUGCAUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGGGCGGACCCG-----------------------CG-AGG-GUGCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-                                        ]
Anomisma_abnormeOD193                   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------
------------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAC
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GAGUGCAUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAAUAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGGGCGGACCCG-----------------------CG-AGG-GUGCCGUUCGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGC[-                                        ]
Lestes_sponsa                           ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG----------------
------------------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAA CUCCGGCUUGCUCGAU
CAAUUUA-------AUGAAGCCG-GAGU-CGGGGC-------------------------CAC----------------------------------------GA---- GCCCUCA-
GGAUCGGAGUGCAUAGUGGGCCACUU-----------------------------------------------------------------------------------------
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-----------------------------------------------------------------------------------------------------------[-           ]
Asiagomphus_melaenops                   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----GGAG----------------
------------------------------AAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
AUUCA---------AUGAAGCCG-GAGA-UGGGGC-------------------------CUC---------------------------------------GGA----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGUCGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGGGCGGGCUCC-UUGCGU----A-------ACAGCG-GGG-GUGCCGUUUGAUGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-                                        ]
Orthemis_discolor                       ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG----------------
------------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAA
CUCCGGCUUGCUCGAUUC----------UUGUGAAGCCG-GAGA-UGGGGC-------------------------CUU---------------------------------------CGG---- GCCCCGU-
GGAUCGGAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA AGCGUCGUGCCUAUACCCGGCCGUCGC-
GGCAGGGCGGGCUCC-UCCCU------C------UCGGGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-                                        ]
Leucorrhinia_dubia                      ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG----------------
------------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAA CUCCGGCUUGCUCGAU
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GGAUCGGAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAA AGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGA
AGCGUCGUGCCUAUACCCGGC  CGUCGC-GGCAGUGCGGGCCCC-UC----------GCCCGCGGCGA-GGG-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGC[-          ]
]
[[                                          32â€šÃ„Ã´           31aâ€šÃ„Ã´    36                  37              38
D4                                                            D5a                                                                  D5b
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38â€šÃ„Ã´ 39 40
41 42 43 44 42â€šÃ„Ã´
41â€šÃ„Ã´ D6 36â€šÃ„Ã´]
Lestes_eurinus_OLE ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUCAA-------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU- GCUUAAGACAGCAGGA
CGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-CGCAGGGCGGGCCCC---
--------GUGA-----------GGG-GUGCCGCUUGACGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU[-]
Hemiphlebia_mirabilis_OHM acCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUUGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGGCUUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUAGAGA---
UCUGUUGUGAAGCCG-GAGU-CGGGGCCUC------------------------UUCG---GGGGCCCCCA-GGAUCGGAGUGCA
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCC-----------GCGA-----------GGG-GUGCCGCUUGAUGCGGCGACGAGUAGGAGGGUCGCGGCGGCGU
Epiophlebia_superstes_OES ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------GAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUA---------
UUGAAUGAAGCCG-GAGA-UGGGGC---------------------------CACGA---GCCCCGU-GGAUCGGAGUGCC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGACCCC---C----CUCGAAA-----------GGG-GUGCCCCUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU
Unaligned_Aeshnoid
Archipetia_auriculata ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GGAG-----------------------------
------------------AAGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAUA---------
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UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-----------GUAU-----------GGG-GUGCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-]
FJ712326_Libellula_quadrimaculata ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCU-CUC----GGAG------------------
-----------------------------UGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUCCGGCUUGCUCGAU
----------UUAUGUGAAGCCG-GAGA-UGGGGC---------------------------CUUC-------------------------------------GG----GCCCCGU-GGAUCG
GAGUGCCUAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGACGGGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGACAUGGAAGUUGUAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC CGUCGC-
GGCAGGGCGGGCUCC-CCUCUCG--------------GGG-GGA-GUUCCGUUUGACGCCGCGACGAGUAGGAGGGUCGCGGCGGUGU[-]
]
Unaligned_Orders ?????????-??????????????-?-?-?-????????????????-???????-???
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??aaaaaaaaaaaaaa????????????????
?????????bbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbbb???????????????????????????????????????---
????????????????????-???-??????-??????????????-????????????????
??-??-???????-
?????--???6666666666666666-666---??[-]
Ephemerella_sp_AY749918 ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC
???GAG
UCCCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGUCGAAACGAUCUCAACCUAUUCUCAAACUUUAAAUGGGUGGGACCUGCGGCUUGCUUGAA-----------UUGGUGAAGCCG-CAG----
-----------------------UCUC--GGAUCGGAGUGCCCAGUGGGCCACUU---
UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCCGAAUAAACGCUCAU-UCGAA-ACCAU--GAAAGGUGUUGGUU-GCUUAAGACAGCAGGA
CGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAAAAAUGGAUGGCGCUGAAGCGUUUUGCCUAUACCCGGCCGCCGGAGGCAAAG- GGCGCGC--
-????----????????-???---GCG-CG-UCGC--CAAGCCCCGGUGAGUAGGAGGGUCGCGACGGUGU[-]
Paralept_vaciva_AY749922 ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC
???GAG

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UCCCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGUCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGGGAACCGCGGCCUGUUUGAA------------CGUGAGGCCG-CGG----
-----------------------ACCAC-----------------------------------------------------------GGAUCGGAGUGCCCAGUGGGCCACUU---
UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCGGGGUUAAGGCGCCCGAAUCGACGCUCAU-UCGAA-ACCAU--GAAAGGUGUUGGUU-GCUUAAGACAGCAGGA
CGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCCGCCGCCGGCGGCAGAA- GGCGGGG--
-????----????????-?????????????????????????????????????????????????????[-                    ]
Anthopotamus_sp_AF461226      ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----GGAG-U---------------------------
------------------??GAGUCCCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGUCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGGGAACCGCGGCUUGCUUGAA----------
---UGUGAAGCCG-CGG---------------------------ACCUU-----------------------------------------------------------GGAUCGGAGUGCC
CAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCCGAAUCGACGCUCAU-UCGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC
CGCCGGCGGCAGAA-GGCGCGC---????----????????-???---GUG-CG-CCGC--GAAGCCCCGGUGAGUAGGAGGGUCGCGACGGUGA[-          ]
Caenis_sp_AY338667            ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC
?????????????????????????????????????????????????????????GAG
UCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGUCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACCGCGGCUUGCUCGAGUA-----------GUGAAGCCG-CGG----
----------------------AAAA------------------------------------------------------------GGAUCAGAGUGCCUAGUGGGCCAUUU---
UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCUAAAUCGACGCUCAU-GAGAC-ACCAU--GAAAGGUGUUGGUU-GCUUAAGACAGCAGGA
CGGGGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGCCGCCGGCGGCAGAA- GGCGGGC--
-????????????????-???---GUU-CG-CUGC--GAAGCCCCGGUGAGUAGGAGGGUCGCGACGGUGA[-                    ]
Ephemera_sp                   ACC??????-??????????????-?-?-?-????????????????-???????-???
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???????????????????????????????????????????????????????????????????????????-???????????????????????????????????????????????-
???????---????????????????-??????????????????????????????????????????????????????????[-          ]
Callibaetis_sp_AY749925       ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-GCC
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UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCCGGUUAAGGCGCCCGAAGCGACGCUCAU-CGGAA-ACCAU--GAAAGGUGUUGGUU-GCUUAAGACAGCAGGA
CGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCGGGCCGUCGG-GGCAGAG- GGCGCGG--
-????----????????-???---CCG-CG-CUGC--GAGGCCCCGACGAGUAGGAGGGUCGCGGCGGUGA[-                    ]
Callibaetis_ferrugineus_AY859557       ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-GCC----GUUGA-----------------
----------------------------??GAGUCCCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGUCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGGGAACCGCGGCUUUUUUGAA C---
----------GUGAAGCCG-CGG-------------------------ACUGC-----------------------------------------------------------GGAUCA
GGCUGCCAAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCCGGUUAAGGCGCCCGAAGCGACGCUCAU-CGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCGGGC CGUCGG-
GGCAGAG-GGCGCGG---????----????????-???---CCG-CG-CUGC--GAGGCCCCGACGAGUAGGAGGGUCGCGGCGGUGA[-                ]
Baetis_sp_AY338652            ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAG-AUA-GCUGGCG-CCC
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-----------------------ACUU-----------------------------------------------------------GGAUCAGGACGCCAAGUGGGCCACUU---
UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCCGGUUAAGGCGCCCGAACCGACGCUCAU-CGGAA-ACCAU--GAAAGGUGUUGGUU-GCUUAAGACAGCAGGA
CGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCGGGCCGUCGG-GGCAGAG- GGCGCGG--
-????????????????-???---CCG-CG-CUGC--GAAGCCCCGACGAGUAGGAGGGUCGCGACGGUGA[-                    ]
Hexagenia_sp_AY125276         ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-UUC----GGAGAU---------------------------
------------------??GAAUCCCAUCCGGUAAAGCGAAUGAUUAGAGGCCGUGGGAUCGAAACGAUUUCAACCUAUUCUCAAACUUUAAAUGGGUGGGAACCGCGGCUUGCUUGAA----------
---AGUGAAGCCG-CGG---------------------------ACCC-----------------------------------------------------------GGAUCAGAGUGCC
CAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCAAAAUCGACGCUCAU-UCGAC-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC
CGCCGGUGGCAGAU-GUCCACC---????????????????-???---GGU-GG-GCGC--CAAGCUCCGGUGAGUAGGAGGGUCGCGACGGUGA[-          ]
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Cloeon   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CCC
???GAG
UCCCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGUCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGAGUGGGAUCCGCGGCUUAUUUGAA-------------CGUGAAGCCG-CGG----
------------------------AUAU---GGAUCAGGGUGCCAAGUGGGCCACUU----
??????????????????-??-??????-??????????????-????????????????
??-??-
???????---????????????????-??[-   ]
Leuc_maculipennis_AY749959   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----AGAGAU---------------------------
------------------??GAGUCCCAUCCGGUAAAGCGAAUGAUUAGAGGCUAUGGGGUCGAAACGAUCUCAACCUAUUCUCAAACUCUAAAUGGGUGGGAUCUGCGGCUUGCUUAAC----------
---GGUGAAGCCG-UGG----------------------------UUAC---GGAUCGGAGUGCC
CAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCCGAAUAAACGCUCAU-GUGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUUUUGCCUAUACCCGCC
CGCCGGUGGCAGAA-GGCGGGU---????----????????-???---ACU-CG-CUGC--GAAGCCCCGGUGAGUAGGAGGGUCGCGACGGUGA[-   ]
Centropt_luteolum_AY749935   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CCC
???GAG
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------------------------UCC--GGAUCAGGGUGCCAAGUGGGCCACUU---
UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCCGGUUAAGGCGCCCGAAGCGACGCUCAU-UGGAA-ACCAU--GAAAGGUGUUGGUU-GCUUAAGACAGCAGGA
CGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCGGGCCGUCGG-GGCAGAA- GGCGGGG--
-????????????????-???---CUC-CG-CUGC--GAAGCCCCGACGAGUAGGAGGGUCGCGACGGUGA[-   ]
Stenonema_sp_AF461223   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-UUC----GGAGAU---------------------------
------------------??GAGUCCCAUCCGGUAAAGCGAAUGAUUAGAGGCCAUGGGGUCGAAACGACCUCAACCUAUUCUCAAACUCUAAAUGGGUGGGAUCCGCGGCUUGUUUGAA----------
---CGUGAAGCCG-CGG--------------------------CUUUGUC--GGAUCGGAGUGCC
CAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCCGAAUAGACGCUCAU-GUGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCUUGCCUAUACCCGGC
CGCCGGCGGCAGAA-GGCGUCC---????????????????-???---GGU-CG-CUGC--GAAGCCCCGGUGAGUAGGAGGGUCGCGACGGUGA[-   ]
Trigoniopthalmus_altern   ACCAUC--G-UAGCUGGUUCCUUC-C-G-A-????????????????-???????-???
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Allomachilis_froggart   ACCAUCUA?-??????????????-?-?-?-????????????????-???????-???
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EF199981_Machilis_hrabei   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----GAGG-----------------------------
---------------?????GAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAAGUCCGGCUUGCUUGAU----------
-----UGAAGCCAUGAC-----------------------------UUUAUUU---GGAUCUGAGCAUC
CAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAAGCGCCCGAAUCGACGCUCAU-GAGAU-CCCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCUCAUACCCGGC
CGCCGGGGCAAUGG-AGACGCA---CG-----------AGU-------UGC-GU-CUU---GAGGCCCCGGUGAGUAGGAGGGUCGCAGCGGUGU[-   ]
Dilta_littoralis_AY859570   ACUAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUA-CUC---AGAGG-----------------------------
------------------??GAAUGUCAUCCGGUAAAGCGAAUGACUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGACGCCCGGCUUCCUUGAA----------
---CCUGAAGCCG-GGC---CCU----------------------CACG---GAAUCUGAGUGCC
CAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAGAGCGCCUAAGUGGACGCGCAUUUUGAU-ACCAUUAGAAAGGGGUUGGUC-

GCUGAAGACAGCAGGACGGUGACCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCGACCAGCCCUGAA-AAUGGAUGGCGCCCGAGCGUUCCGCUCAUACCCGGC CGCCGG-
GGCAG----AG????????????????????????-???????????????????GAGGCCCCGGUGAGUAGGAGGG-CGCGGCGGUGU[-]
Ctenolepisma_longicaudata ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC
???GAG
UCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAAACUCUGCUUGCUUAAC------------GGUGAAGCAG-AGU----
--------------------------ACUUG----UUU--GGAUUGGAGUACCUAGUGGGCCACUU---
UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCUAAAUUGGAGCUCAUUAGGAU-ACCAU--GAAAGGUGUUGGUU-GCUUAAGACAGCAGGA
GGAUGGCCAUGGAAGUCGGAAUUCCCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUCUAGCUUCAUGCCUAUACCCGGCCGUCAC----------
---------UGUA????????????-???????????????????GAAGCAGUGAUGAGUAGGAGGGCCGCGGCGGUGU[-]
Lepisma_sp ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC
???GAG
UCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAAACUCUGCUUGCUUAAA-----------UAGUGAAGCAGGGGU----
----------------------------UUGUG--AC---GGAUCGGAGUACCUAGUGGGCCACUU---
UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCUCAAUCGAAGCUUAUUUUGAU-CCC??--??????????????-????????????????
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???????????????-??????----????????-???[-]
EU376048_Lepisma_saccharina ACCGUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUGUCCCUCAGGACA-GCUGGCG-CUC----GCAAG----------------------------
------------------??GGGUCCAUCCCGGUAAAGCGAAUGACCGGGGGCCUCGGGGCCGAAACGGCCUCGACCCACUCUCAAACUCUGAACGGGAUGGAGGUCCCGCUUGCCCCUA----------
---GGCGAAGCGG-GGC-------------------------CUUUUUCA---GGACCCGAGUGCU
CAGUGGGCCGCUC---CUGGUAAGCAGGACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCUGAAUCGACGCUGC--UC-AA-ACCAU--GAAAGGCGUCGGUU-
GCUCAAGACAGCAGGGCGGUGGCCAUGGAAGUCGGCAUCCGCUAAGGAGUGUGUAACGACUCACCUGCCGAAGCAACCGGCCCUGAA-AAUGGAUGGCAAUCGAGCGUCGUGCCUAUACCCGGC CGCCGC-
???????????????-??????----????????-???[-]
Thermobia_domestica ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC
???GAG
UCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAAACUCUGCUUGCUUAAC??????????????????????????????
?????????-------------????????????-???------------------------------------????????????GGAUCGGAGUACCCAGUGGGCCACUU---
UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCUGGGUUAAGGCGCCUAAAUCGAAGCUUAUUUUGAU-CCCAU--GAAAGGUGUUGGUU-GCUUAAGACAGCAGGA
CGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUCAAGCUUCGUGCCUAUACCCGGCCGUCAC----------
---------UGCA????????????-???????????????????GAAGCAGUGACGAGUAGGAGGGUCGCGGCGGUGA[-]
Tricholepidion_AY338685 ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC
???GAA
UCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUUUGACAUUCAUGAA----------AUGAUGAUGUCAAAUG----
------------------------------UUUUAUAA--GGAUCAGAGUACCAAGUGGGCCACUU---
UUGGUAAGCAGAACUGGCG-CUGUGGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN-NNNNNNNNNNNNN-NNNNNNNNNnCAGGA
CGGUGGCCAUGGAAGUUGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUAAAGCGUCGUGCCUAUACCCGACCGUCAC----------
---------UAUA????????????-???????????????????GAAAUAGUGACGAGUAGGAGGGUCGCGAUGGUGA[-]
Gromph_laevigata_AY210819 ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CCC????GGAG----------------------------
--------------??????GAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAUCUCCGGCUUGCUCGAC----------
-----UGAAGCCGCGAG-----------------------------AGUACU---GGAUCAGGGUGCC
AAGUGGGCCAUUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCUAAACCGGAGCUCAU-GGGAG-ACCAU--GAAAGGCGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUAAAGCUCCGUGCCUAUACCCGGC CGCCGG-
???????-???????-??????----????????-???????????????????GAAGCCCCGGCGAGUAGGAGGG-CGCGGCGGCGU[-]
Isoperla_davisi_AY125288 ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----
GGAG??CAG
UCUCAUCUGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAAAAUCGACUUGCUUAAA----------UGCAUGAAGUCG-AUG----
----------------------GCGCUUAAUUGUGCAC--------------------------GCUAAAGUGG-----------AUGAGCGAGUGCCAAGUGGGCCAUUU---
UUGGUAAGCAGAACUGGUG-CUGUGGGAUGAACCAAACGUCGAGUUAAGGCGCCUAAAACGAUGCUCAU-GGGAU-ACCAU--GAAAGGCGUUGGUU-GCUUAAGACAGCAGGA
CGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUCUAGCAUCGUGCCUAUACUCGACCGUCAC-???????-
???????-??????----????????-???????????????????GAGGCCGUGACGAGUAGGAGGGUCGCGACGGUGU[-]
EU414717_Isoperla ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----
GGAG??CAG

UCUCAUCUGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUUAAUGGGUGAGAAAAUCGACUUGCUUAAA-----------UGUAUGAAGUCG-AUG----
---------------------UGCGCUUAAUUGUGCAC--------------------------GCCAAAGUGG------------AUGAGCGAGUGCCAAGUGGGCCAUUU---
UUGGUAAGCAGAACUGGUG-CUGUGGGAUGAACCAAACGUCGAGUUAAGGCGCCUAAAACGAUGCUCAU-GGGAU-ACCAU--GAAAGGCGUUGGUU-GCUUAAGACAGCAGGA
CGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUCUAGCAUCGUGCCUAUACUCGACCGUCAC-???????-
???????-??????----????????-???????????????????GAAGCCGUGACGAGUAGGAGGGUCGCGACGGUGU[-   ]
AY859546_Gomphocerinae   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC---????-----------------------------
-------------------?GAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAUCUCCGGCUUGCUUGAU----------
-AUGCUGAAGCCGCGAG--CGAACGACUC-----------GGAUCGGAGUGCC
AAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGAGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGCGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACUCGGC CGUCAG-
???????-???????-??????----????????-???????????????????GAAGCCCUGACGAGUAGGAGGGUCGCGGCGGUGG[-   ]
[
[32â€šÃ„Ã´   31aâ€šÃ„Ã´   36   37   38
D4   D5a
D5b   38â€šÃ„Ã´   39   40
41   42   43   44
42â€šÃ„Ã´   41â€šÃ„Ã´   D6
36â€šÃ„Ã´   ]
Ephemerella_sp_AY749918   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GUAUAU--------------------------
------------------ACGAGUCCCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGUCGAAACGAUCUCAACCUAUUCUCAAACUUUAAAUGGGUGGGACCUGCGGCUUGCUUGAA----------
-UUGGUGAAGCCG-CAG--------------------------UCUC---GGAUCGGAGUGCC
CAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCCGAAUAAACGCUCAU-UCGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAAAAAUGGAUGGCGCUGAAGCGUUUUGCCUAUACCCGGC
CGCCGGAGGCAA---AGGGCGC-GCCCCCUCGGGG----------GC-GCG-UCGC-----CAAGCCCCGGUGAGUAGGAGGGUCGCGACGGUGU[-   ]
Paralept_vaciva_AY749922   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----GUUGAA--------------------------
------------------CCGAGUCCCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGUCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGGGAACCGCGGCCUGUUUGAA----------
---CGUGAGGCCG-CGG--------------------------ACCAC--GGAUCGGAGUGCC
CAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCGGGGUUAAGGCGCCCGAAUCGACGCUCAU-UCGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCCGC
CGCCGGCGGCAG---AAGGCGG-GG????----????????-???[-   ]
Anthopotamus_sp_AF461226   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----GGAG-U-------------------------
------------------CUGAGUCCCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGUCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGGGAACCGCGGCUUGCUUGAA----------
---UGUGAAGCCG-CGG--------------------------ACCUU--GGAUCGGAGUGCC
CAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCCGAAUCGACGCUCAU-UCGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC
CGCCGGCGGCAG---AAGGCGC-GC????----????????-???GU-GCG-CCGC-----GAAGCCCCGGUGAGUAGGAGGGUCGCGACGGUGA[-   ]
Caenis_sp_AY338667   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC
???UUGAG
UCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGUCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACCGCGGCUUGCUCGAGUA-----------GUGAAGCCG-CGG----
----------------------AAAA---GGAUCAGAGUGCCUAGUGGGCCAUUU---
UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCUAAAUCGACGCUCAU-GAGAC-ACCAU--GAAAGGUGUUGGUU-GCUUAAGACAGCAGGA
CGGGGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGCCGCCGGCGGCAG--- AAGGCGG-
GC????????????????-???GU-UCG-CUGC-----GAAGCCCCGGUGAGUAGGAGGGUCGCGACGGUGA[-   ]
Ephemera_sp   ACC??????-??????????????-?-?-?-????????????????-???????-???
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Callibaetis_sp_AY749925   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-GCC----GUUGA----------------------------
------------------CCGAGUCCCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGUCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGGGAACCGCGGCUUUUUUGAAC---------
----GUGAAGCCG-CGG-------------------------ACUGC--GGAUCAGGCUGCC
AAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCCGGUUAAGGCGCCCGAAGCGACGCUCAU-CGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCGGGC CGUCGG-
GGCAG---AGGGCGC-GGCCUCGUG------------CC-GCG-CUGC-----GAGGCCCCGACGAGUAGGAGGGUCGCGGCGGUGA[-   ]
Callibaetis_ferrugineus_AY859557   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-GCC----GUUGA------------------
----------------------------CCGAGUCCCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGUCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGGGAACCGCGGCUUUUUUGAA C---
----------GUGAAGCCG-CGG-------------------------ACUGC--GGAUCA
GGCUGCCAAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCCGGUUAAGGCGCCCGAAGCGACGCUCAU-CGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCGGGC CGUCGG-
GGCAG---AGGGCGC-GGCCUCGUG------------CC-GCG-CUGC-----GAGGCCCCGACGAGUAGGAGGGUCGCGGCGGUGA[-   ]
Baetis_sp_AY338652   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAG-AUA-GCUGGCG-CCC----ACGGA---------------------------
------------------CCGAGUCCCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGUCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGGGAUCCGCGGCUUUUUUGAA----------
---CGUGAAGCCG-CGG---------------------------ACUU--GGAUCAGGACGCC
AAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCCGGUUAAGGCGCCCGAACCGACGCUCAU-CGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCGGGC CGUCGG-
GGCAG---AGGGCGC-GGGCAA---------------CC-GCG-CUGC-----GAAGCCCCGACGAGUAGGAGGGUCGCGACGGUGA[-   ]
Hexagenia_sp_AY125276   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-UUC----GGAGAU--------------------------
------------------UCGAAUCCCAUCCGGUAAAGCGAAUGAUUAGAGGCCGUGGGAUCGAAACGAUUUCAACCUAUUCUCAAACUUUAAAUGGGUGGGAACCGCGGCUUGCUUGAA----------
---AGUGAAGCCG-CGG---------------------------ACCC--GGAUCAGAGUGCC
CAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCAAAAUCGACGCUCAU-UCGAC-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCCGGC
CGCCGGUGGCAG---AUGUCCA-CC????????????????-???GG-UGG-GCGC-----CAAGCUCCGGUGAGUAGGAGGGUCGCGACGGUGA[-   ]
Cloeon   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CCC----GCGGGA-----------------------------------
---------CCGAGUCCCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGUCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGAGUGGGAUCCGCGGCUUAUUUGAA-------------C
GUGAAGCCG-CGG---------------------------AUAU--GGAUCAGGGUGCCAAGUGG GCCACUU---
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???????-??????????????????-???[-   ]
Leuc_maculipennis_AY749959   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CUC----AGAGAU--------------------------
------------------UCGAGUCCCAUCCGGUAAAGCGAAUGAUUAGAGGCUAUGGGGUCGAAACGAUCUCAACCUAUUCUCAAACUCUAAAUGGGUGGGAUCUGCGGCUUGCUUAAC----------
---GGUGAAGCCG-UGG---------------------------UUAC--GGAUCGGAGUGCC
CAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCCGAAUAAACGCUCAU-GUGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUUUUGCCUAUACCCGCC
CGCCGGUGGCAG---AAGGCGG-GU????----????????-???AC-UCG-CUGC-----GAAGCCCCGGUGAGUAGGAGGGUCGCGACGGUGA[-   ]
Centropt_luteolum_AY749935   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CCC----GUUGAA--------------------------
------------------CCGAGUCCCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGUCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGGGAUCCGCGGCUUUUUUGAA----------
---CGUGAAGCCG-CGG---------------------------UCC--GGAUCAGGGUGCC
AAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCCGGUUAAGGCGCCCGAAGCGACGCUCAU-UGGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACCGGGC CGUCGG-
GGCAG---AAGGCGG-GGGCAA---------------CU-CCG-CUGC-----GAAGCCCCGACGAGUAGGAGGGUCGCGACGGUGA[-   ]
Stenonema_sp_AF461223   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-UUC----GGAGAU--------------------------
------------------UCGAGUCCCAUCCGGUAAAGCGAAUGAUUAGAGGCCAUGGGGUCGAAACGACCUCAACCUAUUCUCAAACUCUAAAUGGGUGGGAUCCGCGGCUUGUUUGAA----------
---CGUGAAGCCG-CGG-------------------------CUUUGUC--GGAUCGGAGUGCC
CAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCCGAAUAGACGCUCAU-GUGAA-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCUUGCCUAUACCCGGC
CGCCGGCGGCAG---AAGGCGU-CC????????????????-???GG-UCG-CUGC-----GAAGCCCCGGUGAGUAGGAGGGUCGCGACGGUGA[-   ]
Trigoniopthalmus_altern   ACCAUC--G-UAGCUGGUUCCUUC-C-G-A-????????????????-???????-???
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Allomachilis_froggart   ACCAUCUA?-??????????????-?-?-?-????????????????-???????-???
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EF199981_Machilis_hrabei   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----GAGG-----------------------------
---------------AAACGGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAAGUCCGGCUUGCUUGAU----------
-----UGAAGCCAUGAC-----------------------------UUUAUUU---GGAUCUGAGCAUC
CAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAAGCGCCCGAAUCGACGCUCAU-GAGAU-CCCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCUCAUACCCGGC
CGCCGGGGCAAUGG---AGACG-CACG----------AGU----UG-CGU-CUU------GAGGCCCCGGUGAGUAGGAGGGUCGCAGCGGUGU[-   ]
Dilta_littoralis_AY859570   ACUAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUA-CUC----AGAG-----------------------------
-----------------GAGGAAUGUCAUCCGGUAAAGCGAAUGACUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGACGCCCGGCUUCCUUGAA----------
---CCUGAAGCCG-GGC---CCU---------------------CACG---GAAUCUGAGUGCC
CAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAGAGCGCCUAAGUGGACGCGCAUUUUGAU-ACCAUUAGAAAGGGGUUGGUC-
GCUGAAGACAGCAGGACGGUGACCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCGACCAGCCCUGAA-AAUGGAUGGCGCCCGAGCGUUCCGCUCAUACCCGGC CGCCGG-
GGCAG----AG???????????????????????-????????????????????GAGGCCCCGGUGAGUAGGAGGG-CGCGGCGGUGU[-   ]
Ctenolepisma_longicaudata   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC-----AUU-----------------------------
-------ACAUAAUACAAACGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAAACUCUGCUUGCUUAAC----------
---GGUGAAGCAG-AGU------------------------------ACUUG----UUU--GGAUUGGAGUACC
UAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCUAAAUUGGAGCUCAUUAGGAU-ACCAU--GAAAGGUGUUGGUU-
GCUUAAGACAGCAGGAGGAUGGCCAUGGAAGUCGGAAUUCCCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUCUAGCUUCAUGCCUAUACCCGGC CGUCAC---
----------------UGUAGUAGAGGA---------UGCUUAUGCACCGAAUGAAGCAGUGAUGAGUAGGAGGGCCGCGGCGGUGU[-   ]
Lepisma_sp   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC
???ACGAG
UCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAAACUCUGCUUGCUUAAA------------UAGUGAAGCAGGGGU----
----------------------------UUGUG--AC--GGAUCGGAGUACCUAGUGGGCCACUU---
UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCUCAAUCGAAGCUUAUUUUGAU-CCC??--??????????????-????????????????
???-??-
???????????????-??????----????????-???[-   ]
EU376048_Lepisma_saccharina   ACCGUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUGUCCCUCAGGACA-GCUGGCG-CUC----GCAAG----------------------------
------------------GGGGGUCCAUCCCGGUAAAGCGAAUGACCGGGGGCCUCGGGGCCGAAACGGCCUCGACCCACUCUCAAACUCUGAACGGGAUGGAGGUCCCGCUUGCCCCUA----------
---GGCGAAGCGG-GGC-------------------------CUUUUUCA--GGACCCGAGUGCU
CAGUGGGCCGCUC---CUGGUAAGCAGGACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCUGAAUCGACGCUGC--UC-AA-ACCAU--GAAAGGCGUCGGUU-
GCUCAAGACAGCAGGGCGGUGGCCAUGGAAGUCGGCAUCCGCUAAGGAGUGUGUAACGACUCACCUGCCGAAGCAACCGGCCCUGAA-AAUGGAUGGCAAUCGAGCGUCGUGCCUAUACCCGGC
CGCCGCCGCAAUGCUCCUU???-??????----????????-??[-   ]
Thermobia_domestica   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC
??CGAG
UCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAAACUCUGCUUGCUUAAC??????????????????????????????
?????????--------------????????????-???-------------------------------------????????????GGAUCGGAGUACCCAGUGGGCCACUU---
UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCUGGGUUAAGGCGCCUAAAUCGAAGCUUAUUUUGAU-CCCAU--GAAAGGUGUUGGUU-GCUUAAGACAGCAGGA
CGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUCAAGCUUCGUGCCUAUACCCGGCCGUCAC----------
---------UGCA????????????-???????????????????GAAGCAGUGACGAGUAGGAGGGUCGCGGCGGUGA[-   ]
Tricholepidion_AY338685   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUCAUCUAAAUUAAUGAAACUUA-----------------
------------------UUGAAUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAACUUUGACAUUCAUGAA----------

-AUGAUGAUGUCAAAUG----------------------------------UUUUAUAA--GGAUCAGAGUACC
AAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN-NNNNNNNNNNNNN-
NNNNNNNNNNnCAGGACGGUGGCCAUGGAAGUUGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUAAAGCGUCGUGCCUAUACCCGAC CGUCAC---
----------------UAUAAUAUUAAUAAUAUUUAAUUAUUAUAGAUAAGUGAAAUAGUGACGAGUAGGAGGGUCGCGAUGGUGA[-   ]
Gromph_laevigata_AY210819   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGCG-CCCAUUUGGAG-----------------------------
--------------AGGGACGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAUCUCCGGCUUGCUCGAC----------
-----UGAAGCCGCGAG------------------------------AGUACU---GGAUCAGGGUGCC
AAGUGGGCCAUUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGGGUUAAGGCGCCUAAACCGGAGCUCAU-GGGAG-ACCAU--GAAAGGCGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUAAAGCUCCGUGCCUAUACCCGGC
CGCCGGCAGGCAAGGGCAGGUCCUCUUUCCGGAGG--ACCGGCGU----------------GAAGCCCCGGCGAGUAGGAGGG-CGCGGCGGCGU[-   ]
Isoperla_davisi_AY125288   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----
GGAGAUGUAAAUGAGAAACGUGUCGCAGUUGCCUCGCGCAAUGGGCACACUACCAG
UCUCAUCUGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAAAAUCGACUUGCUUAAA-----------UGCAUGAAGUCG-AUG----
----------------------GCGCUUAAUUGUGCAC---------------------------GCUAAAGUGG------------AUGAGCGAGUGCCAAGUGGGCCAUUU---
UUGGUAAGCAGAACUGGUG-CUGUGGGAUGAACCAAACGUCGAGUUAAGGCGCCUAAAACGAUGCUCAU-GGGAU-ACCAU--GAAAGGCGUUGGUU-GCUUAAGACAGCAGGA
CGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUCUAGCAUCGUGCCUAUACUCGAC
CGUCACCGGCAAAGGAGCGUGGCGGCGCUCGCGCGCGACAUGCCU----------GCUCACGAGGCCGUGACGAGUAGGAGGGUCGCGACGGUGU[-   ]
EU414717_Isoperla   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----
GGAGUAUUAAAUGAGAAACGUGUCGCAGUUGCCUCGCGCAAUGGGCACACUACCAG
UCUCAUCUGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUUAAUGGGUGAGAAAAUCGACUUGCUUAAA-----------UGUAUGAAGUCG-AUG----
---------------------UGCGCUUAAUUGUGCAC---------------------------GCCAAAGUGG------------AUGAGCGAGUGCCAAGUGGGCCAUUU---
UUGGUAAGCAGAACUGGUG-CUGUGGGAUGAACCAAACGUCGAGUUAAGGCGCCUAAAACGAUGCUCAU-GGGAU-ACCAU--GAAAGGCGUUGGUU-GCUUAAGACAGCAGGA
CGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUCUAGCAUCGUGCCUAUACUCGAC
CGUCACCGGCAAAGAAGCGUUGGCGGUGCCUCGCGCACGACAUGC--------CUGCUUAAGAAGCCGUGACGAGUAGGAGGGUCGCGACGGUGU[-   ]
AY859546_Gomphocerinae   ACCAUCUAG-UAGCUGGUUCCCUC-C-G-A-AGUUUCCCUCAGGAUA-GCUGGUG-CUC----GUA------------------------------
-------------------CGAGUCUCAUCCGGUAAAGCGAAUGAUUAGAGGCCUUGGGGCCGAAACGACCUCAACCUAUUCUCAAACUUUAAAUGGGUGAGAUCUCCGGCUUGCUUGAU----------
-AUGCUGAAGCCGCGAG---CGAACGACUC------------GGAUCGGAGUGCC
AAGUGGGCCACUU---UUGGUAAGCAGAACUGGCG-CUGUGGGAUGAACCAAACGCCGAGUUAAGGCGCCCGAAUCGACGCUCAU-GGGAA-ACCAU--GAAAGGCGUUGGUU-
GCUUAAGACAGCAGGACGGUGGCCAUGGAAGUCGGAAUCCGCUAAGGAGUGUGUAACAACUCACCUGCCGAAGCAACUAGCCCUGAA-AAUGGAUGGCGCUGAAGCGUCGUGCCUAUACUCGGC
CGUCAGUCUGGCAGUCACGGCCGGUCCUCGCGGCCGGCCGC--------------------GAAGCCCUGACGAGUAGGAGGGUCGCGGCGGUGG[-   ]

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[D7][28sD7 33 13â€šÃ„Ã´
0 B1 B2 XX 1 ZZX Y 2
3 Yâ€šÃ„Ã´ 4 ZZâ€šÃ„Ã´ A 5
6a 6b P W 7 8
9 Wâ€šÃ„Ã´ Pâ€šÃ„Ã´ Aâ€šÃ„Ã´ Xâ€šÃ„Ã´ XXâ€šÃ„Ã´
10 B2â€šÃ„Ã´ 11 B1â€šÃ„Ã´ D8UPbGGUAAGGGAAGUCGGCAA]
[FromFLC
CGAUCCUAAGCCC-UAGGAGAAAUCCGAUACU-AACGG-CGAU-GGGAAACCAGA--AUAAGACG-AGA-
GCCCAUUGAUCGGG-CGAAAGGGAA]
Unaligned   D7-????????????--????????????-???????-??????????????????-?????????--??????????????????????????????????????
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Unaligned_Zygoptera   D7-????????????--????????????-???????-??????????????????-?????????--?????????????????????????????
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??????????????????????-?????????????????[-   ]
Protosticta_sp_A_ZPA   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGUCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------A--
-------UUGAACG----------------------AGA------GAAAG-AGA--CCCGUCGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AAACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGUACCGCA-GUUGCGGCGGU--ACCC-GGGUAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGUUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAggUAA-ggg-AAgUCggCAAAUC Protosticta_curiosa_ZPCs_BPCp
GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC- GGGAAAA---------
-------AUUUG---GAAAA-AUA--CCCGUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGC-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGACUUCCCGACGGACCGUGAA??-??????
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Protosticta_sanguinostigma   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGACGC----------------- ACGAG-----
----------------------------AGA------GACAG-AGA--CCCGUCGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC---
--UGUUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??????????-????????-?????????-??
????????????---?????-????????-???????????????-???????????????????????????????????-?????????????????[-   ]
Sinosticta_ogatai_ZSOg   gcgcagaaggg-uCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAGG------------------
------AAGC--GAA--------------------ACGA------GAGAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAgaauaauguagguaa-ggg-aagucggcaaauc Palaemnema_paulicoba_ZPP
GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAU------------------
---------CAUUA------------------------A------AUUAG-CAA--CCCGUCGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAggUAA-ggg-AAgUCggCAAAUC
Palaemnema_domina_ZPDm   ???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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Palaemnema_melanostigma   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-GACGG-CGAU-GGGAGAG----------------
AAGGAA---------------------------------AG------GAAAG-AGA--CUCGUCGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCAGGAACCUU-GCAGGGG--AACCGC--
---UGUUUGU-UGAGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGCAAUCCUCUCGCAGGGAGAAAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??????????-????????-?????????-??
????????????---?????-????????-???????????????-???????????????????????????????????-?????????????????[-   ]
Isosticta_robustior   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAU---------------

GAACUAA---------------------------------CGA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACC-----??????????-????????-
?????????-??????????????---?????-????????-???????????????-???????????????????????????????????-?????????????????[-   ]
Rhadinosticta   ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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Amphisticta_silvarum_ZAS   gCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGUC-AAUAG-CGAC-GGGAUUU---------------
UACGUUU-----------------------------------C------GAAAG-UGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAgucggcaaauc[-   ]
Labidosticta_vallisi_OLVa   gCgCAgAAggg-UCU--gggCUCgAgCCU-gCCUggA-gCCgCCgCCggUgCAgAU-CUUgg-UggUAgUAgCAAAUACUCCAgCgAggCCCUggAg
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGUC-GAUGG-CGAC-GGGAAAA---------------
AAAUAAAACG---------------------------CACUGA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAgucggcaaauc[-   ]
Orosticta_filicicola_ZOF   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-gccgccgccggugcagau-cuugg-ugguaguagcaaa?????????????????????
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Platycnemis_pennipes_OPPp   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG GACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA----------------A-
UUAAUC--------------------------------UUU------GAAAA-AGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC---
--UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGuaa-ggg-aagucggcaaauc[-   ]
Copera_annulata_OCAn   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG GACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA----------------A-
UUAAUC--------------------------------UGU------GAAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC---
--UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAuguagguaa-ggg-aagucggcaaauc[-   ]
Copera_vittata   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------- ACUGAAUC--------
------------------------UUA------GAAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAA??????????-????????-
?????????-??????????????---?????-????????-???????????????-???????????????????????????????????-?????????????????[-   ]
Copera_marsouipes_ZCM   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
ACUGAAUC--------------------------------UUA------GAAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--

UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-
CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGuaa-ggg-aagucggcaaauc[-   ]
Coeliccia_albicauda_OCAL   gCgCAgAAggg-UCU--gggCUCgAgCCU-gCCUggA-gCCgCCgCCggUgCAgAU-CUUGG-UggUAgUAgCAAAUACUCCAgCgAggCCCUggAg
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
AUUUGAAA-------------------------------ACGA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAauc[-   ]
Coeliccia_cyanomelas   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
AUUUGAAAA------------------------------CGA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??????????-????????-
?????????-??????????????---?????-????????-???????????????-????????????????????????????????????-?????????????????[-   ]
Calicnemia_miles_OCMi   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAUA--------------- AAUUUGAU--------
-----------------------UUGA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAnUn[-   ]
Prodasineura_vitatta_OPV   GUGUAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
GAAUCGA---------------------------------AA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAnUC[-   ]
Chlorocnemis_abboti_ZCAb   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
AUUAUUUUU-------------------------------UU------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-   ]
Nososticta_solida_ZNSo   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
AGAUCGAA-------------------------------CUCA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAnUc[-   ]
Phylloneura_westermanni_BPWGCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAC---------------
AGUACG-AUU------------------------------GA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACC???????-???????-????????-
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Onychargia_atrocyana_ZOA   GCGCAGAAGG--UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAC---------------A--
----UUUUUAAC---------------------------G------CAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACcc-auauccgc-agcaggucuccaagg-ugaagagccucuagucgauagaauaauguagguaa-ggg-aagucggcaaauc

Argia_moesta_OAM GCGCAGAAGGg-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAUU------------------
------UUGAAAAAU--------------------CAUG------UUAAU-UAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC
Argia_nahuana_BAN GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAU------------------
------AUGUUC---------------------------------GAAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACC???????-???????-????????-?????????-??
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GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-UACGG-CGAC-GGGAAAA----------------
AUGA-----------------------------------AA------GAAAU-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC--
---UGUUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-?????????-??
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Agriocnemis_pygmaea_OAP GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-UACGG-CGAC-GGGACGA---------------
AAUCAUUU------------------------------UUGU------AAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGuaa-ggg-aagucggcaaauc[-]
Austroagrion_watsoni_ZAW GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAACCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-UACGG-CGAC-GGGUAGA---------------
AAUUUAUGA-----------------------------AAUGU------GAAAG-AAU--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Archibasis_viola_ZAV ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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Coenagrion_resolutum_JQ966593 GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-UACGG-CGAC- GGGAAUA--------
--------AAGAA--------------------------------UUUGA------GAAAU-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA

ACCCG-GCAGCGG--AACCGC-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG-
-UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-
CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAG??????????-????????????????????????????????????-?????
????????????[-   ]
Pseudagrion_cingillum_OAAL   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------- AUUGAGAA--------
-----------------------AUUA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-   ]
Pseudagrion_aureofrons   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-UACGG-CGAC-GGGAAUU---------------UU- GAAAAU---
-----------------------------UG------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAGCGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-?????????-??
????????????---?????-????????-????????????????-????????????????????????????????????-??????????????????[-   ]
Pseudagrion_ignifer_OPi   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-UACGG-CGAC-GGGAAUU---------------
UUCGAGA----------------------------------CU------GAAUG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACCAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGucggcaaauc[-   ]
Erythromma_najas_1238   ????????????????--?????????????-???????-??????????????????-???
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Cercion_plagiosum_AJ488552   ????????????????--?????????????-???????-??????????????????-???
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Cercion_lindenii_AJ488550   ????????????????--?????????????-???????-??????????????????-???
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Paracercion_hieroglyphicum_AJ488551   ????????????????--?????????????-???????-??????????????????-?????????????????????
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Acanthagrion_quadratum_ZAQ   gcgcagaaggg-ucu--gggcuCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-UACGG-CGAC-GGGAAAA---------------- AUUUGAAA--------
-----------------------GAGA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--

UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-
CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-Aagucggcaaauc[-]
Leptobasis_vacillans_ZLV ???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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Amphiagrion_saucium_OAS gcgcagaaggg-ucu--gggCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-UACGG-CGAC-GGGAAAA---------------- AUUAUUUC--------
----------------------UUGA------GAAAG-UAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGuaa-ggg-aagucggcaaauc[-]
Amphiagrion_abbreviatum GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-UACGG-CGAC-GGGAAUA---------------
AUUUUUCUU--------------------------------GA------GAAUG-UAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
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Xiphiagrion_cyanomelas_ZXC ???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-UACGG-CGAC-GGGAAAA---------------
AUUUUU------------------------------------GA------AAAAU-CAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAA??-???????????????????????????????????-?????????????????[-]
Ischnura_elegans_1239 ???????????????--????????????-???????-??????????????????-??
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Ishnura_barberi GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-UACGG-CGAC-GGGAUUU---------------
UUGAAAAU---------------------------------U------UUUAA-UAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
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Ischnura_graellsi_AJ488545 ???????????????--????????????-???????-??????????????????-??
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Anomalagrion_hastatum_OAH   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-UACGG-CGAC-GGGAAAA---------------- AUUUUU----------
-------------------------GA------AAAAU-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-   ]
Amphiallagma_parvum_AJ420939_   ???????????-???--????????????-???????-??????????????????-?????-???????????????
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Azuragrion_granti_AJ420937_???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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Azuragrion_nigridorsum_AJ420938_   ???????????-???--????????????-???????-??????????????????-?????-???????????????
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Enallagma_cyathigerum_0110   ???????????????--????????????-???????-??????????????????-???
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Enallagma_sp   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-UACGG-CGAC-GGGAAAA----------------
AUACUGAA--------------------------------C------GAAAA-UAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC--
---UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-?????????-??
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E_aspersum_DQ087506   ???????????????--????????????-???????-??????????????????-???
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Aciagrion   ???????????-???--????????????-???????-??????????????????-?????-???
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Aciagrion_borneense_ZAB      ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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                             GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-
UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGU UU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-
CGAC-GGGAAAA---------------
AUU-------------------------------------UG------GAAAA-AUA--CCCGUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGACUUCCCGACGGACCGUGAA??????????-????????-
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Protoneura_cara_ZPC          GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
AUUAAAA---------------------------------UG------GAAAA-AAA--CCCGUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAGCGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGACUUCCCGACGGACCGUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCCAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-                         ]
Psaironeura_remissa_PRN      ???????????????--????????????-???????-??????????????????-?????????????????????????????????????????
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Elattoneura_analis_or_glauca???????????????--????????????-???????-??????????????????-?????????????????????????????????????????
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Neoneura_aaroni_ONA          GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------A--
--UGAAAUUUUUU-------------------------GA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAGCGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGACUUCCCGACGGACCGUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCCAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC
Neaneura_amelia_ZNA          ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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Neoneura_maria               GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAG---------------
AGC-GAAAC---------------------------------------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAGCGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGACUUCCCGACGGACCGUGAA??????????-????????-
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Ceriagrion_aeruginosum_ZCAegcgcagaaggg-ucu--gggcucgagccu-gccugGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAU---------------
GAAUAG-----------------------------------AG------UAAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
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----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUaa-ggg-aagucggcaaauc[-   ]
Telebasis_salva_ZTS   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCAUAAGCCC-UAGGAGAAAUC-------C-AACGG-CGAC-GGGAAUC------------------
--GGA-AAUGAG--------------------------A------GAAAA-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCc-
uggaauccUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GCUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-?????????-??
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GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
AAUUCAGAAUC-----------------------------GA------GAAAG-CAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCA???????????-?????????????????????????????????????-???-????????????? Metaleptobasis_manicaria_ZMMr
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Diceratobasis_sp_A_ZDA   gCgCAgAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAC------------------
-UUGA-AA-----------------------------------AAAAU-UGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAgUCggCAAAUC FJ596559_Pyrrhosoma_nymphula
GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC- GGGAAAU---------
-------AUGAAAGUAC-----------------------------GA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GUAGCGG--
AACCGC-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCACCGGAUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-   ]
Chromagrion_conditum_OCCn   gCgCAgAAgGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA------------------
--UGA-AAGUACG-------------------------A------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAgUCggCAAAUC Teinobasis_alluaudi_ZTA2
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                            GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAUA---------------
AUUUGAAA--------------------------------GA------GAAAA-ACA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-                         ]
Coryphagrion_grandis_ZCG    ???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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Microstigma_rotundatum_OMRtGCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA----------------
ACGAACGAAC------------------------------------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC--
---UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCAGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAgUCggCAAAUC
Microstigma_anomalum        GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------- ACGAACGA-------
--------------------------------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC--
---UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCAGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??????????-????????-?????????-??
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Mecistogaster_ornata_ZMO_BMLGCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------A--
-UGAA-ACA----------------------------GA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC
Mecistogaster_linearis      GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------A--
-UGAA-A------------------------------GA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??????????-????????-?????????-??
????????????---?????-????????-???????????????-????????????????????????????????????-?????????????????[-              ]
Megaloprepus_coerulatus_ZMCGCGCAGAAGGG-UCU--GGGCUcgagccu-gccugga-gccgccgccggugcagau-cuugg-ugguaguagcaaa????????????????????
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Haplostigma_modesta_ZHM     gcgcagaaggg-ucc--gggcucgagccu-gccugga-gccgccgccggugcagau-cuugG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
AACGAACGA-------------------------------AU------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-                         ]
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Pseudostigma_aberrans_OPA GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------- AACGAAC---------
--------------------GAUUGA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAnUC[-]
Rhinagrion_mima_ZRM gCgCAgAAggg-UCU--gggCUCgAgCCU-gCCUggA-gCCgCCgCCggUgCAgAU-CUUgg-UggUAgUAgCAAAUACUCCAgCgAggCCCUggAg
gACUgAUgUggAgAAgggUUU-CgUgUgAACAgCCgUUgCACACgAgUCA-gUCgAUCCUAAgCCC-UAggAgAAAUCCgA-UACC-AACGG-CGAC-GGGAAAA---------------A--
--UUA-AUGUCAG--------------------------------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCggAACCCg-gCAgCgg--AACCgC----
-UgUUUgU-CgggCCCUC---ACAAggg
gUUCgUCAgggUAACCUAAAAgggCCCgg-AgACgCCgU-CgggAgCCCCggAAAgAgUUUU-CUUUUCUgCAUgAgCg--UUCgAgUUCCC-UggAAUCCUCUCgCAgggAgAUAgggU-
UUggAACgCgAA-gAgCACCgCA-gUUgCggCggU--gCCC-gggAAUUCCCgACggACCUUgAAAA-UCCgggA-gAgggCCA-CgUggAggU-gUCgCgCCggCUCg---UACCC- AUAUCCgC-
AgCAggUCUCCAAgg-UgAAgAgCCUCUAgUCgAUAgAAUAAUgUAggUAA-ggg-AAgUCggCAAAUC
Sciotropis_cyclanthorum_BSCGCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA------------------
-GUGA-AAAUUC------------------------AAA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGCCGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAA??-???????-????????-?????????-??
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GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------A--
-CUGA-UCGAAA---------------------------------GAAAG-AGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-?????????-??
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Heteragrion_sp GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------- ACUGAUCG--------
-----------------------AAA------GAAAG-AGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
?????????-??????????????---?????-????????-???????????????-???????????????????????????????????-?????????????????[-]
Oxystigma_cyanifrons_ZOC gcgcagaaggg-ucu--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------AA-
-UUUU-UCUGA----------------------------------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAAAGGG-AAGUCGGCAAAUC
Dimeragrion_percubitale_ZDPgcgcagAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------A--
-UUGA-GAGAAAC-----------------------AAAA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGCCGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC Tatocnemis_malgassica_ZTMa
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GCGCAAAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-
UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGU UU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-
CGAC-GGGACUU----------------

GACUUGAA---------------------------------AC------GAAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
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Philogenia_terraba_ZPBn_ZPT???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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Philogenia_ZPBn   gcgcaaaaggg-uCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGACUU---------------- GACUUGAA--------
-------------------------AC------GAAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGagcg--
uucgaguuccc-uggaauccucucgcagggagauagggu-uuggaacgcgaa-gagcaccgca-guugcggcggu--gccc-gggaauucccgacggaccuugaaaa-uccggga-gagggcca-
cguggaggu-gucgcgccggcucg---uaccc-auauccgc-agcaggucuccaagg-ugaacagccucuagucgauagaauaauguagguaa-ggg-aagucggcaaauc
Teinopodagrion_venale_ZMV_BTV   gCgCAgAAggg-UCU--gggCUCgAgCCU-gCCUggA-gCCgCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCA-AACGG-CGAC- GGGAAGU---------
-----------GUGA-A---------------------------------------GAGAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCUGCGG--
AACCGC-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAggUAA-ggg-AAgUCggCAAAUC Teinopodagrion_lepidum_ZTL
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Amanipodagrion_gilliesi_ZAGgCgCAgAAGGG-UCU--GCGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAACA------------------
---GA-CGAUUUG---------------------------------GAAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAggUAA-ggg-AAgUCggCAAAUC Nesolestes_elizabethae_ZNE
gcgcagAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAU------------------
-UUGA-ACU---------------------------------------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAauc
Protolestes_kerckhoffae_ZPKcGCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAGAG------------------
--AAA-AUGUAC---------------------------------GAAAU-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC
Argiolestes_ochrostomas_ZAOcgcgcagAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------A--
-UUGA-AUGA------------------------------------GAAAA-UAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-

UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC
Argiolestes_sidonia   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAGAA---------------U--
--UGAA------------------------------UGA------GAAAA-UAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-?????????-??
????????????---?????-????????-???????????????-???????????????????????????????????-?????????????????[-   ]
Caledopteryx_maculata   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------A-- UUUGAA---
---------------------------ACA------GGAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUG????-???????-????????-?????????-??
????????????---?????-????????-???????????????-???????????????????????????????????-?????????????????[-   ]
Trineuragrion_percostale_BTPGCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------A--
-AAGA-GA-------------------------------------GAAAG-GAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUU?GUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACC???????-???????-????????-?????????-??
????????????---?????-????????-???????????????-???????????????????????????????????-???-????????????? Caledargiolestes_uniseries
GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG GACU
GACGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAUGU------------------
AAUGAA---------------------------------A------GAUGA-CGA--CCCGUCGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC---
--UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-?????????-??
????????????---?????-????????-???????????????-???????????????????????????????????-?????????????????[-   ]
Podopteryx_roseonotata_ZPR   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG GACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------A-
UUUUGA-UCGA-------------------------------------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC---
--UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC Austroargiolestes_icteromelas_OAIc
GCGCAGAAGGg-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC- GGGAAAA---------
-------AUUGAGAA------------------------------AUUA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGC-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC Griseargiolestes_albescens
GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAGAA--------------- AUUUUGAA----
---------------------------AGA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAAUUCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGC???---?????-????????-???????????????-?????????????????????????????????????-?????????????????[-   ]
Grisagriolestes_eboracus_ZGE_BGA   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC- GGGAGAA---------
-------A-UUUUGA-AAGA-----------------------------------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGC-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCgU-CgggAgCCCCggAAAgAgUUUU-CUUUU CUgCAUgAgCg--UUCgAgUUCCC-
UggAAUCCUCUCgCAgggAgAUAgggU-UUggAACgCgAA-gAgCACCgCA-gUUgCggCggU--gCCC-gggAAUUCCCgACggACCUUgAAAA-UCCggg A-gAgggCCA-CgUggAggU-
gUCgCgCCggCUCg---UACCC-AUAUCCgC-AgCAggUCUCCAAgg-UgAAgAgCCUCUAgUCgAUAgAAUAAUgUAggUAA-ggg-AAgUCggCAAAUC

Miniargiolestes_minimus_ZMMn2 gcgCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-GACGG-CGAC- GGGAAAA---------
-------U-UUUUAC-GAGA-----------------------------------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGC-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC Lestomima_flavostigma_OPBc3[?]
gCgCAgAAggg-UCU--gggCUCgAgCCU-gCCUggA-gCCgCCgCCggUgCAgAU-CUUgg-UggUAgUAgCAAAUA
CUCCAgCgAggCCCUggAggACUgAUgUggAgAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC- GGGAAAA---------
-------A-UUCUAC-UUUUA----------------------------------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCggA AC CCg-gCAgCgg--
AACCgC-----UgUUUgU-CgggCCCUC---ACAAggggUUCgUCAgggUAACCUAAAAgggCCCgg-AgACgCCgU-CgggAgCCCCggAAAgAgUUUU-CUUUU CUgCAUgAgCg--UUCgAgUUCCC-
UggAAUCCUCUCgCAgggAgAUAgggU-UUggAACgCgAA-gAgCACCgCA-gUUgCggCggU--gCCC-gggAAUUCCCgACggACCUUgAAAA-UCCggg A-gAgggCCA-CgUggAggU-
gUCgCgCCggCUCg---UACCC-AUAUCCgC-AgCAggUCUCCAAgg-UgAAgAgCCUCUAgUCgAUAgAAUAAUgUAggUAA-ggg-AAgUCggCAAAUC Rhipidolestes_hiraoi_ORH
gCgCAgAAGGG-UCU--GCGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------- AUUGAAAC----
----------------------------CAU------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Rhipidolestes_aculeata GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA----------------A-- UUGAAAC--
----------------------------CAC------GAAAU-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-?????????-??
????????????---?????-????????-???????????????-????????????????????????????????????-?????????????????[-]
Paraphlebia_zoe_OPZ gCgCAgAAggG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA-------------------
-CUGA-AUUCAUU---------------------------------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAgUCggCAAAUC
Thaumatoneura_inopinata_OTI3GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAG----------------A--
-AUGA-AAAAAU--------------------------AC------GAAAG-ACA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUCU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC
Hypolestes_clara_OHC GCGCAGAAGGg-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAUU-------------------
---GACAAUUGUUUU-----------------------GA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCUGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUGGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGg-AAGUCGGCAAAUC
Hypolestes_sp GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGCAUU-------------------
---GACAAUUGUUUU-----------------------GA------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCUGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUGGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGAU--GCCC-GGGAAUUCCCGACGGA?????????-???????-????????-?????????-??
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Agriomorpha_fusca_ZAF6 gcGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA----------------A--
-UUAA--AAAAG-UGG--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----

-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAAAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC Sinocnemis_yangbingi_ZSY
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GCGCAGAAGGG-UCG--GGGCUUGAGCCU-GCCUGgA-gccgccgccggugcAgAu-cuugg-ug?????????????????????????????????
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Cora_marina_OCMr gCGCAGAAGGG-UCG--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------A--
-UUAA-AAAAUUU---------------------------------GAAAG-AAG--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACUCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC
Cora_cyane_BCC GCGCAGAAGGG-UCG--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------A--
-UUGA-AACAUG----------------------------------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACUCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACC???????-???????-????????-?????????-??
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Polythore_boliviana GCGCAGAAGGG-UCG--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
AUUGAAAAUU--------------------------------G------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACUCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
?????????-??????????????---?????-????????-???????????????-?????????????????????????????????????-?????????????????[-]
Euthore_fasciata_ZEF3_BEFs GCGCAGAAGGG-UCG--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------A--
-CUGA-AAAUUG----------------------------------GAAAA-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACUCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACC???????-???????-????????-?????????-??
????????????---?????-????????-???????????????-?????????????????????????????????????-???-?????????????Rimanella_arcana_ORA
GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------A--
--UUA-UUUCAC----------------------------------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGAAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC

Pentaphlebia_stahli_OPSt   gCgCAgAAggG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA----------------C--
--UGA-AUUCAUU--------------------------------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAgUCggCAAAUC Devadatta_podolestoides
GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAG-------------------
---AA-------------------------------ACG------AAAUG-CAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG
--UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAGCGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
?????????-??????????????---?????-????????-???????????????-???????????????????????????????????-?????????????????[-   ]
Amphipteryx_longicaudata_ZAL5   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC- GGGAAAA---------
-------A---UUUU-UCAUU----------------------------------CAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGC-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC
Pseudolestes_mirabilis_OPMbgcgcanaaggg-UCU--GGGCUCGAGCCU-GCCCGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGACGA---------------- AGGAAUUU----
--------------------------AA------GACAUUU-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-   ]
Philoganga_vetusta   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAC----------------
UGAAAAAAUUUUUCG--------------------------A------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
?????????-??????????????---?????-????????-???????????? ???-???????????????????????????????????-?????????????????[-   ]
Philoganga_robusta   ???????????????--????????????-???????-??????????????????-??
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Lestoidea_conjuncta_ZLC   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAUU----------------
UUUGAAUA-------------------------------UCU------GAAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCggcaaauc[-   ]
Diphlebia_lestoides_ZDL   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGa-gccgccgccggugcagau-cuugg-ugguaguagcaaauacuccagcgaggcccuggag
gacugauguggagaaggguuu-cgugugaacagccguugcacacgaguca-gucgauccuaagccc-uaggagaaauccga-cgcc-aacgg-cgac-gggaaaa----------------
aacaaaucu----------------------------cuuga------gaaaa-cga--cccguugaucggg-cgaaagg-gaauccgg--uuc-cuauuccggaacccg-gcagcgg--aaccgc-
----uguuugu-cggcccuc---aaaaggggguucgucaggguaaccuaaaagggcccgg-agacgccgu-cgggagccccggaaagaguuuu-cuuuucugcaugagcg-- uucgaguuccc-
uggaauccuCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGgcaaauc[-   ]
Diphlebia_coerlescens_ODC   gCgCAgAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA-------------------
-AUGA-AAUCUAU-----------------------UGA------GAAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----

-UGUUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACgCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCggCAAAUC Bayadera_melanopteryx_ZBM
GCGCAGaaggg-ucu--gggCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
AUUCAAUUU------------------------------UUG------GAAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGuaa-ggg-aagucggcaaauc[-]
Bayadera_brevicauda GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
AUUCAAUUUUUUU----------------------------A------GAAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
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Dysphaea_gloriosa_ODG GCGCAGAAGGg-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAC---------------
AAAUCGAG----------------------------------A------GAAAA-UCA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Euphaea_formosa_BEFm GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
AUUUAUUCACA------------------------------U------GAAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
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Anisophaea_decorata_ZAD_OEDGCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
AUCUUAUCU----------------------------UUAU------GAAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGuaa-ggg-aagucggcaaauc[-]
Anisopleura_sp_A_ZAA GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGUC-GACGG-CGAC-GGGAAAA---------------
AUAUCUUUU---------------------------------G------GAAAA-UCA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-aagucggcaaauC[-]
Disparocypha_biedermanni_ZDB???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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Libellago_semiopaca GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------- AAUAACUUU-------
-------------------------A------GAAAA-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
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Heliocypha_biseriata GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------- AACGAAAGAG------
--------------------------C------GAAUG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
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Platycypha_caligata_OPC GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
UUGAAAAC---------------------------------A------GAAAA-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Chlorocypha_curta_CHL ???????????????--????????????-???????-??????????????????-??
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Sundacypha_petiolata_CHL ???????????????--????????????-???????-??????????????????-??
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Rhinocypha_fenestrella_ORF GCGCAGAAGGg-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------A--
-ACGA-AGG----------------------------AGA------GAAUG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC
Rhinocypha_tincta GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGACUA---------------- ACGAUACUG-------
--------------------------A------GAAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
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Heliocharis_amazona_ZHAz3 GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUUGA-GCCGCCGUCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGACGA---------------
GAGAGAGAA-------------------------------AG------UGAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC--------GGGUUCGUCAGGGUAACCUAAAUGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Hetaerina_americana_OHA2 GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGUCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-AGCU-AACGG-CGAU-AGAAAAA---------------
AUUUUCAUA-------------------------------AG------CAAAA-UGA--UCCAUCGGUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGAGCCCGG-AGACGUCGU-CGGGAGCCACGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GUGAUUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGUCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Calaphaea_confusa_ZCC gcgcagaaggg-ucu--gggcucgagccu-gccugga-gccgccgccggugcagau-cuugg-ugguaguagcaaauacuccagcgaggcCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
AUUUUCAUA--------------------------------G------CAAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-

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----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAgucggcaaauC[-                    ]
Noguchiphaea_yoshikoae       ???????????????--????????????-???????-??????????????????-????????????????????????????????????????
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Vestalis_beryllae            GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
AUAUCGAGA--------------------------------G------CGAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
?????????-??????????????---?????-????????-???????????????-???????????????????????????????????-?????????????????[-                    ]
Matrona_basilaris            GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
AUUUUCAAA--------------------------------A------CGAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
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FJ596560_Atrocalopteryx_atrata          GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC- GGGAAAA---------
-------AUUUUCAUA--------------------------------A------CGAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGC-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-    ]
Echo_modesta                 GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA--------------- AUUUAAAUGAGA----
--------------------------G------CGAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
?????????-??????????????---?????-????????-???????????????-???????????????????????????????????-?????????????????[-                    ]
Neurobasis_ianthinipennis    GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCUCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
AUUUAAUGA--------------------------------G------CGAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
?????????-??????????????---?????-????????-???????????????-???????????????????????????????????-?????????????????[-                    ]
Sapho_orichalcea_OSO         gcgcAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA---------------
AUUUUCAAA-----------------------------GAG------CGAAA-CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCggcaaauc[-                    ]
Calopteryx_amata_OCAm_BCS          ???????????-???--????????????-???????-??????????????????-?????-???????????????
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DCS_Calopteryx_splendens   ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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Calopteryx_aequabilis   GUGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUG??-??????????????????-???
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Iridictyon   ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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????????????---?????-????????-???????????????-???????????????????????????????????-???-????????????? Iridictyon_trebbaui_ZIT
GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC-GGGAAAA------------------
-AUUU-UGAG---------------------------AGC------GAAG--CGA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-   ]
Unaligned_lestoid   D7-????????????--????????????-???????-??????????????????-?????????--?????????????????????????????
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Nubiolestes_diotima_OND   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU-GGGACGA---------------
AACAAACUC---------------------------ACGAGA------GAAAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---CCAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAgucggcaaauc[-   ]
Perilestes_kahli_ZPK2_BPK   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU-GGGACGA---------------
ACGAAAA--------------------------------AGA------GAAAA-AAA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
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Perissolestes_remotus   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU-GGGAAAA---------------
AAAAAU--------------------------------AC--------GAAAA-CGU--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
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Perissolestes_magellenae   ???????????????--????????????-???????-??????????????????-??
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Chlorolestes_umbrata   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU-GGGACGA---------------
AACAAACUC-----------------------------ACGA------GAAAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCC
GGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-
GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGA
UAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-   ]
Euchlorolestes_tessellata   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU-GGGACGA--------------- AACAAACUC---
--------------------------ACGA------GAAUA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-   ]
Phylolestes_ethelae   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU-GGGACGA---------------
ACGAAAA-------------------------------ACG-------GAAAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAGCGCAAA-GAGCACCGCA-GUUGCGGCGGA--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAuC[-   ]
Synlestes_weyersii   GCGCAGAAGGg-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU-GGGACGA---------------
ACGAAAUUU----------------------------CAAUA------GAAAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-   ]
Synlestes_tropicus   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-ACCUGGA-gccgccgccggugcagau-cuugn-ngguaguagcaaa?????????????????????
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Chorismagrion_risi   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU-GGGACGA---------------
ACGAAUUUC-----------------------------ACGA------GAAAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGcggcggu--gCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGuaa-ggg-aagucggcaaauc[-   ]
Episynlestes_cristatus   GCGCAGAAGGGGUCU--GGGCUCGAGCCU-ACCUGGA-gccgccgccggugcagau-cuugg-ugguaguagcaaauacuccagcgaggcccuggag
gacugauguggagaaggguuu-cgugugaacagccguugcacacgaguca-gucgauccuaagccc-uaggagaaauccga-uacc-aacgg-cgau-gggacga-------------- aucgaacuuu-
-------------------------------------gaaaa-cag--cccauugaucggg-cgaaagg-gaauccgg--uuc-cuauuccggaacccg-gcagcgg-- aaccgc-----uguuugu-
cgggcccuc---acaagggguucgucaggguaaccuaaaagggcccgg-agacgccgu-cgggagccccggaaagaguuuu-cuuuucugcaugagcg-- uucgaguuccc-
uggaauccucucgcagggagauagggu-uuggaacgcgaa-gagcaccgca-guugcggcggu--gccc-gggaauucccgacggaccuugaaaa-uccggga-gagggcca- cguguagGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-   ]
Episynlestes_albicauda   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU-GGGACGA---------------

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ACGAAUUU------------------------------AUUAU-----GAUAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
?????????-??????????????---?????-????????-???????????????-???????????????????????????????????-?????????????????[-              ]
Megalestes_micans           GCGCAGAAGGG-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGACGA---------------
ACGAAAUUU-----------------------------CACGA-----GAAAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGu--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-              ]
Megalestes_kurahashii       ???????????????--????????????-???????-??????????????????-????????????????????????????????????????
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Orolestes_octomaculatus     GCGCAGAAGGG-UCU--GGGCUCGAGCCU-ACcugGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU-GGGACGA---------------
AGUAAC--------------------------------GAGA-----GAAAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCAAA-GAGCACCGCA-GUUGCGGCGGu--gccc-gggaauucccgacggaccuugaaaa-uccggga-gagggcca- cguggaggu-
gucgcgccggcucg---uaccc-auauccgc-agcaggucuccaagg-ugaagagccucuagucgauagaauaauguagguaa-ggg-aagucggcaaauc[-              ]
Austrolestes_annulosus      GCGCAGAAGGG-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU-GGGACGA---------------
AAGAAC--------------------------------CAAA-----GAAAA-UAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCAAA-GAGCACCGCA-GUUGCGGCGGA--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
?????????-??????????????---?????-????????-???????????????-???????????????????????????????????-?????????????????[-              ]
Sympecma_paedisca           GCGCAGAAGGG-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGACGA---------------
AAGAAC--------------------------------GAAA-----GAAAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCAAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
?????????-??????????????---?????-????????-???????????????-???????????????????????????????????-?????????????????[-              ]
Sympecma_fusca_ZSF          GCGCAGAAGGG-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGACGA---------------
AAGAAC--------------------------------GAAA-----GAAAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCAAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-              ]
Austrolestes_analis_OAAn    GCGCAGAAGGg-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCUUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU-GGGACGA---------------
AAGAACG-------------------------------AAAG-----gAAAC-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCAAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-              ]
Indolestes_pergrinus_OIP    GCGCAGAAGGG-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU-GGGACGA---------------
ACGAAUUC------------------------------GAAA-----GAAAA-CAA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--
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UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCAAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-
CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Indolestes_cyanea ???????????????--????????????-???????-??????????????????-??
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Chalcolestes_viridis_ZCV GCGCAGAAGGG-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGugcagau-cuu??-????????????????????????????????????
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Archilestes_grandis_OAG GCGCAGAAGGg-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGACGA---------------
AAGAACGA------------------------------ACG-------GAAAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCAAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Lestes_rectangularis_OLR GCGCAGANGGG-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGACGA---------------
AAGAAAGA------------------------------ACG-------GAAAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAGCGCAAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Lestes_eurinus GCGCAGAAGGG-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGACGA---------------
AAGAAAGA------------------------------ACG-------GAAAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAGCGCAAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGUUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Hemiphlebia_mirabilis_OHM GCGCAGAAGGg-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UAGC-AACGG-UGAU-GGAAAGA------------------
------UUUUC----------------------------------GAAAA-ACG--UCCAUCGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAGCGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCU-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Unaligned_Anisoptera D7-?????????????--????????????-???????-??????????????????-?????????--?????????????????????????????
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Epiophlebia_superstes_OES GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAU---------------- ACUU-----UUUUCU-
-------------------------GA------GACGG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]

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Epiophlebia_laidlawi_JQ943594          GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCU?????????????????????????-???????????CCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU- GGGAAAU---------
-------ACUU-----UUUUCU-------------------------GA------GACGG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGA???-????????-???????????--????-?????????????????????????-??????
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Unaligned_Aeshnoid          D7-????????????--????????????-???????-??????????????????-?????????--??????????????????????????????
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Archipetia_auriculata        GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAC---------------- CAGAAAAC--------
-------------------------GA------GACGA-GAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--Gccc-gggaauucccgacggaccuugaaaa-uccggga-gagggcca- cguggaggu-
gucgcgccggcucg---uaccc-auauccgc-agcaggucuccaagg-ugaagagccnnnnnnnnnnnnnnnnnnnnngguaa-ggg-aagucggcaaauC[-                          ]
Austropetalia_victoria       GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAC---------------
CAAAACC---------------------------------GA------GACGA-GAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACnCCGU-CnGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUagguaa-ggggaagucggcaaauc[-                          ]
Hypopetalia_pestilens        GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UUCU-AACGG-CGAU-GGGAAAC---------------
CAGAAUG----------------------------------A------GACGA-GAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUNUNGUCNAUNGANUANUGUNGGNAA-GGN-NNNUCGNCNAANN[-                          ]
A_FJ596639_Phyllopetalia_apicalis     GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU- GGGAAAC---------
-------CAGAAU----------------------------------AA------GACGA-GAG--CC-AUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCA--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAAUGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-    ]
A_EU055322_Phyllopetalia_apollo       GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU- GGGAAAC---------
-------CAGAAU----------------------------------AA------GACGA-GAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCA--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAAUGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA---------
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Eurypetalia_altarensis       ???????????????--????????????-???????-??????????????????-?????????????????????????????????????????
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Ophiopetalia_diana GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAC---------------
CAGAAUA----------------------------------A------GACGA-GAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCA-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAAUGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAnUC[-]
Gomphaeschna_furcilata GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGACGA---------------
AAUUUAA--GAAAA-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----AGUUUGU-CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCAAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCCAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Oligoaeschna_pryeri ???????????-???--????????????-???????-???????????????????-?????-???????????????????????????????????
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Austroaeschna_parvistigma GCGCAGAAGGG-UCU--GGGCUCGAGCCu-gccugga-gccgccgccagugcagau-cuugn-ugguaruarcaaa?????????????????????
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???????-------------------------------cuag-----ugugag--ag--cccauugaucggg-cgaaagg-gaauccgg--uuc-cuauuccggaacccg-gcagcgg--aaccgu-
----aguuugu-cgggccuuc--------ggguucgucaggguaaccuaaaagggcccgg-agacgccgu-cgggaGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--nCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-gagggcca- cguguaggu-
gucgcgccggcucg---uaccc-auauccgc-agcaggucuccaagg-ugaagagccucuaguccauagaauaau????????-?????????????????[-]
Telephlebia_tillyardi GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAGAA---------------
UCGACC--------------------------------GAA------GAGAG-CGG--UCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----AGUUUGU-CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAAGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCCAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Boyeria_vinosa_OBV GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAGAA---------------
ACGAAAC------------------------------GAAA------GUCAA-UAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----AGUUUGU-CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAAGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCCAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
FJ596627_Boyeria_irene GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAUGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAA---------------
AUUAACCA--------------------------------AG------UAAAG-CGG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----AGUUUGU-CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCCAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
EU424323_Brachytron_pratenseGCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAA---------------
ACAUAUUUU----------------------------UUUGA------GAAAA-CGG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----AGUUUGU-CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCCAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]

Epiaeschna_heros GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAA---------------- AUUUAUU---------
-----------------------GUAA------GAAAA-CGG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----AGUUUGU-CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCCAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
FJ596626_Caliaeschna_microstigma GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCCCUAGGAGAAAUCCGAAUACUUAACGG-CGAU- GGGAGAA---------
-------ACGAAUG---------------------------------AA------GUAAG-AGG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----AGUUUGU-CGGGCCUUC--------GGGUUCGUCAGGGUUACCUAUAUGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCCAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
FJ596628_Anaciaeschna_isoceles GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAUUCUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUUUCGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAUGAGAAAUCCGA-UACU-AACGG-CGAU- GGGAGAA--------
--------AUUAAC------------------------------UCAAG-----UUGAA--CGG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA ACCCG-GCAGCGG--
AACCGU-----AGUUUGU-CGGGCCCUC---NNAAGGGGUUCGUCAG
GGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCC--GUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-
GAGCACCGCACGUCGCGGCGGU--GCCC-GGGAAUYCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGU CUCC AAGG-
UGAAGAGCCUCUAGUCCAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
A_GQ118298_Oplonaesch GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAUGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAA---------------- AAGAACA---------
-----------------UUUUGCGAAG------UGAAG-CGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----AGUUUGU-CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCCAUAAAAUNNNNNNNNNNN-NNN-NNNNNNNNNNNNN[-]
Aeshna_canadensis GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUgga-gccgccgccggugcagau-cuugg-ugguaguagcaaa?????????????????????
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A_EU055242_Rhionaeschna_multicolor GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAUGAGAAAUCCGA-UACU-AACGG-CGAU- GGGAGAA---------
---------AUUUC----------------------------UUUUG--------UAAAG-CGG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----AGUUUGU-CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUU---
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Aeshna_cyanea_1203 NNNNNNNNNNNNNNN--NNNNNNNNNNNN-NNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
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---NN-----------NNNNNNNNNNN------NNNNN-NNN--NNNNNNNN-NNNN-NNNNNNN-NNNNNNNN--NNN-NNNNNNNNNNNNNNN-NNNNNNN--NNNNNN-
----NNNNNNN-NNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNN--NNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNNNN-
NNNNNNNNN-NNNNNNNNNNNNNN---NNNNN-NNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNN---------------------------------------[-]
FJ596630_Aeshna_grandis GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAUGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAA----------------
AUCAA--------------------------------ACGA-G------UAAAG-CGG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----AGUUUGU-CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGUACGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCCAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]

FJ712316_Gynacantha_japonica_or_bullata GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAUGAGAAAUCCGA-UACU-AACGG-CGAU- GGGAAAA---------
---------ACGAA----------------------------ACUGAAU------GAAAA-CGG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----AGUUUGU-CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCCAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
Austrogynacantha_heterogen GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAUGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAA----------------AU-
-UUA-----------------------------UUUCAAA------GAUAA-CGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU----
-AGUUUGU-CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-?????????-??
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Hemianax_ephippiger ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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Anax_junius_OAJ GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAUGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAA----------------
AAGAACAUU--------------------------UUGCGAAG------UGAAG-CGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----AGUUUGU-CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCCAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAUAUC[-]
FJ596632_Anax_imperator GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAUGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAA----------------
AAGAACAUUU-------------------------UACGAAG------UGAAG-CGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----AGUUUGU-CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCCAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Unaligned_Gomphid D7-????????????--????????????-???????-??????????????????-?????????--??????????????????????????????
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Sinogomphidia_kruegeri GCGCAgaaggg-ucu--gggcuugagccu-gccugga-gccgccgccggugcagau-cuugg-ugguaguagcaaauacuccagcgaggcccuggaggacu
gaugUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAC----------------
UGAAAUUUAUUUUGAUA-------------UGCAAAUAUACAA------GAUGG-AAG--CCCAUUGAUUGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUucca-
uggaauccucucgcagggagauauggu-uuggaacgcgaa-gagcaccgca-guugcggcggu--gccc-gggauuucccgacggaccuugaaaa-uccggga-gagggcca- cgcggaggu-
gucgcgccggcucg---uaccc-auauccgc-agcaggucuccaagg-ugaagagccucuagucgauagaauaauguagguaa-gng-ragucgncaanuc[-]
A_EU055258_Ictinogomphus_australis GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAAAAAUCCGA-UACU-AACGG-CGAU- GGGAAAC---------
-------UGAAAU--------------------------UAUGAU--AA------GAUGG-AAG--CCCAUUGAUUGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGAC-------------------
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Ictinogomphus_sp ???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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FJ712322_Onychogomphus_sp_mistake GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGUCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU- GGGAAAC---------
-------UGAAAUAAAUGAAUAAAUAUAUUUAUAUAUAUACAUAAUGAAA------GAUGG-AAG--CCCAUUGAUUGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
Phyllogomphoides_stigmatus_APS GCGCAGAAGGG-UCU--GGGCUCGAGCCu-gccugga-gccgccgccggugcagau-cuugg-ugguaguagcaaaua
cuccagcgaggcccuggaggacugauguggAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU- GGGAUAC---------
-------UAAUAAUUCA----------------------------AUAG------GAAAG-AGG--CCCAUUGAUCGGG-CGAAAGG-GAauccgg--uuc-cuauuccgga ac ccg-gcagcgg--
aaccgu-----ugcuugu-cgggcccuc---acaaggggguucgucaggguaaccuaaaagggcccgg-agacgccgu-cgggagccccggaaagaguuuu-cuuuu cugcaugagcg--uucgaguucca-
uggaauccucucgcagggagauauggu-uuggaacgcgaa-gagcaccgca-guugcgucggu--gccc-gggauuucccgacggaccuugaaaa-uccggg a-gagggcca-cgcggaggu-
gucgcgccggcucg---uaccc-auauccgc-agcaggucuccaagg-ugaagagccucuagucgauagaauaauguagguaa-ggg-a
agucggcaaauc[-]
Progomphus_obscurus GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAUAC---------------- AAACAAUUAAA-----
------------------------UAU------GAAUG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
EU055271_Progomphus_Neaprogomp_borealis GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCACCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU- GGGAUAC---------
-------AAAUAAU-----------------------AUAUAUUAAAAU------GAAUG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAA---------
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Hagenius_brevistylus GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAC---------------- UGAAAUUAAUG-----
-------------------------A------GAUUG-UAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGCUUGU-CGGGCCCUCU--UAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Lanthus_vernalis GCGCAGAAGGg-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAC---------------
UGAAAUUAAUG----------------------------UAU------GAUUG-UAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGCUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGUCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Davidius_nanus ???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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Neogomphus_edenticulatus     GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAC---------------- UGAAAUAAACU-----
-------------------------U------GAUCG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAnUC[-                    ]
Armagomphus_armiger          GCGCAGAAGGG-UCU--GGGCUCGAGccu-gccugga-gccgccgccggugcagau-cuugg-ugguagUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAC----------------
UGAAAAAUUAUA-------------------------AUUUA------GACAA-UAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCA-
UGGAAUCCUCucgcagggagauauggu-uuggaacgcgaa-gagcaccgca-guugcggcggu--gccc-gggauuucccgacggaccuugaaaa-uccggga-gagggcca- cgcggaggu-
gucgcgccggcucg---uaccc-auauccgc-agcaggucuccaagg-ugaagagccucuagucgauagaauaauguagguaa-ggg-aaguuggcaanuC[-                    ]
Hemigomphus_comitans_AHC     GCGCAGAAGGG-UCU--GGGCUCGAGccu-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAC----------------
UGAAACUGAAAG---------------------------UGA------GAUAG-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC
AFJ596622_Hemigomphus_heteroclytus     GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UAAU-AACGG-CGAU- GGGAAAC---------
-------UGAAAU--AAAUAAA-----------------------UAAA------GAUAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-    ]
EU055228_Hemigomphus_magela_BYB       GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU- GGGAAAC---------
-------UGAAA------------------------------GUGUGA------GAUAG-CAG--CCCAUUGAUUGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCCCGGGAUUUCCCGACNNNNNNNNNNNN-NNNNNN N-NNNNNNNN-NNNNNNNNN-
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Trigomphus_sp                ???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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FJ596615_Stylogomphus_Lanth_albistylus GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU- GGGAAAC---------
-------UU------GA-----------------------------AAG-----AUUAA-AAG--CCCAUUGAUCGGGUCGAAAGGUGAAUCCGUGUUUC-CUAUUCCGGA AC
CCGUGCAGCGUGUAACCGU---UUGUCUUGUUCUGUCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--
UUCGAGUUCCA-UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-
CGCGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-    ]
FJ712325_Stylogomphus_shirizui        GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU- GGGAAAC---------
-------AUUAAU--GA-----------------------------AA------GAUAA-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGCUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGG
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A-GAGGGCCA-CGCGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
EU055286_Davidioides_martini GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGCGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU- GGGAAAC---------
-------UGAA----------------------------AUUAAUGAAA------GAUUG-UAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGCUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAANN-NNNNNN N-NNNNNNNN-NNNNNNNNN-
NNNNNNNNNNNNNN---NNNNN-NNNNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-N
NNNNNNNNNNNN[-]
Burmagomphus_collaris GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGCGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UAGC-AACGG-CGAU-GGGAAAC---------------- UGAAAUAAAUAAA---
-------------------GAAAGAAA------GAUUG-CAG--CCCAUUGAUUGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UUCUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
EU055285_Cyclogomphus_heterostylus GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UAGC-AACGG-CGAU- GGGAAAC---------
-------UGAAAAAA------------------------UAAUAAUAAUGA------AAAUG-AAG--CCCAUUGAUGGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UUCUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAANN-NNNNNN N-NNNNNNNN-NNNNNNNNN-
NNNNNNNNNNNNNN---NNNNN-NNNNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-N
NNNNNNNNNNNN[-]
Anisogomphus_pinratani_not_pinratanai???????????-???--????????????-???????-??????????????????-?????-???????????????
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FJ596613_Dromogomphus_spinosus GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGCGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UAGC-AACGG-CGAU- GGGAAAC---------
-------UGAAAUAAAUGAA----------------------UAAAUAAA------GAAAG-AAG--CCCAUUGAUGGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UUCUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC Arigomphus_villosipes
GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGCGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UAGC-AACGG-CGAU-GGGAAAC---------------- UGAUAUAAAA--
---------------------------GAGA------GAUAA-AAG--CCCAUUGAUGGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UUCUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Arigomphus_cornutus_ ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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FJ712319_Stylurus_intricatusGCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGCGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UAGC-AACGG-CGAU-GGGAAAC----------------
UGAAANNNNNNNNNN-----------------------NNNN------NNNNN-NNN--NNNNNNNNNNNNN-NNNNNNN-NNNNNNNN--NNN-NNNNNNNNNNNNNNN-NNNNNNN--NNNNNN-
----NNNNNNN-NNNNNNNNN---NNNNNNNNNNN---------CCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--

UUCGAGUUCCA-UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-
CGCGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Stylurus_amnicola ???????????????--????????????-???????-??????????????????-??
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FJ596610_Stylurus_nagoyanusGCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCUGCCGCCAGCGCAGAU-CUUGG-UGGUAGUAGCUAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCAUUGCACACGAGUCA-GUCGAUCCUAACCCC-UAGGAGAAAUCCAA-UAGC-AACGG-CGAU-GGGAAAC---------------
UGAAAAAAAAUUAAA-----------------------GAAA------GAUUG-CAG--CCCAUUGAUGGGG-UGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UUCUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
FJ596612_Gomphurus_Gomphus_externus GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGCGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UAGC-UUCGG-CGAU- GGGAAAC---------
-------UGAAAGAGAAGA-AA-----------------------GAAA------GAUAG-AAG--CCCAUUGAUGGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UUCUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAAUGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CUCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
J596611_Asiagomphus_melaenopsGCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGCGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UAGC-AACGG-CGAU- GGGAAAC---------
-------UGAAAAUAAA---GA-----------------------GAAA------GAUUG-CAG--CCCAUUGAUGGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UUCUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAMAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCMAAUC[-]
FJ596614_Gomphus_Phanogomphus_exilis GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGCGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UAGC-AACGG-CGAU- GGGAAAC---
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UGAAAAAUGAAAUGA-----------------------AUAA------GAUAG-AAG--CCCAUUGAUGGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UUCUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Gomphus_Gomphus_graslini_AF266051???????????-???--????????????-???????-??????????????????-?????-????????????????
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Gomphus_Hylogomphus_adelphus_OGA GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGCGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UAGC-AACGG-CGAU- GGGAAAC---------
-------UGAAAUUGAAA-----------------------UAAUAAGA------GAUAG-AAG--CCCAUUGAUGGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UUCUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
FJ712320_Gomphus_Gomphus_vulgatissimus GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGCGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UAGC-AACGG-CGAU-

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GGGAAAC----------------UGAAAGA--------------------------AUUAA-AAA------GAUUG-CAG--CCCAUUGAUGGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC
CCG-GCAGCGG--AACCGU-----UUCUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--
UUCGAGUUCCA-UGGAAUCCUCUUGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-
CGCGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-    ]
Megalogomphus_sommeri        ???????????????--????????????-???????-??????????????????-????????????????????????????????????????
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FJ712321_Onychogomphus_uncatus          GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU- GGGAAAC---------
-------UGAAAU--GAGUGA--------------------------AA------GAUUU-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-    ]
FJ596620_Onychogomphus_Onych_forcipatus         GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU- GGGAAAC---------
-------UGAAAU--GAGUGA--------------------------AA------GAUUU-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-    ]
FJ596617_Lindenia_tetraphylla_mistake   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU- GGGAAAC---------
-------UGAAAU--GAGUGA--------------------------AA------GAUUU-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGCGGAGGU-
GUCGCGCCGGC UCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-    ]
Ophiogomphus_carolus         GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAC---------------- UGAAAUGAA-------
--------------------------A------GAUUU-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-                          ]
FJ596618_Ophiogomphus_severus          GCGCGAAAGGG-UCU--GGGCGUGAGCCU-GCCUGGA-GCCGCCGUCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU- GGGAAAC---------
-------UGAAAGAUU----------------------------------------UAUUU-AAG--CCCAUUGCAUGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCGACCGGACCUUGAAAU-UCCGGG A-GAGGGCCA-CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGG?????????-????????????????????????????????????-?????
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Ophiogomphus_Ophiogomphus_caecilia    ???????????-???--????????????-???????-??????????????????-?????-???????????????
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Leptogomphus_elegans   ???????????????--????????????-???????-??????????????????-??
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Leptogomphus_sauteri_FJ596609   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU- GGGAAAC---------
-------UGAGA----AACUAU-----------------------AAAA------GAUAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGCUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCAGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCU-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGCGGAGGU-
GUCGCGCCGGUUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-   ]
Epigomphus_compactus   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAGAC---------------- UGUAACAAAGA-----
-------------------AAGAAAGA------GAUAG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGAUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-   ]
Microgomphus_chelifer_FJ712323   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCUUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG- CUAUUGGGAAAC--------
--------UGAGACAAAAACAAUUUUUU---------------AUGAAAUA------GAUUG-AAG--CCCAUUGAUCGGG-CGAAAGGGAUAUCCGG--UUC- CUAUUCCGGAACCCG-GCAGCGG--
AACCGU-----UGCUUGU-CGGGCCCUC---CAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCG GAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGG ACCUUGAAAA-UCCGGGA-GAGGGCCA-CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGA
UAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-   ]
Heliogomphus_retroflexus   ???????????-???--????????????-???????-??????????????????-?????-???????????????
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Macrogomphus_parallelogramma???????????-???--????????????-???????-??????????????????-?????-????????????????????????????????????
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Ceratogomphus_pictus   GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UAAU-AACGG-CGAU-GGGAAAC---------------
UGAAAUGAAU----------------------------UAAG------UAGAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGGGAAGUCGGCAAAUC[-   ]
Lestinogomphus_angustus_ALAGCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAC---------------
UGAAAUUA----------------------------UUAAAA------GAUGG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--

UUCGAGUUCCA-UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-
CGCGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCggcAAAUC
Austrogomphus_guerini GCGCAGAAGGG-UCU--GGGCUUGagCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGGUUGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UAAU-AACGG-CGAU-GGGAAAC---------------
UGAAAUAAAUAA-------------------------AUAAA------GAUAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUC????????????????????????-?????????????????[-]
EU055267_Austrogomphus_amphiclitus GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UAAU-AACGG-CGAU- GGGAAAC---------
-------UGAAAAA------------------------AAUAAAUAAA------GAUAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGANNNNNNNNNNNNN-NNNNNN N-NNNNNNNN-NNNNNNNNN-
NNNNNNNNNNNNNN---NNNNN-NNNNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-N
NNNNNNNNNNNN[-]
EU055261_Antipodogomphus_acolythus GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UAAU-AACGG-CGAU- GGGACAC---------
-------UGAAAAA------------------------UAAUGAAAAU------GAUAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGCUUGU-CGGGCUCUC---AAAAGGAGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCG--------------------
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Unaligned_Petalurid D7-????????????--????????????-???????-??????????????????-?????????--?????????????????????????????
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Tanypteryx_hageni gcgcagaaggg-ucu--gggcucgagccu-gccugga-gccgccgccggugcagau-cuugg-ugguaguagcaaauacuccagcgaggcccuggaggacu
gauguggagaaggguuu-cgugUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU-GGGAUUU--------------- UAAAUUCAAA------
----------------------GAGA------GACAG-UUG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGrcca- cguggaggu-
gucgcgccggcucg---uaccc-auauccgc-agcaggucuccaagg-ugaagagccucuagucgauagaau???????????-?????????????????[-]
Tanypteryx_sp ???????????-???--????????????-???????-??????????????????-?????-?????????????????????????????????????
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FJ712330_Tanypteryx_pryeri GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU-GGGAUUU---------------
UUAUUUCAAA---------------------------GAGA------GAAAG-UUG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUC AGGGUAACCUAAA--GGCCCGR-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Tachopteryx_thoreyi GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCC-AACGG-CGAU-GGGAGAU---------------
CAAUUAA-------------------------------GUCA-----AGA-AG-AGG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--

UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-
CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Phenes_raptor GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCC-AACGG-CGAU-GGGAGAU-------------- CCAAUUAA---
----------------------------GUCA-----AGAAAG-AGG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG-- AACCGU-----UGUUUGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
?????????-??????????????---?????-????????-???????????????-???????????????????????????????????-?????????????????[-]
Phenes_centralis GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACCUCAGCGAGGCCCUGGAG
GACUGACGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UGUA-AACGG-CGUU-GGGAAAA---------------
UUGUGUCAUG---------------------------UUGA----AAGACAA-AAG--CCCACUGAUCGG--CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGUAU-CCCGACGGACCUUGAAAA-UCCGGGA-GAAGGCCA- CGUG-AGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC
FJ596625_Uropetalia_caroveiGCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCC-AACGG-CGAU-GGGAAAU---------------
WAAGUAAAAACG-------------------------UUGA------GAAAG-CGG--CCCAUUGAUCGGG-CGAAAGG-GAAKCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Petalura_hesperia GCGCAGAAGGG-UCU--GGGCUCGagccu-gccugga-gccgccgccggugcagau-cuugg-ugguaguagcaaauacUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCC-AACGG-CGAU-GGGAAAU---------------
CAAGUAACAGAG-------------------------ACGA------GAAAG-CGG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCucuagucgauagaauaauguagguaa-ggg-aagucggcaaauc[-]
Petalura_gigantea GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCC-AACGG-CGAU-GGGAAAU---------------
CAGACGAAAC---------------------------GAAC------GAAAG-CGG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
?????????-??????????????---?????-????????-???????????????-???????????????????????????????????-?????????????????[-]
Petalura_litolae gcgcagaaggg-ucu--gggcucgagccu-gccugga-gccgccgccggugcagau-cuugg-ugguaguagcaaauacuccagcgaggcccuggag
gacugauguggAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCC-AACGG-CGAU-GGGAAAU---------------
CAGACGAAAC---------------------------GAAC------GAAAG-CGG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGaguuuu-cuuuucugcaugagcg-- uucgaguuccc-
uggaauccucucgcagggagauagggu-uuggaacgcgaa-gagcaccgca-guugcggcggu--gccc-gggaauucccgacggaccuugaaaa-uccggga-gaaggcca- cguggaggu-
gucgcgccggcucg---uaccc-auauccgc-agcaggucuccaagg-ugaagagccucuagucgauagaauaaugu??????-?????????????????[-]
Petalura_ingentissima GCGCAGAAGGG-UCU--GGGCUCGAgccU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UCCC-AACGG-CGAU-GGGAAAU---------------
CAAACGAAAC-------------------------------------GAAAG-CGG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAauaauguagg???-?????????????????[-]
Zoraena_bilineata GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU-GGGAAAU---------------
UUGAAAC---------------------------------GA------GACUG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-UGG-AAGUCGGCAAAUC[-]

Taeniogaster_obliqua   GCGCAGAAGGG-UCU--GGGCUCGmsCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU-GGGAAAU--------------- UUGAAAC---------
------------------------GA------GACUG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-   ]
Kalyptogaster_erronea   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AUCGG-CGAU-GGGAAAU---------------
UUGAAAC---------------------------------GA------GACUG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGUACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAUAUC[-   ]
FJ712317_Cordulegaster_maculata   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU- GGGAAAU---------
-------UU---------------------------------GAAACUA------GACUG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-ASACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-   ]
EU055277_Cordulegaster_dorsalis   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU- GGGAAAU---------
-------U---------------------------------UGAAACGA------GACUG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA---------
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FJ596634_Cordulegaster_boltonii   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU- GGGAAAU---------
-------UUAA-------------------------------GAAACGA------GACUG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUCACUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-   ]
FJ596637_Cordulegaster_picta   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUYU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU- GGGAAAU---------
-------UUU--------------------------------GAAACGA------GACUG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-   ]
FJ596638_Anotogaster_sieboldii   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU- GGGAAAU---------
-------UU---------------------------------GAAACGA------GACUG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-   ]
Neopetalia_punctata   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGC
GAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU-GGGAAAC-----
-----------UGAAACGAUAAAAAG-------------------UGAAAAAA------GACUG-UGG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCG G--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAUGGGCCCGG-AGACGCCGU-CGGGAACCCGGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--

UUCGAGUUCCA-UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-UGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-
CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-   ]
Chloropetalia_soarer   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUgga-gccgccgccggugcagau-cuugg-ugguagu???????????????????????????
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?????????-??????????????---?????-????????-???????????????-?????????????????????????????????????-??g-aagucggcaaauc[-   ]
Sinorogomphus_nasutus   gcgcagaaggg-ucu--gggcuCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCUUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-AGAC-GGG-AAUA--------------
AUGAAAU--GGAAA-UGG--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUCU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGAAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGAAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGC-AAGUCGGCAAAUC[-   ]
FJ596635_Chlorogomphus_brunneus   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU- GGGAAAU---------
-------UCAAA------GUCA-------------------UAAAAAGA------GACGA-GAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GUAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-   ]
Chlorogomphus_sp   ???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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?????????-??????????????---?????-????????-???????????????-????????????????????????????????????-?????????????????[-   ]
Synthemis_eustalacta   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUA-AACGG-CGAU-GGGAAAC---------------
ACUCACUCUUAA---------------------------AUG------GAAAG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGA UAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-   ]
Archaeosynthemis_marcrostigma_   ???????????-???--????????????-???????-??????????????????-?????-???????????????
??-????????????????????????????-???????????????-??????????????-????-??????????-
???????----------------?????????????????-----------??????????????------?????-???--?????????????-???????-????????--???-??????????
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?-????????-?????????-??????????????---?????-????????-???????????????-????????????????????????????????????-?????
????????????[-   ]
EF631201_Synthemis_leachii_93   --GCCGCCGGUGCAUAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCANUCCUAAGCCC-UAGGAGAAAUCCGA-UGCU-AACGG-CGAU- GGGAAAC---------
-----GAUUUGACUCUUUGAU--------------------------UCUAAUGAGACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---NCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCNU-CGGAGGCCCCGGAAAGANUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUANGGU-UUGGAACGCNAA-NAGCACCNCN-UUUGCNGCGGU--GCGC-GGNAAUUCCCCACGGACCUUGAAAA-UNNNGG A-NAGGGCCC-CNUGNAGNU-
GUCGCGCCCCUUCG---UACCCCNUAUCCGC-AUNNGGUCUCC- ----------------------????????????????-?????
????????????[-   ]
Eusynthemis_brevistyla   GCGCAGAAGGG-UmU--GGGCUnGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUA-AACGG-CGAU-GGGAAAC---------------- ACUCACUCUCGAUU--
-----------------------UAAA------GAAGG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--

UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-
CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
FJ596573_Eusynthemis_guttata GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUU-AACGG-CGAU- GGGAAAC---------
-------ACUCACUCUUA------------------------------------GAAGG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
EU055262_Eusynthemis_nigra GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUA-AACGG-CGAU-GGGAAAC---------------- ACACACAC--------
--------------------------------GAAAG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--
UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA---------------------
---[-]
EU055263_Choristhemis_flavoterminata GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCC-A-UAUA-AACGG-CGAU- GGGAAAC---------
-------ACACACACACAC------------------------------------GAAAG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA---------
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Synthemiopsis_gomphomacromioides_ASG gcgcagaaagg-ucu--gggcucgagccu-gccugga-gccgccgccggUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUA-AACGG-CGAU- GGGAAAC---------
-------ACUCACUCUCUAUU-----------------------AUAAG------GAAAG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGguaa-ggg-a
agucggcaaaUC[-]
Gomphomacromia_chilensis GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUU-AACGG-CGAU-GGGAAAC---------------- ACUACUCUUAAUAA--
-----------------------UAU------GAAAG-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
FJ712318_Gomphomacromia_paradoxa GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUU-AACGG-CGAU- GGGAAAC---------
-------ACUACUCUUAAUAA-------------------------UAU------GAAAG-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
A_GQ329652_Syncordulia_serendipator GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACUCGAUUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUA-AACGG-NGAU- GGGAAAC---------
-------A---CCCAUUGUUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCUCCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCC-CGUGGAGUU--
UCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAG--CUCCAAG--UGAAGAGCCUCUAGUC------------------------------------- [-]
A_GQ329654_Syncordulia_venator GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUA-AACGG-CGAU-

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GGGAAAC----------------A-----------------------------------------------------------CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC
CCG-GCAGCGG--AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--
UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCC-
CGUGGCGUU--UCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCACG-C-CCAUGG-UGAAGAGCCUCUAGUC-- ----------------------------------- [-    ]
EU055287_Idionyx_imbricata   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUA-AACGG-CGAU-GGGAGAC----------------
ACGACUCGAUGAUAAA---------UAAGACUAAUCAUAUAAA------GAAAA-GAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--
UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA---------------------
-------------------------------------------------------------------------------------------------------------[-                 ]
EF631193_Idionyx_selysi_80            -------------------------------CUGGA-GCCGCCGCCGRUGCAGAU-NUUGG-UGGUAGNANMAAAUN
CUCCAGCGAGGCCCUGGAGGACUGAUGUGNABAAGGNUUN-CNNGNGAACAGNCNUUGCACACGAGUCA-GUCKACCCUAAGCCC-UAGGAGAAAUCCGA-UAUA-ANCGG-CGAU- GGGAAACA--------
-------UUAUCNCNAUGAAAGA---------------------------------GACNA-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCNR--UUC-CUNUYCNGGA AC CCG-GCAGCGG--
AACCGN-----UGUUUGU-NNGGNCCUC---MCNANGGGNUCNUNNGGGCNNCCUAAAARGGCCCGG-ANACBCCGU-CNGGAGCCCCNRAAARARUUUU-CUUUU CUNNNNGASCN--UUCRAGNUCCC-
UGGAAUCCUNUCNCAGGNANAUNGGGU-UNGGAACSCGAA-RA-----------------------------------------------------------
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????????????[-    ]
Macromidia_rapida            -CGCArAAnGG-UyU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-yUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUA-AACGG-CGAU-GGGAAAC---------------- AUGUGUUCGAAUGA--
---------------------------------GACGA-GAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGkAA-GGG-AAGUCGGCAAAUC[-                       ]
EU424325_Oxygastra_curtisiiGCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUA-AACGG-CGAU-GGGAAAC---------------
ACGCAAAAAAAAG-------------------------CACA------GACGA-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-                       ]
EU055244_Cordulephya_pygmaea          GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUA-AACGG-CGAU- GGGAAAC---------
-------ACACACUUGACUCUUGUCU-----------------CGAAAA------GACGA-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA---------
-------------------------------------------------------------------------------------------------------------------------- [- ]
EF631251_Pseudocordulia_circularis_8    GCCCAAAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCnnGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGN-NNNN-AACGG-CGAU- GGGAAAC---------
------AC----------------------AAAAAAAUCGNACUCCAA-------UACGA-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCCNUAUUCCGC-AGCAGGUCUUCCAGG-UGAAAAGCCUCU-------????????????????-?????
????????????[-    ]
Hesperocordulia_berthoudi    GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUA-AACGG-CGAU-GGGAAAC---------------- ACGCACUGGACUCU-
GUCUU------------GAAAAACUCA------GACGA-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCG-----------??-???????-????????-
?????????-??????????????---?????-????????-???????????????-???????????????????????????????????-?????????????????[-                 ]
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EF631239_Lathrocordulia_metallica_6   GNNCAGAAGGG-UCU--GGGCUCGAGCCU-UCCUGGA-GCCGCCNCCGGUGCAGAU-nnnGG-UGGUAGUAGCAAnUA
CUCnnGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUNGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUA-AACGG-CGAU- GGGANAC---------
-------ACACUGGACUNUGU---------------------CAAAAAU-----AGACGA-AAG--CCCAUUGAUCGGG-NGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCNGCAUGCAGGUCUCCAANG-UGAAGAGCCUC--------????????????????-?????
????????????[-   ]
Micromidia_convergens   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUA-AACGG-CGAU-GGGAAAC--------------- ACACAAAUGACUCU-
GUCAA-----------------AAAA-------GACGA-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCA?????-???????????--????-?????????????????????????-???????-????????-
?????????-??????????????---?????-????????-???????????????-????????????????????????????????????-?????????????????[-   ]
EF631240_Micromidia_atrifrons_17   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUA-AACGG-CGAU- GGGAAAC---------
-------ACACUGGACUCUGU---------------------CAAAAA-------GACGA-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUCAAA--UCCGGG A-NAGGNCCA-CGUNGAGNU-
GUCGCGCCGGCUNG---UACCC-AUAUCNGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUC-- -????????????????-?????
????????????[-   ]
EF631236_Austrophya_mystica_3   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUA-AACGG-CGAU- GGGAAAC---------
-------AUGACUCUGUC-----------------GAAAGAAAGAAAAA------GACGA-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUC-- -????????????????-?????
????????????[-   ]
EF631243_Austrocordulia_refracta_36   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUA-AACGG-CGAU- GGGAAAC---------
-------ACACUGGACUC---------------------UGUCAAAAA------AGACGA-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUNG---NCCC--????????????????-?????
????????????[-   ]
Archaeophya_magnifica   ???????????-???--????????????-???????-??????????????????-?????-???????????????
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Epophthalmia_elegans   ???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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Didymops_transversa   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAGAUCCGA-UGCA-AACGG-CGAU-GGGAAAA----------------
ACUGUACUCU---------------------GUU-CUUUUAU------GACGA-GAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--

UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-
CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Macromia_illinoiensis GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAGAUCCGA-UGCA-AACGG-CGAU-GGGAAAA---------------
ACUGUACUCUUU-------------------GUUUCUUUU-------GACGAAGAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAUAUC[-]
FJ596570_Macromia_amphigena GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAGAUCCGA-UGCA-AACGG-CGAU- GGGAAAA---------
-------ACUGUACUCUUU------------------UGUUAUUUUU-------GACGA-GAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGUCUCGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
Macromia_eurynome GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAGAUCCGA-UGCA-AACGG-CGAU-GGGAAAC---------------- UGAACUCGAGA-----
----------------------GAAA------GACGA-GAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAA??-???????-????????-
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Macromia_magnifica ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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FJ712329_Macromia_splendens GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAGAUCCGA-UGCA-AACGG-CGAU- GGGAAAA---------
-------ACUGUACUCU---------------------GUUCUUUUUUG------ACGAG-AG---CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
EF631197_Phyllomacromia_bifasciata_ GCGCAGAARGG-UCU--GGG-UCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAGAUCCGA-UGCA-AACGGGCGAU- GGGAAAA--------
-------AACUGUACUCUU------------------------GAANAANGGUUUKGANRA-RAN--CCCNUUGAUCGGG-NNAAAAG-GGAANNCG--GUU-CC--------
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FJ596572_Idomacromia_proavita GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UAUA-AACGG-CGAU- GGGAAACAC-------
ACAAAUCACUCGAUCGACUCUCUCUCUCAUGGAGGAGCAG-----GAGCGAAAGACGAAGA-AUG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
EF631223_Aeschnosoma_forcipula_29 GCGCAGAAGGU-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGCGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-AGCA-GACGG-CGAU- GGGAAAC--------
---------GAACUGAGAGAC---------UCGUAU---UUUGAGAGAGA-------GAAAA-GAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA

ACCCG-GCAGCGG--AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG-
-UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-
CGUGGAGGU-GUCGCGCCGGCUCG---????????????????-?????
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EF631211_Pentathemis_membranulata_15   GCNCAGAAGGU-UCU--GGGCUCGAGCCU-GCCUGGAAGCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-AGCA-GACGG-CGAU- GGGAAAAAC-------
-----GACAGACUCGGAGAG---------UAUGAAAGACUCGAGAGAGAGCGAAAGCAAAG-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACUGGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG--GAAGAGCCUCUAGUC---????????????????-?????
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Tetragoneuria_cynosure   GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGACGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GACGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UGUA-AACGG-CGUU-GGGAAAC---------------- AUUAGAUGCGAA----
--------------------------A------GACAG-AAG--CCCAAUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--
UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-
GGGAAUCCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGA
UAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-   ]
Tetragoneuria_costalis   ???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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FJ596567_Tetragoneuria_canis   GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGACGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UGUA-AACGG-CGUU- GGGAAAC---------
-------AUUAGAUGCAAA-----------------------------A------GACUG-AAG--CCCACUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUCCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-   ]
FJ596565_Epitheca_princeps   GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGACGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAYCCUAAGCCC-UAGGAGAAAUCCGA-UGUA-AACGG-CGUU- GGGAAAC---------
-------AUUAGAUGCG-----------------------------AAA------GACAG-AAG--CCCACUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-   ]
FJ596561_Epitheca_marginata   GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGACGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UGUA-AACGG-CGUU- GGGAAAA---------
-------AUUAUAGGUGCA---------------------------AAA------GACAA-AAG--CCCACUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCAG-AGACGCCAU-CGGGAGCCAUAGAUA--GUUUU-CUUUU CUGCAUGAACG--GAUGAGUUCCC-
UGGAAUCCUCUCUCAGGGAGAUAGGGU-UUGGAACGCGAA-GUGCAUCGCA-GUUGCGGCAGU--GCCC-GGGAAUCCCCGAUGGCCCUUGAAAA-UCCGGG A-GAAGGCCA-CAUGGAGGU-
GUCGCGCCGGCUCA---UACCC-AUACCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAUUCGGUACAAUAAUGUAGGUAA-GGG-A
AGUUGGAAAAUC[-   ]
FJ596564_Epitheca_bimaculata   GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGACGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAYCCUAAGCCC-UAGGAGAAAUCCGA-UGUA-AACGG-CGUU- GGGAAAC---------
-------AUUAGAUGCG-----------------------------AAA------GACAG-AAG--CCCACUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG

A-GAGGGCCA-CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
EF631273_Rialla_villosa_83 GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGACGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCUC-UAGGAGAAAUCCGA-UGUA-AACGG-CGUU- GGGAAAA---------
-------AUUGUAUUAUU---------------------------UAAA------GAAAA-AAG--CCCACUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUCCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUC-- -????????????????-?????
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EF631286_Cordulia_aenea_61 GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGACGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UGUA-AACGG-CGUU- GGGAAAA---------
-------AUUGAUUGAUUCUG-------------------------AAA------GAAAG-AAG--CCCACUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUCCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUC-- -????????????????-?????
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Cordulia_aenea_shurtleffii GCsCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GACGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UGUA-AACGG-CGUU-GGGAAAA---------------- AUUGAUUCAUUUA---
--------------------------U------GAAAG-AAG--CCCACUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUCCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
FJ596568_Somatochlora_alpestris GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGACGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UGUA-AACGG-CGUU- GGGAAAA---------
-------AUUGUGUUGCAUU-------------------------GAAA------GACAA-AAG--CCCACUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGUCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGUAUCCCCGACGAACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
Somatochlora_flavomac_1242 ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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FJ596569_Somatochlora_metallica GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGACGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UGUA-AACGG-CGUU- GGGAAAA---------
-------AUUGUGUCAUGUU-------------------------GAAA------GACAA-AAG--CCCACUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGUAUCCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
Somatochlora_tenebrosa ACGCAGAAGGg-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGC-GCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GACGUGGAGAAGGGUUU-GGUGUGAACAGCCGUUGCACACGAGUCA-GUCGACCCUAAGCCC-UAGGAGAAAUCCGA-UGUA-AACGG-CGUU-GGGAAAA---------------- AUUGUGUCAUGUU---
-----------------------GAAA------GACAA-AAG--CCCACUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGUAUCCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCANAUC[-]
FJ596562_Hemicordulia_mindana GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGGCUGACGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCUC-UAGGAGAAAUCCGA-UGUA-AACGG-CGUU-

GGGAAAA----------------AAUUUUAUUUA---------------------------ACAUA------GAAAG-AAG--CCCACUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC
CCG-GCAGCGG--AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--
UUAGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUCCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-
CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCCAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-   ]
EU055266_Hemicordulia_australiae   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGGCUGACGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCUC-UAGGAGAAAUCCGA-UGUA-AACGG-CGUU- GGGAAAA---------
-------AUUUUUAUUUA---------------------------ACAUA------GAAAG-AAG--CCCACUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUUGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUCCCCGACGGACCUUGAA---------
--- [-]
EU055254_Procordulia_jacksoniensis   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGACGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCUC-UAGGAGAAAUCCGA-UGUA-AACGG-CGUU- GGGAAAA---------
-------AUUGAUAUU-------------------------------AUU------GAAAA-AAG--CCCACUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUUGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUCCCCGACGGACCUUGAA---------
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Unaligned_Libellulid   D7-?????????????--????????????-???????-??????????????????-?????????--?????????????????????????????
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777777777777777777777777777777777777777777777777777777777777777777????????????????????????-???????-????????--???-????????????????-
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????????-?????????-??????????????---?????-????????-???????????????-????????????????????????????????????-?????????????????[-
]
FJ596583_Notiothemis_robertsi   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
---------GCACUGAACUCAU-----------------U-------GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGA UAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-   ]
FJ596578_Tetrathemis_irregularis   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------ACGCACUGAACUCGU-----------------CACUGUGAGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-   ]
EF631495_318_222_Tetrathemis_polleni GCGCAGAAGGG-UCC--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACAAGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-----------GCUGAUCUCG-----------------------AAUAA------GAAAG-AGANNNNNNNNNNNNNNNN-NNNNNNN-NNNNNNNN--NNN-NNNNNNNNNN NN NNN-NNNNNNN--
NNNNNN-----NNNNNNN-NGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUANNNNUNNCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGANUUUUUCUUUU CUGCNUGAGCG--UUCGANUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGNGGUGGU--GCNCGGGGAAUUCCCGACGGANCUUGANAA-UCCGGN AAGAGGGCCA-
CNUGGAGGUUGUCCGCCCGGCUCG---UACCCCAUNUCCGCUNGNAGGUNUCCAAGGGUGNAGAGCCnnnnNn-------------------------------------- [-   ]
FJ596587_Urothemis_signata   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAAA---------------
GUG-------------------------------------AGU------GAAAG-CA---CCCAUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--

UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-
CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAUAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-   ]
EF631421_313_217_Urothemis_assignata GNGCAGAANGG-UCU--GGGCUCKMKCCU-GCCNGGA-NCCGCCNCCGGUGCAGAU-NUUGG-UGGUAGUAGCAAAUA
CUCCANCGAGNCCCUGGAGGAYUGAUGUGGANAAGGGUUU-CGUGUGAACAGCNGUUNCACANGAGUCA-GUNGAUCYUAANNCC-UAGGAGAAAUCCGA-UGCA-AANGN-NGAU- GGGAAWC---------
-------ANNA--------CNGAGAC-------------------UNGA------GACAG-ANA--CCCAUUGAACGGG-CNAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-NCNNCNN--
AACCGU-----UGUUUGU-CNGGNCCUC---KNAAGGGGYUCGUCANGGCAACCUAAAAGGGCCCGG-ANACNCCGU-CGGGGGNCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCANGGANAUAGGNU-UUGGAACGCGAA-G--
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FJ596588_Macrodiplax_cora   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG GACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAA---------------
AUUUCGAAUGACUCGACU--------------------GUUGA------GACAG-AGA--CCCAUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG-- AACCGU----
-UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAUAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-   ]
EU055229_Macrodiplax_balteata   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAA--------
--------AGAAA--------------------GAAACUGGCUCG----------GACAG-AGA--CCCAUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA ACCCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU
CUGCAUGAGCG--UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAA---------
--- [-]
EF631458_344_253_Zyxomma_elgneri   NCACAGAAGNG-UCU--GGGNUCGAGCCU-GCCUGGA-GCCGCCGCCGGUNNAGAU-CUUGG-UGGUAGUAGCNAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCNCACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GCAC-------AUUGACUCGAUUC---------UUUUAUCAGA------GACAG-AGA--CCCAUUGAACGGN-CGAAAGG-NAAUCCGG--NUC-CUAUUCCNGA AC CCG-GCUGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUCCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGUUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUC-- ---------------------------------- [-   ]
Zyxomma_petiolatum_GU196340GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC---------------
GCA---------UUGACUCGAUC---------------GAUGA------GACAG-AGA--CCCAUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCUGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUCCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGUUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-   ]
FJ596576_Zygonyx_torridus   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAAAC-------------
GACUC-----------------------------------GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGNNNNNN--NNNNNN--NNNNNN-
----NNNNNNN-NNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAUAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-   ]
EU055233_Nannophlebia_sp   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAAAC-------------
GACUC---GAUUG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--
UUCGAGUUCCA-UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-UUUGCGGCGGU--GCAC-GGGUAUUCCCGACGGACCUUGAA----------------------
--[-   ]
Bironides_sp_HOL_2010_GU196365   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC--------
---------AACUGA-----------CU------------UUUUUUU-------G--GAAAA-GGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA ACCCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU

CUGCAUGAGCG--UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-
GAGGGCCA-CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAACAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-   ]
Huonia_epinephela_GU196370   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC---------------- GCACUGAU--------
--CU----------------CUCAGACA----GAUUG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAUAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-   ]
EF631477_361_270_Huonia_oreophila   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GCAAAAGAAA-GACGACUGCUCGU---------CCUA--AAGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAUAGCCUCUAGUC-- ---------------------------------- [-   ]
A_EF631485_367_278Onycothemis_testacea GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAA---------
-------AUGAACUG---ACUGACUUGUUUA---------ACAGAACAGU-------AAAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAUAGCCUCUAGUC-- ---------------------------------- [-   ]
FJ596582_Rhyothemis_variega_imperatrix GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GCACUUGACUC---------------------AUUGA---GA------GACAG-AGA--CCCAUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-   ]
Rhyothemis_fuliginosa_GU196333   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GCACUUGACUC---------------GAUCGA------AUGA------GACAG-AGA--CCCAUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---RCAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGGAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-   ]
Miathyria_marcella   ???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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Miathyria_simplex_GU196345   GCGCAGAAGGG-UCU--GGGCCCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC----------------
GCACUGUACUCAAAGAGAGAG-------------------AGA------GAUCG-AGA--CCCAUUAAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGUACCUAAAA-GGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAUAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-   ]
FJ596577_Tholymis_citrina   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGCGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC----------------

AUGCACU----------------------------GACUGAGA------GACAG-AGA--CCCAUUGAAGGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCUGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUCCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-]
EF631403_298_202_Tholymis_tillarga GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GCA-UUGACUCAGU-------------------ACAA--UAA------GUCAG-AGA--CCCAUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCUGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUCCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGUUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUC-- ----------------------------------- [-]
EF631487_369_280_Pantala_flavescens GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGGA-AACGG-CGAU- GGGAAAC---------
-------GCACUCGACUCUAUAUAUAAUGUA---------UGUUGAAUGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGUAUGAGCG--UUUGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGA-UUGGGACGCGAA-GAGCACCGCA-GUUGCGGCGGA--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAUAGCCUCUAGUC-- ----------------------------------- [-]
Traemea_lacerata GCGCAGAAGGg-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGC-GCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACC-AACGG-CGAU-GGGAAAC---------------- GAAUCAAUUG--
-------------------------------------GACACGCGG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAnUC[-]
FJ596586_Tramea_calverti GCGCAGAAGGG-UCU--GGGCCUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GCACUGAACUCA--------------------UUU-CUGGUGA------GACAG-AGA--CCCAUUAAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGUUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAUAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-]
Sympetrum_Kalosympetrum_janeae_OSJ GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACA-AACGG-CGAU- GGGAAAC---------
-------GCA-UUGACUCUUAUGAA-------------UGAAUCUAU-GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
Sympetrum_Kalosympetrum_obtrusum_ ???????????-???--????????????-???????-??????????????????-?????-???????????????
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FJ596606_Sympetrum_Sympetrum_vulgatumGCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACA-AACGG-CGAU- GGGAAAC---------
-------GCA-UUGACUCUUA-----------UGA-AUGAAUCUAU-GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG

A-GAGGGCCA-CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
Sympetrum_Sympetrum_pedemontanum_ --

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Sympetrum_Nesogonia_blackburni_ ???????????-???--????????????-???????-??????????????????-?????-???????????????
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FJ596607_Sympetrum_Sympetrum_sanguineum GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GCA-UUGACUCUUA-----------UAA-UUGAAUCUAU-GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
EU055230_Sympetrum_Tarnetrum_corruptum GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GCA-UUGACUCUUAAUU---------UGAUAUUGUCGAAU-GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAA---------
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Sympetrum_fonscolombei_GU196359 GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-----GCACA--UUGACUCUACUAUG--UAA----------GCAAGU-GA------GACAG-AAA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
Sympetrum_Tarnetrum_illotum_???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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Sympetrum_Tarnetrum_infuscatum ???????????-???--????????????-???????-??????????????????-?????-???????????????
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EU424330_Sympetrum_danae GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-

GGGAAAC----------------GCA-UUGACUCUUAUGA------------AUGAAUCUAU-GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC
CCG-GCAGCGG--AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--
UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAGCGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-
CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
Sympetrum_meridionale_GU196334 GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GCA-UUGACUCUAUAAUGAAUGA----------AUCUAU-GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
FJ596605_Leucorrhinia_pectoralis GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GCA-UUGAUU-----------------GA---CUCAAAC-GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
EF631207_Leucorrhinia_glacialis_OLF GCGCAGAANGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GCA-UUGACUC---------------------------GAAUGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCW-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUC-- -????????????????-?????
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Celithemis_elisa GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC---------------- GCACUGAUUC------
-----------------------GAAA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGAAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAUAUC[-]
Celithemis_eponina_1233 ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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Brachymesia_gravida_ ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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Brachymesia_herbida_GU196344GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC---------------
GCACUGAUUCGAUU-------------UGUCAAAACGUGAGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCUGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-]

EF631463_349_258_Brachythemis_leucostic GCGCANAAGGN-UCU--GGNCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-UUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAA---------
-------ACGAUUGACUUAU----------------------GAAAUGA------GACAG-AGA--CCCAUUGAAAGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCUGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUCCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCNGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCNGGUCUCCAAGG-UGAAGAGCCUCUAGUC-- ----------------------------------- [-]
Brachythemis_contaminata_ ???????????-???--????????????-???????-?????????????????-?????-???????????????
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Deielia_phaon_GU196343 GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAA---------------- ACGAUUCGACUCUAU-
-----------------------UGA------GACAG-AGA--CCCAUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCUGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCC--GAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAGCGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGUUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-]
EF631398_294_198_Pachydiplax_longipenni GCGCAGAAKNN-UCU--GGGCUCNAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GCACUGAACUCGAUU---------------------UAUUGA------GACAG-AGA--CCCAUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUC-- ----------------------------------- [-]
AY750042_Erythemis_sp GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCACCGCUGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC---------------- GCACUGAACUCACA--
---------------------------------CACAG-AGAGACCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUG---A-AAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA- GAGGGCCAGCGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAG-UCUCCAAG--UAAA---[-
]
FJ596592_Acisoma_panorpoidesGCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC----------------G- ACUAGUCUCGAA--
----------UGAU--UCUA-----AA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU---
--UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-]
EU055239_Erythrodiplax_minuscula GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCU-AACGG-CGAU- GGGAAAC---------
-------GCACUGAACUCUUG-AG-----------------AGAAUUGA------GACAG-AGA--CCCAUUGAUGGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCUGCGG--
AACCGU-----UGUUUGU-CGGGCUCUC---GCAAGGAGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAA---------
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Erythrodiplax_basalis_ ???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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EF631390_289_192_Crocothemis_serviliaGCGCAGAAGGU-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GCANUGAACUCAUU-----------------------CAAAGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-NGAAGAGCCUCUAGUC-- ---------------------------------- [-   ]
Crocothemis_erythraea_GU196335   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GCA-CUGAACUCAUUC--------------------AAA-GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG-
AAGCCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUSKYMRGGSMAMCYWAAARGGSCCSGR-R-ACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-   ]
FJ596590_Rhodothemis_rufa   GCGCAGAAGGG-UCU--GGGCUCGAGCCC-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC---------------- GCACUGAACUC-----
----------U----------------------GAUUG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-   ]
Neurothemis_fulvia_   ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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Neurothemis_ramburii_GU196339   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GCACUGAACUCAUAU------------UAUAUUCAUAUUAGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-   ]
Diplacodes_lefebvrii   ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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Diplacodes_trivialis_GU196342   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GCAAAGA-CUGAACUCAG-------------UG-ACUU--GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAGCGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-   ]
EF631462_348_257Bradinopyga_strachaniGCGCANAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC--------
------ACGCAUUGA-CUCG---------------------------AGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA

ACCCG-GCAGCGG--AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG-
-UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-
CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUC------------------------------------ [-]
Brachydiplax_denticauda GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAG-AGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAA-------------
ACGAACUGAACUCGAU-------------------------AGA------GACAG-AGA--CCCAUUGAACGGG-CGAAAGG-GA??????--???-???????????????-???????--
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FJ596585_Brachydiplax_chalybea_flavovit GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAA---------
-----ACGAACUGAACUCGCA------------------CACAGAGAGA------GACAG-AGA--CCCAUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUCCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-]
FJ596584_Chalcostephia_flavifrons GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GUACUCGACUCAAU-----------UGUUUGAACGAAU--GA------GACAG-AGA--CCCAUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUCCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGU UCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-]
EF631393_291_195_Micrathyria_aequalisGCGCAGAAGGG-UCUU-GGGCUCGAUCCUUGCCUGGNAGCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GCACUGAACUCGAUU-----------------U-ACAU--GA------GACAG-AGA--CCCAUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUC-- ---------------------------------- [-]
Micrathyria_atra_ ???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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Micrathyria_didyma_GU196361GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC---------------
GCACUGAACUCGAUCA---------------------UUUGA------GACAG-AGA--CCCAUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Uracis_imbuta_GU196363 GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC---------------
GCACUGAACUCUCA-----------------CAGACU---GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-]
Uracis_infumata ???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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FJ596589_Nannophya_pygmaea   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC---------------
GCACUGAACUU--------------GAAUCAAA-------GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGA-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA
-GGG-AAGUCGGCAAAUU[-     ]
EF631412_307_210_Nannothemis_bella     GCGCAGAAGGG-UCU--GGNCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC--------
-------GCACUGAACUCGA------------GAAUCAAA-------GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCANGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUC-- ---------------------------------- [-      ]
EF631492_373_Paltothemis_lineatipes   NNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNN
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-------NNNNNNN-----------------------NNNNNNNNNNNNNNN----NNN-NNN--NNNNNNNNNNNNNNNNNNNNN-NNNNNNNN--NNN- NNNNNNNNNNNNNNN-NNNNNNN--
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NNNNNNNNNNNNNN---NNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-- ------------------
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EF631189_Brechmorhoga_mendax_58          GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAAAU-------
-------GCACACGACUG------------------AACUCGAGAGAGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-ANCNNGUCUCCAAGG-AGAAGAGCCUCUAGUC-- -????????????????-?????
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Brechmorhoga_praedatrix_GU196346       GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAAAU-------
-------UUGAGAGACUGACUUGUU-------------------ACAGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG-
AAGCCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-    ]
Dythemis_fugax_              NNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
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A_FJ596580_Trithemis_auroraGCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCU-AACGG-CGAU-GGGAAAC---------------
GAUUU--------------------UGACUCAAGACAAAUGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAUAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-                         ]
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FJ596581_Trithemis_africana            GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCU-AACGG-CGAU- GGGAAAC---------
-------GAUUC----------------------GACUCUAAUGA--CGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAUAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-    ]
Trithemis_arteriosa_         ???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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Perithemis_tenera            GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC---------------GCA-
-CUUGACUUG---------------------UUUAUGUGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCUGCGG--AACCGU----
-UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCnAAUU[-              ]
A_EU055236_Perithemis_intensa          GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GCACUUGACUUG----------------------UUUAUGUGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCUGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGUCCUUGUA---------
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Perithemis_lais_GU196362     GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC---------------- GCACUGAACUCAA---
------------UUAUNUGAUUUNNNN------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCUGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGC UCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-                            ]
Palpopleura_lucia_GU196337   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC----------------
GCACUGAACUCAU------------------ACUCA---AAGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-                            ]
FJ596579_Diastatops_pullataGCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC----------------GA-
-----------------------CUACUAUAAUAAACAGA------GACAG-AGA--CCCAUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCUGCGG--AACCGU----
-UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-              ]
Zenithoptera_fasciata_GU196364         GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
------U----------------------GA----------------CCU------GUUAG-AGA--CCCAUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG-
AAGCCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-    ]
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EF631486_368_279_Neodythemis_pauliani----NNNNNNN-NNN--NNNNNNNNNNNN-NNNNNNN-NNNNNNNNNNNNNNNNNNNN-NN-NNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNN-----------------------NNNNNNNNNNNNNNNNNNGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAA---------
-------AUUUCCU--GACUGACUUGUUUA----------ACAGAACAU-------UAAAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-UUUGCGGCGGU--GCAC-GGGAAUUCCCGAGGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAUAGCCUCUAGUC-- ----------------------------------- [-]
Selysiothemis_nigra ???????????-???--????????????-???????-??????????????????-?????-???????????????
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Trithetrum_navasi ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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Porpax_risi_ ???????????-???--????????????-???????-??????????????????-?????-???????????????
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Micromacromia_camerunica_GU196367 NNNNNNNNNNN-NNN--NNNNNNNNNNNN-NNNNNNN-NNNNNNNNNNNNNNNNNN-NNNNN-NNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNN-NNNN-NNNNN-NNNN- NNNNNNN---------
------NNNNNNNNNNNNNNNNNNNNN-------------------------NNN--NNNNN-NNN--NNNNNNNNNNNNN-NNNNNNNNN-NNNNNN--NNN-NNNNNNNNNN NN NNN-NNNNNNN--
NNNNNN-----NNNNNNN-NNNNNNNNN---NNNNNNNNNNNGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-]
FJ596594_Allorhizuch_preussi GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
-------GCAC---UCGACUCGAA---------U--------------GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGGAAGACGCCGU-CGGGGGCCCNGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-]
Neodythemis_klingi ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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FJ596575_Hadrothemis_infesta GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA--UGCAAACGG-CGAU- GGGAAAC--------
------N--NN------N--NN-NNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNNNNN---N---------------------UAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAA-GAGUUUU-CUUUU

CUGCAUGAGCG--UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-
GAGGGCCA-CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-   ]
FJ596595_Thermorthemis_madagascariensis   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
----GAUUUUGACUUGUUGUU-----------GUUAAUACAU-----CA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCUUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-   ]
FJ596599_Agrionoptera_insignis   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
----AC-------GACUCGUU-----------UUAUGAAUGU-----GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-   ]
FJ596593_Cratilla_metallicaGCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC-------------GCUAU-
---GACUCGUU-----------CUCGU----------GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU----
-UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-   ]
Pseudoleon_superbus   ???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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FJ596597_Orthemis_cultriformis   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
----AUUUCAGACGACUCGUU-----------CUAU----------GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-   ]
EF631471_265_Orthemis_ferruginea   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
----GCAAAAAAUGACUCGUU-----------GUCACGAU-------GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAG--- [-   ]
FJ596601_Orthetrum_albistylum   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
----GCAAAAAAUGACUCGUU-----------GUCACGAU-------GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-   ]

EF631473_267_Orthetrum_pruinosum   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC--------
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Orthetrum_coerulescens_   ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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FJ596600_Lyriothemis_elegantissima   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
----GCACUG---UACUC----------------UCGU---------AA------GUCAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-   ]
A_FJ596602_Ladona_fulva   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC------------GCACA-
---GACUCGAG------------UCAC---------GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU----
-UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-]
Ladona_julia   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC------------GCACA-
---GACUCGAG------------UCAC---------GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU----
-UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAyGUAGGUAA-GGG-A????????????[-   ]
A_FJ596598_Ladona_depressa   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC----------------
AUU--GACUCA---------------CUC---------GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU--
---UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-   ]
Plathemis_subornata_   ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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Plathemis_lydia   GCGCAGAAnGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC------------ GCACAUU--
GACUCAU---------------UC-AA-----GUGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG-- AACCGU-----
UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-   ]

FJ712326_Libellula_quadrimaculata   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
----GCACAUU--GACUCGAA-------------UNUGAAUCNUUUUGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-   ]
Libellula_Syntetrum_angelina   ???????????-???--????????????-???????-??????????????????-?????-???????????????
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Libellula_Eolibellula_semifasciata   ???????????-???--????????????-???????-??????????????????-?????-???????????????
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Libellula_Belonia_saturata_AY338674   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
----GCACGAAUUGACUCGAA------------UUAAUCUUUUU-U--GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGA----------
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Libellula_Eotainia_composita_   ???????????-???--????????????-???????-??????????????????-?????-???????????????
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Libellula_Neotetrum_pulchella_OLP   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
----GCAC--AUUGACUCGAA-------------------UCAUUU--GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-N
NNNNNNNNNAUN[-   ]
Libellula_Holotania_comanche_   ???????????-???--????????????-???????-??????????????????-?????-???????????????
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Libellula_Holotania_auripennis_   ???????????-???--????????????-???????-??????????????????-?????-???????????????
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Libellula_Holotania_axilena_          ???????????-???--????????????-???????-?????????????????-?????-???????????????
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EF631194_Libellula_luctuosa_90         ------------------------------------------------------------------------------------
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---------------------------------------------------------------CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--
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GUCGCGCCGGCUCG---UACCC-AUAUCNGC-AGCAGGUCUCCAAGG-AGAAGAGCCUCUAGUC-- -????????????????-?????????????????[-                    ]
Aethriamanta_rezia_GU196369GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG GACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC----------------
AUUAAAAAAAACUCGUGUGUC----------------CGGA------GACAG-AGA--CCCAUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU--
---UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAA- GGGCCCGG-A----------------------AGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAUAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-              ]
Tetrathemis_corduliformis_GU196368    GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
------ACUG----AACUCGA--------------------------GA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-    ]
Diplacina_ismene_GU196366    GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG GACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC-------------- GCACU--
CGACUCACGAAUU---------------------AA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG-- AACCGU-----
UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-                      ]
Erythemis_vesiculosa_GU196360          GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCUGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAA--------
-------ACG-----GACUGGACUCGA-------------UUACA-GAGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA ACCCG-GCAGCGG--
AACCGU-----UGUUUGU-CGGGCCCU----GAAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCC-GGAAAGAGUUUU-CUUUU
CUGCAUGAGCG--UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-
GAGGGCCA-CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-    ]
Nannophyopsis_clara_GU196358GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC--------------ACU-
---GUACUCUAUA-UAUAUAU----------AUACAU-A------GUCAA-AGA--CCCAUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-   ]
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Oligoclada_amphinome_GU196357 GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
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------AGAAC---GACUGCA-CUCUU--------UCUAUGUAUGUGAGA------GACAG-AGA--CCCAUUGAACGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCUGCGG--
AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGACCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUCCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-]
Idiataphe_sp_HOL_2010_GU196356 GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
------ACAC----AAAUCACUGAC---------------------UCA------GAAAG-AAA--CACAUUGANCGAU-CGAACGG-GAAUCAGGUCUUUCCUAUUCCGGA AC CCG-GCAGCGG--
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UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
Atoconeura_sp_HOL_2010_GU196355 GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
------G-A-------CUGAU----AC--------UGAAAAGAUGUGUGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
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GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAUAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-]
Elga_leptostyla_GU196354 GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG GACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC--------------- GCUU----UUUU----
-------GA----------------CUU------GACUC-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG- AAGCCGU-----UGUUUGU-
CGGGCCCUC---AAAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGUAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Fylgia_amazonica_GU196353 GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG GACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC---------------
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UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-]
Hemistigma_albipunctatum_GU196352 GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
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AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU
CUGCAUGAGCG--UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-
GAGGGCCA-CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-]
Porpacithemis_sp_GU196351 GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCU-AACGG-CGAU-GGGAAAC---------------G-A-
------UUGAU----KU--------GWCUCAUU-GAAAGA------GACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU----
-UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
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CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAUAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-]
Thermochoria_equivocata_GU196350 GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
------GCA-------CUGAACUCAU--------------UUCUAUAAUG------UAAAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
ARCCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG

A-GAGGGCCA-CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-   ]
Malgassophlebia_bispina_GU196349   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC---------
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AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGUUAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
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AGUCGGCAAAUU[-   ]
Micromacromia_zygoptera_GU196348GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG GACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC--------------- ACUUGA-
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UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-   ]
Argyrothemis_argentea_GU196347   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU- GGGAAAC--------
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AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU
CUGCAUGAGCG--UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-
GAGGGCCA-CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-   ]
Pseudothemis_zonata_GU196341GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC---------------GCA-
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UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGUUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-   ]
Oxythemis_phoenicosceles_GU196338   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
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AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-   ]
Olpogastra_lugubris_GU196336GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC---------------G---
------CUGAC----UU--------GUACUGAAUGUAUAG------UAAAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGG----
-UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAGCGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAUAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-   ]
Misagria_parana_GU196331   GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-GGGAAAC---------------AC--
----------------------------UGAAACA-GAGA------GAAAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU----
-UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-   ]
Unaligned_Orders   ????????????????--?????????????-???????-???????????????????-??????????--??????????????????????????????
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Ephemerella_sp_AY749918 GCGCAGAAGGG-UCU--GGGCGUGAGCCU-GCCUGGA-GCCGCCGUCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUC-CGUGUGAACAGCCGUUGCACACGGGUCA-GUCGAUCCUAAGCCC-UA????????????-????-??????????-??????------------
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Paralept_vaciva_AY749922 ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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Anthopotamus_sp_AF461226 GCGCAGAAGGG-UCU--GGGCGCGAGCCU-GCCUGGA-GCCGCCGUCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUC-CGUGUGAACAGCCGUUGCACACGGGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGUU-GAUGG-UCGC-GGG---------------- AUGUGCUUGAG---
---N----------AUCUCGACGCUCGCACCAGUAC------------CCCGUCCGUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GUUGCGG-- AACCGCACUCA--------
CGA-UCCUC---------GUAUUGACACGGUAACGUGAAGGACCCCAG-AGAUGCCGU-CUGGAGCCCCGGGAAGAGUUUU-CUUUUCUGCCUGAGCG-- UCCGGGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGA-AUGGGACGCGAA-GAGCACCGCA-GUUGCUGCGGU--GUCC-GGGGAGUCCCGUCGGUCCUUGA???-???????-????????-
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Caenis_sp_AY338667 GCGCAGAAGGG-UCU--GGGCGUGAGCCU-GCCUGGA-GCCGCCGUCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUC-CGUGUGAACAGCCGUUGCACACGGGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGUU-GAUGG-UCGU-GGG----------------
AUGUCGAACGCGGUCUC----N------------GAAUUUUGAAUGCAAC------------CCCGUCCGUCGGG-CGAAAGG-GAAUCUGG--UUC-CUAUUCCAGAACCCG-GUUGCGG--
AACCGCACUCA--------CGA-UCCUC---------GUAUUGACACGGUAACGUGAAUGACCCCAG-AGACGCCGU-CUGGAGCCCCGGGAAGAGUUUU-CUUUUCUGCCUGAGCG-- UUCGGGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGA-AUGGAACGCGAA-GAGCACCGCA-GUUGCUGCGGU--GUCC-GGGGAUUCUCGUCGGCCCUUGA???-???????-????????-
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Ephemera_sp ???????????-???--????????????-???????-??????????????????-?????-??????????????????????????????????
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Callibaetis_sp_AY749925 GCGCAGAAGGG-UCC--GGGCGCGAGCCC-GCCUGGA-GCCGCCGUCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUC-CGUGUGAACAGCCGUUGCACACGGGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGUC-GAUGGGCAGC-GGG---------------- AUGUCGU-------
-----------------UUGGCGAGAGCCGCGAGCAC------------CCCGUCCGUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GUUGCGG-- AACCGCACUCA--------
CGA-UCCUC---------GUAUUGACACGGUAACGUGAAUGACCCCAG-AGACGCCGU-CUGGAGCCCCGGGAAGAGUUUU-CUUUUCUGUUUGAGCG-- UUCGGGUUCCA-
UGGAAUCCUCUAGCAGGGAGAUAUGGA-AUGGAGCGCGAA-GAGCACCGCA-GUUGCUGCGGU--GUCC-GGGGAGUCCCGUCGGCCCUUGAAAA-UCUGGGU-GAGGGUCA- CGUGGAGUC-
GCCGCACCGGCUCG---UACCC-AUAUCCGC-AGCA???????????-???????????????????????????????????-?????????????????[-]
Callibaetis_ferrugineus_AY859557 GCGCAGAAGGG-UCC--GGGCGCGAGCCC-GCCUGGA-GCCGCCGUCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUC-CGUGUGAACAGCCGUUGCACACGGGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGUC-GAUGGGCAGC-GGG---
-------------AUGUCGU----------------------UUGGCGAGAGCCGCGAGCAC------------CCCGUCCGUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAAC CCG-
GUUGCGG--AACCGCACUCA--------CGA-UCCUC---------GUAUUGACACGGUAACGUGAAUGACCCCAG-AGACGCCGU-CUGGAGCCCCGGGAAGAGUUUU-CUUUU CUGUUUGAGCG--
UUCGGGUUCCA-UGGAAUCCUCUAGCAGGGAGAUAUGGA-AUGGAGCGCGAA-GAGCACCGCA-GUUGCUGCGGU--GUCC-GGGGAGUCCCGUCGGCCCUUGAAAA-UCUGGG U-GAGGGUCA-
CGUGGAGUC-GCCGCACCGGC UCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UCAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]
Baetis_sp_AY338652 GCGCAGAAGGG-UCU--GGGCGCGAGCCC-GCCUGGA-GCCGCCGUCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUC-CGUGUGAACAGCCGUUGCACACGGGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGUU-GAUGGAUAGC-GGG----------------AUGUCG-
------------------------CGGCGAGAGCUACGAGGAC------------CCCGUCCGUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GUUGCGG--
AACCGCACUCA--------CGA-UCCUC---------GUAUUGACACGGUAACGUGAAUGACCCCAG-AGAUGCCGU-CUGGAGCCCCGGGAAGAGUUUU-CUUUUCUGCAUGAGCG--

UUCGGGUUCCA-UGGAAUCCUCUAGCAGGGAGAUAUGGA-AUGGAGCGCAAA-GAGCACCGCA-GUUGCUGCGGU--GUCC-GGGGAGUCCCGUCGGCCCUUGA???-???????-????????-
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Hexagenia_sp_AY125276   GCGCAGAAGGG-UCU--GGGCGCGAGCCU-GCCUGGA-GCCGCCGUCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGGCCUGGAG
GACUGAUGUGGAGAAGGGUUC-CGUGUGAACAGCC-UUGCACACGGGUCA-GUCGAUCCUAAGCCC-UAGGCGAAAGCCGA-UGAU-GAUGG-UCGC-GGG--------------- AUGUCUGCGA----
---------------GCCAGUCUCGCGACUGCAGAAC------------CCCGUCCGUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GUUGCGG-- GACCGUUCUCU--------
CGA-UCCUC---------GUAUUGACGCGGUAACGCGAAAGACCCCAG-AGAUGCCGU-CUGGAGCCCCGGGAAGAGUUUU-CUUUUCUGUUUGAGCG-- UUCGGGUUCCA-
UGGAAUCCUCUCGUAGGGAGAUAUGGA-AUGGAGCGCGAA-GAGCACCGCA-GUUGCUGCGGU--GUCC-GGGGAGUCCCGUCGGCCCUUGAAAA-UCUGGGU-GAGGGUCA- CGUGGAGGC-
GCCGCACCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCC????-????????????????????????????????????-?????????????????[-   ]
Cloeon   ???????????-???--????????????-???????-??????????????????-?????-??
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Leucrocuta_maculipennis_AY749959   GCGCAGAAGGG-UCU--GGGCGU??????-???????-?????????????????-?????-???????????????
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Centropt_luteolum_AY749935   GCGCAGAAGGG-UCU--GGGCGCGAGCCC-GCCUGGA-GCCGCCGUCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG GACU
GAUGUGGAGAAGGGUUC-CGUGUGAACAGCCGUUGCACACGGGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-AA----AUGGAUAGC-GGG--------------- AUGUCUU------------
-------------AGCGAAAGCUUCGGUAGGC------------CCCGUCCGUUGGG-CGAAAGG-GAAUCUG---UUC-CUAUUCCAGAACCCG-GUUGCGG-- AACCGCACUCA--------CGA-
UCCUC---------GUAUUGACACGGUAACGUGAAUGACCCCAG-AGAUGCCGU-CUGGAGCCCCGGGAAGAGUUUU-CUUUUCUGUUUGAGCG-- UUCGGGUUCCA-
UGGAAUCCUCUAGCAGGGAGAUAUGGA-AUGGAGCGCGAA-GAGCACCGCA-GUUGCUGCGGU--GUCC-GGGGAGUCCCGUCGGCCCUUGAAAA-UCUGGGU-GAGGAUCA- CGUGGAGUC-
GCCGCACCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UCAAGAGCCUCUAGUCGAUAGAAU???????????-?????????????????[-   ]
Stenonema_sp_AF461223   GCGCAGAAGGG-UCU--GGGCGUGAGCCU-GCCUGGA-GCCGCCGUCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG GACC
GAUGUGGAGAAGGGUUC-CGUGUGAACAGCCGUUGCACACGGGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGUU-GAUGG-UCGC-GGG--------------- AUGUACCUUAUC-----N-
------------UGCCGGUUGGCGCUAUAAAC------------CCCGUCCGUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GUUGCGG-- AACCGCACUCA--------CGA-
UCCUC---------GUAUUGACACGGUAACGUGAAUGAGCCCAG-AGAUGCCGC-CUGGAGCCCCGGGAAGAGUUUU-CUUUUCUGCCUGAGCG-- UUCGGGUUCCA-
UGGAAUCCUCUCGUAGGGAGAUAUGGA-AUGGAACGCGAA-GAGCACCGCA-GUUGCUGCGGU--GUCC-GGGGAGUCCCGCCGGCCCUUGAAAA-UCUGGGU-GAGGAUCC-- GUGGAGGC-
GGANCACCGGCUCG---UACCC-AUAUCCGC-AGC????????????-????????????????????????????????????-?????????????????[-   ]
Trigonioptha1mus_altern   ???????????-???--????????????-???????-??????????????????-?????-?????????????????????????????????????
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Allomachilis_froggart   ???????????-???--????????????-???????-??????????????????-?????-?????????????????????????????????????
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Dilta_littoralis_AY859570   GCGUAGAAGGG-UCU--GGGCGCGAGCCC-GCCUGGA-GCCGCCGCCGGCGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGAGAGACCCUGGAG
GGCUGAUGCGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCG-CAAGAUAAGUC???-????-??????????-??????------------
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---???????????GG-CGAAAGG-GAAUCCGG--UAC-CCAUUCCGGAACCCG-GCAGCGG--AACCG?????????????-??????????--?????????UCG----------------
------------------GGACGCUC-GGGAAGAGUUAU-CUUUUCUGCAUGAGCG--UCUGGG-ACCC-UGGAAGCCCCUCGCGGGGAGAUAGGGUAGGCGGACGCGAAAGAGCACCGCA-

CUUGCGGCGGU--GUCC-GUGUCGUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCUA-CGUGGAGGU-CUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-
UGAAGAGCCUCUAGUCGGUAGACUAAUGUAGGUAA-GGG-AAGUCGGCAACUC[-]
Ctenolepisma_longicaudata GCGCAGAAGGG-UCU--GGGCGUGAGCCU-GCCUGGA-GCCGCCGUCGGUGUAGAU-CUUGG-UGGUAGUAGCAAAUACUCAAGCGAGGGCCUUGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAUAACUC???-????-??????????-??????------------
???----------???????????GG-CGAAAGG-GAAUCUGG--UUC-CUAUUCCAGAACCGG-GCAGCGG--
AACCG?????????????-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAACAGGACCCGG-AGACGCCGU-CGGGAGCUCUGGGAAGAGUUUU-CUUUUCUGUAUGAGCG--
UUCGUGUUCCCCUGGAAUCAUCUCGCAUGGAGAUAGGGA-AAGGAACGCGAA-GAGCACCGCA-GUUGCAGCGGU--GUCC-AGAGAGUCCCGAUGGACCUUGAAAA-UCCGGGA-GAGGGCCA-
CGUGGAGGU-GUCGCGCCCGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAUUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-]
Lepisma_sp ???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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???----------??????????GAG-CGAAAGG-GAAUCUGG--UUN-CUAUUNNAGAACUGG-GUUGCGG--
AACCG?????????????-CGGGCCCCC---UAAAA-GGCUCGUCAGGGUAACCUAAGAGGACCCGG-AGACGCCGC-CGGGAGCUCUGGGAAGAGUUUU-CUUUUCUGUAUGAGCG-- UUCAUGCUCCC-
UGGAAUCAUCUCGCAUGGAGAUAGGGA-GAAGUCCGCGAA-GAGCACCGCA-GUUGCAGCGGU--GUCC-AGAGAUUCCCGACGGACCUUGAAAA-UCCGGGA- GAGGG???????????-???-
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EU376048_Lepisma_saccharina???????????-???--????????????-???????-??????????????????-?????-???????????????????????????????????
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GCG???????????????GGAAUCUUCCCAGAAGGAGAAGGGGA-??????????AA-GAGAACCGUA-GUUGGGUGCGG-UUUCC-CCGGGUGCCCGUCGGACCUUGAAAA-UCUUGGU- GGGAACAG-
CGCAGCAGA-GUCCCGAGGCCUGGCCGUACCC-GAAUCCGC-AUCUGGCCUCCGAGG-UAAAGAGCCUCUUGACGAUAGACUAAUGUGGGUAA-GGG-AAGUCGGCAAUCU[-
]
Thermobia_domestica GCGCAGAAGGG-UCU--GGGCGUGAGCCU-GCCUGGA-GCCGCCGUCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGGCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAUAACUC???-????-??????????-??????------------
???----------???????????GG-CGAAAGG-GAAUCUGG--UUC-CUAUUCCAGAACCGG-GCAGCGG--
AACCG?????????????-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAACAGGACCCGG-AGACGCCGU-CGGGAGCUCUGGGAAGAGUUUU-CUUUUCUGUAUGAGCG-- UUCGAGUUCCC-
UGGAAUCAUCUCGCAUGGAGAUAGGGA-AAGGAACGCGAA-GAGCACCGCA-GUUGCAGCGGU--GUCC-AGAGAGUCCCGUCGGACCUUGA???-???????-????????-
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Tricholepidion_AY338685 GCAAAGAAGGG-UCU--GGGUGUAAACCU-GCCUGGA-GCCGCCAUCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCUAAAGAGGACCUUGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGUUC-UAAGAGAAAUC???-????-??????????-??????------------
???----------???????????AG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GUAGUGG--
AACCG?????????????-CGAGACCCU---CAUAAGAUCUCGUCAGGGUAACCUAACGUAACCCGG-AGACGUCGU-CGGGAGCCACGGGAAGAGUUUU-CUUUUCUGUAUGAGCG-- UUCGUAUACCA-
UGGAAUCUUUUCGAAGGGAGAUAUGGUUAUGGAACGCGAA-GAGCACCGCA-GUUGCUGCGGG--GUCU-GUGGUUUCCCGACGAACCUUGA???-???????-????????-
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Gromph_laevigata_AY210819 GCGCGGAAGGG-UCU--GGGCGUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCAAGCGAGGGCCUUGAG
GGCUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGUC-GAUG-----------------------------
CGGGGGAUUGUUCUACACACC----CC-------------------------------------CCGUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--
AACCGAAUCUU--------CGGGCCCUCUA-ACGAGUAGCUCGUCGGGGUAACCCAAAAGGACCCGG-AGACGCCGU-CGGGAGACCCGGGCAGAGUUUU-CUGUUCUGCAUAAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUAGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GUCC-GGGUCGUCCCCUCGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGCGGAGGC-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGACUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-]
Isoperla_davisi_AY125288 GCGCAGAAGCG-UUG--GCCCGCGAGGCC-GCGUGGA-GCCGCCGUCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACACUAGCGAGGCCCUGGUG
GACUGAUGUGGAGAAGGGUUU-CGUGUGACAAACCGUUGCACACCAGUCAAGUCGAUCUUAAGCCC-CAGAAGAAAUCCGA-UGUU-GAUG---------------------------
UGCUGUCGUUAUAAAACGUUAUC----CAAUCGAUGUGAACGGUUUGACCA----------------CAUCGGG-CGAAAGG-GAAUCCGU--UUC-CUAUUACGGAACCCG-GCUGCGG--
AACCGACCAUG--------CGGGCC???--????????GCUCGUCGGGGUAACCCAAAAGGACCCGG-AGACGCCGC-CGGAUGAUCGAGGCAGAGUUUU-CUGUUCUGCAUAAGCA-- UUCGAGUUCCC-
UGGAAUCGCCUAGCGCGGAGAUAGGGU-UUGGAAUGCGAA-GAGCACCGCA-CUUGCGGCGGU--GUCU-CGAUCUAUCUCGCGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGAUCG---UACCC-AUAUCCGC-AGCAGGUCUCC????-???????????????????????????????????-?????????????????[-]
EU414717_Isoperla GCGCAGAAGCG-UUG--GCC-GCGAGGCC-GCGUGGA-GCCGCCGUCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACACUAGCGAGGCCCUGGUG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-CAGGAGAAAUCCGA-UGUU-GAUG---------------------------
UGCUGUCGUAUAUACGGAAUUUU----GGAACAAUGCAAAUGGUUUGACCA----------------CAUCGGG-CGAAAGG-GAAUCCGU--UUC-CUAUUACGGAACCCG-GCUGCGG--
AACCGACCAUG--------CGGGCC???--?????????CUCGUCGGGGUAACCCAAAAGGACCCGG-AGACGCCGC-CGGAUGAUCGAGGCAGAGUUUU-CUGUUCUGCAUAAGCA--

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UUCGAGUUCCC-UGGAAUCGCCUAGCGCGGAGAUAGGGU-UUGGAAUGCGAA-GAGCACCGCA-CUUGCGGCGGU--GUCU-CGAUCUAUCUCGCGGACCUUGAAAA-UCCGGGA-GAGGGCCA-
CGUGGAGGU-GUCGCGCCGGAUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UCAGCAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGA-AAGUCGGCAAAUC[-                ]
AY859546_Gomphocerinae       GCGCAGAAGGG-UCU--GGGCGCGAGCCU-GCCUGGA-GCCGCCGUCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG GGCU
GACGCGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGUC-GAUG--------------
GGGGCCGUCAUAGCAUGAUGCCUAUUUGUGCUGGCCCC--------------------------------------------CGUUGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-
GCAGCGG--AACCGAUACAA----GU--CGGGCCC??????????AUGCUCGUCGGGGUAACCCAAAAGGACCCGG-AGACGCCGU-CGGGAGAUCGGGGAAGAGUUUU-CUUUUCUGCAUGA GCG--
UUCGAGUUCCC-UGGAAUCCUCUAGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GUCC-CGAUCUUCCCCUCGGACCUUGAAAA-UCCGGGA- GAGGGCCA-
CGUGGAGGU-GUCGCGCCGGUUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUU[-
]
EF199981_Machilis_hrabei     GCGCAGAAGGG-UCU--GGGCGUGAGCCU-GCCUGGA-GCCGCCGCUGGCGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCGA-CAAGAGAAAUC---------------------------
UUAGCCAUUGAGGGGAUGUUGAGUAAGUAAAGAUGAAAGGCUAUAAAACCCCAGGCUUU----------------------------GG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-
GCCGCGG--AACCGAUCUCA--------CGAGCCCUC--------GGGUUCGACAGGGUAACCUGAAAGGACCCGG-AGACGCCGU-CGGGAGCCCCGGGAAGAGUUUU-CUUUUCUGCAUGA GCG--
UUCGAGACCC--UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUUGAACGCGAA-GAGCACCGCA-UUUGCGGCGGU--GUCC-GGGGAGUCCCGCCGGACCUUGAAAA-UCCGGGU- GAGGGCUA-
CGUGGAGGU-CUCGCGCCGGUUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-
]


[
Neogomphus_edenticulatus_FJ712324      GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUYGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU- GGGAAAC---------
--------UG----AAAUA--------------------------AACUU------GAUCG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----UGCUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGRUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCA-
UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGCGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-    ]
Aeshna_mixta_FJ712315        GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG GACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAUGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAA------------------
A----UUAACC--AA-------------------------G------UAAAG-CGG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU---
--AGUUUGU-CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCC-GG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCCAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-              ]
Gomphaeschna_furcillata_FJ712314      GCGCAGAAGGG-UCU--GGGCUUGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU- GGGACGA---------
--------------AAUUUA-----------------------------A------GAAAA-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGU-----AGUUUGU-CGGGCCUUC--------GGGUUCGUCAGGRUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCAAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCCAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-    ]

Teinobasis_fortis_OD203                GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC- GGGAAAAAUGAAAG-
--------------------------------------------------A------GAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-nnnnnnnn--nnn-n---------
----------------------------------------------------------UCAGGGUAACCUAAAAGGGCCUGG-AGACGCCGU-CGG-AGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG-
-UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGUAACGCGAA-GAGCACCUCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG
-AGAGGGCCA-CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAG---------------------------------------------------------------- [ - ]
Mecistogaster_modestaOD198             GCGCAGAAGGG-UCC--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC- GGGAAAAAACGA-A-
--------------------------------------------------C--GAAUGAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA ACCCG-GCAGCGG--
AACCGC-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU
```

CUGCAUGAGCG--UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG
-AGAGGGCCA-CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAG-- [-]
Anomisma_abnormeOD193 GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-CGCC-AACGG-CGAC- GGGAAAAACGAAAG--
---A--GAGAGAAAG-AAA--CCCGUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC CCG-GCAGCGG--
AACCGC-----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG
-AGAGGGCCA-CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAG-- [-]
Lestes_sponsa --

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Asiagomphus_melaenops GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGCGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UAGC-AACGG-CGAU-
GGGAAACUGAAAAUAA---AGAGAAAGAUUG-CAG--CCCAUUGAUGGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC
CCG-GCAGCGG--AACCGU-----UUCUUGU-CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAMAGAGUUUU-CUUUU CUGCAUGAGCG--
UUCGAGUUCCA-UGGAAUCCUCUCGCAGGGAGAUAUGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAUUUCCCGACGGACCUUGAAAA-UCCGGG
-AGAGGGCCA-CGCGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCMAAUC[-]
Orthemis_discolor GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-
GGGAAACAUUUUUAUG---------------------------------------GACGACUCGUUCUGUGAGACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC
CCG-GCAGCGG--AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--
UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG
-AGAGGGCCA-CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-]
Leucorrhinia_dubia GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UGCA-AACGG-CGAU-
GGGAAACGCAUUGACUCUA----------------------------------AUAAUGA---UAAUCAUGAGACAG-AGA--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGA AC
CCG-GCAGCGG--AACCGU-----UGUUUGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGGGCCCCGGAAAGAGUUUU-CUUUU CUGCAUGAGCG--
UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCGC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG
-AGAGGGCCA-CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUC[-]

]

[[D7][28sD7 33 13â€šÃ„Ã´
0 B1 B2 XX 1 ZZX Y 2
3 Yâ€šÃ„Ã´ 4 ZZâ€šÃ„Ã´ A 5
6a 6b P W 7 8
9 Wâ€šÃ„Ã´ Pâ€šÃ„Ã´ Aâ€šÃ„Ã´ Xâ€šÃ„Ã´ XXâ€šÃ„Ã´
10 B2â€šÃ„Ã´ 11 B1â€šÃ„Ã´ D8UPbGGUAAGGGAAGUCGGCAA]
[FromFLC
CGAUCCUAAGCCC-UAGGAGAAAUCCGAUACU-AACGG-CGAU-GGGAAACCAGA--AUAAGACG-AGA-
GCCCAUUGAUCGGG-CGAAAGGGAA]
Unaligned ???????????????--?????????????-???????-???????????????????-?????????--???????????????????????????????????????
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]
Lestes_eurinus                GCGCAGAAGGG-UCU--GGGCUCGAGCCU-ACCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAGGACU
GAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGACGA---------------- AAGAAAGAA-------
-------------------------CG------GAAAA-CAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAGCGCAAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGUUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-                         ]
Hemiphlebia_mirabilis_OHM     GCGCAGAAGGg-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UAGC-AACGG-UGAU-GGAAAGA------------------
------UUUUC----------------------------------GAAAA-ACG--UCCAUCGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGC----
-UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAGCGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCU-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA-CGUGGAGGU-GU
CGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-                ]
Epiophlebia_superstes_OES     GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAU---------------
ACUU-----UUUUCU-------------------------GA------GACGG-AAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCCC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGGA-GAGGGCCA- CGUGGAGGU-
GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-AAGUCGGCAAAUC[-                         ]
Unaligned_Aeshnoid
Archipetia_auriculata         GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUACUCCAGCGAGGCCCUGGAG
GACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA-UACU-AACGG-CGAU-GGGAAAC--------------- CAGAAAAC----
-----------------------------GA------GACGA-GAG--CCCAUUGAUCGGG-CGAAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-
----UGUUUGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCCGU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG-- UUCGAGUUCCC-
UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--Gccc-gggaauucccgacggaccuugaaaa-uccggga-gagggcca- cguggaggu-
gucgcgccggcucg---uaccc-auauccgc-agcaggucuccaagg-ugaagagccnnnnnnnnnnnnnnnnnnnnnnngguaa-ggg-aagucggcaaauC[-                         ]
FJ712326_Libellula_quadrimaculata      GCGCAGAAGGG-UCU--GGGCUCGAGCCU-GCCUGGA-GCCGCCGCCGGUGCAGAU-CUUGG-UGGUAGUAGCAAAUA
CUCCAGCGAGGCCCUGGAGGACUGAUGUGGAGAAGGGUUU-CGUGUGAACAGCCGUUGCACACGAGUCA-GUCGAUCCUAAGCCC-UAGGAGAAAUCCGA--UGCAAACGG-CGAU- GGGAAAC---------
-------GCACAUU--GACUCGAA-------------------------------------------NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NN
NNNNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNUUUU-CUUUU CUGCAUGAGCG--
UUCGAGUUCCC-UGGAAUCCUCUCGCAGGGAGAUAGGGU-UUGGAACGCGAA-GAGCACCGCA-GUUGCGGCGGU--GCAC-GGGAAUUCCCGACGGACCUUGAAAA-UCCGGG A-GAGGGCCA-
CGUGGAGGU-GUCGCGCCGGCUCG---UACCC-AUAUCCGC-AGCAGGUCUCCAAGG-UGAAGAGCCUCUAGUCGAUAGAAUAAUGUAGGUAA-GGG-A
AGUCGGCAAAUU[-    ]
]

                       [RhadinoFix:ReplaceOrotsticta#1withRhadinosticta
                       Amphi
                       Labido
                       Oro
Euphaea_decorata               ?????????????CGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACAAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------GGCGU-------------------------UCGCGCG-CA-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGU-CGUCGG-CG-CGGC-CUC-CGG-GUCG--UG--
UCGCUCGGGGUCACCGCCCGCGUGCCACUCUUCGGCCGCCAUUUAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCCGGC[- ]
                       ]
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[ComtaminatedD8sequencesinclude:OPBc,ZPZ,ZEF3,OLC,APS,AHC,ALA,OTH,APH,OSN,OEB,andOTC. allchecked]

[D8]
Unaligned   D8-???-??-????????-
??8888888888888888888888888888888888888888888888888888888888???????9999??
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Unaligned_Zygoptera   D8-???-??-????????-
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Protosticta_sp_A_ZPA   ggauccguaacuucgggauaaggauuggcucugagggucggggcgugucg-gg-cuuggucg-
ggaagcgggcuguuugcugacgagccgggccugggcgaggugaa--ucgg----------------------------cgcgu-------------------------ucgcgcg-ug-cc
ggggauccgaguucgguc- ccgugccuuggccacccgcggaccuuccuugc-ugcgagggcgcgugu-agcgguccugg-ugucgg-uuucggc-uc-ucgg-gccg--ug--
cCGCCCGGGGUCACCGCUCGCUCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAgccaaaugccu
cgucauccaauuagugacgcgcaugaau-gga-uuaa-cgagauuccc-acugucccuaucuacuaucuagcgaaaccacagccaagggaacgggcuuggaagaaucagcggggaaagaaga
cccuguugagcuugacucuagucuggc[-]
Protosticta_curiosa_ZPCs_BPCp   ??-??-????????-
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Protosticta_sanguinostigma   ??-??-????????-
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Sinosticta_ogatai_ZSOg   ggauccguaacuucgggauaagGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG----------------------------CGCGU-------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGUCGG-CG-CGUC-CU-CCGG-GUCG--CG--
UCGCCCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCuggc[-]
Palaemnema_paulicoba_ZPP   ggaucCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-CG-------------------------GGCGU-------------------------UCGCGCGCUCGCC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGCCGG-CG-CGGCCCC-AUGG-GUCG--CG--
UCGUCCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU

CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Palaemnema_domina_ZPDm   ??-??-????????-
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Palaemnema_melanostigma   ??-??-????????-
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Isosticta_robustior   ??-??-????????-
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Rhadinosticta   ??-??-????????-
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Amphisticta_silvarum_ZAS   ggauccguaacuucgggauaaggauuGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGU-------------------------UC?CGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGUCGG-CU-CGGC-UC--CG--GUCG--GG--
UCGCCCGGGGUCUCCGUCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
 CCCUGUUGAGCUUGACUCUAGUCUggc[-   ]
Labidosticta_vallisi_OLVa   ggauccguaacuucgggauaaggauuggcucugagggucggggcgugucg-gg-cuuggucg-
ggaagcgggcugaucgcugacgacccgggccugggcgaggugaa--uccg------------------------------cgcgu-------------------------ucacgcg-ag-cc
ggggauccgaguucgguc- ccgugccuuggccacccgcggaccuuccuugc-ugcgagggcgcgcgu-ggcggucccgn-nnnnnnnnn-nnnn-nnn-nnn-nnng---g--
ucgcccgggggucaccgcucgcgcgccgcucuucggccgccauucaacgacugg-cucagaacuggcacggacugggggaauccgacugucuaauuaaaacaaagcauugcgauggccccagc-
ggguguugacgcaaugugauuucugcccagugcucugaaugucaaagugaagaaauucaagcaagcgcggguaaacggcgggaguaacuaugacucucuuaagguagccaaaugccu
cgucauccaauuagugacgcgcaugaau-gga-uuaa-cgagauuccc-acugucccuaucuacuaucuagcgaaaccacagccaagggaacgggcuuggaagaaucagcggggaaagaaga
cccuguugagcuugaCUCUAGUCUGGC[-]
Orosticta_filicicola_ZOF[WHY2?]   ggauccguaacuucgggauaaggauuggcucugagggucggggcguguCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCACGCG-AG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGUUGG-CG-CGGC-UCU-CGG-GUCG--CG--
UCGCCCGGGGUCACCGCUCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]

Platycnemis_pennipes_OPPp ggauccguaacuucgggauaaggauuggcucUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------GGCGU-------------------------UCGCGCG-CA-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-UGUGGG-UG-CGGC-CUU-CCG-GUCG--UG--
CCGCCUGGGGCCACCGCCCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGucuggc[-]
Copera_annulata_OCAn ggaucCGUAACUUCGGGAUAaGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------GGCGU-------------------------UCGCGCG-CA-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-UGUGGG-CG-CGGC-CUU-CCG-GUCG--UG--
UCGCCCGGGGCCACCGCCCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUG??????????CUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Copera_vittata ??-??-????????-
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Copera_marsouipes_ZCM ggauccGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CACGU-------------------------UCGCGCG-AG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGUGGG-CG-CGGC-UUU-CGG-GUCG--CG--
UCGCCCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUggc[-]
Coeliccia_albicauda_OCAL GGAUCnGUAnCUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-UGUCGG-CG-CGGC-UUU-CGG-GUCG--CG--
GCGCCCGGGGCCACCGCCCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Coeliccia_cyanomelas ??-??-????????-
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Calicnemia_miles_OCMi ggauccguaacuucgggauaaggauuggcucugaggguCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-UGUCGG-CG-CGGC-UUU-CGG-GUCG--CG--
GCGCCCGGGGCCACCGCCCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGacucuagucuggc[-]
Prodasineura_vitatta_OPV GgAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCGCGCG-UG-CC

GGGGAUCCGAguucgguc- ccgugccuuggccacccgcggaCCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-UGCGGG-CG-CGGC-UCU-CGG-GUCG--CG--
UCCCCCGGGGUCACCGCUCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUAG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUagcgaaaccacagccaagggaacgggcuuggaagaaucagcggggaaagaaga
cccuguugagcuugaCUCUAGUCUGGC[-   ]
Chlorocnemis_abboti_ZCAb   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG----------------------------CGCGCGU------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-UGCGGG-CG-CGGC-UUU-CGG-GUCG--CG--
UCCCCCGGGGUCACCGCUCGUGCGCCGCUCUUCGGCCGCCAUUCAACgACuAG-CUCAgaacuggcacggacugggggaauccgacugucuaauuaaaacaaagcauugcgauggccccAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Nososticta_solida_ZNSo   ggauccguaacuucgggauaaggauuggcucugagggucggggcgugucg-GG-CUUGGUCG-
GAAAGCGGGAUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------UGCGU------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-CGUGGG-CG-CGGC-CUU-CGG-GUCG--CG--
UCGCCCGGGGCCACCGCCCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-acugucccuaucuacuaucuagcgaaaccacagccaagggaacgggcuuggaagaaucagcggggaaagaaga
cccuguugaGCUUGACUCUAGUCUGGC[-]
Phylloneura_westermanni_BPW   ??-??-????????-
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Onychargia_atrocyana_ZOA   ggauccguaacuucgggauaaggauuggcucugagggucggggcgugucg-gg-cuuggucg-
ggaagcgggcugaucgcugacgagccgggccugggcgaggugaa--ucgg------------------------------cgcgu------------------------uccugcg-ug-cc
ggggauccgaguucgguc- ccgugccuuggccacccgcggaccuuccuugc-ugcgagggcgcgcgu-ggcggucccgg-cguggg-cg-cggc-uuu-cgg-gucg--cg--
ucgcccggggccaccgccCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGGAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUagucuggc[-]
Argia_moesta_OAM   gGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU------------------------UCGCGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGUCGG-CG-CGGC-UCU-CGG-GUCG--UG--
UCGCCCGGGGUCACCGCUCGCGUGCCACUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Argia_nahuana   ??-??-????????-
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Argiocnemis_rubescens_ZAR   ?gauCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGUUGAUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU------------------------UCGCGCG-CG-CC
GAGGAUCCGAGUUCGGUC- CCGUGCCUUGGCUCCCGCGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CG-C-------------UCG--CG--
CCGCCCGGGGUCACCGCUCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-

GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Mortonagrion_binocellata   ??-??-????????-
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Agriocnemis_pygmaea_OAP   ggauccguaacuucgggauaaggauuggcucugagggucggggcgugucg-gg-cuuggucg-
ggaagcgGGUUGAUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------UGCGU-------------------------UCGCGCG-CG-CU
GAGGAUCCUAGUUCGGUC- CCGUGCCUUGGCUCCCGCGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CG-C--------------UCG--CG--
UCGCCCGGGGUCACCGCUCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCaaugugauuucugcccagugcucugaaugucaaagugaagaaauucaagcaagcgcggguaaacggcgggaguaacuaugacucucuuaagguagccaaaugccu
cgucauccaauuagugacgcgcaugaau-gga-uuaa-cgagauuccc-acugucccuaucuacuaucuagcgaaaccacagccaagggaacgggcuuggaaaaaucagcggggaaagaaga
cccuguugagcuugacucuagucuggc[-]
Austroagrion_watsoni_ZAW   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------CGCGU-------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGGUCG-CGGC-CCU-CGG-GUCG--CG--
CCGCCCGGGGUCACCGCUCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Archibasis_viola_ZAV   ?gauCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------CGCGU-------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCACGUGU-AGCGGUCCUGG-UGUCGGUUU-CGGC-UCU-CGG-GCCG--UG--
CCGCCCGGGGUCACCGCUCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Coenagrion_puella_AJ488546   ??-??-????????-
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Coenagrion_resolutum   ??-??-????????-
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Pseudagrion_cingillum_OAAL   GGAUCCGuaaCUUCGGnAUAaGGAUuGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------CGCGU-------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCUGG-UGUCGGUUU-CGGC-UCU-CGG-GCCG--UG--
CCGCCCGGGGUCACCGCUCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU

CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAaCGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Pseudagrion_aureofrons   ??-??-????????-
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Pseudagrion_ignifer_OPi   ggaucCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCUGG-UGUCGGUUU-CGGC-UCU-CGG-GCCG--UG--
CCGCCCGGGGUCACCGCUCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGAcucuagucugGC[-]
Erythromma_najas_1238   ??-??-????????-
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Cercion_plagiosum_AJ488552   ??-??-????????-
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CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Cercion_lindenii_AJ488550   ??-??-????????-
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Paracercion_hieroglyphicum_AJ488551   ??-??-????????-
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CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Acanthagrion_quadratum_ZAQ   ggaucCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCU--UCG----------
GAGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGACGCGUGU-GGCGGUCCCGG-UGUCGGUCG-CGGC-UCU-CGG-GUCG--
CGCGCCGCCCGGGGUCACCGCUCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAA GCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUA
AGGUAGCCAAAUGCCUCGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAA
GAAUCAGCGGGGAAAGAAGACCCUGUUGAGCUUGACUCUAGUCUGGc[-   ]

Leptobasis_vacillans_ZLV   ?gauccguAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCU---UCG---------
GAGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGACGCGUGU-GGCGGUCCCGG-UGUCGGUCG-Cggc-ucu-cgg-gucg--
cgcgccgcccggggucaccgcucgcgcgccgcucuucggccgccauucaacgacugg-cucagaacuggcacggacugggggaauccgacugucuaauuaaaaCAAA GCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUA
AGGUAGCCAAAUGCCUCGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAA
GAAUCAGCGGGGAAAGAAGACCCUGUUGAGCUUGAcucuagucuggc[-   ]
Amphiagrion_saucium_OAS   ggauccguaacuucgggauaaggauuggCUCUGAGGGUCAGAUCAUGUCG-GG-CUUGGUCG-
GCAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCU---UCG---------
GAGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGACGCGUGU-GGCGGUCCCGG-UGUCGGUCG-CGGC-UCU-CGG-GUCG--
CGCGCCGCCCGGGGUCACCGCUCGCGCGCCACUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAA GCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUA
AGGUAGCCAAaugccucgucauccaauuagugacgcgcaugaau-gga-uuaa-cgagauuccc-acugucccuaucuacuaucuagcgaaaccacagccaagggaacgggcuuggaa
gaaucagcggggaaagaagacccuguugagcuugacucuagucuggc[-   ]
Amphiagrion_abbreviatum   ??
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Xiphiagrion_cyanomelas_ZXC   ?gauccguaacuucgggauaaggAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCU---UCG---------
GAGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGACGCGUGU-GGCGGUCCCGG-UGUCGGUCG-CGGC-UCU-CGG-GUCG--
CGCGCCGCCCGGGGUCACCGCUCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAA GCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUA
AGGUAGCCAAAUGCCUCGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAA
GAAUCAGCGGGGAAAGAAGACCCUGUUGAGCUUGACUCUAGUCuggc[-   ]
Hesperagrion_sp_AY750044   ??
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Ischnura_elegans_1239   ??
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GAAUCAGCGGGGAAAGAAGACCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Ishnura_barberi   ??
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Ischnura_graellsi_AJ488545   ??
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Anomalagrion_hastatum_OAH   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCU---UCG----------
GAGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGACGCGUGU-GGCGGUCCCGG-UCUCGGACG-CGGC-UCU-CGGCGUCG--CG--
CCGUCCGGGGUCACCGCUCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Enallagma_parvum_AJ420939   ??
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Enallagma_granti_AJ420937   ??
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E_nigridorsumAJ420938   ??
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Enallagma_cyathigerum_0110   ??
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Enallagma_sp   ??
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E_aspersum_DQ087506   ??
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Aciagrion   ??-??-????????-??--
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Aciagrion_borneense_ZAB   ??-??-????????-
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Protoneura_capillaris   ??
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Protoneura_cara_ZPC   GGAUCCGUAACUUCGGGauaaggauugncucu??????????
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Psaironeura_remissa_PRN   ??
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Elattoneura_analis_or_glauca??
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Neoneura_aaroni_ONA   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGUGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCUCGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGU-UGUCGG-CG-CGGC-UCU-UGG-GUCG--CG--CCGCC-
GGGGCAACCGCUCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU

CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Neaneura_amelia_ZNA   ??
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Neoneura_maria   ??
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Ceriagrion_aeruginosum_ZCAe   ggauccguaacuucgggauaagGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU------------------------UCGCGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGUCGG-CG-CGGC-UCU-CGG-GUCG--CG--
UCGCCUGGGGUCACCGCUCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUcuggc[-]
Telebasis_salva_ZTS   ??
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Leptagrion_elongatum_ZLE   ?gaucCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------UGCGU------------------------UCGCGCG-UA-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCUCGG-UGUCGG-CG-CGGC-UCU-CGG-GUCG--CG--
UCGCCUGGGGUCACCGCUCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Leptagrion_sp   ??
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Metaleptobasis_manicaria_ZMMr   ??
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Diceratobasis_sp_A_ZDA   gGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------UGCGU-------------------------UCGCGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGUCGG-CG-CGGC-UCU-CGG-GUCG--UG--
UCGCCUGGGGUCACCGCUCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CucagaacuggcacggacugggggaauccgacugucuaauuaaaacaaagcauugcgauggCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
FJ596559_Pyrrhosoma_nymphula   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCGCGCG-UG-UC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGU-GGCGGUCCCGG-UGUCGG-CG-CGGC-UUU-CGG-GUCG--UG--
UCGCCUGGGGUCACCGCUCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Chromagrion_conditum_OCCn   ggauccguaacuucgggauaaggauuggcucUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCGCGCG-UG-UC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGUGCACGU-GGCGGUCCCGG-UGUCGG-CG-CGGC-UUU-CGG-GUCG--UG--
UCGCCUGGGGUCACCGCUCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAaGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Teinobasis_alluaudi_ZTA2   ggauccguaacuucgggauaaggauuggcucugagggucggggcgugucg-gg-cuuggucg-
ggaagcgggcugauugcugacgagccgggccugggcgaggugaa--ucgg------------------------------ugcgu-------------------------ucgcgcg-uG-cc
guggauccgaguucgguc- ccgugccuuggccacccgcggaccuuccuugc-ugcgagggcgcgcgu-ggcggucccgg-ugucgg-cg-cggc-ucu-cgg-gucg--ug--
ucgccuggggucaccgcucgugCGCCGCUCUUnGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Nehalennia_gracilis_ONG   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCACGCG-UG-CC
GCGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGUGCACGU-GGCGGUCCCGG-UGUCGG-CG-CGGC-UCU-CGG-GUCG--UG--
UCGCCUGGGGUCACCGCUCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Coryphagrion_grandis_ZCG   ??-??-????????-
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Microstigma_rotundatum_OMRt   ggauccguaACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------UGCGU-------------------------UCGCGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-CGCGGUCCCGG-UGUCGG-CG-CGGC-CUC-CGG-GUCG--CG--
UCGCCUGGGGUCACCGCUCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Microstigma_anomalum   ??
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Mecistogaster_ornata_ZMO_BMLGGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------UGCGU--------------------------UCGCGCG-CG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGUCGU-CG-UGGC-UCU-CGG-GUCG--CG--
UCGCCUGGGGUCACCGCUCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Mecistogaster_linearis   ??
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Megaloprepus_caerulatus   ??
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Haplostigma_modesta_ZHM   GgauCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------UGCGU--------------------------UCGCGCG-CG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGUCGG-CG-CGGC-UCU-CGG-GUCG--CG--
UCGCCUGGGGUCACCGCUCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Pseudostigma_aberrans_OPA   GGAUCCGUAaCUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------UGCGU--------------------------UCGCGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGUCGG-CG-CGGC-UCU-CGG-GUCG--CG--
UCGCCUGGGGUCACCGCUCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Rhinagrion_mima   ggauccguaacuucgggauaaggaUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------CGCGU--------------------------UCgCGCG-UG-CC
GCGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGU-GGCGGUCCCGG-UGUCGG-CU-CGGC-CUC-CGG-GUCG--UG--
CCGCCCGGGGUCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAGAGAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUcuagucuggc
Sciotropis_cyclanthorum_BSC   ??-??-????????-
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Heteragrion_mitratum_ZHMt   ?gauccguaacuucgggauaaggAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------UGCGU------------------------UCGCGCG-CG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGUCGG-CG-CGGC-UCU-CGG-GUCG--CG--
UCGCCUGGGGUCACCGCUCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAauuagugacgcgcaugaau-gga-uuaa-cgagauuccc-acugucccuaucuacuaucuagcgaaaccacagccaagggaacgggcuuggaagaaucagcggggaaagaaga
cccuguugagcuugacucuagucuggc[-]
Heteragrion_sp   ??
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Oxystigma_cyanifrons_ZOC   GgauccguaacuucgggauaagGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU------------------------UCGCGCG-UG-CC
GAGGAuCCGAGUUCGGUC- CCGCGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGC-GGCGGUCCUGG-UGUUGG-CG-CGUC-CU--CUG-GUCG--CG--
UCGCCCGGGGUCACCGCCCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGaau-gga-uuaa-cgagauuccc-acugucccuaucuacuaucuagcgaaaccacagccaagggaacgggcuuggaaaaaucagcggggaaagaaga
cccuguugagcuugacucuagucuggc[-]
Dimeragrion_percubital   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CACGU------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGU-GGCGGUCCCGA-CGUUGG-CG-CGUC-CUU-CGG-UUCG--GG--
UCGCCCGGGGUCACCGCUCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGC??
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Tatocnemis_malgassica_ZTMa   ??-??-????????-
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????????????????????????????-???-????-??????????-??cggggaaagaaga
cccuguugagcuugacucuaGUCUGGC[-   ]
Philogenia_cassandra   ??
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Philogenia_terraba_ZPBn_ZPT   ??-??-????????-
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ZPBn_Philogenia_bernice_   ??
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Teinopodagrion_venale_ZMV   ggauccguaacuucgggauaaggauuggcucugagggucggggcgugucg-gg-cuuggucg-
ggaagcgggcugaucgcugacgagccgggccugggcgaggugaa--ucgg----------------------------cgcgu------------------------ucgcgcg-ug-cc
guggauccgaguucgguc- ccgugcucaggccacccgcggaccuuccuugc-ugcgagggcgcacgu-ggcggucccgg-cgucgg-cu-cggc-cc-gcgg-gucg--gg--
ucACUCGGGGUCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGacucuagucuggc[-]
Teinopodagrion_lepidum_ZTL   ?gauccguaacuucgggaUA
AGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------CGCGU-
-----------------------UCGCGCG-CG-CCGAGGAUCCGAGUUCGGUC- CCGCGCCUAGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG- CGUCGG-CU-
CGGC-CUU-CGG-GUCG--GG--UCGCUCGGGGUCACCGCUCGCGCGCCACUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGAC
UGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGC
GGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCUCGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAG
CCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGACCCUGUUGAGCUUGACUCUAGUCuggc[-   ]
Amanipodagrion_gilliesi_ZAG   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG----------------------------CGCGU------------------------UCGCGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGU-GGCGGUCCCGG-CGUCGG-CG-CGGC-CUC-CGG-GUCG--UG--
UCACCCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Nesolestes_elizabethae_ZNE   ggauCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGUGCGAGGUGAA--UCGG----------------------------CGCGU------------------------UCUCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGU-GGCGGUCCCGG-CGUCGG-CG-CGGC-UCU-CGG-GUCG--CG--
UCACUCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Protolestes_kerckhoffae_ZPKcGgauccguaacuucgggauaaggauuggcucugagggucggggcgugucg-gg-cuuggucg-
ggaagcgggcugaucgcugacgagccgggccugggcgaggagaa--ucgg----------------------------cgcgu------------------------ucgcgcg-cg-cc
ggggauccgaguucgguc- ccgugccuuggccacccgcggaccuuccuugc-ugcgagggcgcgcgu-ggcggucccgg-ugucgu-cg-cggccuuc-cgg-gacu--cg--
ucgcucggggccaccgcccgcgcgccgcucuucggccgccauucaacgauugg-cucagaacuggcacggacugggggaauccgacugucuaauuaaaacaaagcauugcgauggccccagc-
ggguguugacgcaaugugauuucugcccagugcucugaaugucaaagugaagaaauucaagcaagcgcggguaaacggcgggaguaacuaugacucucuUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Argiolestes_ochrostomas_ZAOcGgauccguaacuucgggauaaggauuGGCUCUGAGGGucggggcgugucg-gg-cuuggucg-
ggaagcgggcugauugcugacgagccgggccugggcgaggugaa--ucgg----------------------------cgcgu------------------------ucgcgcg-ug-cc
ggggauccgaguucgguc- ccgugccuuggccacccgcggaccuuccuugc-ugcgagggcgcacgu-ggcggucccgg-uguugg-cg-cggc-ucu-cgg-gucg--cg--
ucgcccggggccaccgcccgcgcgccgcucuucggccgccauucaacgacugg-cucagaacuggcacggacugggggaauccgacugucuaauuaaaacaaagcauugcgauggccccagc-
ggguguugacgcaaugugauuucugcccagugcucugaaugucaaagugaagaaauucaagcaagcgcggguaaacggcgggaguaacuaugacucucuuaagguagccaaaugccu
cgucauccaauuagugacgcgcaugaau-gga-uuaa-cgagauuccc-acugucccuaucuacuaucuagcgaaaccacagccaagggaacgggcuuggaagaaucagcggggaaagaaga
cccuguugagcuugacucuagucuggc[-   ]

Argiolestes_sidonia   ??
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Caledopteryx_maculata   ??
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Trineuragrion_percostale_BTP??-??-????????-
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Caledargiolestes_uniseries   ??
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Podopteryx_roseonotata_ZPR   Ggauccguaacuucgggauaaggauuggcucugagggucggggcgugucg-gg-cuuggucg-
ggaagcgggcugaucgcugacgugccgggccugggcgaggugaa--ucgg-cu---------------------------cgcGU-------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGUUGG-CG-CGGC-UCU-CGG-GUCG--CG--
UCGCCCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Austroargiolestes_icteromelas_OAIc   GGAUCCGUAACUUCGGgAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGUGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CUCGC-------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGU-GGCGGUCCCGG-UGUUGG-CG-CGGC-UCU-CGG-GUCG--CG--
UCGCCCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Griseargiolestes_albescens   ??
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Grisagriolestes_eboracus_ZGE_BGA   g???-??-????????-
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Miniargiolestes_minimus_ZMMnGgaucCGUAACUUCGGgAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGUGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------CGCGU------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGUUGG-CG-CGGC-UCU-CGG-GUCG--CG--
UCGCCCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Lestomima_flavostigma_OPBc3   ??
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Rhipidolestes_hiraoi_ORH   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------CGCGU------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGU-GGCGGUCCCGG-CGUUGG-CG-UGGC-UUU-CGG-GUCG--CG--
UCGCCCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUugagCUUGACUCUAGUCUGGC[-]
Rhipidolestes_aculeata   ??
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Paraphlebia_zoe_OPZ   ggauccGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------CGCGU------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGU-GGCGGUCCCGG-CGUUGG-CG-CGGC-UCU-AGG-GUCG--UG--
UCGCCCGGGGGCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Thaumatoneura_inopinata_OTI3   Ggauccguaacuucgggauaaggauuggcucugagggucggggcgugucg-gg-cuuggucg-
ggaagcgggcugaucgcugacgagccgggccugggcgaggugaa--ucgg-----------------------------cgcgu------------------------ucgcgcg-ug-cc
ggggauccgaguucgguc- ccgugccuuggccacccgcggaccuuccuugc-ugcGAGGGCGCACGU-GGCGGUCCCGA-CGUUGG-CG-CGGC-UCU-AGG-GUCG--CG--
UCGCCCGGGGCCACCGCCCGGGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUugacucuagucuggc[-   ]
Hypolestes_clara_OHC   ggauccguaacuucgggauaaggauuggcucugagggucgggGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGC--------------------------GUUCGCGU------------------------UCGCGCG-UC-CC
GAGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGUUGG-CG-CGGCCAG--CAG-GUCG--CG--
UGCCCCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAUAGCAUUGCGAUGGCCCCAGC-

GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAUCGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGUAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Hypolestes_sp   ??
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Agriomorpha_fusca_ZAF6   GgauccguaacuucgggauAAGGAUuGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCGCGCG-UG-CU
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGUGCACGU-GGCGGUCCCGG-CGUUGG-CG-CGGC-UCU-CGG-GUCG--CG--
UCGCCCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAAAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Sinocnemis_yangbingi_ZSY   ?gauccguaacuucgggauaaGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GAAAGCGGGCUGAUCGCUGACGAGCCGGGCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-CGUGGG-CG-CGGC-CUU-CGG-GUCG--CG--
UCGCCCGGGGCCACCGCCCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGgc[-   ]
Miocora_peraltica_ZMP   ?gauccguaacuucgggauaaggauuGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGAGCCGGGCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCGCGCG-UG-CC
GAGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGU-GGCGGUCCCGG-UGUCGG-CG-CGGC-UUU-CGG-GUCG--UG--
UCGCCUGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUcuagucuggc[-]
Cora_marina_OCMr   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGAGCCGGGCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCGCGCG-UG-CC
GAGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGUGCACGU-GGCGGUCCCGG-UGUCGG-CG-CGGC-UCU-CGG-GUCG--UG--
UCGCCUGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Cora_cyane   ??
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Polythore_sp_Z_ZPZ_BPB   ??-??-????????-
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Polythore_boliviana   ??
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Euthore_fasciata   ??
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Rimanella_arcana_ORA   gGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU------------------------UCACGCG-UG-CC
GAGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGUUCCCGG-CGUUGG-CG-CGGC-CUU-CGG-GUCG--CG--
UCGCCCGGGGCCACCGCCCGCGCGGGCCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUG???aaga
cccuguugagcuugacucuagucuggc[-]
Pentaphlebia_stahli_OPSt   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGU-GGCGGUCCCGG-UGUUGG-CG-UGGC-UCU-CGG-GCCG--CG--
UCGCCCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Devadatta_podolestoides_BDP   ?GAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CACGU------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGU-GGCGGUCCCGA-CGUUGG-CG-CGUC-CUU-CGG-UUCG--GG--
UCGCCCGGGGUCACCGCUCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Amphipteryx_longicaudata_ZAL5   GgaucgguaacuucgggauaAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGUUGAA--UCGG------------------------------CGCGU------------------------UCGCGCG-UG-CC
GUGGAUCCUAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGUUGG-CG-CGGC-UUU-AGG-GUCG--CG--
CCGCCCGGGACCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Pseudolestes_mirabilis_OPMb   GGAUCCGUAACUUcgggaua-ggauuggcucugagggucgGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU------------------------UCACGCG-CG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGUCGG-CU-CGGC-CUC-CGG-GUCG--GG--
UCGCCCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]

Philoganga_vetusta_OPVt3_BPVt   ?gauCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-UGUGGG-CG-CGGC-UUU-CGG-GUCG--CG--
UCGCCCGGGGUCACCGCUCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Philoganga_robusta_OPRb2   ?gauccguaacuucgggauaaGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCACGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGU-GGCGGUCCCGG-UGUCGG-CU-CGGC-UUU-CGG-GUCG--UG--
UCGCCCGGGGUCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAGAGAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUggc[-]
Lestoidea_conjuncta_ZLC   ggauccguaacuucgggauaaggauuggcuaugagggucggggcgugucg-gg-cuuggucg-
ggaagcgggcugaucgcugacgagccgggccugggcgaggugaa--ucgg------------------------------cgcgu-------------------------ucgcgcg-ug-cc
ggggauccgaguucggun- ccgugccuuggccacCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGU-GGCGGUCCCGG-CGUUGG-CG-CGGC-CUC-CGG-GUCG--UG--
UCGCCCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUcauccaauuagugacgcgcaugaau-gga-uuaa-cgagauuccc-acugucccuaucuacuaucuagcgaaaccacagccaagggaacgggcuuggaagaaucagcggggaaagaaga
cccuguugagcuugacucuagucuggc
Diphlebia_lestoides_ZDL   ggauccguaacuuCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCGCGCG-UG-CC
GCGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGU-GGCGGUCCCGG-CGUUGG-CG-CGGC-CUC-CGG-GUCG--CG--
UCGCCCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Diphlebia_coerlescens_ODC   gGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGU-GGCGGUCCCGG-CGUUGG-CG-CGGC-CUC-CGG-GUCG--CG--
UCGCCCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
cccuguugagcuugacucuagucuggc[-]
Bayadera_melanopteryx_ZBM   ggauCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGAUCGCUAACGAGUCGGGCCUGGGCGAGGUGAA--UCGG------------------------------UGCGU-------------------------UCGCGCG-UG-CC
GAGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-CGCGGUCCCGA-CGUGGG-CG-GGGC-CUC-CGG-GUCU--CG--
UCGCUCGGGGCCACCGCGCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUggc[-]
Bayadera_brevicauda   ??
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Dysphaea_gloriosa_ODG   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACAAGCCGGGCCUGGGCGAGUUGAA--UCGG------------------------------UGCGU------------------------UUCG-GCG-UG-CC

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GAGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-CGCGGUCCCGU-C-UCGG-CG-UGGC-CUC-CGG-GUCG--CG--
UCGUUCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGacucuagucuggc[
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Euphaea_formosa              ??????????????????????????????????????????
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Anisophaea_decorata_ZAD_OED  gGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACAAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------GGCGU-------------------------UCGCGCG-CA-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGU-CGUCGG-CG-CGGC-CUC-CGG-GUCG--CG--
UCGCUCGGGGCCACCGCCCGCGUGCCACUCUUCGGCCGCCAUUUAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCCGGC[- ]
Anisopleura_sp_A_ZAA         GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACAAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------UGCGU-------------------------UCGCGCG-CG-UC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGU-CGUCGG-CG-UGGC-UUU-CGG-GUCG--CG--
UCGCUCGGGGUCACCGUCCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[- ]
Disparocypha_biedermanni_ZDB?gaucCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------GGUGU-------------------------UCGCGCG-CC-UC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGA-CGCGGUCCCGU-A-UUGG-CG-CGGC-CCC-CGG-GUCG--CG--
UCGUCCGGGGUCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-       ]
Libellago_semiopaca          ??????????????????????????????????????????
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Heliocypha_biseriata         ??????????????????????????????????????????
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Platycypha_caligata_OPC      GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------GGCGU-------------------------UCGCGCG-CU-UC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGUGA-CGCGGUCCCGA-U-UCGG-UG-UGGC-CUC-CGG-GUCU--CG--
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UCGUUCGGGGUCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Chlorocypha_curta_AJ746319_ZCC   ?gaucCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------GGCGU-------------------------UCGCGCG-CC-UC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGUGA-CGCGGUCCCGA-U-UCGG-CG-UGGC-CUC-CGG-GUCU--CG--
UCGUUCGGGGUCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Sundacypha_petiolata_CHL   ??
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Rhinocypha_fenestrella_ORF   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------GGCGU-------------------------UCGCGCG-CC-UC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGUGCGCGA-CGCGGUCCCGA-A-UUGG-CG-UGGC-CUC-CGG-GUCU--CG--
UCGUUCGGGGUCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGACGGAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCCGGC[-]
Rhinocypha_tincta   ??
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Heliocharis_amazona_ZHAz3   GgauccguaacuucgggauaagGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------AGCGC-------------------------UUCGGCG-UU-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGU-GGCGGUCCCGG-CGUCGG-CG-CGGC-CUU-CGG-GUCG--CG--
UCACUCGGGGUCACCGCUCGGGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUcAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAUAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Hetaerina_americana_OHA2   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGUUGAUAGCUGACGUGCCGGGCCUGGGCGAGGAGAA--UCGG-----------------------------UGCGU-------------------------UCGCGCG----CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCUCCCGCGGACCUUCCUUGC-UGCGAGGACGCGCGU-GGCGACCCCG-----UGG-UA-CG-----U-CGU--UCG--UG--
CCAUUUGGGGCCACCGCCCGCGCGCCACUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACCGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Calaphaea_confusa_ZCC   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------UGCGU-------------------------UCGCGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGUUGG-CG-CGGCUUU--CGG-GUCG--UG--
UCGCUCGGGGCCACCGCCCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU

CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Noguchiphaea_yoshikoae   ??
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Vestalis_beryllae   ??
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Matrona_basilaris   ??
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FJ596560_Atrocalopteryx_atrata   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUAACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCGCGCG-UG-CU
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGA-CGUUGG-CA-CGGCUUU--CGG-GUCG--UG--
UCGCCCGGGGCCACCGCCCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Echo_modesta   ??
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Neurobasis_ianthinipennis   ??
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Sapho_orichalcea_OSO   ggauccguaacuucgggauaaggAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUAACGAGCCGGGCCUGGGCGAGUUGAA--UCGG------------------------------CGCGU-------------------------UCGCGCG-CG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGAUCCCGA-CGUUGG-CG-UGGCCUU--CGG-GUCA--CG--
UCGCCCGGGGCCACCGUCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUagucuggc[-]

Calopteryx_amata_OCAm_BCS   ggaucCGUAaCuUCGGgAUAaGGAUuGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUAACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UUGCGCG-UG-CU
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGA-CGUUGG-CA-CGGCUUU--CGG-GUCG--UG--
UCGCCCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
DCS_Calopteryx_splendens   ??
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Calopteryx_aequabilis   ??
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GAAUCAGCGGGGAAAGAAGACCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Iridictyon   ??-??-????????-
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Iridictyon_trebbaui_ZIT   GGAUCCGUAACUUAGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUAACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------UGCGU-------------------------UCGCGCG-CG-CC
GGGGAGCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCUGG-CGUUGG-CG-UGGC-UU--UCGGGUCG--CG--
UCGCCUGGGGCCACCGCCCGCGUGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCuugacucuagucuggc[-]
Unaligned_lestoid   D8-??-??-????????-
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Nubiolestes_diotima_OND   ggauccguaacuucgggauaaggauuggcucugagggucgGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGAGCUGGGCCUGGGCGAGgugaa--ucgg------------------------------ugcgu-------------------------ucgcgcg-ug-cc
guggauccgaguucgguc- ccgugccuuggccacccgcggaccuuccuugc-ugcgagggcgcacgu-ggcggucccgg-ugucgu-cg-cggc--u--ucg-gucg--ug--
gcgcccggggccaccgcccgcgcgccgcucuucggccgccauucaacgacugg-cucagaacuggcacggacugggggaauccgacugucuaauuaaaacaaagcauugcgauggccccagc-
ggguguugacgcaaugugauuucugcccagugcucugaaugucaaagugaagaaauucaagcaagcgcggguaaacggcgggaguaacuaugacucucuuaagguagccaaaugccu
cgucauccaauuagugacgcgcaugaau-gga-uuaa-cgagauuccc-acugucccuaucuacuaucuagcgaaaccacagccaagggaacgggcuuggaagaaucagcggggaaagaaga
cccuguuaagcuugacUCUAGUCUGGC[-]
Perilestes_kahli_ZPK2_BPK   ?gaucCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCACGCG-UG-CC

GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGCCGG-CG-UGGC--U--UCG-GUCG--CG--
UCGCCCGGGGCCACCGCCCGUGUGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Perissolestes_remotus   ??
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Perissolestes_magellenae   ??
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Chlorolestes_umbrata   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------CACGU------------------------UCGCGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGUCGA-CG-CGGC--U--UCG-GUCG--CG--
CCGCCCGGGGCCACCGCCCGCGUGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Euchlorolestes_tessellata   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUUGCUGACGUGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------UGCGU------------------------UCGCGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGU-GGCGGUCCCGG-UGUCGG-CG-UGGC--U--UCG-GUCG--CG--
CCGCCCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Phylolestes_ethelae   GGAUCCGUAaCUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGACUGCCGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------CGCGU------------------------UCGCGCG-UG-CC
GAGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGCCGG-CG-UGGC--U--UCG-GUCG--CU--
CCGCCCGGGGCCACCGCCCGCGCGCCACUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Synlestes_weyersii   GGAUCCGUAACUUcgggauaaggauuggcucugagggucggggcgugucg-gg-cuuggucg-
ggaagcgggcugauugcugacgagccgggccugggcgaggugaa--ucgg-----------------------------ggcgu------------------------ucgcgcg-ug-cc
guggauccgaguucgguc- ccgugcgucggCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-UGCCGG-UG-UGGC--U--UCG-GUCG--CG--
CCGCCCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAgcuuGACUCUAGUCUGGC[-   ]
Synlestes_tropicus   ggauccguaacuucgggauaaggauuggcucugagggucggggcgugucg-gg-cuuggucg-
ggaagcgggcugauugcugacgugccgggccugggcgaggugaa--ucgg-----------------------------ugcgu------------------------ucgcgcg-ug-cc
guggauccgaguucgguc- ccgugccuuggcCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGU-GGCGGUCCCGG-UGUCGG-CG-UGGC--U--UCG-GUCG--CG--
CCGCCCGGGGCCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-

GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAgcuugacucuagucuggc[-   ]
Chorismagrion_risi   ??
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Episynlestes_cristatus   GGauccguaacu??????????????????????????????
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??-???-????-??????????-????UCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAA
GAAUCAGCGGGGAAAGAAGACCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Episynlestes_albicauda   ??
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Megalestes_micans   ??
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Megalestes_kurahashii   ??
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Orolestes_octomaculatus   ggauccguaACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------UGCGU-------------------------UCGCGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-G-CGGUCCCGG-ACCCGG-CG-UGGC--U--UCG-GCCG--CG--
UCGCCCGGGGCCACCGCACGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Austrolestes_annulosus   ?
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Sympecma_paedisca ???
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Sympecma_fusca_ZSF GgauCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------UGCGU------------------------UCGCGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGCGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-AUACGG-CG-UGGC--U--UCG-GCUG--CG--
ACGCCCGGGGCCACCGCCCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Austrolestes_analis_OAAn GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------UGCGU------------------------UCGCGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGA-G-CGGUCCCGG-AAACGG-CG-CGAU--U--UCG-GUCG--CG--
UCGCCCGGGGCCACCGCCCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Indolestes_pergrinus_OIP GGAUCCGUAACUUcgggauaaggAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------UGCGU------------------------UCGCGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGA-G-CGGUCCCGG-AAACGG-CG-CGAC--U--UCG-GUCG--CGG-
UCGCCCGGGGCCACCGCCCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAaga
cccuguugagcuugacucuAGUCUGGC[-]
Indolestes_cyanea ???
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Chalcolestes_viridis_ZCV ?gaucCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------CGCGU------------------------UCGCGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-G-CGGUCCCGG-ACCCGG-CG-UGGC--U--UCG-GCCG--CG--
UCGACCGGGGCCACCGUACGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Archilestes_grandis_OAG GGAUCCGUAACUUCGG-AUA-GGAU-GGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------CGCGC------------------------UCGCGCG-UG-CC
GUGGAUCCGAGUUCGGUC-CCGCGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-AUACGG-CG-UGGC--C--ACG-GCUG--CG--
UCGCCCGGGGCCACCGCCCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]

Lestes_rectangularis_OLR   GGAUCCGUAACUUCGG-AUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGC-------------------------UCGCGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGCGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-AUACGG-CG-UGGC--U--ACG-GCUG--CG--
UCGCCCGGGGCCACCGCCCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Lestes_eurinus   GGAUCCGUAACUUCGG-AUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGC-------------------------UCGCGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGCGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-AUACGG-CG-UGGC--C--ACG-GCUG--CG--
UCGCCCGGGGCCACCGCCCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAgucuggc[-]
Hemiphlebia_mirabilis_OHM   GGAUCCGUAACUUCGGnAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGUUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------UGCGU-------------------------UCGCGCG-CG-UC
GAGGAUCCGAGUUCGGUC- CCGCGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGUCGG-UC-CUGU--C--ACG-GCCG--GG--
CCGCCCGGGGUCACCGCCUGCGCGCCGCUCUUCGGCCGCCACUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGGAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Unaligned_Anisoptera   D8-???-??-????????-
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Epiophlebia_superstes_OES   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GAAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCACGCG-CG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCUGG-CG-UGGC--U--UCG-GCUG--CG--
UCGCCCGGGGUCACCGUCCCCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Epiophlebia_laidlawi   ??
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Unaligned_Aeshnoid   D8-???-??-????????-
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Archipetia_auriculata   GGAUCCGUAnCUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGU-------------------------UAACGCG-UG-CC

GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-CGGC--U--UCG-GUCG--UG--
UCGUCCGGGGUCACCGUCCCCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Austropetalia_victoria   ggauccguanCUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG-----------------------------CGCGU------------------------UAACGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-CGGC--U--UCG-GUCG--UG--
UCGUCCGGGGUCACCGUCCCCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Hypopetalia_pestilens   GGAUCCNUANCUU????????????????????????????
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A_FJ596639_Phyllopetalia_apicalis   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG-----------------------------CGCGU------------------------UCACGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-CGGC--U--UCG-GUCG--UG--
UCGUCCGGGGUCA??????????????????????????????????????-???-
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A_EU055322_Phyllopeta   --

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Eurypetalia_altarensis   ??
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Ophiopetalia_diana   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG-----------------------------CGCGU------------------------UCACGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-CGGC--U--UCG-GUCG--UG--
UCGUCCGGGGUCACCGUCCCCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Gomphaeschna_furcilata   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--CCGG-----------------------------UGCGU------------------------UAACGCG-CGUCC
GGGGAUCCAAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCUGG-UGCCGG-CG-CGAC--U--UCG-GUCG--CG--
UCGCCCGGGGUCACCGUCCCCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-

GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Oligoaeschna_pryeri ??
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AAPs_Austroaeschna_parvistigma GGAUC-GUA-CUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------UGCGU-------------------------UCACGCG-CGUCC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-UGGC--U--UCG-GUCG--CG--
UCUCCCGGGGUAACCGUCCCCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC
Telephlebia_tillyardi GGAUCCGUAaCUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------UGCGU-------------------------UCACGCG-CGUCC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-UGGC--U--UCU-GUCG--CG--
UCUCCCGGGGUAACCGUCCCCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUgACUCUAGUCUGGC[-   ]
Boyeria_vinosa_OBV GGAUCCGUAaCUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------UGCGU-------------------------UCACGCG-CGUCC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-UGGC--U--UCG-GCCG--CG--
UCUCCCGGGGUUACCGUCCCCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
FJ596627_Boyeria_irene GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------UGCGU-------------------------UCACGCG-CGUCC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-UGGC--U--UCU-GCCG--CG--
UCUCCCGGGGUAA??-??-
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EU424323_Brachytron_pratenseGGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------UGCGU-------------------------UUACGCG-CGUCC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-UGGC--U--UCG-GUCG--CG--
UCUCCCGGGGUUA??-??-
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Epiaeschna_heros GGAUCCGUAACUUCGG-AUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGGGGUGAA--UCGG------------------------------UGCGU-------------------------UUACGCG-CGUCC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CG-UGGC--U--UCG-GUCG--CG--
UCUCCCGGGGUUACCGUCCCCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU

CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
FJ596626_Caliaeschna_microstigma   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------UGCGU-------------------------UCACGCG-CGUCC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-UGGC--U--UCG-GUCG--CG--
UCUCCCGGGGUAA???-??-
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FJ596628_Anaciaeschna_isoceles   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------UGCGU-------------------------UAACCCG-CGUCC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CG-UGGC--U--UCG-GUCG--CG--
UCUCCCGGGGUUA???-??-
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A_GQ118298_Oplonaesch   NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--NNNN------------------------------NNNNN-------------------------N--NNNN-NNNNN
NNNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNN-NNNNNN-NN-NNNN-NNN----NNNNN--NN--
NNNNNNNNNNNNN???-??-
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Aeshna_canadensis   ggauccguaacuucggGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------UGCUU-------------------------UAACACG-CGUCC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CG-UGGC--U--UCG-GUCG--CG--
UCUCCCGGGGUUACCGUCCCCGCGCUUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
A_EU055242_Rhionaeschna_multicolor   --

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Aeshna_cyanea_1203   ??
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FJ596630_Aeshna_grandis   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------UGCUU-------------------------UAACACG-CGUCC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CG-UGGC--U--UCG-GUCG--CG--
UCUCCCGGGGUUA???-??-
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FJ712316_Gynacantha_japonica_or_bullataGGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------UGCGU-------------------------UAACCCG-CGUCC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CG-UGGC--U--UCG-GUCG--CG--
UCUCCCGGGGUUA????????????????????????????????????????-???????????????????????????????????????????????????????????????????-
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Austrogynacantha              ggauccguAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------UGCGU-------------------------UAACCCG-CGUCC
GUGGAUCCGAGUUCGGUC- CCGUGCAUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCUGG-UGUCGG-CG-UGGC--U--UCG-GUCG--CG--
UCUCCCGGGGUUACCGUCCCCGCGCUUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[- ]
Hemianax_ephippiger           ??????????????????????????????????????????
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Anax_junius_OAJ               GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------UGCGU-------------------------UAACUCG-CGUCC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CG-UGGC--U--UCG-GUCA--CG--
UCUGCUGGGGUCCCCGUCCCCGCGCUUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[- ]
FJ596632_Anax_imperator       GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------UGCGU-------------------------UUACUCG-CGUCC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CG-UGGC--U--UCG-GUCA--CG--
UCUGCUGGGGUUC????????????????????????????????????????-???????????????????????????????????????????????????????????????????-
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Unaligned_Gomphid             D8-???????????????????????????????????????????????-??-????????-
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Sinogomphidia_kruegeri        ggauccguaacuucgggauaagGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUU-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------UGCGU------------------------UC-CGCG-CG-CCGUGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-CGGC--U--UCG-GUCG--UG--UCGCCUGGGUGCA
UCGUCCCCGCGCAUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCuacuaucuagcgaaaccacagccaagggaacgggcuuggaagaaucagcggggaaagaaga
cccunuugagcuugacucuagucuggc[- ]
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A_EU055258_Ictinogomphus_australis   ggauccguaa????????????????????????????????
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???????cggggaaagaagacccuguugagcuugacUCUAGUCUGGC[-   ]
Ictinogomphus_sp   ??
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FJ712322_Onychogomphus_sp_mistake   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUU-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------UGCGU-------------------------UC-CGCG-CG-CCGUGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGACGG-CG-CGGC--U--UCG-GCCG--UG--UCGCCUGGGUGCA
UCGUCCCCGCGCAUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUUNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNGACGCGCAUGA-U-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC
Phyllogomphoides_stigmatus_APS   gg??
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Progomphus_obscurus   GGAUCCGUAACUUCGGGAUAAG-AU-G-CUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUU-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGU-------------------------UC-UACG-UG-CCGUGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGAGU-GGCGGUCCCGG-UGCCGG-CG-CGGC--U--UCG-GCCG--UG--UCGCCCGGGUUCA
UCGUCCCCGUGCAUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAAAAUCAGCGGGGAAAGAAGA
CCCUgUUGAGCUUGACUCUAGUCUGGC[-]
EU055271_Progomphus_Neaprogomp_borealis   ---

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Hagenius_brevistylus   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUU-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGC-------------------------UCUGCGU-UG-CCGUGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CU-CGUC--U--UCG-GUCG--AG--UCGCCCGGGUUCA
UCGUCCCCGCGCAUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAAAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Lanthus_vernalis   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUU-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGG------------------------------CGCGU-------------------------CCUGCGU-UG-CCGUGGACCCGAGUUCGGUC-

CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CG-CGGC--U--UCG-GUCG--GG--UCGCCCGGGUUCA
UCGUCCCCGCGCAUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Davidius_nanus   ??
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Neogomphus_edenticulatus   GGAUCCGUA-CUUCGG-AUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUU-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG-----------------------------UGCGU-------------------------UC-CGCG-UG-CCGUGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCUGG-UGUCGG-CG-AGGC--U--UCG-GCCC--CG--UCGCCCGGGUUCA
UCGUCCCCGCGCAUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Armagomphus_armiger   GGAUCCGUAnCUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUU-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG-----------------------------CGCGU-------------------------CC-UGCG-UG-CCGUGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-AGGC--U--UCG-GCCG--AG--UCGCCCGGGUUCA
UCGUCCCCGCGCAUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Hemigomphus_comitans_AHC   GGAUCCGUAACUUCGGGAUAAGGAUUggcucugA????????
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AFJ596622_Hemigomphus_heteroclytus   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUU-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG-----------------------------UGCGU-------------------------CC-UGCG-UG-CCGUGGAUCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-CAGC--U--UCG-GCCG--CG--UCGCCCGGGUUCA
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EU055228_Hemigomphus_magela_BYB   NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--NNNN-----------------------------NNNNN-------------------------N--NNNNNNN-NN
NNNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNN-NNNNNN-NN-NNNN--N--NNN-NNNN--NN--
NNNNNNNNNNNNN??-??-
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Trigomphus_sp   ??
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FJ596615_Stylogomphus_Lanth_albistylusGGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUC-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGG------------------------------CGCGU-------------------------UC-UGCGUUG-CCGCGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CA-CGGC--U--UCG-GUCG--GG--UCGCCCGGGUUCA
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FJ712325_Stylogomphus_shirizui   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUU-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGG------------------------------CGCGU-------------------------UC-UGCGUUG-CCGCGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CA-CGGC--U--UCG-GUCG--GG--UCGCCCGGGUUCA
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EU055286_Davidioides_martini   NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--NNNN------------------------------NNNNN-------------------------N--NNNNNNN-NN
NNNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNN-NNNNNN-NN-NNNN--N--NNN-NNNN--NN--
NNNNNNNNNNNNN??-???-
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Burmagomphus_collaris   GGAUCCGUAACUUCGGGauaaGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUC-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGG------------------------------UGCGCGUGUCCCCUCGGGGG-------------CGCGUCG-CCGCGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUGGG-CG-AGGC--U--CCG-GCCG--AG--UCGCCCGGGUUCA
UCGUCCCCGCGCAUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGGAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
EU055285_Cyclogomphus_heterostylus   NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--NNNN------------------------------NNNNN-------------------------N--NNNNNNN-NN
NNNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNN-NNNNNN-NN-NNNN--N--NNN-NNNN--NN--
NNNNNNNNNNNNN??-???-
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Anisogomphus_pinratani_not_pinratanai ??
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FJ596613_Dromogomphus_spinosus   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUC-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGG------------------------------UGCGCGCGUGUCCCUCCGGGGG--------CG-CGUCGUG-CCGCGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGC-GGCGGUCCCGG-CGUGGG-CG-AGGC--U--UCG-GCCG--AG--UCGCCCGGGCUCA
UCGUCCGCGCGCAUCUCUUCGGCCGCCAUUCAACGACCGGUCUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGYUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU

CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGGAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Arigomphus_villosipes   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUC-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--GUGG------UGCUCUGCGAGUCCCUCAAAAGGGGGCGCG????????????????????????UU-UGUG-UG-CCGCGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGUUGGCGGUCCCAG-CGUUGG-CG-AGGC--U--UCG-GCUG--AG--UCGCCUGGGCUCA
UCGUCCGCGCGCAUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGGAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Arigomphus_cornutus_   ??
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FJ712319_Stylurus_intricatusGGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUC-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGG-------------------------CGCGCGCGU---CCCCUUCGGGGGG-----------CACGUCG-CCGCGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-CGUGGG-CG-AGGC--U--UCG-GCCG--AG--UCGCCCGGGUUCA
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Stylurus_amnicola   ??
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FJ596610_Stylurus_nagoyanus   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUC-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGG-------------------------CGCGCGCGU---CCCCCUCGGGGGG-----------CGUGUCG-CCGCGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUGGA-CG-AGGU--U--UCG-GCCG--AG--UCGCCCGGGCUCA
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FJ596612_Gomphurus_Gomphus_externus   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUC-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGGUG---------------------CUCUUGCGCGU---CCC--UCGGGGCGUGU------CU-UGAG-CG-CCGCGGACCCGAGUUCGGUC-
CCAUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGC-GGCGGUCCCGG-CGUGGG-CG-AGGC--U--CCG-GCCG--AG--UCGCCCGGGCUCA
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J596611_Asiagomphus_melaenops   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUC-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGG-------------------------UGCGCGCGU----CCCCUCGGGGG------------CGCGUCG-CCGCGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUGGG-CG-AGGC--U--UCG-GCCG--AG--UCGCCCGGGCUCA
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FJ596614_Gomphus_Phanogomphus_exilis   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUC-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGGUG----------------------CGCGCGCGCGU---CCCCCUCGCGGGGGCGCG----U--CGCG-UG-CCGCGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-CGUGGG-CG-AGGC--U--UCG-GCCG--AG--UCGCCCGGGCUCA
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Gomphus_Gomphus_graslini_AF266051??
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Gomphus_Hylogomphus_adelphus_OGA   GGAUCCGUAACUUCGGGAUGAGGAUUGGCUCUGAGGGUCGG-GCGUGUCGGGG-CUUGGUCG-GAAAGUGGGCUGUC-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGGCGGAGAGGCGCGCGUCCCUUCGCGGGGGCGCGCGU????????UUUUUUU-?????????????????CG-CCGCGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGUUGGCGGUCCCGG-CGUGGG-CG-AGGC--U--CCG-GCCG--AG--UCGCCCGGGCUCA
UCGUCCGCGCGCAUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGGAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
FJ712320_Gomphus_Gomphus_vulgatissimusGGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUC-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGGC-----------------------------GCGCUCGUCCCUUUCGGGGGGCGU-GUGUA---------G-CCGCGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUGGG-CG-AGGC--U--UCG-GCCG--AG--UCGCCCGGGCUCA
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Megalogomphus_sommeri   ??
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FJ712321_Onychogomphus_uncatus   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUU-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGG------------------------------CGCGU-------------------------UC-UGCGUUG-CCGUGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CA-CGGC--U--UCG-GCCG--AG--UCGCCCGGGUUCA
UCGUCCCCGCGCAUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNGACGCGCAUGA-U-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC
FJ596620_Onychogomphus_forcipatus_un   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUU-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGG------------------------------CGCGU-------------------------UC-UGCGUUG-CCGUGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CA-CGGC--U--UCG-GCUA--AG--UCGCCCGGGUUCA
UCGUCCCCGCGCAUCUCUUCGGCCGCCAAUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC
FJ596617_Lindenia_tetraphylla_mistake   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUU-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGG------------------------------CGCGU-------------------------UC-UGCGUUG-CCGUGGACCCGAGUUCGGUC-

CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CA-CGGC--U--UCG-GCUA--AG--UCGCCCGGGUUCA
UCGUCCCCGCGCAUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAWK-GGA-UUAA-CGAGAUUCCC-GCUGUCC-UAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC
Ophiogomphus_carolus_OOC   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUU-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGG------------------------------CGCGU-------------------------UC-UGCGUUG-CCGUGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CA-CGGC--U--UCG-GCCG--AG--UCGCCCGGGUUCA
UCGUCCCCGCGCAUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC
FJ596618_Ophiogomphus_severus   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUU-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGG------------------------------CGCGU-------------------------UC-UGCGUUG-CCGUGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CA-CGGC--U--UCG-GCCG--AG--UCGCCCGGGUUCA
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Ophiogomphus_Ophiogomphus_caecilia   ??
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Leptogomphus_elegans   ???????
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Leptogomphus_sauteri_FJ596609   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCAGGGCGUGUCG-GG-CUUGGUUG-GAAAGUGGGCUGCU-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGG---------------------------CUU--------------------------------------UG-CUGCGGACCCGAGUUCGGUC- CCG-
GCCUUAGACACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGUUCCCGG-UGAC---UC-UGGC--U--UCG-GUCG--UG--UCGCUUGGGUUCA
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Epigomphus_compactus   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUCUG-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGG------------------------------CGCGU?????????????????????????CCUGCGU-UG-CCGUGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CG-UGGC--U--CCG-GCCG--CG--UCGCCCGGGUUCA
UCGUCCCCGCGCAUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGCUUGGAAGGAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Microgomphus_chelifer_FJ712323   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGCU-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGG-------------------------UUCA------CA----------------------------------CCGUGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UCCCGG-UC-AGGC-CUA-UCG-GUCU--GG--CCGCCUGGGUUCA

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Heliogomphus_retroflexus   ??
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Macrogomphus_parallelogramma??
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Ceratogomphus_pictus   GGAUCCGUAACUUCGG-AUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGCU-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGG------------------------------CUUUG------------------------------------CUGUGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCUGG-UGCCGG-CG-CGAC--U--UCG-GUUG--CG--UCGCCCGGGUUCA
CCGUCCCCGCGCAUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Lestinogomphus_angustus   ggAuccguAA????????????????????????????????
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Austrogomphus_guerini   ???????????uucgg-auaaggauuggcucugagggucggggcgugucg-gg-cuuggucg-gaaagugggcuguu-
gcugacgagccgggccuggaugaggugaa--acgg--------------------------------ggcgu-----------------------uc-ggcg-aagcuguggagccgaguucgguc-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCUGG-UGUCGG-CG-UGGC--U--UUA-GUUG--CG--UCGCCCGGGUUCA
UCGUCCCUGCGCAUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUugagcuugacucu????????[-]
EU055267_Austrogomphus_amphiclitus   NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNNNN-
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EU055261_Antipodogomphus_acolythus   --

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Unaligned_Petalurid   D8-???-??-????????-
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Tanypteryx_hageni   ??-??-????????-
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cccUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Tanypteryx_sp   ??-??-????????-
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FJ712330_Tanypteryx_pryeri   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGU-------------------------UC-CGCG-CG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CG--------------------------------
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Tachopteryx_thoreyi   GGAUCCGUAACUUCGG-AUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGU-------------------------UC-CGCG-CG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CG-CGGC--U--CCG-GCCG--UG--
UCGCCCGGGGUCAUCGUCCCCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGAcucUAGUCUGGC[-]
Phenes_raptor   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGU-------------------------UC-CGCG-UG-CC
GCGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CU-CGGC--C--CCG-GUCG--GG--
UCGCCCGGGGUCUCCGUCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-????-??????????-????UCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Phenes_centralis   GGAUCCGUA-CUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGU-------------------------UC-CGCG-UG-CC
GCGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CU-CGGC--C--CCG-GUCG--GG--
UCGCCCGGGGUCUCCGUCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC

FJ596625_Uropetalia_carovei   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGU-------------------------UC-CGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CU-CGGC--U--CCG-GUCG--GG--
UCGCCCGGGGUCU???-??-
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Petalura_hesperia   ggauccguaacuu?????????????????????????????????????-??-????????-
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A_EU055252_Petalura_gig   ---

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Petalura_litolae   ??-??-????????-
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cccuguugaGCUUGACUCUAGUCUGGC[-   ]
Petalura_ingentissima   ??-??-????????-
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Zoraena_bilineata   GGAUCCGNNNNNNCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGU-------------------------UC-CGCG-UG-CC
GAGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CG-UGGC--U--UCG-GUCG--CG--
UCGCCCGGGGUCACCGUCCCCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUnGACUCnAGUCUGGC[-]
Taeniogaster_obliqua   GGAUCCGUAAyUUCgggAUA-ggAUU?????????????????????????-??-????????-
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cccuguugagcuugacucuagucuggc[-   ]
Kalyptogaster_erronea   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGU-------------------------UC-CGCG-UG-CC

GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-UGGC--U--UCG-GUCG--CG--
UCGCCCGGGGUCACCGUCCCCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
FJ712317_Cordulegaster_maculata   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGU------------------------UC-CGCG-UG-CC
GGGGAUCCGAGUUCGGUC-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CG-UGGC--U--UCG-GUCG--CG--
UCGCCCGGGGUCA??-??-
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EU055277_Cordulegaster_dorsalis   --

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FJ596634_Cordulegaster_boltonii   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGU------------------------UC-CGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-UGGC--U--UCG-GUCG--CG--
UCGCCCGGGGUCA??-??-
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FJ596637_Cordulegaster_picta   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGU------------------------UC-CGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-UGGC--U--UCG-GUCG--CG--
UCGCCCGGGGUCA??-??-
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FJ596638_Anotogaster_sieboldii   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGU------------------------UC-CGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-UGGC--U--UCG-GUCG--CG--
UCGCCCGGGGUCA??-??-
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Neopetalia_punctata   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGU------------------------UUCGGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGGUUG-CGG-UG-CGGC--C--UCG-GUCG--UG--
CCGCCCGGGGUCACCGUCCCCGCGCCUCUCUUCGGCCGCCAUUUAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Chloropetalia_soarer   ggauccguaacuucgggauaaggauuggcucugaggguCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGU------------------------UC-UGCG-CG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCUGG-UGCCGG-UG-CGGC--C--UCG-GUCG--UG--
CCGCCCGGGGUUACCGUCCCCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-

GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Sinorogomphus_nasutus   GGnUCnGUAnCUn?????????????????????????????????????-??-????????-
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cccuguugagcuugacucuagUCUGGC[-   ]
FJ596635_Chlorogomphus_brunneus   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGU-------------------------???????-?????
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Chlorogomphus_sp   ??-??-????????-
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Synthemis_eustalacta   GGAUCCGUAACUUCGGGAUA-GGAUUGGCUCUGAGGGUCGG-GCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCCGGCCUGGGUGAGGUGAA--GCGA------------------------------CGCGU-------------------------UC-CGCG-CG-UC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCACGUGU-GGCGGUCCCGG-UGCUGG-CG-CGGU--U--UCG-GUCG--CG--
UCGCCCGGGGUCACCGUCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Archaeosynthemis_marcrostigma_   ??
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Archaeosynthemis_leachii_   ??
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Eusynthemis_brevistyla   GGAUCCGUAACUUCgggAUA??????????????????????
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FJ596573_Eusynthemis_guttata   ??
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EU055262_Eusynthemis_nigra   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGA------------------------------CGCGU-------------------------???????-?????
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EU055263_Choristhemis_flavoterminata

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Synthemiopsis_gomphomacromioides_ASG GGAUCnGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGA------------------------------CGCGU-------------------------UC-CGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCACGUGU-GGCGGUCCCGG-UGCUGG-CG-CGGC--U--UCG-GUCG--UG--
UCGCCCGGGGUCACCGUCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Gomphomacromia_chilensis   GGAUCCGUAnCUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGGUGAGGUGAA--GCGA------------------------------CGCGU-------------------------UC-CGCG-CG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCACGUGU-GGCGGUCCCGG-UGCUGG-CG-CGGC--U--UCG-GUCG--UG--
UCGCCCGGGGUCACCGUCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
FJ712318_Gomphomacromia_paradoxa   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGGUGAGGUGAA--GCGA------------------------------CGCGU-------------------------???????-?????
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A_GQ329652_Syncordulia_serendipator   --
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A_GQ329654_Syncordulia_venator   --
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EU055287_Idionyx_imbricata   --
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Idionyx_selysi_   ??
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Macromidia_rapida   GGAUCCGkAACUUCgggAUAAgnnUngg??????????????
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EU424325_Oxygastra_curtisii   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGG------------------------------CGCGU-------------------------???????-?????
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EU055244_Cordulephya_pygmaea   --
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Pseudocordulia_circularis   ??
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Hesperocordulia_berthoudi     ???????????????????????????????????????????
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Lathrocordulia_metallica      ???????????????????????????????????????????
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Micromidia_convergens         ???????????????????????????????????????????
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Micromidia_atrifrons          ???????????????????????????????????????????
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Austrophya_mystica            ???????????????????????????????????????????
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Austrocordulia_refracta       ???????????????????????????????????????????
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Archaeophya_magnifica         ???????????????????????????????????????????
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Epophthalmia_elegans          ???????????????????????????????????????????
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Didymops_transversa   GGAUCCGUAACUUCGG-AUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGG------------------------------CACGU------------------------------------CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCCGG-CG-CGGC--U--UCG-GCCG--CG--
UCGCCCGGGGUCACCGUCCGUGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Macromia_illinoiensis   GGAUCCGUAACUUCGG-AUA-GGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGG------------------------------CUCGU------------------------------------CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-AGCCGA-CG-CGGC--U--UCG-GCCG--CG--
UCGCCCGGGGUCACCGUCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
FJ596570_Macromia_amphigena   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGG------------------------------CACGU------------------------------------CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCCGG-CG-CGGC--U--UCG-GCCG--CG--
UCGCCCGGGGUCACCGUCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Macromia_eurynome   ??
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Macromia_magnifica   ??
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FJ712329_Macromia_splendens   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGG------------------------------CACGU------------------------------------CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCCGG-CG-UGGC--U--UCG-GCCG--CG--
UCGCCCGGGGUCACCGUCCGUGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGNNNNNNNNNNNNNN-NNN-NNNN-NNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNN[-   ]
FJ596571_Phyllomacromia_sp   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGG------------------------------CACGU------------------------------------CC
GCGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCCGG-CG-CGGCCGU--ACG-GCCG--CG--
CCGCCCGGGGUCACCGUCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-

GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
FJ596572_Idomacromia_proavita   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAAA-GCGG------------------------------CGCGU------------------------UC-UGCG-CG-CC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUC CUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCUGG-CG-CGGC--U--UCG-GCCG--UG--
UCGACCGGGGUCACCGUCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Aeschnosoma_forcipula   ??
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Pentathemis_membranulata   ??
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Tetragoneuria_cynosure   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGC------------------------------GGCGU---CCUCUCUCGGGGGGG----------CGC-CGUCG
ACGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCUUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-CGCUGG-CU-CGGUCGAUCCCG-GCCG--UG--
UCGCCCGGGGUUCCCGCUCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Tetragoneuria_costalis   ??
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FJ596567_Tetragoneuria_canis   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGGUGAGGUGAA--GUGC---------------------------GUGCUCGC--UCCCUCGUGGGGCGGG----------CGC----GC
GCGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGC-GGCGGUCCCGG-CGUCGA-CU-CGGUCGGUUUCG-GCCG--GG--
UUGCCCGGGGUCCCCGCCCGUGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
FJ596565_Epitheca_princeps   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGGUGAGGUGAA--GUGC------------------------------GUGCUCGCUCUCUCGUGGGGCGGG---------CGC----GC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-CGUCGA-CU-CGGUCGGUUUCG-GCUG--GG--
UUGCCCGGGGUCCCCGCCCGUGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU

CAACAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
FJ596561_Epitheca_marginata GGAUCUGUAACUUUGGGAUAAGUAUUGGCUCUGAAGGUCGGCGCAAGUCG-GG-CUUGGUCG-GGAAGCAGGCUGUUU----
ACAAGCUGGGCCUGGGUGAGGUGAA--GUGC------------------------------GUGCUCGCUCCCUUGCGGGGCGGG---------CGU----ACGCGGAUCCGGGUUCGGUC- CCAUG
CCAUGGCCACCCCCCGACCUUCCUUGC-UGCCUGGGCGUGCAU-GGCAGUCCCGG-CGUCGA-CU-CGGUCAGUUUCA-GCCG--GU--UUACCCCGGGUCC
CUUCCAGUGCGCCUCUCGUCAGUCACCAUUCAUUGACCUG-CUAUGGACUGACACGGACUGAUGGAAUCCGACUGUCUAAUUAAAACAAAACCAUANNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
FJ596564_Epitheca_bimaculata GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGGUGAGGUGAA--GUGC------------------------------GUGCUCGCUCUCUCGUGGGGCGGG---------CGC----GC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-CGUCGA-CU-CGGUCGGUUUCG-GCUG--GG--
UUGCCCGGGGUCCCCGCCCGUGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CAACAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Rialla_villosa ???
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Cordulia_aenea_1236 ???
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Cordulia_shurtleffii GGAUCC?????????????????????????????????????
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FJ596568_Somatochlora_alpestris GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGGUGAGGUGAA--GUGC---------------------------GUGCUCGC--UCCUCACGGGG-UGGG-----------CGC----GC
GCGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-CGUUGA-CU-CGGUCGGUUUCG-GCCG--GG--
UCGCCCGGGGUCCCCGCCCGUGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Somatochlora_flavomac_1242 ???
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FJ596569_Somatochlora_metallica   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGGUGAGGUGAA--GUGC---------------------------GUGCUCGC--UCCUCGCGGGG-UGGG-----------CGC----GU
GCGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGC-GGCGGUCCCGG-CGUCGA-CU-CGGUCGGUUUCG-GUCG--GG--
UCGCCCGGGGUCCCCGCCCGUGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAG
AAGACCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Somatochlora_tenebrosa   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGC------------------------------GGCGU---CCUCUCUCGGGGGGG-----------CGC-CGUCG
ACGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCUUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-CGCUGG-CU-CGGUCGAUCCCG-GCCG--UG--
UCGCCCGGGGUUCCCGCUCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
FJ596562_Hemicordulia_mindana   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGGUGAGGUGAA--GUGC-------------------------------GUGCUCGCUCCUU----------------???????-?????
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EU055266_Hemicordulia_australiae   --
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EU055254_Procordulia_jacksoniensis   --
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Unaligned_Libellulid   D8-??-??-????????-
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FJ596583_Notiothemis_robertsi   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGA------------------------------GGCGU-------------------------???????-?????
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FJ596578_Tetrathemis_irregularis   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGA------------------------------GGCGU-------------------------???????-?????

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EF631495_318_222_Tetrathemis_polleni   --
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FJ596587_Urothemis_signata   ??
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EF631421_313_217_Urothemis_assignata   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGA------------------------------GGCGU-------------------------???????-?????
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FJ596588_Macrodiplax_cora   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGA------------------------------GGCGU--UCUCG----------------------GAC-GCCGA
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-CGCUGG-CU-CCGCCUCUACCG-GCGG--UG--
UCGCCCGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
EU055229_Macrodiplax_balteata   ??
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EF631458_344_253_Zyxomma_elgneri   --
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Zyxomma_petiolatum_GU196340   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGUUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGA------------------------------GGCGUCCCUCGG----------------------GGC-GCCGA
GCGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCUCCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CU-CCGCCUAUCC-G-GUGG--UG--
UCGCCCGGGGUCCCCGUCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-

GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
FJ596576_Zygonyx_torridus   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGA------------------------------GGCGU-------------------------???????-?????
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EU055233_Nannophlebia_sp   --
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Bironides_sp_HOL_2010_GU196365   GGAUCCGUAACCUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGAGG---------------------------AGGUGCUCC-GUGCC------------------------UCCGA
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCUGG-CA-GCGUCUUCGCGG-UCGC--UG--
UCGCCCGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAA-ACAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Huonia_epinephela_GU196370   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGAGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGAGG---------------------------GGGCACUCCCGUGCC------------------------UCCGA
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCUGG-CA-GCGCCUUCGCGG-GCGG--UG--
UCGCCCGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUNUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
EF631477_361_270_Huonia_oreophila   ---
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A_EF631485_367_278Onycothemis_testacea--
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FJ596582_Rhyothemis_variega_imperatrixGGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGC------------------------------GGUGUCUUC---------------------???????-?????
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Rhyothemis_fuliginosa_GU196333 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGC-----------------------------GGUGUCUUCGGGC-------------------------GCCGC
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-CGCUGG-CU-CGGCCAUUCCCG-GUCG--UG--
UCGCCCGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Miathyria_marcella ??
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Miathyria_simplex_GU196345 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGA-----------------------------GGCGUCCUCCGGGC------------------------GCCGA
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCCGG-CU-CCGCCUUCGCCG-GCGG--UG--
UCGCCCGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
FJ596577_Tholymis_citrina GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGUUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGA-----------------------------GGCGUCCUCCCUC-----------------???????-?????
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EF631403_298_202_Tholymis_tillarga --
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EF631487_369_280_Pantala_flavescens --
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Traemea_lacerata GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGA-----------------------------GGCGUUC---UCGGACGCCGA----------------------
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCUGG-CU-CCGCCUUUACCG-GCGG--UG--
UCGCCCGGGGUCCCCGCUCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]

FJ596586_Tramea_calverti   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGA------------------------------GGCGUCC-UCCUGGGCGCCGA----------------------
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGC-GGCGGUCCCGG-CGCUGG-CU-CCGCCUUCACCG-GCGG--UG--
UCGCCCGGGGUUCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Sympetrum_Kalosympetrum_janeae_OSJ   GGAUCCGUAACUU?????????????????????????????
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Sympetrum_Kalosympetrum_obtrusum_   ??
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FJ596606_Sympetrum_Sympetrum_vulgatum GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGC------------------------------GGCGUCCUCUCUC-----------------???????-?????
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Sympetrum_Sympetrum_pedemontanum_   ---
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CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Sympetrum_Nesogonia_blackburni_   ??
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FJ596607_Sympetrum_Sympetrum_sanguineum   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGC------------------------------GGCGUCCUCUCUC-----------------???????-?????
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EU055230_Sympetrum_Tarnetrum_corruptum---
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Sympetrum_fonscolombei_GU196359   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGGC----------------------------CGGUGACCUCCCUCGGGGGGA-------------CGC-CGCCG
ACGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCUUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-CGCUGG-CU-CGGUCGAUCCCG-GCCG--UG--
UCGCCCGGGGUUCCCGCUCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAACGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Sympetrum_Tarnetrum_illotum_??
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Sympetrum_Tarnetrum_infuscatum   ??
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GAAUCAGCGGGGAAAGAAGACCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
EU424330_Sympetrum_danae   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGC------------------------------GGUGUCCUCUCUCGGGGGG-------------CGC-CGUCG
ACGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCUUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-CGCUGG-CU-CGGUCGAUCCCG-GCCG--UG--
UCGCCCGGGGUUCCCGCUCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Sympetrum_meridionale_GU196334   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGC------------------------------GGUGUCCUCUCUCGGGGGG-------------CGC-CGUCG
ACGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCUUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-CGCUGN-CU-CGGUCGAUCCCG-GCCG--UG--
UCGCCCGGGGUUCCCGCUCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNN-NNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNN[-   ]
FJ596605_Leucorrhinia_pectoralis   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGC------------------------------GGCGUCUCCUCGC-----------------???????-?????
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Leucorrhinia_glacialis   ??
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Celithemis_elisa   GGAUCCGUAACUUCGGGAUAAGGAUCGCCUCUGAGGGUCGGCGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGC------------------------------GGCGUCCUCUCGGGGG-----------------CGC-CGUCG
ACAGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACUUUCCUUGCAUGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCUGG-CU-CGGCCGAUCCCG-GUCG--UG--
UCGCCCGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAACGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Celithemis_eponina_1233   ???
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Brachymesia_gravida_   ???
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Brachymesia_herbida_GU196344GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCCGGU----------------------------GCGUCCUCGGGCG-----------------------CGUCG
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGC-GGCGGUCCCGA-CGCUGG-CU-CCGCCUUAACGG-GUGG--UG--
UCGCUCGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUUUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUUUAGUUUGGC[-   ]
EF631463_349_258_Brachythemis_leucostic   --
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Brachythemis_contaminata_   ???
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Deielia_phaon_GU196343   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGA------------------------------GGCGUCCCUCACG--------------------GGGC-GCCGA
GCGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-AGCCGG-CU-CCCCCUAUCC-G-GGGG--GG--
UCGCCCGGGGUCCCCGUCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAACAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU

CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
EF631398_294_198_Pachydiplax_longipenni   ---
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AY750042_Erythemis_sp   --
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FJ596592_Acisoma_panorpoidesGGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAG--CCGGGGAGUCC--UUCG---???????-?????
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EU055239_Erythrodiplax_minuscula   --
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Erythrodiplax_basalis_   ??
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EF631390_289_192_Crocothemis_servilia --
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Crocothemis_erythraea_GU196335   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGG--GGC-AACCC
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-CGCUGG-CU-CCGCCUUCGCGG-GUGG--UG--
UCGCCCGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]

FJ596590_Rhodothemis_rufa   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAG--CCGGGGAGUCC--UUCG---???????-?????
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Neurothemis_fulvia_   ??
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Neurothemis_ramburii_GU196339   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGG--GGG-AACCC
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GACGGUCCCGG-CGCUGG-CU-CCGCCUUAACGG-GUGG--UG--
UCGCCUGGGGUCCCCGCCCGCGCGCUUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Diplacodes_lefebvrii   ??
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Diplacodes_trivialis_GU196342   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGG--GGC-AACCC
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-CGCUGG-CU-CCGCCUUCACCG-GCGG--UG--
UCGCCUGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
EF631462_348_257Bradinopyga_strachani --
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Brachydiplax_denticauda   ??
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FJ596585_Brachydiplax_chalybea_flavovit   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGGCGGGU---???????-?????

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FJ596584_Chalcostephia_flavifrons   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGGUGGGUCC--UUCG---???????-?????
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EF631393_291_195_Micrathyria_aequalis --
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Micrathyria_atra_   ??
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Micrathyria_didyma_GU196361   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUAACGAGCCGGGCCUGGAUGAGGUGAA--GCGA------------------------------GGCGUCCCUCGG----------------------GGC-GCCGA
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCUGG-CU-CGGCCUAUCCCG-GUCG--UG--
UCGCCCGGGGUCCCCGCCCGUUCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUNUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Uracis_imbuta_GU196363   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGCGAA--UCGG------------------------------GGCGUUCCUCGCGG--------------------GGC-GUCCU
GAGGAACCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCUGG-CU-CCGCCUUCACGG-GCGG--UG--
UCGCCUGGGGUACCCGCUCGCACGUCUCUCUUCGACCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Uracis_infumata   ??
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FJ596589_Nannophya_pygmaea   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGAGGAGUC---UUCU---???????-?????
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EF631412_307_210_Nannothemis_bella   GGAUCCGUAACUUCGGGAUAAGnAUnGGCUCUGA????????
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EF631492_373_Paltothemis_lineatipes   ---
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Brechmorhoga_mendax_   ??
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Brechmorhoga_praedatrix_GU196346   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUAACGAGCCGGGCCUGGAUGAGGUGAA--GCGGGU----------------------------CGCGUCCCUCGCGGGU------------------CGC-GAUCU
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCUGG-CU-CGGCCUAUCCCG-GUCG--UG-- UCGCCCGGGGUCC
CCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Dythemis_fugax_   --
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A_FJ596580_Trithemis_aurora   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGUUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGAGAGGGGA--CUUG---???????-?????
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FJ596581_Trithemis_africana   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGUUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGAGAGGGGA--CUUG----------------------UC-CUC---------------------------GAUU-
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGUCGG-CA-CUGCCUUCGCGGGUUGG--UG--
UCGCCCGGGGUCCCCGCUCGUGCGCUUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGYACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU

CGCCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Trithemis_arteriosa_ ??
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Perithemis_tenera GGAUCCGUAACUUCGG-AUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGG------------------------------GGCGUCUUC------------------------GGGC-GUCUG
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUUCUUGC-UGCGAGGGCACGUGU-GGCGGUCCCGA-CGCUGG-CU-CCGCCUUAACGG-GUGG--UG--
UCGCUCGGGGUUCCCGCUUGCGUGCCUCUCUUCGGCCGCUAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
A_EU055236_Perithemis_intensa ---
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Perithemis_lais_GU196362 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GAAAGCGGGUUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GUCG-----------------------------GGGCGUCUCUCGG---------------------GGCG-UCUCG
GCGGAUCCCAGUUCGGUC- CCGAGCCUUGGCCUCCCACGGACCUUCCUUGC-UGCGAGGGCACGCGC-GGCGGCCCCGCGUUGUCGGCU-GCGCCUCUCGGG-GCGUU-UCG-
UCGCUCCGGGUGUCCGCACGCGUGCCUCUCUUCGGCCGCUAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Palpopleura_lucia_GU196337 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGG---GGC-AACCC
GCGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCCGG-CU-CCGCCUUCGCGG-GCGG--UG-- UCGCCCGGG-
UCCCCGCUCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACA
AAGCAUUGCGAUGGCCCUAGC-GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUA
AGGUAGCCAAAUGCCUCRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUNUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAA
GAAUCAGCGGGGAAAGAAGACCCUGUUGAGCUUGACUCUAGUCUGGC[-]
FJ596579_Diastatops_pullata GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA-----------GCCCUC---???????-?????
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Zenithoptera_fasciata_GU196364 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUAACGAGCCGGGCCUGGAUGAGGUGAA--GCGA------------------------------GGCGUCCCACGG---------------------GGC-GCCGA
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCUGG-CU-CGGCCUGUCCCG-GUCG--UG--
UCGCCCGGGGUCCCCGCCCGCGUGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]

EF631486_368_279_Neodythemis_pauliani ---
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Selysiothemis_nigra   ??
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Trithetrum_navasi   ??
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Porpax_risi_   ??
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Micromacromia_camerunica_GU196367   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUUGGGGUGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGG------------------------------GUCGUCUUC------------------------GGGC-GACCU
GCGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-CGCUGG-CU-CCGCCCCUACCG-GCGG--UG--
UCGCCCGGGGUCCCCGCCCGCGCGUCUCUCUUCGGCCACCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
FJ596594_Allorhizuch_preussi   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUUGGGGUGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GUGGGU-----------------------------CGUCUUC---------------------???????-?????
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Neodythemis_klingi   ??
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FJ596575_Hadrothemis_infesta   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUUGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGGGU---------------------------CGCCGUUCCUU--------------------???????-?????

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FJ596595_Thermorthemis_madagascariensis   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUUGGGGUGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUAACGAGCCGGGCCUGGAUGAGGUGAA--GUGGGU------------------------------CGUUUUC---------------------???????-?????
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FJ596599_Agrionoptera_insignis   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GUGGGU------------------------------CGUCUUC---------------------???????-?????
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FJ596593_Cratilla_metallica   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GUGGGU------------------------------UGUCUUC---------------------???????-?????
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Pseudoleon_superbus   ??
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FJ596597_Orthemis_cultriformis   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GUGGGA------------------------------CGUCCUC---------------------???????-?????
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EF631471_265_Orthemis_ferruginea   --
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FJ596601_Orthetrum_albistylum   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGAUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GUGGGU------------------------------CGUCCUC---------------------???????-?????
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EF631473_267_Orthetrum_pruinosum   --
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Orthetrum_coerulescens_   ??
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FJ596600_Lyriothemis_elegantissima   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGAUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGGGU------------------------------CGUCUUC---------------------???????-?????
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A_FJ596602_Ladona_fulva   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGAUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GUGGGU------------------------------CGUCUUC---------------------???????-?????
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Ladona_julia   ??
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A_FJ596598_Ladona_depressa   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGAUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGGGU------------------------------CGUCUUC---------------------???????-?????
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Plathemis_subornata_   ??
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Plathemis_lydia   GgAUCCGUAACUUCGGGAUAAGGAUnGGCUCUGA????????
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????????????????aagacccuguugagcuugacucuagucuggc[-   ]
Libellula_quadrimaculata_GU196332   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGAUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGG------------------------------GGCGUCUUC-------------------------GGGC-GACCU
GCGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-CGCUGG-CU-CCGCCUCUACCG-GCGG--UG--
UCGCCCGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGAUCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Libellula_Syntetrum_angelina???
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Libellula_Eolibellula_semifasciata   ??
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Libellula_Belonia_saturata_AY338674   --
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Libellula_Eotainia_composita_   ??
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Libellula_Neotetrum_pulchella_OLP   GGNUCCGUANCUUCGGGAUAAGGAUUGGCUCUGAGGAUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGG------------------------------GGCGUCUUC-------------------------GGGC-GACCU
GCGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-CGCUGG-CU-CCGCCUCUACCG-GCGG--UG--
UCGCCCGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGAUCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]

Libellula_Holotania_comanche_   ??
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Libellula_Holotania_auripennis_   ??
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Libellula_Holotania_axilena_??
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Libellula_Holotania_luctuosa??
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Aethriamanta_rezia_GU196369   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--SCGA------------------------------GGCGUCCUCCGG----------------------GAC-GCCGA
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCCGG-CU-CCGCCUCUACCG-GCGG--UG--
UCGCCCGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Tetrathemis_corduliformis_GU196368   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGA------------------------------GGCGUCUUUCGG----------------------GGC-GCCGA
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGUUCCCGG-CGCCGG-CU-CCGCCUCCAAGGGGCGG--CG--
UCGCCCGGGGUCCGCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Diplacina_ismene_GU196366   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGG------------------------------GGCGUCCUCG------------------------GGC-GACCU
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCUGG-CU-CCGCCUCUACCG-GCGG--UG--
UCGCCUGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Erythemis_vesiculosa_GU196360   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAG--CCGG------------------------------GGCGUCCUUCG----------------------GGGC-GACCC

GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCUGG-CU-CCGCCUCUGACG-GCGG--UG--
UCGCCCGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Nannophyopsis_clara_GU196358GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGC-----------------------------GGUGUCUUCG------------------------GGC-GCCGA
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGUGUGU-GGCGGUCCCGA-CGCUGG-CU-CGGCCAUUCCCG-GUCG--UG--
UCGCCCGGGGUCCCCGCCCGCUCGCUUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAKKGAMSSSMMWGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Oligoclada_amphinome_GU196357 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCCUC----------------------------AGCGUCCUUCUUGGG-------------------CGU-CGCGG
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGC-GGCGGUCCCGA-CGCCGG-CU-CCGCCUUUCAACGGGCGG-UG--
UCGCUCGGGUCCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Idiataphe_sp_HOL_2010_GU196356 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGGGU--------------------------CUGCGU----UCUG---------------------CGC-AACCC
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCUGG-CU-CGGU
CCA-CUCG-GCCG--UG--UCGCCCGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAA
GCAUUGCGAUGGCCCUAGC-GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUA
AGGUAGCCAAAUGCCUCRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAA
GAAUCAGCGGGGAAAGAAGACCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Atoconeura_sp_HOL_2010_GU196355 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGA-----------------------------CGCGUCCUCG------------------------GAC-GCCGA
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCUGG-CU-CCGCCUUCGCGG-GCGG--UG--
UCGCCCGGGGUUCCCGCUCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Elga_leptostyla_GU196354 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGCGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGA-----------------------------GGCGUCUCUCGG---------------------GGC-GCCGA
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGUGAGGGCUGGCGU-GGCGGUCCCGG-AGCUGG-CU-CGGCCUGUCCCG-GUCG--UG--
UCGCCCGGGGUUCCCGCCCGCUAGUCnnUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Fylgia_amazonica_GU196353 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUAACGAGCCGGGCCUGGAUGAGGUGCA--GUGA-----------------------------GGCGUCCUCCGG---------------------GGC-GCCGA
GCGAAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCUGG-CU-CGGCCUGUCCCG-GUCG--UG--
UCGCCCGGGGUCCCCGCCCUCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAAUAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Hemistigma_albipunctatum_GU196352 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGG--GGC-AACCC
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-CGCUGG-CU-CCGCCUUCACGG-GCGG--UG--
UCGCCCGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-

GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Porpacithemis_sp_GU196351 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGUUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGAGA-----------------------GGGGACUCGU-----------------------------CCU-CGAUU
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGUCGG-CA-CUGCCUUCGCGGGUUGG--UG--
UCGCCCGGGGUCCCCGCUCGCGCGCUUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGRMCUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Thermochoria_equivocata_GU196350 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACG---G---------------------GGC-AACCC
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGCUGG-CU-CCGCCUUCGCGG-GCGG--UG--
UCGCCUGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Malgassophlebia_bispina_GU196349 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGAG-----------------------------GCGC-----------------------------GA-GCCGA
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGUUCCCGG-UGCUGG-CU-UCGCCUUCG--G-GUGG--UG--
UCGCCUGGGGUUUACGUCCGCGCGUUUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Micromacromia_zygoptera_GU196348 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUUGGGGUGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GUGG-----------------------------GUCGUCUUCG-----------------------GGC-GACCU
GCGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-CGCUGG-CU-CCGCCCCUACCG-GCGG--UG--
UCGCCCGGGGUCCCCGCCCGCGCGUCUCUCUUCGGCCACCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Argyrothemis_argentea_GU196347 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUAACGAGCCGGGCCUGGAUGAGGUGAA--GCGA-----------------------------CGUGUCCCCCUUCGCGGGU-GC-----------GGC-GCCGA
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-CGCUGG-CU-CGGCCUGUCCCG-GUCG--UG--
UCGCCCGGGGUCCCCGCCCGCUCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Pseudothemis_zonata_GU196341GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGA-----------------------------GGCGUCCUCG-----------------------GGC-GCCGA
GCGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-AGCCGG-CU-CCGCCCAUCC-G-GCGG--UG--
UCGCCCGGGGUCCCCGUCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Oxythemis_phoenicosceles_GU196338 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGA-----------------------------GGCGUCUUUCGG---------------------GGC-GCCGA
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGUUCCCGG-CGCCGG-CU-CCGCCUCCAAGGGGCGG--CG--
UCGCCCGGGGUCCSCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU

CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Olpogastra_lugubris_GU196336GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--ACGA------------------------------GGCGUUUCG------------------------GAU-GCUGA
GUGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCUGG-CGCUGG-CU-CCGCCUUUGCGG-GCGG--UG--
UCGCCUGGGAUUCCCGCCCGUGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CRWCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Misagria_parana_GU196331 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGGG--GC-GACCU
GCGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCUGG-CU-CCGCCUCUACGG-GCGG--UG--
UCGCCCGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
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Neogomphus_edenticulatus_FJ712324 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUU-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------UGCGUUC---------------------------CGC-GUGCCGUGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCUGG-UGUCGG-CG-AGGCUU----CG-GCCC--CG--UCGCCCGGGUUCA
UCGUCCCCGCGCAUCUCUUCGGCCGCCAUWCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Aeshna_mixta_FJ712315 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------UGCUUUAAC-------------------------ACG-CGUCC
GUGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUCGG-CG-UGGCUU----CG-GUCG--CG--
UCUCCCGGGGUUACCGUCCCCGCGCUUCUCUUCGGCCGCCAUUCAACGACCGUGCUCAGAACU--------GUGNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNUGCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Gomphaeschna_furcillata_FJ712314 GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--CCGG------------------------------UGCGUUAAC-------------------------GCG-CGUCC
GGGGAUCCAAGUUCGGUC-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-CGACUU----CG-GUCG--CG--
UCGCCCGGGGUCACCGUCCCCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGUACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGAAAAGAAnn
nCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Teinobasis_fortis_OD203 ---

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Mecistogaster_modestaOD198 ---

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Anomisma_abnormeOD193   --

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Lestes_sponsa   --

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Asiagomphus_melaenops   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUCGC-
UGACGAGCCGGGCCUGGAUGAGGUGAA--GCGG-----------------------------UGCGCGUCCCCUCGGGGG------------CGC-GUCGCCGCGGACCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGUGGG-CG-AGGC----UUCG-GCCG--AG--UCGCCCGGGCUCA
UCGUCCCCGCGCAUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAKCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGGAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Orthemis_discolor   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--GCGG------------------------------GGCGUCUU--C----------------------GGG-CGACCU
GCGGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-CGCUGG-CU-CCGCCUCUACCG-GCGG--UG--
UCGCCCGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACNGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Leucorrhinia_dubia   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUNGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGC------------------------------GGCGUCUCCUCGC---GGGG------------GCG-CCGUCG
ACAGAUCCCAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-CGCUGG-CU-CGGCCGAUCCCUCGGUCG-UG--
UCGCCCGGGGUCCCCGCCCGCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]

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Lestes_eurinus   GGAUCCGUAACUUCGG-AUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGC-------------------------UCGCGCG-UG-CC
GUGGAUCCGAGUUCGGUC- CCGCGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-AUACGG-CG-UGGC--C--ACG-GCUG--CG--
UCGCCCGGGGCCACCGCCCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU

CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAgucuggc[-   ]
Hemiphlebia_mirabilis_OHM   GGAUCCGUAACUUCGGnAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGUUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------UGCGU-------------------------UCGCGCG-CG-UC
GAGGAUCCGAGUUCGGUC- CCGCGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGUCGG-UC-CUGU--C--ACG-GCCG--GG--
CCGCCCGGGGUCACCGCCUGCGCGCCGCUCUUCGGCCGCCACUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGGAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Epiophlebia_superstes_OES   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GAAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCACGCG-CG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCUGG-CG-UGGC--U--UCG-GCUG--CG--
UCGCCCGGGGUCACCGUCCCCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Unaligned_Aeshnoid
Archipetia_auriculata   GGAUCCGUAnCUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGU-------------------------UAACGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-CGGC--U--UCG-GUCG--UG--
UCGUCCGGGGUCACCGUCCCCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
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Ephemerella_sp   ??
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Paraleptophlebia_sp   ??
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Anthopotamus_sp   ??
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Caenis_luctuosa   ??
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Ephemera_sp   ??
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Callibaetis_sp_AY749925   ??
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Callibaetis_ferrugineus_AY859557   GGAUCCGUAACUUCGGGACAAGGGUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGUAGACAGCUGACGUGCCGGGCCUGGGCGAGGUGGG-----------------------------------UGUGCUUUCGGGUACGCCUG-----------------------------
CCGAGUUCGGUC- CCGUGCCUUGGCCGCCCACGGAGCUUCCUUGC-UGCGAG???A CCUGCCUU-
CCGGUCUCUUCGGCCGCCAUUCAACGACCAG-CUCAGAACUGGCACGGACCGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC- GGGUGUUGACGCAAUGU
GAUUUCUGCCCAGUGCCUUGAAUGUCAACGUGAAGAAAUUCAAUGAAGCGCAGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU CGUCAUCUAAUUAGUGACGCGCAUGAAU-GGA-
UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACUGCCAAGGGAACGGGCUUGGGAAAAUUAGCGGGGAAAGAAGA CCCUGUUGAGCUUGACUCUAGUUUGGC[-   ]
Baetis_buceratus   ??
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Hexagenia_sp_AY125276   ??
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Leucrocuta_aphrodite          ??????????????????????????????????????????
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Centropt_luteolum_AY749935    ??????????????????????????????????????????
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Stenonema_sp_AY749928         ??????????????????????????????????????????
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Trigonioptha1mus_altern       ??????????????????????????????????????????
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Allomachilis_froggart         ??????????????????????????????????????????
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EF199981_Machilis_hrabei      GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCG-GUCG-GG-CUUGGUUG-AGAAACGGGUGGU-GUC-
GACGCGUCGGGCCUGGGCGAGACUUCGGUCGA----------------------------------------------------------------------------------GCUCGGUC-
CCGUACCUUGGCCCCCGCGGACCUUCCUUGC-UGCGAG??????????????????????-?????????-?????????????????--???-?????????????
?????????????CCUCUUCGGCCGCCAAUCAACGACCGA-CUCAGAACUGGCACGGACCGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCUAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAAAAUUAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-       ]
Dilta_littoralis_AY859570     UGAUCCGUAACUUCGGGACAAGGAUUGGCUCUGAGGGUCGAGGCG-GUCG-GG-CUUGGUUG-AGAAGCGGGAGUGCGUC-
GACGCGGCGGGCCUGGGCGAGACUUCGGUCGA----------------------------------------------------------------------------------GCCCGGUC- CCGC-
CCUUGGCCCCCCGCGGA??UUCCUCGC-UGCGAG??????????????????????-?????????-?????????????????--???-?????????????
?????????????CCUCUUCGGCCGCCGGCCAACGGCCGA-CUCAGAACUGGCACGGACUGUGGGAAUCCGACUGUCUAAUUAAAACAAA
GCUUUGCGAGGGCCCUGGCAGGGUGCUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUUAACGGCGGGAGUAACUAUGACUCUCUUA
AGGUAGCCAAAUGCCUCGUCAUCUAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-UCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAA
AUAUCAGCGGGGAAAGAAGAC????????????????????????GC[-         ]
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Ctenolepisma_longicaudata   CGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGAUCGGGGCUGGUCG-GG-CUUGGUCG-
GGAAGUGGGUUGUUCGCUGACGUGCCGGGCCUGGGCGAGGUGACGGUCGA------------------------------GAAGU-GGUUUCGGCUGCUUUUCGUUCCUU------AACCG---------
--AGUUCGGUC-CCGUGCCUUGGCCUCCCACGGAUCUUCCUUGC-UGCGAG??????????????????????-?????????-?????????????????--???-?????????????
??????????????CUCUUCGGCCGCCAUUUAACGUUCAA-CUCAGAACUGGCACGGACCGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAAC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAACGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCUAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAAAAUUAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-   ]
Lepisma_sp   ??
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???[-   ]
EU376048_Lepisma_saccharina   GGAUCCGUACCUUCGGAACAAGGAUUGGCUCUGGGGACCGGGGCCGGUCG-GG---
-----------GCCCGGGGGCCACCGCGGGUUCGGUCCGGCGUGGGUCUUGGCGAGGGACUCCUUCCGGG???
???-------- CUCCCCUCGAGUCGGCCGCCGACGAACGGUCGA-
CUCAGAACCGGCACGGACCAGGGGAAUCCGACUGUUUAAUUAAAACAAAGCAUCCCGACAGCCCGAGA-GGGUGUUGACGGGAUGUGAU
UUCUGCCCAGUGCUCUGAAUGUCGCGCUGAAGAAAUUCAGGGAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCUCGUCAUCCAAUUAGUGACGCGCAUGAAU
-GGA-UUAA-CGAGAUUCCC-UCUGUCCCUACCUACUGUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAGAAU[G]UCAGCGGGGAAAGAAGACCCUGUUGAGCUUGA
CUCUAGUCUGCC[-   ]
Thermobia_domestica   ??
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???????-???????????????????????- ??-?????????-?????????????
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Tricholepidion_gertschi   ??
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Gromph_laevigata_AY210819   GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGACCGGGGCGCGUCG-GG-CGUGGUCG-GGAAGCGGGUCUGC-
GCCAACGUGCCGGGCCUGGGCGAGGCGAA-GUCCG-----------------------------GGAGU-C---UCUCUCGG-----UCGGACCCGAACCCGGUCCCGUGCCUUGGCCUCCCGCG- GAU--
CUUCCACGCUGCGAGGGACCGC---GCGC
UCGCUCGCGGUGCACUCUUCGGCCGCCACUCAACGGUCGA-CUCAGAACUGGCACGGACUCGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAGGGCCCUAGC-
GGGUGCUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAACGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCUAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACUGCCAAGGGAACGGGCUUGGAGGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
Isoperla_davisi_AY125288   ??
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???-???-????-??????????-???
???[-   ]
EU414717_Isoperla   GGAUCCGUAACUUCGGGACAAGGAUUGGCUCUGAGGGACGGGGUGUGUCGCGG-CUUGGUCGCAGAAGUCGGUAUGC-
GUCGUAGUGCCGGGCCUGGGAGAGG-GA---GCGAGCCG-------------------------UGCGU-U-----------------------???????-???????????????????????-

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??????????????????????????????????CGCGAG????????????CGGUCCCGU-?????????-?????????????????--???-?????????????
??????????????????????????????????CGUUCGG-CUCAGAACUGGCACGGACAAGGGGAAUCCGACUGUCUAAUUAAAACAAA
GCAUUGCGAUGGCGUUAACAAUGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUA
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AAAUUAGCGGGGAAAGAAGACCCUGUUGAGCUUGACUCUAGUCUGGC[-         ]
AY859546_Gomphocerinae        GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGAUCGGGGCGUGUCG-GG-CUUGGUCG-GGAAGUGGGUCAGCGCUA-
ACGUGCCGGGCCUGGGCGAGGUGAG------???????????????????????????????GUGCUUCAACCUGCGCGCA------------------------GGAUCCGAGCUCGGUC-
CCGUGCCUUGGCCUCCCACGGAUCUUCCUUGC-UGCGAGGCCGCGU??-???????????-?????????-?????????????????--???-?????????????
?????????????UCUCUUCGGCCGCCAUUCAACGAUCAA-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAACGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCUAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACUGCCAAGGGAACGGGCUUGGAAAAAUUAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-       ]

[Gomphidcontaminants
Chorismagrion_risi            ggauccguaacuuCgggauaaggauuggcucugagggucggggcgugucg-gg-cuuggucg-gaaagugggcuguu-
gcugacgagccgggccuggaugaggugaa--ucgg-----------------------------cgcgu------------------------cc-ugcg-ug-ccguggacccgaguuCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-AGGC--U--UCG-GCCG--AG--UCGCCCGGGUUCA
UCGUCCCCGCGCAUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[- ]
Megalestes_micans             GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-GAAAGUGGGCUGUU-
GCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG-----------------------------UGCGU------------------------CC-UGCG-UG-CCGCGGAUCCGAGUUCGGUC-
CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-CAGC--U--UCG-GCCG--CG--UCGCCCGGGUUCA
UCGUCCCCGCGCAUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
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CCCUGUUGAGCUUGACUCUAGUCUGGC[- ]
]
[
Lestes_eurinus                GGAUCCGUAACUUCGG-AUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
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GUGGAUCCGAGUUCGGUC- CCGCGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCGG-AUACGG-CG-UGGC--C--ACG-GCUG--CG--
UCGCCCGGGGCCACCGCCCGUGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
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CCCUGUUGAGCUUGACUCUAgucuggc[- ]
Hemiphlebia_mirabilis_OHM     GGAUCCGUAACUUCGGnAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGUUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------UGCGU------------------------UCGCGCG-CG-UC
GAGGAUCCGAGUUCGGUC- CCGCGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCGG-UGUCGG-UC-CUGU--C--ACG-GCCG--GG--
CCGCCCGGGGUCACCGCCUGCGCGCCGCUCUUCGGCCGCCACUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGGAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-       ]
Epiophlebia_superstes_OES     GGAUCCGUAACUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GAAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG-----------------------------CGCGU------------------------UCACGCG-CG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCUGG-CG-UGGC--U--UCG-GCUG--CG--
UCGCCCGGGGUCACCGUCCCCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[- ]
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Unaligned_Aeshnoid
Archipetia_auriculata GGAUCCGUAnCUUCGGGAUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGUGGGCUGUUUGCUGACGAGCCGGGCCUGGAUGAGGUGAA--UCGG------------------------------CGCGU-------------------------UAACGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCGG-UGCCGG-CG-CGGC--U--UCG-GUCG--UG--
UCGUCCGGGGUCACCGUCCCCGCGCCUCUCUUCGGCCGCCAUUCAACGACCGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-GCUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAAGAAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]

Gomphocerinae GGAUCCGUAACUUCGGGAUAAGGAUU-GGCUCUGAG-GAUCGGG-GCGUGUCG-GG-CUUGGUCG-GGAAGUGGGUCAGCGCUA-
ACGUGCCGGGCCUGGGCGAGGUGAG--UGCCGUAGGG

GUGCCGGUAAGUGCGGGCGCUUAGCGCGGGCGUGGUCUGCUCUCGCCGUUGGUCGGCCUCGCGCUGGCCGGCGGUGCAGGAUGCGCGCGCCUGCGCGGCGUUCGCGCCCCGGUGCUUCAACCUGCGCGCAGGAU
CCGAGCUCGGUCCCGUGCCUUGGCCUCCCACGGAUCUUCCUUGCUGCGAGGCCGCGUCCGCCUUAGCGCGCUCCUUCGGGGGUGCGCGGGUGCGCGGAUUCUCUUCGGCCGCCAUUCAACGAUCAACUCAGAAC
UGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCUAGCGGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAACGUGAAGAAAUUCAAGCAAGCGCGGGUAA
ACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCUCGUCAUCUAAUUAGUGACGCGCAUGAAUGGAUUAACGAGAUUCCCGCUGUCCCUAUCUACUAUCUAGCGAAACCACUGCCAAGGGAACGGG
CUUGGAAAAAUUAGCGGGGAAAGAAGACCCUGUUGAGCUUGACUCUAGUCUGGCACUGUGAGGUGACAUGAGA
EU414717_Isoperla GGAUCCGUAACUUCGGGACAAGGAUU-GGCUCUGAG-GGACGGG-GUGUGUCGCGG-CUUGGUCGCAGAAGUCGGUAUGC-
GUCGUAGUGCCGGGCCUGGGAGAGGGA----GCGAGCCG--------------------------UGCGU-UGCGGGUUUCGGCCUAGCGCGUGU-ACGCGAGCCUCUGAUCCCGGUCCCGUGCCGAC
GGCCUCCGACGGAUCUUCCUUGCUCUGUCCGGACGACAUCGAGGCGGCGUGUGCGGCGUC-GGCGCGGUACCGCGGCGUUCUUCCGGAACCGCCGGCCGGCCGUGUU
CGCGUCGUCACGUCGUCGUCGUACCGGCGGCGACCUCCGAAAAACGUUCGGCUCAGAACU
GGCACGGACAAGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCGUUAACAAUGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAA
ACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCUCGUCAUCUAAUUAGUGACGCGCAUGAAUGGAUUAACGAGAUUCCCA
contaminantidenticaltoPhiloganga
Lestomima_flavostigma_OPBc3 ggauccguaacuucgggaUAAGGAUUGGCUCUGAGGGUCGGGGCGUGUCG-GG-CUUGGUCG-
GGAAGCGGGCUGAUCGCUGACGAGCCGGGCCUGGGCGAGGUGAA--UCGG------------------------------CGCGU-------------------------UCACGCG-UG-CC
GGGGAUCCGAGUUCGGUC- CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCACGU-GGCGGUCCCGG-UGUCGG-CU-CGGC-UUU-CGG-GUCG--UG--
UCGCCCGGGGUCACCGCCCGCGCGCCGCUCUUCGGCCGCCAUUCAACGACUGG-CUCAGAACUGGCACGGACUGGGGGAAUCCGACUGUCUAAUUAAAACAAAGCAUUGCGAUGGCCCCAGC-
GGGUGUUGACGCAAUGUGAUUUCUGCCCAGUGCUCUGAAUGUCAAAGUGAAGAAAUUCAAGCAAGCGCGGGUAAACGGCGGGAGUAACUAUGACUCUCUUAAGGUAGCCAAAUGCCU
CGUCAUCCAAUUAGUGACGCGCAUGAAU-GGA-UUAA-CGAGAUUCCC-ACUGUCCCUAUCUACUAUCUAGCGAAACCACAGCCAAGGGAACGGGCUUGGAGAGAUCAGCGGGGAAAGAAGA
CCCUGUUGAGCUUGACUCUAGUCUGGC[-]
]

[D10]
[Copera_annulata_OCAn_different acuguaaggagacaugagagguguagcauaagugggagc--ugugg----ccccc-ucggg--gaccgcugucgacggugaaaua
ccacuacuuugauaguuucuuuacuuacucggugaggcggagggcgugcgcggucgucgauucgucgcgaccgcGUCACGGUGUUCUGGAUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU----
---------------GGGACGU--GGGCGCG--Ucgc--ggg-a-cggucguc--cggg-ccg-gggg---guaa----cccucggcccggguc---gccg------cccuucggc-- cgcuc--cg--
ucccuagcccguguuuaucccacccgauccgauucgaggacaccgccaggcugggaguuugacuggggcgguacaucugucaaa-gaauaacgcagguguccuaa
ggccagcucagcgaggacagaaaccucgcguggagcaaaagggcaaaugcuggcuugaucc-cgaugcucaguacgcauagggacugcgaaagcacggccuaucgauccuuuuggc------
uuggagaguuucca-gcaagaggugucagaaaag-uuaccacag
Pentaphlebia_stahli Acuguaaggagacaugagagguguagcauaagugggagc--ugugG-----CCCU-UGGGG--GGCCGCUGUCGACGGAGAAAUACCACUA
CUAUGAUAGUUUCUUUACCUACUCGGUAAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CUG-GGG-----AA------UCUCGGCCCGCGGC---GCCG------CCCUUCGGA--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAgggcaaaugcuggcuugaucc-cgaugcucaguacgcauagggacugcgaaagcacggccuaucgauccuuuuggc------ uuggagaguuucca-
gcaagaggugucagaaaag-uuaccacag[ ]
CONTAMINATEDD10sequencesinclude:OLVBlaststogomphids,includingLanthus92%,ZOFBLASTstoLabisosticta,OPBc??,ZAD
maybe:BLASTStoBayadera,AAArnodata,AHCnodata,andAUC.

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FJ712322_Onychogomphus_sp               ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGU---CAGCUU---CG-GU--UGGCGCUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAAGGCGUGCGCUGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU----
---------------GGGGCGU--GGGCG----UCGG--GAG-U-CGGUC--GUCCGGG-CCG-GGGG--G-AAA----CCCUCGGCCCGCGGC---GCCG------CCUCUCGUC-- CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG
]


Unaligned          D10?????????????????????????????????????????9999999999999999999999?????????????????????????
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Unaligned_Zygoptera          D10?????????????????????????????????????????9999999999999999999999?????????????????????????
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Protosticta_sp_A_ZPA         ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG---CUUCCC---UCGGGU-CGCCACUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCGGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGCGUG--UCGC--GGG-A-CGGUCGUC--CGGG-CCG-GGG----UUCU-----CUCCGAUCCGCGGC---GCCG------CCCUUCGGC--CGCCU--CG--
GCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCaagaggugucagaaaag-uuaccacag
Protosticta_curiosa_ZPCs_BPCp          ????????????????????????????????????????????---??????---??????-??????????????????????
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---------------???????--?????????????--???-?-??????????????????-????-??????----?????????????????????????????????????--
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????????????????????????????-?????????????????????????????[      ]
Protosticta_sanguinostigma   ????????????????????????????????????????????---??????---??????-???????????????????????????
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Sinosticta_ogatai_ZSOg       acugUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG---CUUCCC---UCGGGU-CGCCACUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGCGCG--UCGC--GGG-A-CGGUCGUC--CGGG-CCG-GGG----UCCU-----CCUCGGCCCGCGGC---GCCG------CCCUUCGGC--CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUgucagaaaag-uuaccacag
Palaemnema_paulicoba_ZPP     ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCCGUGG---CUCUCCU--UCGGGU-CGCCACUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCGGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGCGCG--UCGC--GGG-G-CGGUCGUC--CGGG-CCG-GGG----uuCCC----CCCCGGCCCGCGGC---GCCG------CCCUUCGGC--CGCCC--CG--
GCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGugucagaaaag-uuaccacag
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Palaemnema_domina_ZPDm acuguaaggagacaugagagguguagcauaagugggagccgugg---cucuccu--ucgggu-cgccaccgucgacggugaaauaccacua
cuuugauaguuucuuuacuuacucggugaggcggagggcgugcgcggucgucgauucgucgcggcggcgucacgguguucugguuccaagg--gugucagggucgcgggcgccacu-----------
-------gggacgc--gggcgcg--ucgc--ggg-g-cggucguc--cggg-ccG-GGGG--GUCCU-C--CCCCCGGCCCGCGGC---GCCG------CCCUUCGGC--CGCCC--CG--
GCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGaggugucagaaaag-uuaccacag
Palaemnema_melanostigma ??---??????---??????-????????????????????????????
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Isosticta_robustior ??---??????---??????-????????????????????????????
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Rhadinosticta ??---??????---??????-????????????????????????????
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Amphisticta_silvarum_ZAS ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UUCCC---UCGGG--GACCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGU--GGGCGCG--UCGC--GGG-A-CGGUCGUC--CGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGGC---GCCG------CCCUUCGGC--CGCCU--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAag-uuaccacag
Labidosticta_vallisi_OLVa ??---??????---??????-????????????????????????????
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Orosticta_filicicola_ZOF ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UUCCC---CAGGG--AACCGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGCGCG--UCGC--GGG-G-CGGUCGUC--CGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGGC---GCCG------CCCUUCGGC--CGCCU--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-uuaccacag
Platycnemis_pennipes_OPPp ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----CCCCC---UCGGG--GA-UGCUGUCGACGGUGAAAUGCCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGAUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGCGUG--UCGC--GGG-A-CGGUCGUC--CGGG-CCG-GGGG---GCAA----CCCUCGGCCCGCGUC---GCCG------CCCUUCGGC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG
Copera_annulata ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----CCCCC---UCGGG--GACCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGAUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGU--GGGCG--CUUCGC--GGGGA-CGGUCGUC--CGGG-CCG-GGGG---GCAA----CCCUCGGCCCGCGUC---GCCG------CCCUUCGGC--CGCUC--CG--

UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAgaggugucagaaaag-uuaccacag[ ]
Copera_vittata ??---??????---??????-????????????????????????????
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Copera_marsoupipes acuguaaggagacaugagaggugaccccuaagugggag???????--??????---?????--????????????????????????????
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Coeliccia_albicauda_OCAL ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUAG----CCCCC---UCGGG--GGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUG
GUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------------GGGACGU--GGGCGCG--UCGC--GGG-A-CGGUCGUC--CGGG-CCG-GGGG---GUGA---- CCCUCGGCCCG
CGGC---GCCG------CCCUUCGGC--CGCUC--CG--UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGU ACAUCUGUCAAA-
GAAUAACGCAGGUGUCCUAAGGCCAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGAC
UGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------UUGGAGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACag
Coeliccia_cyanomelas ??---??????---??????-????????????????????????????
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Calicnemia_miles_OCMi acuguaaGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UUCCC---UCGGG--GAUCGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACAGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGCGCG--CCGC--GGG-A-CGGUCGUC--CGGG-UCG-GGGG---GCAA----CCCUCGGCCCGCGGC---GCCG------CCCUUCGGC--CGUUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAgaggugucagaaaag-uuaccacag
Prodasineura_vittata_OPV ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----GCCCC---UCGGG--GACCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGUGCG--UCGC--GGG-A-CGGUCGUC--CGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGUC---GCCG------UCCUUCGUC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAag-uuaccacag
Chlorocnemis_abboti_ZCAb ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----GCCCC---UCGGG--GACCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGUGCG--UCGC--GGG-A-CGGUCGUC--CGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGUC---GCCG------UCCUUCGUC--CGCUC--CG--
UCCCUGGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCacag
Nososticta_solida_ZNSo[frankelimin] CCUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UUCCC---UCGGG--AGCCGCUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUGUUCUGGUUCCAAGG--
GCGUCGGGGUCGCGGGCGCCACUGGGUCGCGU----------GGGGCGC--GUCGCGGGGCUG---GCG-U-CCGUCGUCGCCGGG-CCG-GGGG---GCUCGUC-CCUUCGGUUCGCGGC---
GCGGCUCCG-CCUUUCGGCGUCGCUCCCCG--UCCCUAGCUCGUGUUUAUCCCGCCCGAUCCGAUCCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-
GAAUAACGCAGGUGUCCUAAGGCCAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGG
CCUAUCGAUCCUUUUGGC------UUGGAGAGUUUCCA-Gcaagaggugucagaaaag-uuacCACAG[ ]

Phylloneura_westermanni_BPW???---??????---??????-????????????????????????????
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Onychargia_atrocyana_ZOA   ???---??????---??????-????????????????????????????
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Argia_moesta_OAM   aCUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----CUCCU---UCGGG--UGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCCGGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GAGA----CCCUCGGCCCGCGGC---GCCG------CCCUUCGGC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCACCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAggugucagaaaag-uuaccacag
Argia_nahuana   ???---??????---??????-????????????????????????????
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Argiocnemis_rubescens_ZAR   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGG----UGCCC---UCGGG--CGCUGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUcGUCGCGGCCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCCGGGUCGCGGGCGCCACU------------
-------GGGAGGC--GGGCGGG---CGC-GUCGGGCCGCG-CGCGCGCGC-GGG--CGUC-CUCGC---GGCGCCUCGCGUGUG----UGUG---UGUCCCUUCCGC-UCGCUC--CC--
UCCCUAGCUCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAaag-uuaccacag
Mortonagrion_binocellata   ???---??????---??????-????????????????????????????
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Agriocnemis_pygmaea_OAP   acuguaaggagac???????????????????????????????--??????---?????--???????????????????????????
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Austroagrion_watsoni_ZAW   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UGCCC---UCGGG--CGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCCGGGUCGCGGGCGCCACU------------
-------GGGAGGC--GUGCGGU--CGGGUCGGG-G---GG------CGGC-GUG-UCGC--UUCG-----GCGGC-CGUCG-------UCGC------UCGGCUCGU-UCGCUCCGUC--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG
Archibasis_viola_ZAV   ???---??????---??????-????????????????????????????
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Coenagrion_puella_AJ488546   ??---??????---??????-????????????????????????????
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Coenagrion_resolutum   ??---??????---??????-????????????????????????????
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Pseudagrion_cingillum_OAAL   acuguAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGA----UGCCC---UCGGG--CAACGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUGUUCUGGAUCCAAGG--GUGUUCGGGUCGCGGGCGCCACU------------
-------GGGAGGC--GUGCGGGUGU------GUCGGGGGG----CGGCGC-GUG-UCGU--CUCGU----GCGGC-CGCGUUCG----CUUC------GCGGCGCGU-CUGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACU-CCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAagaggugucagaaaag-uuaccacag
Pseudagrion_aureofrons   ??---??????---??????-????????????????????????????
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Pseudagrion_ignifer_OPi   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGA----UGCCC---UCGGG--CAACGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUGUUCUGGAUCCAAGG--GUGUUCGGGUCGCGGGCGCCACU------------
-------GGGAGGC--GUGCGGGGGU------GUCGGGGGG----CGGCGC-GUG-UCGU--CUCGU----GCGGC-CGCGUUCG----CUUC------GCGGCGCGU-CUGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAgaggugucagaaaag-uuaccacag
Erythromma_najas_1238   ??---??????---??????-????????????????????????????
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Cercion_plagiosum_AB127430   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UGCCC---UCGGG--CGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUUUGGGUCGCGGGCGCCACU------------
-------GGGAGGUGUGCGGGCG--U------GUCGGGGGG----CGGCGC-GUG-UCGU--CUCGU----GCGGCC-GCGUUCG----CUUC----------GCGGCUCGUUCGCUCC-
GUCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCAGAG[   ]
Cercion_lindenii_AJ488550   ??---??????---??????-???????????????????????
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Paracercion_hieroglyphicum_AJ488551   ????????????????????????????????????????????---??????---??????-??????????????????????
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Acanthagrion_quadratum_ZAQ   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UGCCC---UCGGG--CGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUGUUCUGGUUCCAAGG--Gugucugggucgcgggcgccacu------------
-------gggaggcgcgggcggg--cgu----gucgggggg----cggcgc-gug-u-gu-cgccucgu--gcggcc-gcgcguucg--cuuc------gcggcucgu-ucgcuc--cg--
ucccuagcccguguuuaucccacccgauccgauccgaggacaccgccaggcugggaguuugacuggggcgguacaucugucaaa-gaauaacgcagguguccuaaggccagcuca
gcgaggacagaaaccucgcguggagcaaaagggcaaaugcuggcuugaucc-cgaugcucaguacgcauagggacugcgaaagcacggccuaucgauccuuuuggc------ uuggagaguuucca-
gcaagaggugucagaaaag-uuaccacag
Leptobasis_vacillans_ZLV     ????????????????????????????????????????????---??????---??????-????????????????????????????
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Amphiagrion_saucium_OAS      ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UGCCC---UCGGG--CGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCUGGGUCGCGGGCGCCACU------------
-------GGGAGGCGCGGGCGGG--CGCG----UCGGGGGG-CGGCGUGCG--UG-UCGC--CUCGU----GCGGCCGCGCGUUCG---CUUC------GCGGCUCGU-UCGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGgC------ UUGGAGAGUUUCCA-
GCAAgaggugucagaaaag-uuaccacag
Amphiagrion_abbreviatum               ????????????????????????????????????????????---??????---??????-??????????????????????
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Xiphiagrion_cyanomelas_ZXC   ????????????????????????????????????????????---??????---??????-????????????????????????????
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Hesperagrion_sp_AY750044     ????????????????????????????????????????????---??????---??????-????????????????????????????
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Ischnura_elegans_1239        ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UGCCC---UCGGG--CGCUGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCCGGGUCGCGGGCGCCACU------------
-------GGGAGGA--CGGGCGC-GUCG---UGG-G-??????????????-UCGGCG-G-GCGUGU----CGCCUCGUGCGGCCGCUCGUUCGCUUCGCGGCUCGUC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[                     ]
Ishnura_barberi              ????????????????????????????????????????????---??????---??????-????????????????????????????
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Ischnura_graellsi_AJ488545   ??---??????---??????-????????????????????????????
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Anomalagrion_hastatum_OAH   ACUGUAAGGAGACAUGAGagguguagcauaagugggagcugugg----ugccc---ucggg--cgccgcugucgacggugaaauaccacua
cuuugauaguuucuuuacuuacucggugaggcggagggcgugcgcggucgucgauucgucgcgggcgcgucacgguguuacgauucuaagg--cuguccggucgcgggcgccacu------------
-------ggnnnnn--nnnn--nnnnnnn--nnn-n-nnnnnnnnnnnnn-nnnnnnnn-nnnnnn----nnnnnnnnnnnnnn---nnnn----------nnnnn--nnnuc--cg--
ucccuagcccguguuuaucccacccgauccgauucgaggacaccgccaggcugggaguuugacuggggcgguacaucugucaaa-gaauaacgcagguguccuaaggccagcuca
gcgaggacagaaaccucgcguggagcaaaagggcaaaugcuggcuugaucc-cgaugcucaguacgcauagggacugcgaaagcacggccuaucgauccuuuuggc------ uuggagaguuucca-
gcaagaggugucagaaaag-uuaccacag[   ]
Enallagma_parvum_AJ420939   ??---??????---??????-????????????????????????????
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Enallagma_granti_AJ420937   ??---??????---??????-????????????????????????????
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E_nigridorsumAJ420938   ??---??????---??????-????????????????????????????
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Enallagma_cyathigerum_0110   ??---??????---??????-????????????????????????????
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Enallagma_sp   ??---??????---??????-????????????????????????????
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E_aspersum_DQ087506   ??---??????---??????-????????????????????????????
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Aciagrion   ??---??????---??????-????????????????????????????
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Aciagrion_borneense_ZAB   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UGCCC---UCGGG--CGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCCGGGUCGCGGGCGCCACU------------
-------GGGAGGA-CGGCCGCG--UCGG----U----GGG-CGGCGCGCG--CG-UCGC--CUCGU----GCGGCCGCGCGUUCG---UUCCC------CGGCUCGU-CCGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACcacag
Protoneura_capillaris   ??---??????---??????-????????????????????????????
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Protoneura_cara_ZPC   ??---??????---??????-????????????????????????????
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Psaironeura_remissa_PRN   ??---??????---??????-???????????????????????
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Elattoneura_analis_or_glauca??---??????---??????-????????????????????????????
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Neoneura_aaroni_ONA   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----CUCCU---UCGGG--UGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGAUCCAAGG--GUGUCCGGGUCGCGGGCGCCACU------------
-------GGGAUGU--GGGCGCG--UCGC--GGG-A-CGGUCGUC--CGGG-CCG-GGGG---GUGA----CCCUCGGCCCGGGGC---GCCG------CCCUUCGGC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGAGGAGUUUUCA-
GCAAGAggugucagaaaag-uuaccacag
Neaneura_amelia_ZNA   ??---??????---??????-???????????????????????
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Neoneura_maria   ??---??????---??????-????????????????????????????
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Ceriagrion_aeruginosum_ZCAe??---??????---??????-???????????????????????????
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Telebasis_salva_ZTS   ??---??????---??????-???????????????????????????
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Leptagrion_elongatum_ZLE   ??---??????---??????-???????????????????????????
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Leptagrion_sp   ??---??????---??????-???????????????????????????
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Metaleptobasis_manicaria_ZMMr   ??---??????---??????-??????????????????????
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Diceratobasis_sp_A_ZDA   acuguaAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UGCUC---UCGGG--UGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCCGGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGGC---GCCG------CCCUUCGGC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAagaggugucagaaaag-uuaccacag
FJ596559_Pyrrhosoma_nymphula   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UUCCU---UCGGG--UACCGCUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCCGGGUCGCGGGCGCCACU----
---------------GGGACGU--GGGUGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGGC---GCCG------CCCUUCGGC-- CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCCAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGAGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[-   ]
Chromagrion_conditum_OCCn   acuguaaggagacaugagagguguagcauaagugggagcugugg----uuccu---ucggg--ugccgcugucgacggugaaauaccagua
cuuugauaguuucuuuacuuacucggugaggcggagggcgugcgcggucgucgauucgucgcggccgcgucacgguguucugguuccaagg--guguccgggucgcgggcgccacu------------
-------gggangu--gggugcg--ucnc--ggg-a-cggucguc--cggg-ccg-gggg---guga----cccucggcccgcggc---gccg------cccuucggc--cgcuc--cg--
ucccuagcccguguuuaucccacccgauccgauucgaggACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAagaggugucagaaaag-uuaCCACAG[   ]

Teinobasis_alluaudi_ZTA2   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UGCCC---UCGGG--UGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCCGGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGGC---GCCG------CCCUUCGGC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG
Nehalennia_gracilis_ONG   ACUGUAAggagacaugagagguguagcauaagugggagcugugg----ucccu---ucggg--agcugcagucgaaggugaaauaccacua
cuuugauaguuucuuuacuuacucggugaggcggagggcgugcgcggucgucgauucgucgcgACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGCGUG--UCGC--GGG-A-CGUC-GUU--CGGG-CCG-GGGG---GCAA----CCUUCGGCCCGCGGC---GGCG------UUCUUCGGU--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAag-uuaccacag[   ]
Coryphagrion_grandis_ZCG   ???---??????---??????-???????????????????????????
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Microstigma_rotundatum_OMRtACUGUAAGGAGACAUGAgaggugcagcauaagugggagcugugg----ugccc---ucggg--cgccgcugucgacggugaaauaccacua
cuuugauaguuucuuuacuuacucggugaggcggagggcgugcgcggucgucgauucgucgcgaccgcgucacgguguucugguuccaagg--guguccgggucgcgnnnnnnnnn------------
-------nnnnnnn--nnnn--nnnnnnn--nnnnn-nnnnnnnnn-nnnn-nnnnnnnn--nnnnnn---nnnnnnnnnnnnnnn---nnnn------nnnnnnnnn--nnnnn--nn--
nnnnnnnnnnnuguuuaucccacccgauccgauucgaggacaccgccaggcugggaguuugacuggggcgguacaucugucaaa-gaauaacgcagguguccuaaggccagcuca
gcgaggacagaaaccucgcguggagcaaaagggcaaaugcuggcuugaucc-cgaugcucaguacgcauagggacugcgaaagcacggccuaucgauccuuuuggc------ uuggagaguuucca-
gcaagaggugucagaaa????????????[   ]
Microstigma_anomalum   ???---??????---??????-???????????????????????????
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Mecistogaster_ornata_ZMO_BML???---??????---??????-???????????????????????????
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Mecistogaster_linearis   ???---??????---??????-???????????????????????????
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Megaloprepus_caerulatus   ???---??????---??????-???????????????????????????
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Haplostigma_modesta_ZHM   ???---??????---??????-???????????????????????????
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Pseudostigma_aberrans_OPA ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGAGG----UGCCC---UCGGG--UGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCCGGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGCGCG--UCGC--GGG-A-CGGUCGUC--CGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGGC---GCCG------CCCUUCGGC--CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAagaggugucagaaaag-uuaccacag
Rhinagrion_mima_ZRM ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGG---UUUCCU---UCGGG--GGCUGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGUGCG--UCGC--GGG-A-CCGUC--GUCCGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGGC---GCCG------GCCUUCGGC--CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCACCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGgugucagaaaag-uuaccacag
Sciotropis_cyclanthorum_BSC??---??????---??????-?????????????????????????????
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Heteragrion_mitratum_ZHMt ACUGUAaGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UUCCC---UCGGGG-A-CCGCUGUCGCCGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGCGCG--UCGA--GGG-U-CGUUC--GUCCGGG-CCG-GGGG---GUGA----CCCCCGGCCCGCGGC---GCCG------ACCUUCGGC--CGGCU--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCacag
Heteragrion_sp ??---??????---??????-?????????????????????????????
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Oxystigma_cyanifrons_ZOC acuguaaggagacaugagagguguagcauaagugggagcugugg----uuccc---ucgggg-a-ccgccgucgccggugaaauaccacua
cuuugauagUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGCGCG--UCGC--GGG-U-CGGUC--GUCCGGG-CCG-GGGG---GCGA----CCCCCGGCCCGCGGC---GCCG------GCCUUCGGC--ACCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCagaaaag-uuaccacag
Dimeragrion_percubitale_ZDPacuguaaggagacaugagagguguagcauaagugggagcugugg---uucccu---ucgggg-c-ccgcugucgacgGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GUGA----CCCCCGGCCCGCGGC---GCCG------CCCUUCGGC--CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGgugucagaaaag-uuaccacau
Tatocnemis_malgassica_ZTMa ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG---UGUCCU---UCGGGG-G-CCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGCCGC--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GUGA----CUCCCGGCCCGCGUC---GCCG------CCCUUCGGC--CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUgucaaaaaag-uuaccacag

Philogenia_cassandra ??---??????---??????-?????????????????????????????
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Philogenia_terraba_ZPT ??---??????---??????-?????????????????????????????
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Philogenia_berennice_ZPBn aCUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----CUUCG---GUCGGG-AGCCACUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GCGA----CCCUCGGCCCGCGGC---GCCG------CCCUUCGGC--CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUuggc------ uuggagaguuucca-
gcaagaggugucagaaaag-uuaccacag
Teinopodagrion_venale_ZMV_BTV acuGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UUCCUC--UCGGG--A-CCGCUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU----
---------------GGGACGU--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CAG-GGGG---GUGA----CCCUCGGCUCGCGGC---UCCG------CCCUUCGGA-- CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCCAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGAGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-uuaccacag
Teinopodagrion_lepidum_ZTL ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UUCCUC--UUGGG--A-CCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CAG-GGGG---GUGA----CCCUCGGCUCGCGGC---UCCG------CCCUUCGGA--CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-uuaccacag
Amanipodagrion_gilliesi_ZAGACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG---CUUCCU---UCGGG--GGCUGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGCGCG--UCGC--GGG-A-CGGUC--GCCCGGG-CCG-GGGG---GUGA----CCUUCGGCCCGCGGC---GCCG------CCCUUCGGC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAaag-uuaccacag
Nesolestes_elizabethae_ZNE ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG----UUCCU---UCGGG--GGCCGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCAUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGAUGC--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GAAA----CCUUCGGCCCGCGGC---GCCG------CCCUUCGGC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGucagaaaag-uuaccacag
Protolestes_kerckhoffae_ZPKc[?] ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UUCCCU--CCGGG--GGCCGCUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUUGAUUCGUCUCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU----
---------------GGGAUGC--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GCGGGG-GAAACC--CUUUCGGCCCGCGGC---GCCG------CCCUUCGGC-- CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGUCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCCAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGAGAGUUUCCA-GCAAGAGGUGUCAGAAAAg-uuaccacag
Argiolestes_ochrostomas_ZAOcACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUG-----UUCC----UCGGG--UUCUUCAGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGU--GUGCGCG--UCGC--GGG-U-CGGCC--GUCCGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGGC---GCCG------CCCUUCGGC--CGCUC--CG--

UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUgucagaaaag-uuaccacag
Argiolestes_sidonia ???---??????---??????-??????????????????????
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Caledopteryx_maculata ???---??????---??????-?????????????????????????????
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Trineuragrion_percostale_BTP??---??????---??????-?????????????????????????????
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Caledargiolestes_uniseries ???---??????---??????-?????????????????????????????
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Podopteryx_roseonotata_ZPR acuguaaggagacaugagagGUGUAGCAUAAGUGGGAGCUGUGG----UUCCC---UCGGG--UUCUGCAGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGCGUG--UCGC--GGG-A-CGGUC--GUCCGGG-CUG-GAGG---GUGA----CCCCCGGCCCGCGGC---GCCG------CUCUUCGGC--CGCUC--CG--
UCCCUAGCCCGUGUUUACCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAagaggugucagaaaag-uuaccacag
_Austroargiolestes_icteromelas_OAIc ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UUCCC---UCGGG--UUCUGCAGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU----
---------------GGGACGU--GGGCGCG--UCGC--GGG-A-CGGUC--GACCGGG-CCG-GGGG---GUGA----CCCUCGACCCGCGUC---GCCG------CUCUUCGGC-- CGCUC--CG--
UCCCUAGCCCGUGUUUACCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCCAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGAGAGUUUCCA-GCaagaggugucagaaaag-uuaccacag
Griseargiolestes_albescens ???---??????---??????-??????????????????????
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Grisagriolestes_eboracus_ZGE_BGA ???---??????---??????-??????????????????????
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Miniargiolestes_minimus_ZMMnacuguaaggagacaugagagguguagCAUAAGUGGGAGCUGUGG----UUCCC---UCGGG--CUCUGCAGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGU--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGGC---GCCG-----CCCUUCGGC--CGCUU--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUgucagaaaag-uuaccacag
Lestomima_flavostigma_OPBc3acuGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGG---UUUCCU---UCGGG--GGCUGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGUGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGGC---GCCG-----GCCUUCGGC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCACCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUgucagaaaag-uuaccacag
_Rhipidolestes_hiraoi_ORH   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGAGG----GGGCU---UUUGC--CACCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGU--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-AGGG---GUGA----CCCUCGGCCCGCGGC---GCCG-----CCCUUCGGC--CGGCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCgGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-Uugccacag
Rhipidolestes_aculeata   ??????????????
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Paraphlebia_zoe_OPZ   acuguaaggagacaugagagguguagcauaagugggagcugugg---uucccu---uccgg--caccgcugucgacggugaaauaccacua
cuuugauaguuucuuUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGCGAG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GUGA----CCUUCGGCCCGCGGC---GCCG-----CUCUUCGGC--CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG
_Thaumatoneura_inopinata_OTI3   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UUCCC---UCGGG--CACCGCUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU----
---------------GGGACGC--GGGCGAG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GUAA----CCUUCGGCCCGCGGC---GCCG------CUCUUCGGC-- CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCCAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGAGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUaccacag
_Hypolestes_clara_OHC   acugugaggagaCAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG----CUCCU---UCGGG--GGCCgcugucgacggugaaauaccacua
cuuugauaguuucuuuacuuacucggugaggcggagggcgugcgcggucgucgauucgucgcgaccgcgucacgguguucugguuccaagg--gugucagggucgcgggcgccacu-----------
-------gggacgu--gggcgcg--ucgc--ggg-a-cgguc--guccgac-ccg-gg-----guga----cccucgggucgcggc---gccg-----cccuucggc--cgcuc--cg--
ucccuagcccguguuuaucccacccgauccgauucgaggacaccgccaggcugggaguuugacuggggcgguacaucugucaaa-gaauaacgcagguguccuaaggccagcuca
gcgaggacagaaaccucgcguggagcaaaagggcaaaugcuggcuugaucc-cgaugcucaguacgcauagggacugcgaaagcacggccuaucgauccuuuuggc------ uuggagaguuucca-
gcaagaggugucagaaaag-uuaccacag
Hypolestes_sp   ??---??????---??????-???????????????????????????
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Agriomorpha_fusca_ZAF6   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG----UGCCU---UCGGG--UGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGUUCGUCGAUUCGUCGCGAUCGCGUCACGGUGUUUUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------

-------GGGACGC--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-AGGG---GUGA----CCCUCGGCCCGCGGC---GCCG------CCCUUCGUC--CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCACCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCacag
Sinocnemis_yangbingi_ZSY ??---??????---??????-????????????????????????????
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Miocora_peraltica_ZMP acugUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UUCCC---UCCGG--GGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGGC---GCCG------CCCUUCGGC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAgaggugucagaaaag-uuaccacag
Cora_marina_OCMr ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG---UUUCCU---UCGGG--GGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGGC---GCCG------CCCUUCGGC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-uuaccacag
Cora_cyane ??---?????-?--??????-????????????????????????????
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Polythore_spZ_ZPZ acuguaaGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG---UUUCCU---UCGGG--GGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGGC---GCCG------CCCUUCGGC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUgucagaaaag-uuaccacag
Polythore_boliviana ??---??????---??????-????????????????????????????
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Euthore_fasciata_ZEFs_BEFs ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG---UUUCCU---UCGGG--GGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGGC---GCCG------CCCUUCGGC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGgugucagaaaag-uuaccacag
_Rimanella_arcana_ORA acuguaaggagacaUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UUCCU---UCGGG--GACCGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGCGCG--UCGC--GGG-A-CGAUC--GUCCGGG-CCG-GGGG---GCGA----CCCUCGGCCCGCGGC---GCCG------CCCUUCGGA--CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA

GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGAGAGUUUCCA-GCAAGaggugucagaaaag-uuaccacag
_Pentaphlebia_stahli_OPSt_different   acUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG---AUCCCU---UCGGG--GGCCGCUGUCGACGGUGAAAUA
CCACUACUAUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU----
---------------GGGACGC--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CUG-GG-----GAAU------CUCGGCCCGCGGC---GCCG------CCCUUCGGm-- CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCCAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGAGAGUUUCCA-GCAAGAGGugucagaaaag-uuaccacag
Devadatta_podolestoides_BDP   ??---??????---??????-??????????????????????
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Amphipteryx_longicaudata_ZAL5   ??---??????---??????-??????????????????????
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Pseudolestes_mirabilis_OPMbacuguaaggagaCAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGG---GCCCCCC--UCGGGG-GACCGCCGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUCCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGGC---GCCG-----CCCUUCGGA--CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCuuuuggc------ uuggagaguuucca-
gcaagaggugucagaaaag-uuaccacag
_Philoganga_vetusta_OPVt_BPVt   acuguaaggagacaugauaggugUAGCAUAAGUGGGAGCUGUGG----UUCCC---UCCGG--GGCCGCUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCUUCGCGACCGCGUCACGGUGUACUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU----
---------------GGGACGC--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGGC---GCCG------CCCUUCGGC-- CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCCAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGAGAGUUUCCA-GCAagaggugucagaaaag-uuaccacag
_Philoganga_robusta_OPRb2   acuguaaggagacaugagagguguagcauaagugggagcugugg----uuccc---ucggg--agCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGCAGGGCGUGCACGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUACUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGUACUC--GGGUGCG--UCGC--GGG-U-CGGUC--GUCCGGU-CCG-GGGG---GUGA----CCCUCGGCCCGCGGC---GCCG-----CCCUUCGGC--CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAAAGAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUaucgauccuuuuggc------ uuggagaguuucca-
gcaagaggugucagaaaag-uuaccacag
Lestoidea_conjuncta_ZLC   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG---CUCCCU---UCGGG--GGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCCGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGU--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GCAA----CCCUCGGCCCGCGGC---GCCG-----CCCUUCGGC--CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCa-
gcaagaggugucagaaaag-uuaccacag[   ]
_Diphlebia_lestoides_ZDL   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG---CCCCCU---UCGGG--GACCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGU--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GCGA----CCCUCGGCCCGCGGC---GCCG-----CCCUUCGGC--CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGaggugucagaaaag-uuaccacag

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Diphlebia_coerlescens_ODC    ????????????????????????????????????????????---??????---??????-????????????????????????????
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_Bayadera_melanopteryx       acuguAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UUCCC---UCGGG--GGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGA-GUCGAUUCGUCGUGCCGGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGAGGC--GGGCGCG--CCGU--GGG-U-CGAAC--GUCCGGU-GCG-GGGG---GUGA----CCCUCGUGCCGCGGC---GCCG------GUCCUCGGC--CGUCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCagaaaag-uuaccacag[                     ]
Bayadera_brevicauda          ????????????????????????????????????????????---??????---??????-????????????????????????????
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Dysphaea_gloriosa_ODG        acuguAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----AUCCU---UAAUGG-AGCUGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGCCGUCGAUUCGUCGCGGGCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGAGGC--GGGCGCG--ACGU--GGA-U-CGAAC--GUCCGGU-GCG-GGGG---GAGA----CCCUCGUGCCGCGGC---GCCG------GCCCACGUC--CGCCC--GG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCgAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAggugucagaaaag-uuaccacag[                     ]
Euphaea_formosa              ????????????????????????????????????????????---??????---??????-????????????????????????????
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Euphaea_decorata_ZAD_OED     ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGUUCUGUGG----UUCCC---UUCGGG-GGCUGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGCCGUCGAUUCGUCGCGGACGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGAGGC--GGGCGCG--UCGC--GGG-U-CGAAC--GUCCGGU-GCG-GGGG---GCGA----CCCUCGUGCCGCGGC---GCCG------GCUCUCGUC--CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACUGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCAcGGCCUAUCGAUCCuuuuggc------ uuggagaguuucca-
gcaagaggugucagaaaag-uuaccacag[                     ]
_Anisopleura_sp_A_ZAA        ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG---AUCCUU---UAUGG--GCCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGCCGUCGAUUCGUCGCGGACGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGAAGU--GGGCGUG--UCGA--GGG-U-CGAAC--GUCCGGU-GCG-UGGG---GUCA----CCCUCGUGCCGCGUC---GCCG------GUCCUCGCG--CUCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCacag
Disparocypha_biedermanni_ZDB????????????????????????????????????????????---??????---??????-????????????????????????????
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Libellago_semiopaca          ????????????????????????????????????????????---??????---??????-????????????????????????????
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Heliocypha_biseriata   ??---??????---??????-????????????????????????????
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_Platycypha_caligata_OPC   acuguaaggagacaugagAGGUGUAGCAUAAGUGGGAGCUGUGG----CCCCC---UCGGG--AGCCGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGAGCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACUU--GGG-GCG--ACGU--GGG-A-CGGCC--GGCCGGU-UCG-GGGG---GUGA----CCCCCGGGCCGCGUC---GCCG------UUCCGCCG---AUUCC--CG--
UUCCUAGCUCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGaaaag-uuaccacag
Chlorocypha_curta_AJ746319_ZCC   ??---??????---??????-??????????????????????
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Sundacypha_petiolata_CHL   ??---??????---??????-????????????????????????????
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_Rhinocypha_fenestrella_ORFACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----CCCCU---UCGGG--AGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGCUCGUCGAUUCGUCGCGAGUGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACUC--GGG-GCG--UCGU--GGG-A-CGGUC--GUCCGGU-UCG-GGGG---GCGA----CCCCUGGAUCGCGGC---GCCG------AACCGCGGC--CUCCC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG
Rhinocypha_tincta   ??---??????---??????-????????????????????????????
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Heliocharis_amazona_ZHAz3   acuGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UUCCUC--UCGGG---GCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGACCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGCGCG--UCGC--GGG-G-CGGUC--GUCCGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGGC---GCCG------CCUUUCGGC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGUCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUgucagaaaag-uuaccacag
_Hetaerina_americana_OHA2   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUAG----UUCCC---UCGGG--GACCGCAGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGAGCGUGCGCGGUCGUCGAUUCGUCGGGACCGCGUCACGGUGUUCUCGUUCCAAGG--GUGUCAGGGUCGCGGGCGAUACU------------
-------GGGACGC--AGGC-UG--UCGC--GGG-A-CGGUC--GUCCAGG-CCG-GGGG---GUGA----CCUUCGGCCUGCGGC---GUCG------UCUUUCGGC--CGCCU--CG--
GCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUCCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GGAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGUGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACag

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_Caliphaea_confusa_ZCC       ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UUCCU---UCGGG--UGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCCGGGUCGCGGGCGCCACU-----------
-------GGGACGU--GGGUGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GUGA----CCCUCGGCCCGCGGC---GCCG------CCCUUCGGC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG
Noguchiphaea_yoshikoae       ????????????????????????????????????????????---??????---??????-????????????????????????????
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Vestalis_beryllae            ????????????????????????????????????????????---??????---??????-????????????????????????????
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Matrona_basilaris            ????????????????????????????????????????????---??????---??????-????????????????????????????
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FJ596560_Atrocalopteryx_atrata          ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG----UUCCU---UCGGG--GACCGUUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUYGUCGCGAUAGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU----
---------------GGGACGC--GGGCGCG--CCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GAAA----CCCUCGGCCCGCGGC---GCCG------CCCUUCGGC-- CGUUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCCAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGAGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[-      ]
Echo_modesta                 ????????????????????????????????????????????---??????---??????-????????????????????????????
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Neurobasis_ianthinipennis    ????????????????????????????????????????????---??????---??????-????????????????????????????
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_Sapho_orichalcea_OSO        acuguaaggagacaugagaggug?????????????????????---??????---??????-????????????????????????????
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Calopt
eryx_amata_OCAm_BCSACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UUCCC---UCGGG--GACCGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACAGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
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-------GGGACGC--GGGCGCG--CCGC--GGG-A-CGGUC--GUCCGGG-UCG-GGGG---GCAA----CCCUCGGCCCGCGGC---GCCG-----CCCUUCGGC--CGUUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG
DCS_Calopteryx_splendens   ??---??????---??????-?????????????????????????????
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Calopteryx_aequabilis   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----UUCCC---UCGGG--GACCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGACAGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGCGCG--CCGC--GGG-A-CGGUC--GUCCGGG-CCG-GGGG---GUAA----CCCUCGGCCCGCGGC---GCCG-----CCCUUCGGC--CGUUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[   ]
Iridictyon   ??---??????---??????-?????????????????????????????
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Iridictyon_trebbaui_ZIT   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG----UUCCC---UCGGG--GACCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAAGGCGUGCGCGGUCGUCGACUCGUCGCGAUAGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGU--GGGCGCG--UCGC--GGG-A-CGGUC--GUCCGGG-CCG-AGGG---GUGA----CCCUCGGCCCGCGGC---GCCG-----CCCUUUGGC--CGUUC--CG--
UCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-uuaccacag
Unaligned_lestoid   D10??----------------------?????????????????????????
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Nubiolestes_diotima_OND   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG---CUUCCC---UCGGGU-CGCUCCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGGCCGCGUCACGGUAUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGCG----UCGC--GUG-A-CGGUG--AUCCGGG-CUG-UGGG---GAAA----CCCUCGGCCCGCGGC---GCCG-----CCUCUCGGC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCACCCGAUUCGAUCCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAggugucagaaaag-uuaccacag
Perilestes_kahli_ZPK2_BPK   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG---UUUCCU---UCGGGU-CGCUCCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGGCCGCGUCACGGUAUUCUGGUUCCAAGG--GUGUCCGGGUCGCGGGCGCAACU-----------
-------GGGACGC--GGGCG----UCGC--GUG-A-CGGUG--AUCCGGG-CUG-GGGG---GUAA----CCCUCGGCCCGCGGC---GCCG-----CCUCUCGGC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCACCCGAUUCGAUCCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUgucagaaaag-uuaccacag
Perissolestes_remotus   ??---??????---??????-?????????????????????????????
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Perissolestes_magellenae   ??---??????---??????-????????????????????????????
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Chlorolestes_umbrata   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG---CUUCCC---UCGGGU-CGCUCCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGGCCGCGUCACGGUAUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGCG----UCGC--GUG-A-CGGUG--AUCCGGG-CUG-UGGG---GAAA----CCCUCGGCCCGCGGC---GCCG------CCUCUCGGC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCACCCGAUUCGAUCCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[   ]
Euchlorolestes_tessellata   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG---CUUCCC---UCGGGU-CGCUCCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGGCCGCGUCACGGUAUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGCG----UCGC--GUG-A-CGGUG--AUCCGGG-CUG-GGGG---GAAA----CCCUCGGCCCGCGGC---GCCG------CCUCUCGGC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCACCCGAUUCGAUCCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG??????????[   ]
Phylolestes_ethelae   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAgUGGGAGCUGGGG---CUUCCC---UCGGGU-CGCUCCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGGCCGCGUCACGGUAUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGCG----UCGC--GUG-A-CGGUG--AUCCGGG-CUG-GGAG---GAAA----CCCUCGGCCCGCGGC---GCCG------CCUCUCGGC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCACCCGAUUCGAUCCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAggugucagaaaag??????????[   ]
Synlestes_weyersii   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG---CUUCCC---UCGGGU-CGCUCCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGGCCGCGUCACGGUAUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGU--GGGCG----UCGG--GUG-A-CGGUG--AUCCGGG-CUG-GGGG---GCAA----CCCUCGGCCCGCGGC---GCCG-----CCUCUCCG-C--CGUUC--CG--
UCCCUAGCUCGUGUUUAUCCCACCCGAUUCGAUCCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAgaaaag-uuaccacag[   ]
Synlestes_tropicus   acuguAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG---CUUCCC---UCGGGU-CGCUCCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGGCCGCGUCACGGUAUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGCG----UCGG--GUG-A-CGGUG--AUCCGGG-CUG-GGGG---GCAA----CCCUCGGCCCGCGGC---GCCG-----CCUCUCCG-C--CGUUC--CG--
UCCCUAGCUCGUGUUUAUCCCACCCGAUUCGAUCCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAag-uuaccacag[   ]
Chorismagrion_risi   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG---CUUCCC---UCGGGU-CGCUCCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGGCCGCGUCACGGUAUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGCG----UCGC--GUG-A-CGGUG--AUCCGGG-CUG-GGGG---GCAA----CCCUCGGCCCGCGGC---GCCG------CCUCUCG-C--CGUCC--CG--
UCCCUAGCUCGUGUUUAUCCCACCCGAUUCGAUCCGAGGACACCGUCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAgaaaag-uuaccacag[   ]
Episynlestes_cristatus   ACUguAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG---CUUCCC---UCGGGU-CGCUCCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGGCCGCGUCACGGUAUUCUGGUUCCAAGG--GUGUCAGGGUCACGGGCGCCACU-----------
-------GGGACGC--GGGCG----UCGC--GUG-A-CGGUG--AUCCGGG-CUG-GGGG---GCAA----CUCUCGGCCCGCGGC---GCCG------CCUCUCG-C--CGUUC--CG--
UCCCUAGCUCGUGUUUACCCCACCCGAUUCGAUCCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAgaaaag-uuaccacag[   ]

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Episynlestes_albicauda       ????????????????????????????????????????????---??????---??????-????????????????????????????
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Megalestes_micans            CCUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG---CUUCCC---UCGGGU-CGCUCCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGGCCGCGUCACGGUAUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGCG----UCGC--GUG-A-CGGUG--AUCCGGG-CUG-GGGG---GUAA----CCCUCGGCCCGCGGC---GCCG------CCUCUCGGC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCACCCGAUUCGAUCCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCagaaaag-uuaCCACAG[                     ]
Megalestes_kurahashii        ????????????????????????????????????????????---??????---??????-????????????????????????????
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Orolestes_octomaculatus      ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG---CUUCCC---UCGGGU-CGCUCCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGGCCGCGUCACGGUAUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGCG----UCGG--GUG-A-CGGUG--AUCCGGU-CCG-AGGG---GAAA----CCCUCUGGCCGCGAC---GCCG------CCUCUCGGC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCACCCGAUUCGAUCCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC----- UUUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[                      ]
Austrolestes_annulosus       ????????????????????????????????????????????---??????---??????-????????????????????????????
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????????????????????????????-?????????????????????????????[      ]
Sympecma_paedisca            ????????????????????????????????????????????---??????---??????-????????????????????????????
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????????????????????????????-?????????????????????????????[      ]
Sympecma_fusca_ZSF           ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG---CUUCCC---UCGGGU-CGCUCCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGGCCGCGUCACGGUAUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGCG----UCGG--GUG-A-CGGUG--AUCCGGU-CAG-AGGG---GCAA----CCUUUUGGCCGCGAC---GCUG------CCGCUCGGC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCACCCGAUUCGAUCCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUgucagaaaag-uuaccacag
Austrolestes_analis_OAAn     ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG---CUUCCC---UCGGGU-CGCUCCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGGCCGCGUCACGGUAUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGCG----UCGG--GUG-A-CGGUG--CUCCGGA-CUU-AGGG---GAAA----CCCUCUGGCCGCGAC---GCCG------CCUCUCGGU--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCACCCGAUUCGAUCCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG
Indolestes_pergrinus_OIP     ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG---CUUCCU---UCGGGU-CGCUCCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGGCCGCGUCACGGUAUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGCG----UCGG--GUG-A-CGGUG--CUCCGGU-CCG-AGGG---GAAA----CCCUCUGGCCGUGAC---GCCG------CCUCUCGGU--CGCUC--CG--
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UCCCUAGCUCGUGUUUAUCCCACCCGAUUCGAUCCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG
Indolestes_cyanea ??---??????---??????-????????????????????????????
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Chalcolestes_viridis_ZCV ??---??????---??????-????????????????????????????
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Archilestes_grandis_OAG ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG---CUUCCC---UCGGGU-CGCUCCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGGCCGCGUCACGGUAUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGCG----UCGU--GUG-A-CGGUG--AUCCGGA-ACG-AGGG---GCAA----CCUUCUGUCCGCGAC---GCCG------CCGCUCGGC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCACCCGAUUCGAUCCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG
Lestes_rectangularis_OLR ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG---CUUCCC---UCGGGU-CGCUCCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGGCCGCGUCACGGUAUUCUGGUUCCAAGG--GUGUUAGGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGCG----UCGU--GUG-A-CGGUG--AUCCGGA-ACG-AGGG---GCAA----CCUUCUGUCCGCGAC---GCCG------CCGCUCGGC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCACCCGAUUCGAUCCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACag
Lestes_eurinus_OLE ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGGG---CUUCCC---UCGGGU-CGCUCCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGGCCGCGUCACGGUAUUCUGGUUCCAAGG--GUGUUAGGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGCG----UCGU--GUG-A-CGGUG--AUCCGGA-ACG-AGGG---GCAA----CCUUCUGUCCGCGAC---GCCG------CCGCUCGGC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCACCCGAUUCGAUCCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAag-uuaccacag
Hemiphlebia_mirabilis_OHM ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG---CUUCCC---UCGGGU-CGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGCCACGGUAUUCUGGAUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU------------
-------GGGGCGC--GGGCG----UCGC--GUG-A-CGGUC--GUCCGGG-CUG-GGGG---CUAACC--CCCUCGGCCCGCGGC---GCCG------UCUCUCGGC--CGUUC--CG--
UCCCUAGCUCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG
Unaligned_Anisoptera D10???9999999999999999999999?????????????????????????
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Epiophlebia_superstes ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG---CGGCCC---UCGGGC-UGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGAGCGCCACU------------
-------GGGACGC--GGGCG----UCGG--GGG-A-CGGUC--GUCCGGG-CCGUGGGG----CAA----CCUUCGGCCCGCGGC---GCCG------CCUCUCGUC--CGCCU--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[ ]

Epiophlebia_laidlawi ??---??????---??????-????????????????????????????
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Unaligned_Aeshnoid D10???----------------------???????????????????
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Archipetia_auriculata ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGGCG---GGGCCU---UCGGAC-UGCCGCUGCCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUGUUCUGGAUCCAAGG--Gag-ugcggucgcgggcgccacu------------
-------gggacgu--gggcg----ucga--ggg-a-cgguc--guccggu-ccg-gggg---gcaa----ccuucggcccgcggc---gccg------ccucucguc--cgcuc--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCACCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC----- UUUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[ ]
Austropetalia_victoria acuguaagnagacaugaaag????????????????????????---??????---??????-????????????????????????????
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Hypopetalia_pestilens_OHPe ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG----CGGCC---UUCGGACUGCCGCUGCCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GagUUgcggUcgcgggcgccacU------------
-------gggacgU--gggcg----Ucga--ggg-a-cggUc--gUccggU-ccg-gggg---gcaa----ccUUcggcccgcggc---gccg------ccUcUcgUc--cgcUc--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCACCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG
A_FJ596639_Phyllopetalia_apicalis ??---??????---??????-??????????????????????
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A_EU055322_Phyllopeta ??---??????---??????-????????????????????????????
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Eurypetalia_altarensis ??---??????---??????-????????????????????????????
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Ophiopetalia_diana ACUGUAAGNAGACAUGAAAN????????????????????????---??????---??????-????????????????????????????
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Gomphaeschna_furcilata   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUAG---CGGCCC---UCGGGC-UGCAGCCGUCGACGUUGAAAUACCACUA
CUUUGGUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCgucgauuuaucgcggcugcguaacgguguucuggauccaagg--gag-ugcggucgcgggcgccacu-----------
-------gggacgu--gggcg----ucga--ggg-a-cgguC--guucggu-ccg-gggg---gcaa----cccucggaccgcggc---gccg------ccucucguc--cgcuc--cg--
ucccuagcucguguuuaucccucccgaUCCGAUUCGAGGACACCACCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC----- UUUGAGGAGUUUUCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[   ]
Oligoaeschna_pryeri   ??---??????---??????-????????????????????????????
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AAPs_Austroaeschna_parvistigma   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGG---UGGCCC---UCGUGC-UGCUGCUGUCGACGUUGAAAUA
CCACUACUUUGGUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUGUUCUGGAUCCAAGG--GAG-UGCGGUCGCGGGCGCCACU----
--------------GGGACGU--GGGCG----UCGA--GGG-A-CGGUC--GUCCGGU-CCG-GGGG---GCAA----CCCUCGGACCGCGGC---GCCG------CCUCUCGUC-- CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACAACACCAGGCCGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG
Telephlebia_tillyardi   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG---UGGCCC---UCGUGC-UGCUGCUGUCGACGUUGAAAUACCACUA
CUUUGGUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUGUUCUGGAUCCAAGG--GAG-UGCGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGCG----UCGA--GGG-A-CGGUC--GUCCGGU-CCG-GGGG---GCAA----CCCUCGGACCGCGGC---GCCG------CCUCUCGUC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCACCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC----- UUUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[   ]
Boyeria
_vinosa_OBV   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCUG---UGGCCC---UCGGGC-CGCGGCCGUCGACGUUGAAAUACCACUA
CUUUGGUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUGUUCUGGAUCCAAGG--GAG-UGCGGUCGCGGGCGCCACU-----------
-------GGGACGy--GGGCG----UCGA--GGG-A-CGGUC--GUUCGGU-CCG-GGGG---GCAA----CCCUCGGACCGCGGC---GCCG------CCUCUCGUC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCACCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[   ]
FJ596627_Boyeria_irene   ??---??????---??????-????????????????????????????
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EU424323_Brachytron_pratense???---??????---??????-????????????????????????????
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Epiaeschna_heros   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUAG---CGGCCC---UCGGGC-CGUGGCUGUCGACGUUGAAAUACCACUA
CUUUGGUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUGUUCUGGAUCCAAGG--GAG-UGCGGUCGCGGGCGCCACU-----------
-------GGGACGU--GGGCG----UCGA--GGG-A-CGGUC--GUCCGGU-CCG-GGGG---GCAA----CCCUCGGACCGCGGC---GCCG------CCUCUCGUC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCACCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA

GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACNN[   ]
FJ596626_Caliaeschna_microstigma   ??---??????---??????-??????????????????????
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FJ596628_Anaciaeschna_isoceles   ??---??????---??????-??????????????????????
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A_GQ118298_Oplonaesch   ??---??????---??????-????????????????????????????
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Aeshna_canadensis   Acuguaagnagacaugagagguguagcauaacuggcuuguggcg---ugcacc---ucgggc-uaCGGCUGUCGACGUUGAAAUACCACUA
CUUUGGUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUGUUCUGGAUCCAAGG--GAG-UGCGGUCGCGGGCGCCACU------------
-------GGGUCGC--GGGCG----UCGA--GGG-A-CGGUC--GUCCGGU-CCG-AGGG---GCAA----CCCUCGGACCGCGGC---GCCG------CCUCUUGU--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCACCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUAAGCAUAGAGACUGcgaaagcacggccuaucgaucccuuuggc------ uuggggaguuucca-
gcaagaggugucagaaaag-uuaccacag[   ]
A_EU055242_Rhionaeschna_multicolor   ??---??????---??????-??????????????????????
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Aeshna_cyanea_1203   ??---??????---??????-????????????????????????????
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FJ596630_Aeshna_grandis   ??---??????---??????-????????????????????????????
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FJ712316_Gynacantha_japonica_or_bullata??---??????---??????-??????????????????????
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Austrogynacantha ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG---GGGCCU---UCGGGC-CUCGGCUGUCGACGUUGAAAUACCACUA
CUUUGGUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUGUUCUGGAUCCAAGG--GAG-UGCGGUCGCGGGCGCCACU-----------
-------GGGUCGC--GGGCG----UCGA--GGG-A-CGGUC--GUCCGGU-CCG-AGGG---GAAA----CUCUCGGACCGGCGC---GCCG------CCUCUUGUC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCCUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAUGUgucagaaaag-uuaccacaG[   ]
Hemianax_ephippiger ??---??????---??????-????????????????????????????
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Anax_junius_OAJ ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG---CGGCUU---UCGGGC-CGCGGCUGUCGACGUUGAAAUACCACUA
CUUUGGUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUGUUCUGGAUCCAAGG--GAG-UGCGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGCG----UCGA--GGG-U-CGGCC--GUCCGGU-CCG-AGGG---GCAA----CCUUCGGACCGCGGC---GCCG------CCUCUCGUC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUaucgauccuuuuggc------
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FJ596632_Anax_imperator ??---??????---??????-????????????????????????????
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Unaligned_Gomphid D10???----------------------?????????????????????????
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Sinogomphidia_kruegeri acuguaaggngacau?????????????????????????????---??????---??????-????????????????????????????
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Ictinogomphus_australis ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCGGCGU---CAGCUU---CG-GC--UGGCGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAAGGCGUGCGCUGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU-----------
-------GGGGCGU--GGGCG----UCGG--GAG-U-CGGUC--GUCCGGG-CCG-GGGG--G-CAA----CCCUCGGCCCGCGGC---GCCG------CCUCUCGUC--CGCUC--CG--
UUCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGUCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCgauccuuu-ggc------ uuggggaguuucca-
gcaagaggu????????????????????[   ]
Ictinogomphus_sp ??---??????---??????-????????????????????????????
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FJ596617_Lindenia_tetraphylla ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGU---CAGCUU---CG-GU--UGGCGCUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAAGGCGUGCGCUGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU----
---------------GGGGCGU--GGGCG----UCGG--GAG-U-CGGUC--GUCCGGG-CCG-GGGG--G-AAA----CCCUCGGCCCGCGGC---GCC-------CCUCUCGUC--

CGCUC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[ ]
Phyllogomphoides_stigmatus_APS ???---??????---??????-??????????????????????
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Progomphus_obscurus ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCGGCGC---CGGCUC---CUUGGU-UGGCGUCGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCUGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU------------
-------GGGAUGC--GGGCG----UCGG--GGG-U-CGGUC--GUCCGGG-CCG-GGGG--G-AAA----CCUUCGGCCCGCGGC---GCCG------CCUCUCGUC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGaaaag-uuaccacAG[ ]
EU055271_Progomphus_Neaprogomp_borealis ???---??????---??????-???
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Hagenius_brevistylus ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGC-GUGG---CGGCUU---UCUGGC-CGUUUUCGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAAGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGCG----UCGG--GGG-U-CGGUC--GUCCGGG-CUG-GAGG--G-AAA----CCUUCGGCCCGCGGC---GCCG------CCUCUCGUC--UGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCCGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUAcgcauagagacugcgaaa????????????????
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Lanthus_vernalis ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCGGCAC---CGGCCC---UAUGGU-UGGCGUUGUCGAUGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGAUGGAGGGCGGGUGCUGUUGUCCAUUCGUUGCGGCUGCAUCACAGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGUGGGUGCCACU------------
-------GGGACGC--AGGCA----UUGG--GGG-U-CGGUC--GUCCGGGACCA-GGGG--G-AAA----CCUUCGGCCCGUGGC---ACCA------CCUCUCGUU--CACUC--UG--
UCCCUAGCUCGUGUUUAUCCCUCCUGAUCCGAUUUGAGGACACCGCCAGGCGGGGAGUUUGACUGAGAUGGUACAUCUGUCAAA-GAUUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAUAAACCUUGCAUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCAUGGCCUAUCGAUCCUUUUGGC------ UUGGGAAGUUUCUA-
GCAAGAGGUGUCAGAAAAG-UUAUCACAG[ ]
Davidius_nanus ???---??????---??????-?????????????????????????????
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Neogomphus_edenticulatus ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCGGCGC---CGGCCC---UAUGGU-UGGCGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCUGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGCG----UCGG--GGG-U-CGGUC--GUCCGG-ACCG-GGGG--G-AAA----CCUUCGGCCCGCGGC---GCCG------CCUUUCGUC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ CUGGGGAGUUUCCA-
GCANGAGGUGUCAGAAAAG-UUACCACAG[ ]
Armagomphus_armiger ACUGUAAGGAGACAUGAgaggugcagcauaagugg?????????---??????---??????-?????????????????????????????
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Hemigomphus_comitans_AHC   ??---??????---??????-??????????????????????
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AFJ596622_Hemigomphus_heteroclytus   ??---??????---??????-??????????????????????
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EU055228_Hemigomphus_magela_BYB   ??---??????---??????-??????????????????????
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Trigomphus_sp   ??---??????---??????-????????????????????????????
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FJ596615_Stylogomphus_Lanth_albistylu??---??????---??????-??????????????????????
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FJ712325_Stylogomphus_shirizui   ??---??????---??????-??????????????????????
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EU055286_Davidioides_martini   ??---??????---??????-??????????????????????
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Burmagomphus_collaris   ACUGUAAGgAGACAUGAGagguguagcAUAAGUGGGAGCAGUUC---CGGCCC---UGGGGU-CGGUUCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU------------
-------GGGACGA--GGGU--G--CCGG--GGG-G-CGGCC--GUCCGAU-CCG-GGGG--G-AAA----CCUUCGGAUCGCGGC---GCCG------UCUCUCGUC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGUCAGGCCGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC----- UUUGGGGAGUUUCCA-
GCAAGAGGUGucagaaaag-uuaccacag[   ]
EU055285_Cyclogomphus_heterostylus   ??---??????---??????-??????????????????????
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Anisogomphus_pinratani_not_pinratanai????????????????????????????????????---??????---??????-??????????????????????????????
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Dromogomphus_spinosus   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCGGUGC---CGGCCC---UGCGGU-CGGUGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU------------
-------GGGACGA--GGGUG----CCGG--GGG-U-CGGCC--GUCCGGU-CCG-GGGG--G-AAA----CCUUCGGAUCGCGGC---GCCG------UCUCUCGUC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGUCAGGCCGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-Uuaccacag[   ]
Arigomphus_villosipes   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCGGCGC---CGGCCC---UGCGGU-CGGUGGCGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUUGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU------------
-------GGGACGA--GGGUG----CCGG--GGG-U-CGGCCGCGUCCGGU-CUG-GGGG--GUAAAA---CCUUCGGAUCGCGGCGC-GCCG------GCUCUCGUC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGUCAGGCCGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[   ]
Arigomphus_cornutus_   ??---??????---??????-????????????????????????????
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FJ712319_Stylurus_intricatus??---??????---??????-????????????????????????????
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Stylurus_amnicola   ??---??????---??????-????????????????????????????
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FJ596610_Stylurus_nagoyanus??---??????---??????-????????????????????????????
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FJ596612_Gomphurus_Gomphus_externus   ??---??????---??????-??????????????????????
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FJ596611_Asiagomphus_melaenops   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCGGUGC---CGGCCC---UGCGGU-CGGUGCCGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAAGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGGACGA--GGGUG----CCGG--GGG-U-CGGCC--GUCCGGU-CCG-GGGG--G-AAA----CCUUCGGAUCGCGGC---GCCG------UCUCUCGUC-- CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGUCAGGCCGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGU
  CCUAAGGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUC CUUUUGGC----
--UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[-   ]
FJ596614_Gomphus_Phanogomphus_exilis ??---??????---??????-??????????????????????
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Gomphus_Gomphus_graslini_AF266051??---??????---??????-??????????????????????
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Gomphus_Hylogomphus_adelphus_OGA   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCGGUGC---CGGCCC---UGCGGU-CGGCGCCGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGGACGA--GGGCG----CCGG--GGG-U-CGGCC--GUCCGGU-CCG-GGGG--GUAAAA---CCUUCGGAUCGCGGC---GCCG------CCUCUCGUC-- CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGUCAGGCCGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUAUCACAG[   ]
FJ712320_Gomphus_Gomphus_vulgatissimus??---??????---??????-??????????????????????
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Megalogomphus_sommeri   ??---??????---??????-????????????????????????????
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FJ712321_Onychogomphus_uncatus   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCGGCGC---CGGCCC---UAUGGU-UGGCGUUUUCGACAGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCUGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU----
---------------GGGAUGC--GAGCG----UCGG--GAG-U-CGGUC--GUCCGGG-CCG-GGGG--GUAA-----CCUUCGGCCCGCGGC---GCCG------CUUCUCGUC-- AGCUU--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCCGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[   ]
FJ596620_Onychogomphus_forcipatus_unguACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCGGCGC---CGGCCC---UAUGGU-UGGCGUUUUCGACAGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCUGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU----
---------------GGGAUGC--GAGCG----UCGU--GAG-U-CGGUC--GUCCGGG-CCG-GGGG--GCAA-----CCUUCGGCCCGCGGC---GCCG------CUUCUCGUC-- AGCUU--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCCGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[   ]
FJ712322_Onychogomphus_sp   ??---??????---??????-??????????????????????
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Ophiogomphus_carolus        ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCGGCGC---CGGCCC---UAUGGU-UGGCGUUUUCGACAGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCUGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU-----------
-------GGGAUGC--GAGC--G--UCGG--GAG-U-CGGUC--GUCCGGG-CCG-GGGG--G-AAA----CCUUCGGCCCGCGGC---GCCG------CUUCUCGUC--AGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCCGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCC UAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[                     ]
FJ596618_Ophiogomphus_severus         ????????????????????????????????????????????---??????---??????-??????????????????????
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Ophiogomphus_Ophiogomphus_caecilia    ????????????????????????????????????????????---??????---??????-??????????????????????
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Leptogomphus_elegans         ACUGUAAGGAGACAUGAGAGGUGUAGUAUAAGUGGGAGCGGCGA---CGGUUC---CAAAAU-CGUCGUCGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCUGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU-----------
-------GGGACGU--GGGCG----UCGG--GGG-A-CGGUC--GUCCGGG-CCG-GGG----UAAA----UCUUAGGCCUGUGUC---GCCG------CCUCUCGUC--UGUUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCACCAGGCCGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGCGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------UUGGGA- GUUUC-a-
gcaagaggugucagaaaag-uuaccacag[              ]
Leptogomphus_sauteri_FJ596609         ????????????????????????????????????????????---??????---??????-??????????????????????
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Epigomphus_compactus        Acuguaaggagacaugagaggugcaacauuagugggag???????---?????---??????-????????????????????????????
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Microgomphus_chelifer_FJ712323        ????????????????????????????????????????????---??????---??????-??????????????????????
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Heliogomphus_retroflexus    ????????????????????????????????????????????---??????---??????-????????????????????????????
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Macrogomphus_parallelogramma   ??---??????---??????-??????????????????????
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Ceratogomphus_pictus   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCGGCGC---UGACCC---UGUGGU-UGGUGUCGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCUGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU-----------
-------GGGACGU--GGGCG----UCGG--GAG-U-CGGUC--GUCCGGG-CCG-GGGG--G-AAA----CCUUCGGCCCGCGGC---GCUG------CCUCUCGUU--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAg[   ]
Lestinogomphus_angustus_ALA2   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGUGACUA-UUUAAGCC-UUUGUGCU-UG-GGUUCUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCUGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUcuggauccaagg--gaguugcggucgcgggcgccacu----
--------------gggacgu--gggcg----ucgg--gag-u-cgguc--guccggg-ccg-gggg--g-aaa----ccUUcggcccgcggc---gcUg------ccUcUcgUU-- cgcUc--cg--
UcccUagcUcgUgUUUAUCCCUCCCGAUCCGAUUCGAAGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG
Austrogomphus_guerneri_AAG   ACUGUAAGGAGACAUgAGAGGUGUAGCAUAAGUGGGAGCGGCGC---UGACCC---UGUGGU-UGGUGUCGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCUGUCGUCGAUUCGUCGCGGCAGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGCG----UCGG--GAG-U-CGGUC--GUCCGGG-CCG-GGGG--G-AAA----CCUUCGGCCCGCGGC---GCCG------CCUUUCGUC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAAAg-uuaccaca?
EU055267_Austrogomphus_amphiclitus   ??---??????---??????-??????????????????????
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EU055261_Antipodogomphus_acolythus   ??---??????---??????-??????????????????????
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Unaligned_Petalurid   D10???----------------------?????????????????????????
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Tanypteryx_hageni   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUACGC---CGGCCC---UCGGGC-UGGCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGC--G-UACGG--GGG-A-CGGCC--GUCCGGG-CCG-GGGG--G-AAA----CCUUCGGCCCGCGGC---GCCG------CCCCUCGUC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[   ]
Tanypteryx_sp   ??---??????---??????-????????????????????????????
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FJ712330_Tanypteryx_pryeri  ????????????????????????????????????????????---??????---??????-????????????????????????????
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Tachopteryx_thoreyi         ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUACGC---CGGCCC---UCGGGC-UGGCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGC--G-UACGG--GGG-A-CGGCC--GUCCGGG-CCG-GGGG--G-AAA----CCUUCGGCCCGCGGC---GCCG------CCCCUCGUC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCa-
gcaagaggugucagaaaag-uuaccaCAG[                     ]
Phenes_raptor               ACUGUAAGGANACAUGA???????????????????????????---??????---??????-????????????????????????????
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Phenes_raptor               acuguaaggagacaugagagguguagcauaagugggagcugugg----cgucc---cucggggcgcggcugucgacguugaaauaccacua
cuugguaguuucuuuacuuacucggugaggcggagggcgugcgcagucgucgauucgucgcggcugcgucacgguguucuggauccaagg--gag-ugcggucgcgggcgccacu------------
-------gggucgc--gggc--g-u-cga--ggg-a-cggcc--guccggu-ccg-aggg--g-uaa----ccuucggaccgcggc---gccg------ccucucguc--cgcuc--cg--
ucccuagcucguguuuaucccucccgauccgauucgaggacaccaccaggcggggaguuugacuggggcgguacaucugucaaa-gaauaacgcagguguccuaaggcuagcuca
gcgaggacagaaaccucgcguggagcaaaagggcaaaugcuggcuugaucc-cgaugcucaguacgcauagagacugcgaaagcacggccuaucgauccuuuuggc------ uuggggaguuucca-
gcaagaggugucagaaaag-uuaccacag
Uropetalura_carvori         ACUGUAAGGAGACAU?????????????????????????????---??????---??????-????????????????????????????
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Petalura_hesperia_APH       ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUACGC----CGGCC---CUCGGGCUGGCGCCGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUcgcgggcgccacU------------
-------gggacgc--gggc--g-cacgg--gga-U-cggcc--gUccggg-ccg-gggg--g-aaa----ccUUcggcccgcggc-GGGCCG------CCCCCCGUG--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCa-
gcaagaggugucagaaaag-uuaccacag
A_EU055252_Petalura_gig     ????????????????????????????????????????????---??????---??????-????????????????????????????
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Petalura_litolae            ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUACGC---CGGCCC---UCGGGC-UGGCGCCGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGC--G-CACGG--GGA-U-CGGCC--GUCCGGG-CCG-GGGG--G-AAA----CCUUCGGCCCGCGGCUC-GCCG------CCCCCCGUG--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC----- UUUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAAag-uuaccacag[                      ]
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Petalura_ingentissima ??---??????---??????-????????????????????????????
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Zoraena_bilineata GCUGUAAGGAUACAUGA???????????????????????????---??????---??????-????????????????????????????
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Taeniogaster_obliqua acuguaaggagacaugagagguguagcauaagugggagcuacgc---cggccc---ucgggu-cggugccgucgacggugAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU------------
-------GGGACGG--GGGC--G--UCGG--GGG-A-CGGUC--GUCCGGG-CCG-GGGG-UUCUA-----CCCUCGGCCCGCGAC---GCCG------CCUCUCGUC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[   ]
Kalyptogaster_erronea ACUGUAAGgAGACAUGAGAGguguagcauaagugggagcuacgc---cggccc---ucgggu-cggugccgucnacggugaaauaccacua
cuuugauaguuucuuuacuuacucggugaggcggagggcgugcgcagucgucgauucgucgcggcugcgucacgguauucuggauccaagg--gaguugcggucgcgggcgccacu------------
-------ggnnnnn--nnnn--n--nnnn--nnn-n-nnnnn--nnnnnnn-nnn-nnnn-nnnnn-----nnnnnnnnnnnnnnn---nnnn------nnnnncguc--cgcuc--cg--
ucccuagcucguguuuaucccucccgauccgauucgaggacaccgccaggcggggaguuugacuggggcgguacaucugucaaa-gaauaacgcagguguccuaaggcuagcuca
gcgaggacagaaaccucgcguggagcaaaagggcaaaugcuggcuugaucc-cgaugcucaguacgcauagagacugcgaaagcacggccuaucgauccuuuuggc------ uuggggaguuucca-
gcaagaggugucagaaaag-uuaccacAG[   ]
FJ712317_Cordulegaster_maculata ??---??????---??????-??????????????????????
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EU055277_Cordulegaster_dorsalis ??---??????---??????-??????????????????????
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FJ596634_Cordulegaster_boltonii ??---??????---??????-??????????????????????
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FJ596637_Cordulegaster_picta ??---??????---??????-??????????????????????
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FJ596638_Anotogaster_sieboldii ??---??????---??????-??????????????????????
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Neopetalia_punctata   ACUGUAAGGAGACAUGAGAN????????????????????????---??????---??????-?????????????????????????????
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Chloropetalia_soarer   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCGGUGU---CGGCCCU-UUAGGGC-UGGUGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGC--G--UCGG--GGG-A-CGGUC--GUCCGGG-CCG-GCGG-GAUCAA----CCCUCGGCCCGCGGC---GCCG------CCUCUCGUC--CGCCC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAACUCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGG???????-
???????????cagaaaag-uuaccacag[   ]
Sinorogomphus_nasutus   ACUGUAUGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCGGUGU---CGGCCCU-UUAGGGC-UGAAGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGC--G--UCGG--GGG-A-CGGUC--GUCCGGG-CCG-GCGG-GAUCAA----CCCUCGGCCCGCGGC---GCCG------CCUCUCGUC--CGCCC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGugucagaaaag-uUACCACAG[   ]
FJ596635_Chlorogomphus_brunneus   ??---??????---??????-???????????????????????
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Chlorogomphus_sp   ??---??????---??????-?????????????????????????????
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Synthemis_eustalacta   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUACGC---CGGCCC---UCGGGU-CGGCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGG--G--UCGG--GGG-A-CGGUC--GUCCGGG-CCG-GGGG-U-UUAC----UCUUCGGCCCGCGGC---GCCG------CCUCUCGUC--CGCUC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACAACACCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCAAGCaagaggugucagaaaag-uuaccacag[   ]
Archaeosynthemis_marcrostigma_   ??---??????---??????-???????????????????????
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Archaeosynthemis_leachii_   ??---??????---??????-?????????????????????????????
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Eusynthemis_brevistyla   acuguaaGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUACGC---CGGCCC---UCGGGU-CGGCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU------------
-------GGGACGC--GCGG--GGGUCGG--GGG-A-CGGUC--GUCCGGG-CCG-GGGG-U-UUAC----UCCUCGGCCCGCGGC---GCCG------CCUCUCGUC--CGCUC--CG--
UCCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAA???
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FJ596573_Eusynthemis_guttata??---??????---??????-????????????????????????????
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EU055262_Eusynthemis_nigra   ??---??????---??????-????????????????????????????
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EU055263_Choristhemis_flavoterminata   ??---??????---??????-???????????????????????
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Synthemiopsis_gomphomac   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUACGC---CGGCCC---UCGGGU-CGGCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU------------
-------GGGACGC--GGGG--G--UCGG--GGG-A-CGGUC--GUCCGGG-CCG-GGGG-U-UUAC----UCCUCGGCCCGCGGC---GCCG------CCUCUCGUC--CGCUC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC-----
UUUGGGGAGUUUCCAagcaarrggugucagaaaag-uuaCCACAG[   ]
Gomphomacromia_chilensis   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGCCCC---UCGGGU-UGGUGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAAGGCGUGCGCAGUCGUCGAUUCGUCCCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUACGGUCGCGGGCGCCACU------------
-------GGGACGU--GGGC--G--UCGG--GAG-A-CGGUC--AUCCGGG-CCG-GGGG-G-AAA-----CCUUCGGCCCGCGGC---GCCG------CCUCUCGUC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[   ]
FJ712318_Gomphomacromia_paradoxa   ??---??????---??????-???????????????????????
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A_GQ329652_Syncordulia_serendipator   ??---??????---??????-???????????????????????
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A_GQ329654_Syncordulia_venator   ??---??????---??????-???????????????????????
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EU055287_Idionyx_imbricata   ??---??????---??????-????????????????????????????
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Idionyx_selysi_   ??---??????---??????-????????????????????????????
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Macromidia_rapida   GCUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGGCCC---UCGGGU-CGGCGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGG--G--UCGG--GGG-A-CGGUC--GUUCGGG-CCG-GGGG-U-CUAC----UCCUCGGCCCGCGGC---GCCG------CCUCUCGUC--CACUC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCuaucgauccuuuuggc------ uuggggagcuuc-a-
gcaagaggugucagaaaag-uuaccacag[   ]
EU424325_Oxygastra_curtisii??---??????---??????-????????????????????????????
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EU055244_Cordulephya_pygmaea   ??---??????---??????-??????????????????????
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Pseudocordulia_circularis   ??---??????---??????-????????????????????????????
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Hesperocordulia_berthoudi   ??---??????---??????-????????????????????????????
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Lathrocordulia_metallica   ??---??????---??????-????????????????????????????
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Micromidia_convergens   ??---??????---??????-????????????????????????????
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Micromidia_atrifrons   ??---??????---??????-????????????????????????????
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Austrophya_mystica   ??---??????---??????-????????????????????????????
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Austrocordulia_refracta   ??---??????---??????-????????????????????????????
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Archaeophya_magnifica   ??---??????---??????-????????????????????????????
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Epophthalmia_elegans   ??---??????---??????-????????????????????????????
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Didymops_transversa   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUAC---CAUCCC---UCGGGU-CUGCGCUGGCGACUGUGAAAUACCACUU
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAAGAGCGCGUUCGUUGAUUCGUCGCGGCCGUGUCACGGUGUUCUGGAUCCAAGG--GAGU------CGCGGGCGCCACU-----------
-------GGGGCGA--GGUG--G--UCGG--GGG-A-CGGUC--GUUCUUA-CCA-GGGG-C-CUAC----ACCUCGGCAGGUGGCACCGCCG------CCUCUCCUC--CG-CC--CG--
UCCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUAGAGGACACCGCCAGGUGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGUUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAGCCUCGCGUGGAGCAAAAGAGCAUAUGCUGGCAUGAUCU-CGAUGCUCAGUAUGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUCGGC------ UUGGG???NNNNNN-
NNNNNNNNNNNNNNNNNNNN-NNNNNNNNAG[   ]
Macromia_illinoiensis   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUACGC---CGUCCC---UCGGGU-CGGCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUGUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU-----------
-------GGGGCGA--GGUG--G--UCGG--GGG-A-CGGUC--GCUCGGG-CCG-GGGG-C-CUAC----UCCUCGGCCCGCGGCGCCGCCG------CCUCUCGUC--CGCCC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACUGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAgaggugucagaaaag-uuaccacAG[   ]
FJ596570_Macromia_amphigena   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUACGC---CGUCCC---UCGGGU-CGGCGCUGUYGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUYGUCGCGGCCGCGUCACGGUGUUYUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
--------------GGGGCGA--GGUG--G--UCGG--GGG-A-CGGUC--GCUCGGG-CCG-GGGG-C-CUAC----UCCUCGGCCCGCGGCGCCGCCG------CCUCUYGUC--

CGCCC--CG--UCCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACUGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[-   ]
Macromia_eurynome ??---??????---??????-????????????????????????????
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Macromia_magnifica ??---??????---??????-????????????????????????????
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FJ712329_Macromia_splendens NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNN---NNNNNN-NNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNN---
---------------NNNNNNN--NNNN--N-NNNNN--NNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN--NNNNN---------
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[-   ]
FJ596571_Phyllomacromia_sp ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CUUCCC---UCGGGU-CGGCGUCGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUGUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGGGCGA--GGUG--G--UCGG--GGG-A-CGGUC--GCUCGGG-CCG-GGGG-C-CUAC----UCCUCGGCCCGCGGCGCCGCCG------ACUCUCGUC-- CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[-   ]
FJ596572_Idomacromia_proavita ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUACGC---CGGCCC---UCGGGU-CGGCGCUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGACUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGUACGC--GGGA--G--UCGG--GGG-A-CGGUC--GUUCGGG-CCG-GGGG-C-CUAA----UCCUCGGCCCGCGGC---GCCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[-   ]
Aeschnosoma_forcipula ??---??????---??????-????????????????????????????
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Pentathemis_membranulata ??---??????---??????-????????????????????????????
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Tetragoneuria_cynosure ACUGUAAggagacaugagagguguagcauAAGUGGGAgucA-G----UCGCCC---UCGGGU-AGGUGAUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGGGGCGGAAGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU------------
-------GGGAGGU--GGGC--G--UCGG--GGG-U-CGGUC--GCUCGGG-CCG-GGGA-CCUAAUAAG-UUCUCGGCCCGCGGCU--GCCG------CCUCUCGAU--UGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCGUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[   ]

Tetragoneuria_costalis ??---??????---??????-????????????????????????????
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FJ596567_Tetragoneuria_canis ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUUCGC---UCGCCC---UCGGGU-AGGUGAUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGGGGCGGAAGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGGAGGU--GGGC--G--UCGG--GGG-U-CGGUC--GCUCGGG-CCG-GGGA-CCUAAUAAG-UUCUCGGCCCGCGGC---GCCG------CCUCUCGAU-- UGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCGUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[-   ]
FJ596565_Epitheca_princeps ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUUCGC---UCGCCC---UCGGGU-AGGUGAUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGGGGCGGAAGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUGUUCUAGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGGAGGU--GGGC--G--UUGG--GGG-U-CGGUC--GCUCGGG-CUG-GGGA-CCUAAUAAG-UUCUCGGACCGCGGC---GCCG------CCUCUCGAU-- UGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCGUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[   ]
FJ596561_Epitheca_marginata ??---??????---??????-??????????????????????
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FJ596564_Epitheca_bimaculata ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUUCGC---UCGCCC---UCGGGU-AGGUGAUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGGGGCGGAAGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUGUUCUAGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGGAGGU--GGGC--G--UUGG--GGG-U-CGGUC--GCUCGGG-CUG-GGGA-CCUAAUAAG-UUCUCGGACCGCGGC---GCCG------CCUCUCGAU-- UGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCGUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[-   ]
Rialla_villosa ??---??????---??????-????????????????????????????
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Cordulia_aenea_1236 ??---??????---??????-????????????????????????????
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Cordulia_shurtleffii ??---??????---??????-????????????????????????????
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FJ596568_Somatochlora_alpestris ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUUCGC---GCUCUU---CGGAGU-G--CGGCGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGGGGCGGAAGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGGAGGC--GGUC--G--UCCGUGGGG-U-CGGUC--GCUCGGC-UCG-UGGG-CCUAAUAAG-UCCUCGUGCCGCGGC---GCCG------CUCCUCGGU--

CGGCC-AAU--UCCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCGUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[-   ]
Somatochlora_flavomac_1242 ??---??????---??????-?????????????
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FJ596569_Somatochlora_metallica ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUUCGC---GCUCUU---CGGAGU-G--CGGCGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGGGGCGGAAGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGGAGGC--GGGC--G--UCCGUGGGG-U-CGGUC--GCUCGGU-UUG-CGGA-CCUAAUAAG-UCCUCGAGCCGCGGC---GCCG------CUCCUCGGU-- CGCCC-AAU--
UCCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCGUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[-   ]
Somatochlora_tenebrosa ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUUCGC---GCUCUU---CGGAGU-G--CGGCGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGGGGCGGAAGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU-----------
-------GGGAGGC--GGGC--GUCCGUG--GGG-U-CGGUC--GCUCGGU-UUG-CGGA-CCUAAUAAG-UCCUCGAGCCGCGGC---GCCG------CUCCUCGGU--CGCCC-AAU--
UCCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCGUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAagaggugucagaaaag-uuaccacag[   ][unique]
FJ596562_Hemicor_mindana_nipponica AUUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUCUGC---ACGCCU---CAGGGU-GGGCGACGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGGGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU----
---------------GGGACGC--GGGC--G--UCGG--GGG-G-CGGUC--GCUCGGG-CCG-GGGG-CCCACAAAG-UUUUCGGCCCGCAGC---GCCG------UCCCUCGGU-- CGCCC--CG--
UCCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCGUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[-   ]
EU055266_Hemicordulia_australiae ??---??????---??????-??????????????????????
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EU055254_Procordulia_jacksoniensis ??---??????---??????-??????????????????????
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Unaligned_Libellulid D10???----------------------?????????????????????????
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FJ596583_Notiothemis_robertsi ??---??????---??????-??????????????????????
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FJ596578_Tetrathemis_irregularis   ??---??????---??????-??????????????????????
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EF631495_318_222_Tetrathemis_polleni ??---??????---??????-??????????????????????
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FJ596587_Urothemis_signata ??---??????---??????-????????????????????????????
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EF631421_313_217_Urothemis_assignata ??---??????---??????-??????????????????????
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FJ596588_Macrodiplax_cora   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCU---UCGGGU-CGGCGUCGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU-----------
-------GGAGCGC--GGGA--A--ACGA--GGG-U-CGUUC--GCUCGGGCCGG-GGGA--CUA------UCCUCGGCCCGCGGC---GCCG------CCUCUCGUC--CGCCC--CG--
UUCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAUAG-UUACCACAG[   ]
EU055229_Macrodiplax_balteata   ??---??????---??????-??????????????????????
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EF631458_344_253_Zyxomma_elgneri   ??---??????---??????-??????????????????????
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Zyxomma_petiolatum_GU196340ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGGCCC---UCGGGC-CGGUGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGUCACU-----------
-------GGAGCGC--GGGA--G--UCGA--GGG-A-CGGUC--GUGCGGG-CCG-GGGU-ACUAC-----UYUUCGGCCCGUUGC---GCCG------CCUCUCGUC--CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Zygonyx_torrida   ??---??????---??????-????????????????????????????
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EU055233_Nannophlebia_sp   ??---??????---??????-????????????????????????????
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Bironides_sp_HOL_2010_GU196365   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUCGUYGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUUGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--A--UCGA--GGG-A-CGGUC--GUUCGGG-CCG-GGGG-CCUAC-----UUUUCGGCCCGCGGC---GCCG------CUCCUYGUA-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-AGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Huonia_epinephela_GU196370 ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGA-AGGCGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUUGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCAACU------------
-------GGAGCGC--GGGA--A--UCGA--GGG-A-CGGUC--GUUCGGG-CCG-GGGG-CCUAC-----UCCUCGGCCCGCGGC---GCCG------GCUCUYGUA--CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
EF631477_361_270_Huonia_oreophila   ??---??????---??????-??????????????????????
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A_EF631485_367_278Onycothemis_testacea??---??????---??????-??????????????????????
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FJ596582_Rhyothemis_variega_imperatrix??---??????---??????-??????????????????????
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Rhyothemis_fuliginosa_GU196333   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--G--UCGA--GGG-A-CGGUC--GUUCGGG-CCG-GGGG-CCUAC-----UCUUCGGCCCGCGGC---GCCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCC UAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Miathyria_marcella   ??---??????---??????-????????????????????????????
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Miathyria_simplex_GU196345   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGA-CGGCGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCUCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU------------
-------GGAGCGC--GGGA--A--ACGA--GGG-A-CGGUC--GCUCGGG-CCG-GGGG-CCUAC-----UUUUCGGCCCGCGGC---GCCG------CCUCUCGUC--CGCCC--CG--
UUCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUCCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
FJ596577_Tholymis_citrina   ??---??????---??????-????????????????????????????
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EF631403_298_202_Tholymis_tillarga   ??---??????---??????-??????????????????????
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EF631487_369_280_Pantala_flavescens   ??---??????---??????-??????????????????????
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Traemea_lacerata   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGCCC----UCGGGU--GGUGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU------------
-------GGAGCGC--GGGA--A--ACGA--GGG-A-CGGUC--GCUCGGG-CCG-GGGG-CCUAC-----UCUUCGGCCCGCGGC---GCCG------CCUCUCGUC--CGCCC--CG--
UUCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGugu??????????????????[   ]
FJ596586_Tramea_calverti   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGCCCU---CGCGGU--GGCGUUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--A--ACGA--GGG-A-CGGUC--GCUCGGG-CCG-GGGG-CCUAC-----UCUUCGGCCCGCGGC---GCCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Sympetrum_Kalosympetrum_janeae_OSJ   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CUUCCC---UCGGGU-CGGCGUUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--G--UCGG--GGG-A-CGGUC--GCUCGGG-CCG-GGGG-CCUAC-----UCUUCGGCCCGCGGC---GCCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[   ]
Sympetrum_Kalosympetrum_obtrusum_   ??---??????---??????-??????????????????????
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FJ596606_Sympetrum_Sympetrum_vulgatum??---??????---??????-??????????????????????
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AB127406_Sympetrum_pedemontanum_elatum   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGC---CUUCCC---UCGGGU-CGG
CGUUGUCGACGGUGAAAUACCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--
GAGUUGCGGUCGCGGGCGCCACU-------------------GGAGCGU--GGGA--G--UCGG--GGG-A-CGGUC--GCUCGGG-CCG-GGGG-CCUAC-----UCUUCGGCCCGCGGC--- GCCG---
---CCUCUCGUC--CGCCC--CG--UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-
GAAUAACGCAGGUGUCCUAAGGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGG
CCUAUCGAUCCUUUUGGC------UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG
Sympetrum_Nesogonia_blackburni_   ??---??????---??????-??????????????????????
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FJ596607_Sympetrum_Sympetrum_sanguineum   ??---??????---??????-???
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EU055230_Sympetrum_Tarnetrum_corruptum??---??????---??????-??????????????????????
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Sympetrum_fonscolombei_GU196359   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGC---CUUCCU---UCGGGU-CGGCGCUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--G--UCGA--GGG-A-CGGUC--GUCCGGG-CCG-GGGG-CCUAC-----UUUUCGGCCCGCGGC---GCCG------CCUCUCGUU-- CGCCC--CG--
UUCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Sympetrum_Tarnetrum_illotum_??---??????---??????-????????????????????????????
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AB127407_Sympetrum_infuscatum   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGC---CUUCCC---UCGGGU-UGGCGCUACCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--G--UCGG--GGG-A-CGGUC--GUUCGGG-CCG-GGGG-CCUAC-----UCUUCGGCCCGCGGC---GCCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-]
EU424330_Sympetrum_danae   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CUUCCC---UCGGGU-CGGCGUUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--G--UCGG--GGG-A-CGGUC--GUUCGGG-CCG-GGGG-CCUAC-----UCUUCGGCCCGCGGC---GCCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]

Sympetrum_meridionale_GU196334   NNNNNNNNNNNNNAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CUUUCC---UCGGGU-CGGCGUUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--G--UCGG--GGG-A-CGGUC--GUUCGGG-CCG-GGGG-CCUAC-----UCUUCGGCCCGCGGC---GCCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Leucorrhinia_pectoral_0610   ???---??????---??????-?????????????????????????????
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Leucorrhinia_glacialis   ???---??????---??????-?????????????????????????????
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Celithemis_elisa   ACUGUAAGGAGACAUGAAAGGUGUAGCAUAAGUGGGAGCCGCGU---CGUCCC---UCGGGU-CGGUGCGGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU-----------
-------GGAGCGC--GGGA--G--UCGG--GGG-A-CGGUC--GUUCGGG-CCG-GGGG-CCUAC-----UCUUCGGCCCGCGGC---GCCG------CCUCUCGUC--CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGucagaauag-uuaccacAG[   ]
Celithemis_eponina_1233   ???---??????---??????-?????????????????????????????
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Brachymesia_gravida_   ???---??????---??????-?????????????????????????????
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Brachymesia_herbida_GU196344ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-NGGCGUUGUNGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUYGUCGAUUUGUCGCGGCCGCGUCACGGUAUUYUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU-----------
-------GGAGCGC--GGGA--A--UCGA--GGG-U-CGGUY--GUUCGGG-CCGGGGGGGCUCCCC----CCACCGGCCCGCGGC---GCCG------CCUCUYGUC--CUYUC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
EF631463_349_258_Brachythemis_leucostic   ???---??????---??????-???
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Brachythemis_contaminata_   ???---??????---??????-?????????????????????????????
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Deielia_phaon_GU196343       ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGGCCC---UCGGGC-UGGCGUCGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGUCACU------------
-------GGAGCGC--GGGA--G--UCGA--GGG-A-CGGUC--GCGCGGG-CCGGGGGGCCAAAC-----CCUCCGGCCCGUUGC---GCCG------CCCCUCGUC--CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAUAG-UUACCACAG[-                    ]
EF631398_294_198_Pachydiplax_longipenni        ????????????????????????????????????????????---??????---??????-???
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AY750042_Erythemis_sp          ????????????????????????????????????????????---??????---??????-??????????????????????
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FJ596592_Acisoma_panorpoides????????????????????????????????????????????---??????---??????-????????????????????????????
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EU055239_Erythrodiplax_minuscula      ????????????????????????????????????????????---??????---??????-??????????????????????
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Erythrodiplax_basalis_       ????????????????????????????????????????????---??????---??????-????????????????????????????
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AB127415_Crocothemis_servilia         ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCU---UCGGGUUCGGCGUCGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGACUUGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--G--UCGU--GGG-A-CGGUC--GCUCGGG-CCG-GGGG-CCUAC-----UUUUCGGCCCGCGGC---GCCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG
Crocothemis_erythraea_GU196335         ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCU---UCGGGUUCGGCGUCGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGACUUGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--G--UCGU--GGG-A-CGGUC--GCUCGGG-CCG-GGGG-CCUAC-----UCUUCGGCCCGCGGC---GCCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
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GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
FJ596590_Rhodothemis_rufa   ??---??????---??????-?????????????????????????????
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Neurothemis_fulvia_   ??---??????---??????-?????????????????????????????
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Neurothemis_ramburii_GU196339   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCU---UCGGGU-CGGUGUUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--G--UCUG--GGG-A-CGGUC--GCUCGGG-CCG-GGGG-CCUAC-----UUUUCGGCCCGUGGC---GCCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Diplacodes_lefebvrii   ??---??????---??????-?????????????????????????????
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Diplacodes_trivialis_GU196342   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGUGGUCGGCGUUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUCCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--G--UCGU--GGG-A-CGGUC--GCUCGGG-CCG-GGGG-CCUAA-----UYUUCGGCCCGCGGC---GCCG------CCUCUCGUC-- CUACC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
EF631462_348_257Bradinopyga_strachani??---??????---??????-??????????????????????
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Brachydiplax_denticauda   ??---??????---??????-?????????????????????????????
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FJ596585_Brachydiplax_chalybea_flavovit   ??---??????---??????-???
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FJ596584_Chalcostephia_flavifrons   ??---??????---??????-??????????????????????
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EF631393_291_195_Micrathyria_aequalis??---??????---??????-??????????????????????
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Micrathyria_atra_   ??---??????---??????-????????????????????????????
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Micrathyria_didyma_GU196361ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUUGUYGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGUGGUUGUCGACUUGUCGGGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU-----------
-------GGAGCGC--GGGA--G--UCGA--GGG-A-CGGUC--GUUCGGG-CCG-GGGG-CAUAC-----UUUUCGGCCCGCGGC---GCCG------CCUYUYUUC--CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Uracis_imbuta_GU196363   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUCGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU-----------
-------GGAGCGC--GGGA--G--UCGA--GCG-G-CGGUC--GUUCGGG-CCG-GGGG-CCUAC-----UUUUCGGCCCGCGGC---GCCG------CCUCUCGUC--CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Uracis_infumata   ??---??????---??????-????????????????????????????
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FJ596589_Nannophya_pygmaea   ??---??????---??????-????????????????????????????
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EF631412_307_210_Nannothemis_bella   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--A--UCGA--GGG-A-CGGUC--GUUCGGG-CCG-GGGG-CCUAC-----UCUUCGGCCCGCGGC---GCCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAAGugucagaauag-uuaccacag[   ]
EF631492_373_Paltothemis_lineatipes   ??---??????---??????-??????????????????????
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Brechmorhoga_mendax_   ???---??????---??????-?????????????????????????????
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Brechmorhoga_praedatrix_GU196346   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUCGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUYGUCGACUYGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--G--UCGG--GGG-A-CGGUC--GUUCGGG-CCGGGGGGGGUCCUAC---CCCUCGGCCCGCGGC---GCCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Dythemis_fugax_   ???---??????---??????-?????????????????????????????
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A_FJ596580_Trithemis_aurora???---??????---??????-?????????????????????????????
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FJ596581_Trithemis_africana   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CUUCCC---UCGGGU-UGGCGUUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCCUAU---
---------------GGGGCGC--GGGA--A--UCGA--GGG-U-CGGUC--GUCCGGG-UCG-GAGA-UUCUUAU---UCCUCGGCC[U]CGCGGC---GCCG------GUUCUCGUC-- CUCCC--
CG--CUCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Trithemis_arteriosa_   ???---??????---??????-?????????????????????????????
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Perithemis_tenera   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGUGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU-----------
-------GGGGCGU--GGGA--A--UCGA--GGG-U-CGGUC--GUUCGGG-CCG-GGGAGGCUAACCCC-UCGCCGGCCCGCGGC---GCCG------CCUCUCGUC--CUCUC--CG--
CUCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUuggc------ uuggggaguuucca-
gcaagaggugucagaauag-uuaccacAG[   ]
A_EU055236_Perithemis_intensa   ???---??????---??????-??????????????????????
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Perithemis_lais_GU196362   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CUUCCC---UCGGGU-CGGCGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUAGUCGAUUCGUCGCUGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGUCACU------------
-------GGAACGC--GGGA--A--UCGA--GGG-U-CGGUC--GUUCGGG-CCG-GGGGGGGUAACACC-CCGCCGGCCCGCGGC---GCCG------CCUCUCGUC--CUCUC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Palpopleura_lucia_GU196337   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUCGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU------------
-------GGAGCGC--GGGA--G--UCGG--GGG-A-CGGUC--GCUCGGG-CCG-GGGA-CCUAC-----UUUUCGGCCCGCGGC---GCCG------CCUCUCGUC--CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
FJ596579_Diastatops_pullata??---??????---??????-????????????????????????????
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Zenithoptera_fasciata_GU196364   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGACUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--G--UCGA--GGG-A-CGGUC--GUUCGGG-CCG-GGGG-CCUAC-----UUUUCGGCCCGCGGC---GCCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
EF631486_368_279_Neodythemis_pauliani??---??????---??????-??????????????????????
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Selysiothemis_nigra   ??---??????---??????-????????????????????????????
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Trithetrum_navasi   ??---??????---??????-????????????????????????????
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Porpax_risi_   ??---??????---??????-????????????????????????????
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Micromacromia_camerunica_GU196367   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--C--UCGG--GGG-G-CGGUC--GUUCGGG-CUG-GGGG-CCUAC-----UCUUCGGCCCGCGGC---GUCG------CCUCUCGUC--

CGCCC--CG--UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
FJ596594_Allorhizuch_preussi   ??---??????---??????-??????????????????????
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Neodythemis_klingi   ??---??????---??????-????????????????????????????
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FJ596575_Hadrothemis_infesta   ??---??????---??????-??????????????????????
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FJ596595_Thermorthemis_madagascariensis   ??---??????---??????-???
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FJ596599_Agrionoptera_insignis   ??---??????---??????-??????????????????????
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FJ596593_Cratilla_metallica??---??????---??????-????????????????????????????
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Pseudoleon_superbus   ??---??????---??????-????????????????????????????
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FJ596597_Orthemis_cultriformis   ??---??????---??????-??????????????????????
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EF631471_265_Orthemis_ferruginea      ????????????????????????????????????????????---??????---??????-??????????????????????
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FJ596601_Orthetrum_albistylum         ????????????????????????????????????????????---??????---??????-??????????????????????
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EF631473_267_Orthetrum_pruinosum      ????????????????????????????????????????????---??????---??????-??????????????????????
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Orthetrum_coerulescens_               ????????????????????????????????????????????---??????---??????-??????????????????????
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FJ596600_Lyriothemis_elegantissima    ????????????????????????????????????????????---??????---??????-??????????????????????
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A_FJ596602_Ladona_fulva      ????????????????????????????????????????????---??????---??????-????????????????????????????
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Ladona_julia                 ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU------------
-------GGAGCGC--GGGA--C--UCGG--GGG-G-CGGUC--GUUCGGG-CUG-GGGG-CCUAC-----UCUUCGGCCCGCGGC---GUCG------CCUCUCGUC--CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGgggaguuucca-
gcaagaggugucagaauag-uuaccacag[                    ]
A_FJ596598_Ladona_depressa   ????????????????????????????????????????????---??????---??????-????????????????????????????
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Plathemis_subornata_         ????????????????????????????????????????????---??????---??????-????????????????????????????
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Plathemis_lydia   acuguaaggagacauGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU-----------
-------GGAGCGC--GGGA--C--UCGG--GGG-G-CGGUC--GUUCGGU-CUG-GGGG-CCUAC-----ucuucggaccgcggc---gucg------ccucucguc--cgccc--cg--
uuccuagcccguguuuaucccucccgauccgauucgaggacaccgccaggcggggaguuugacuggggcgguacaucugucaaa-gaauaacgcagguguccuaaggcuagcuca
gcgaggacagaaaccucgcguggagcaaaagggcaaaugcuggcuugaucc-cgaugcucaguacgcauagagacugcgaaagcacggccuaucgauccuuuuggc------ uuggggaguuucca-
gcaagagg?????????????????????[   ]
Libellula_quadrimaculata_GU196332   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUAGUCGAUUCGUCGCUGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU----
--------------GGAGCGC--GGGA--C--UCGG--GGG-G-CGGUC--GUUCGGG-CUG-GGGG-CCUAC-----UCUUCGGCCCGCGGC---GUCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCUCGUGUUUAUCGCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Libellula_Syntetrum_angelina???---??????---??????-????????????????????????????
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Libellula_Eolibellula_semifasciata   ???---??????---??????-???????????????????????
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Libellula_Belonia_saturata_AY338674   ???---??????---??????-???????????????????????
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Libellula_Eotainia_composita_   ???---??????---??????-???????????????????????
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Libellula_Neotetrum_pulchella_OLP   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUAGUCGAUUCGUCGCUGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU----
--------------GGAGCGC--GGGA--C--UCGG--GGG-G-CGGUC--GUUCGGG-CUG-GGGG-CCUAC-----UCUUCGGCCCGCGGC---GUCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCGCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGGCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-gcaagaggugucagaauag-uuaccacAG[   ]
Libellula_Holotania_comanche_   ???---??????---??????-???????????????????????
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Libellula_Holotania_auripennis_   ??---??????---??????-??????????????????????
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Libellula_Holotania_axilena_??---??????---??????-????????????????????????????
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Libellula_Holotania_luctuosa??---??????---??????-????????????????????????????
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????????????????????????????-?????????????????????????????[   ]
Aethriamanta_rezia_GU196369ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU-----------
-------GGAGCGC--GGGA--A--ACGA--GGG-A-CGGUC--GCUCGGG-CCG-GGGG-CCUAC-----UCUUCGGCCCGCGGC---GCCG------CCUCUCGUC--CGCCC--CG--
UUCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Tetrathemis_corduliformis_GU196368   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGCACC--CUCGGGU-CGGCGUCGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUCCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
--------------GGAGCGC--GGGA--G--UCGA--GGG-A-CGGUC--GUUCGGG-CCG-GGGG-CCUAC-----UYUUCGGCCCGCGGC---GCCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Diplacina_ismene_GU196366   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUCGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCUGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU-----------
-------GGAGCGC--GGGA--C--UCGG--GGG-G-CGGUC--GUUCGGG-CUG-GGGG-CCUA------UCUUCGGCCCGCGGC---GUCG------CCUCUCGUC--CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Erythemis_vesiculosa_GU196360   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUCGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCACCGAUUYGUCGAGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
--------------GGAGCGC--GGGA--G--UCGG--GGG-A-CGGUC--GUUCGGG-CCG-GGGG-CCUAC-----UUUUCGGCCCGCGGC---GCCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCMGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Nannophyopsis_clara_GU196358ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCU---UCGGGU-CGGUGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU-----------
-------GGAGCGC--GAGG-AG--UCGA--GGG-G-CGGUU--GUUCGGG-CCG-GGGU-CCUAC-----UYUUCGGCCCGUAGC---GCCG------CUUCUCGUC--CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Oligoclada_amphinome_GU196357   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CUUCCC---UCGGGU-CGGCGUCGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
--------------GGGGCGC--GGGA--A--UCGA--GGG-U-CGGUC--GUUCGGG-CCGGGGGGGCUCGCC---CCCGCCGGCCCGUGGC---GCCG------CCUCUYGUC--

CUCCC--CG--UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-]
Idiataphe_sp_HOL_2010_GU196356 ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CUUCCC---UCGGGU-CGGCGCCGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGG---------------------nnn-------------------------------GGCCCGGGGAC--GCCG------CCUCCCGUC-- CGCUC--CG--
CUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-][@nnn
CGCCGGGGGACCGGGGUCGUUUCGGGCCGGGGCCCUGCGUGGUGCGUCCUUCCCUUCGCGGUCGUUCCCCUUCGCGGGGGGGCGCUCGGAGGGCUUGGGCGCGCGGCGUGGGUGUCCCC]
Atoconeura_sp_HOL_2010_GU196355 ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUCGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCUAUUCGUAGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--G--UCGA--GGG-A-CGGUC--GUUCGGG-CCG-GGGG-CCUAC-----UCCUCGGCCCGCGGC---GCCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-]
Elga_leptostyla_GU196354 ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUYGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUYGUCGACUYGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU------------
-------GGAGCGA--GGGC--G--UCGA--GGG-A-CGGUC--GUUCGGG-CCG-GGGG-CCUAC-----UYUUCGGCCCGUGGC---GCCG------CCUCUYGUC--CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUCCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAUAG-UUACCACAG[-]
Fylgia_amazonica_GU196353 ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUCGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU------------
-------GGAGCGC--GGGA--G--UCGA--GGG-A-CGGUC--GUUCGGG-CCG-GGGG-CCUAC-----UUUUCGGCCCGCGGC---GCCG------CCUCUCGUC--CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAUAG-UUACCACAG[-]
Hemistigma_albipunctatum_GU196352 ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--G--UCGG--GGG-A-CGGUC--GCUCGGG-CCG-GGGG-CCUAC-----UCUUCGGCCCGCUGC---GCCG------CUUCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-]
Porpacithemis_sp_GU196351 ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CUUCCC---UCGGGU-CGGCGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCCUAU-----------
-------GGGGCGC--GGGA--A--UCGA--GGG-U-CGGUC--GUCCGGG-UCGGAGAUUCUUAU----UCCUCGGCCUCGCGGC---GCCG------GCUCUCGUC--CUCCC--CG--
CUCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGUGGUACAUMUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAWGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAUAG-UUACCACAG[-]
Thermochoria_equivocata_GU196350 ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCU---UCGGGU-CGGCGUCGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--G--UCGG--GGG-A-CGGUC--GCUCGGG-CCG-GGGG-CCUAC-----UCUUCGGCCCGCGGC---GCCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-]
Malgassophlebia_bispina_GU196349 ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGGCCC---UCGGGC-AGGCGUUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGUCACU----
---------------GGAGCGC--GGGA--G--UCGA--GGG-A-CGGUC--GCGCGGG-CCGGGGGGGGUCAAAC---CCUCCGGCCCGUUGC---GCCG------CCCCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA

GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Micromacromia_zygoptera_GU196348ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU-----------
-------GGAGCGC--GGGA--C--UCGG--GGG-G-CGGUC--GUUCGGG-CUG-GGGG-CCUAC-----UYUUCGGCCCGCGGC---GUCG------CCUCUCGUC--CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Argyrothemis_argentea_GU196347   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUCGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGACUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--G--UCGA--GGG-A-CGGUC--GUCCGGG-CCG-GGGG-CCUAC-----UYUUCGGCCCGCGGC---GCCG------GCUCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Pseudothemis_zonata_GU196341ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGGCCC---UCGGGC-CGGCGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGUCACU-----------
-------GGAGCGC--GGGA--G--UCGA--GGG-A-CGGUC--GCGCGGG-CCGGGGGGGCACUAC----CCUUCGGCCCGUUGC---GCCG------CCUCUCGUC--CGCCC--CG--
UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Oxythemis_phoenicosceles_GU196338   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGCGUUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--A--UCGA--GGG-A-CGGUC--GUUCGGG-CCG-GGGG-CCUAC-----UUUUCGGCCCGCGGC---GCCG------CCUYUYGUC-- CGCCC--CG--
CUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Olpogastra_lugubris_GU196336ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGUCCC---UCGGGU-CGGUGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUC--------GUGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU-----------
-------GGAUCGC--GGGA--A--UCGA--GGG-A-CGGUC--GUUCGGG-CCG-GGGG-CCUAC-----UCCUCGGCCCGCGGC---GCCG------CCUCUCGUC--CGCCC--CG-- UUCCUAGC
CCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Misagria_parana_GU196331   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CGGCCC---UCGGGA-CGGCGUUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGCUGAUUCGUCUCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU-----------
-------GGAGCGC--GGGA--C--UCGG--GGG-G-CGGUC--GUUCGGG-CUG-GGGG-CCUAC-----UCUUCGGCCCGCGGC---GUCG------CCUCUCGUC--CGCCC--CG--
UUCCUAGCCCGUGUUUAUCGCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]

[
Neogomphus_edenticulatus_FJ712324   ACUGUAAGGAGACAUGAGAGGUGUNNNNNNNNNNNNNNNNNNNN---NNNNNN---NN-NNN-NNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNN----
---------------NNNNNNN--NNNN--N--NNNN--NNN-N-NNNNN--NNNNNNN-NNN-NNN--NNNNN-----NNNNNNNNNNNNNNN---NNNN------NNNNNNNNN-- NNNNN--NN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[-   ]
Aeshna_mixta_FJ712315   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGG---UGGCCU---UCGGGC-UACGGCUGUCGACGUUGAAAUACCACUA
CUUUGGUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUGUUCUGGAUCCAAGG--GAGU-GCGGUCGCGGGCGCCACU-----------
-------GGGUCGC--GGGC--G--UCGA--GGG-A-CGGUC--GUCCGGU-CCG-AGGG--GCAA-----CCCUCGGACCGCGGC---GCCG------CCUCUUGUC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCUAGCUCA

GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[-   ]
Gomphaeschna_furcillata_FJ712314   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGnnAGCAGUAG---CGGCCC---UCGGGC-UGCAGCCGUCGACGUUGAAAUA
CCACUACUUUGGUAGUUUCUUUACUUACUCGGUGAGGCGGAGGnnGUGCGCAGUCGUCGAUUUAUCGCGGCUGCGUCACGnnGUUCUGGAUCCAAGG--GAGU-GCGGUCGCGGGCGCCACU----
---------------GGGAUGC--GGGC--G--UCGG--AGG-A-CGGUC--GUCCGGG-CCG-GAAG--GAAA-----CUCUCGGACCGCGGC---GCCG------CCUCUCGUC-- CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCACCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGAGGAGUUUUCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[-   ]
Teinobasis_fortis_OD203   --- --

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Mecistogaster_modestaOD198   ---

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Anomisma_abnormeOD193   --- --

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Lestes_sponsa   --- --

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Asiagomphus_melaenops   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCGGUGC---CGGCC----CUGCGGUCGGUGCCGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAAGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUAUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGGACGA--GGGU--G--CCGGGGGUCGGCCGUCCGG-----UCCGGGGG-------------------------GAAACCUUCGGAUCGCGGCGCCGUCUCUCGUC--
CGCUC--CG--UCCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGUCAGGCCGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[-   ]
Orthemis_discolor   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGUGC---CUUCC----CUCGGGUCGGCGCUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUAGUUGAUUCGUCUCUGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--C--UCGGGGGGCGGUCGUUCG----GGCUGGGGGC-------------------------CUACUCUUCGGCCCGUGGCGUCGCCUCUCGUC--
CGCCC--CG--UUCCUAGCUCGUGUUUAUCGCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]
Leucorrhinia_dubia   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUGCGC---CUUCC----CUCGGGUCGGCGUUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--G--UCGAGGGACGGUCGUUCGG----GCCGGGGGC-------------------------CUACUCUUCGGCCCGCGGCGCCGCCUCUCGUC--
CGCCC--CG--UUCCUAGCCCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAUAG-UUACCACAG[-   ]

FJ596561_Epitheca_marginata ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGCUACGC---CGUCCC---UCGGGU-CGGCGCUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUGUUCUGGAUCCAAGG--GAGUCGCGGUCGCGGGCGCCACU----
---------------GGGGCGA--GGUG--G--UCGG--GGG-A-CGGUC--GCUCGGG-CCG-GGGG-CCUAC-----UCCUCGGCCCGCGGCGCCGCCG------CCUCUCGUC-- CGCCC--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACUGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCRUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[-   ]
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Unaligned_Orders ??9999999999--9999999999?????????????????????????
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Ephemerella_sp ??---??????---??????-????????????????????????????
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Paraleptophlebia_sp ??---??????---??????-????????????????????????????
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Anthopotamus_sp ??---??????---??????-????????????????????????????
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Caenis_luctuosa ??---??????---??????-????????????????????????????
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Ephemera_sp ??---??????---??????-????????????????????????????
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Callibaetis_ferrugine ??---??????---??????-????????????????????????????
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Callibaetis_ferrugineus_AY859557 ACUGUGAGGAGACAUGAGAGGUGUAGAAUAAGUGGGAGGUGCUU------------------------GCACCGACAGUGAAAUA
CCACUACUCUCAUCGUUUCCUCACUUACUCGGUGAGGCGGAGCGCGUGCG???????????????????????CGC-ACGGUGUUCUCGCGCUAAGG--????????????????????????----
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?????--??--???????????????????-----CGAUCCGAUCCGAGGACACUGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-CAAUAACGCAGGUGUCCUAA
GGCCAGCUCAGCGAGGACAGAAACCUCGCGUAGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGUUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGU------
AUGGAGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[ ]
Baetis_buceratus ??---??????---??????-????????????????????????????
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Hexagenia_rigida ??---??????---??????-????????????????????????????
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Cloeon ??---??????---??????-????????????????????????????
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Leucrocuta_aphrodite ??---??????---??????-????????????????????????????
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Centroptilum_luteolum ??---??????---??????-????????????????????????????
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Stenonema_sp ??---??????---??????-????????????????????????????
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Trigonioptthalmus_altern ??---??????---??????-????????????????????????????
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Allomachilis_froggart ??---??????---??????-????????????????????????????
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EF199981_Machilis_hrabei     AUUGUAAGGAGACAUGAGAGGUGUAGAAUAAGUGGGAGG------------------------CUC--CGGCCGACGGUGAAAUACCACUA
CUUUCAUCGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUCCG??????????????????????CGG-ACGGUCUUCUGGAGCCAAGG-------------------------
CGGGGACCUUCGCGGCCC-----------------------------------------------------------------------------------------
--------------------------------???CGAUUCGAUCCGAGGACACCGUCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCCAGCUCGGCGAGGACAGAAACCUCGCGUAGAGUAAAAGGGCAAAAGCUGGCUUGAUCC-CGAUGUUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGAGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[      ]
Dilta_littoralis_AY859571    ACUGUGAGGAGACAUGAGAGGCGCAGAAUAAGUGGGA???????---??????---??????-??????????GACCGUGAGAUACCACUA
CUUUCAUAGUCUGUUCACUUACCCGGUGAGGCGGAGGGCG???????????????????????????????????UCUUCUGGAGC??????????????????????????????------------
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????????????????????????CGAUCCGAUCCGGGGACACUGCCAGGUGGGGAGUUUGGCUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGAGGAGCACAAGGGCAAAUGCUGGCUUGAUCC-CGGUGUUCAGUACGCACAGGGACUGCGAAAGCACGGCCCAGCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCGAGAGGUGUCAGAAAAA-UUACCACAG[                    ]
Ctenolepisma_longicaudata          ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGACUCCU------------------CUG--GGGUCGCCGGUGAAAUA
CCACUACUUUCAUCGUUUCUUUACUUACUCGGUUAGGCGGAGCGCGUGCG???????????????????????CGU-ACGGUCUUCUUGAACCAAGU--CUGGCAAGCUAGUCUUCUUGCC-----
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-----------------------------???CAAUCCGAUCCGAGGACACUGCCAGGCCGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGC
UCAGCGAGGACAGAAACCUCGCGUAGAGCAAAAGGGCAAAAGCUGGCUUGAUCC-CGAUGUCCAGUAAGCAUAGGGACUGCGAAAGCAAGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[                    ]
Lepisma_sp                   ????????????????????????????????????????????---??????---??????-?????????????????????????????
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EU376048_Lepisma_saccharina          GCUGUCGGGAGACGUGA[C]GAGGUGUAGCAUAAGUGGGAGG------------------GCUCCUUCGGGUGCCCGCCGGUGAAAUA
CCACUACUCUCACGGUUUCCCGACUCACCCGGUUGGGCGGGACGCGGGCG???????????????????????CGC-ACGCCGUUCAUGAACCA---------------------------------
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?????--??--????????????????????????CGACCCGAUCCGGGGACAACGGCAGGUGGGGAGUUCGUCUGGGGCGGAACAUCUGUCAAA-GGAUAACGCAGGUGUCCUAA
GGGCGGCUCACCGAGGCCAGAAACCUCGGGUAGAGCGAAAGGGCAAAAGCCGCCCUGAUCC-GCACCCUCAGUACGGGUGGGACCCGGGAAACCGGGGCCUAUCGAUCCUCCCCGU------
CCGAAGGAUCUUCG-GCGGGAGGUGACAGAAAAG-UUACCACAG[      ]
Thermobia_domestica                   ????????????????????????????????????????????---??????---??????-??????????????????????
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Tricholepidion_gertschi      ????????????????????????????????????????????---??????---??????-?????????????????????????????
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Gromph_laevigata_AY210819    ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGGCGCGG------------GGUUCG-CUCCGUCGUCGUCAGUGAAAUACCACUA
CUUUCAUCGUUUCUUUACUUACUCGGUUGGGCGGAGCGCGUGCG??????????????????????CGUCACGGUGUUCUCGCGCCA-------------??????????????------------
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????????????????????????CGAUCCGAUUCGAGGACACUGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAAGCUGGCUUGAUCC-CGAUGUUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[                    ]
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Isoperla_davisi_AY125288 ???---??????---??????-?????????????????????????????
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EU414717_Isoperla AUUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGA?????GGUUAAUAGC--UGCGGCGCUCCCUUGUCGACGGUGAAAUACCACUA
CUUUCAUCGUUUCUUUACUUACUCGGUUGAGCGGAACGCGUGC?????????????????????????UGUCACGG??UUCUCGCACCAAA-------------------------
CGUGCAUGGGGGUUGCAAG???????--?????????????--???-?-??????????????????-????---UUCG----??????????????????????????????????????--
?????--??--?????????????????????????UGAUCCGAUUCGAGGACAUUGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCCAGCUCAGCGAGGACAGAAACCUCGCGUAGAGCAAAAGGGCAAAAGCUGGCUUGAUCU-CGAUGUUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUAAAGAGUUUUUA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[ ]
AY859546_Gomphocerinae ACUGUGAGGUGACAUGAGAGGUGUAGCAUAAGUGGGAGA-----UGGCA------------------ACAUCGCCGGUGAAAUACCACUA
CUUUCAUUGUUUCUUUACUUACUCGGUUAGGCGGAGCGCGUGCG???????????????????????CGUCACGGUGUUCUCGAGCCAAG-------------------------CGUGUUAGGG--
-------???????--?????????????--???-?-??????????????????-????---GCAA----??????????????????????????????????????--?????--??--
?????????????????????????UGAUCCGAUUCGAGGACACUGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUAGAGCAAAAGGGCAAAAGCUGGCUUGAUCC-CGAUGUUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[ ]

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Protosticta_sp_A_ZPA ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGC--UGUGG---CUUCCC-UCGGGU-CGCCACUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCGGCGUCACGGUGUUCUGGUUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGACGC--GGGCGUG--UCGC--GGG-A-CGGUCGUC--CGGG-CCG-GGG----UUCU-----CUCCGAUCCGCGGC---GCCG------CCCUUCGGC--CGCCU--CG--
GCCCUAGCCCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCaagaggugucagaaaag-uuaccacag[ ]
Lestes_eurinus_OLE ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGC--UGGGG---CUUCCC-UCGGGU-CGCUCCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCCCGGCCGCGUCACGGUAUUCUGGUUCCAAGG--GUGUUAGGGUCGCGGGCGCCACU-----------
-------GGGACGU--GGGCG----UCGU--GUG-A-CGGUG--AUCCGGA-ACG-AGGG---GCAA----CCUUCUGUCCGCGAC---GCCG------CCGCUCGGC--CGCUC--CG--
UCCCUAGCUCGUGUUUAUCCCACCCGAUUCGAUCCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAag-uuaccacag[ ]
Hemiphlebia_mirabilis_OHM ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGC--UGUGG---CUUCCC-UCGGGU-CGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGCCACGGUAUUCUGGAUCCAAGG--GUGUCAGGGUCGCGGGCGCCACU-----------
-------GGGGCGC--GGGCG----UCGC--GUG-A-CGGUC--GUCCGGG-CUG-GGGG-CUAACC----CCCUCGGCCCGCGGC---GCCG------UCUCUCGGC--CGUUC--CG--
UCCCUAGCUCGUGUUUAUCCCACCCGAUCCGAUUCGAGGACACCGCCAGGCUGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[ ]
Epiophlebia_superstes ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGC--UGUGG---CGGCCC-UCGGGC-UGCCGCUGUCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCGGUCGUCGAUUCGUCGCGGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGAGCGCCACU-----------
-------GGGACGC--GGGCG----UCGG--GGG-A-CGGUC--GUCCGGG-CCGUGGGG----CAA----CCUUCGGCCCGCGGC---GCCG------CCUCUCGUC--CGCCU--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[ ]
Unaligned_Aeshnoid
Archipetia_auriculata ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGC--UGGCG---GGGCCU-UCGGAC-UGCCGCUGCCGACGGUGAAAUACCACUA
CUUUGAUAGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUGCGCAGUCGUCGAUUCGUCGCGGCUGCGUCACGGUGUUCUGGAUCCAAGG--Gag-ugcggucgcgggcgccacu-----------
-------gggacgu--gggcg----ucga--ggg-a-cgguc--guccggu-ccg-gggg---gcaa----ccuucggcccgcggc---gccg------ccucucguc--cgcuc--CG--
UCCCUAGCUCGUGUUUAUCCCUCCCGAUCCGAUUCGAGGACACCACCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC----- UUUGGGGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[ ]

Libellula_Neotetrum_pulchella_OLP   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGC--UGCGC---CGUCCC-UCGGGU-CGGCGUUGUCGACGGUGAAAUA
CCACUACUUUGAUAGUUUCUUUACUUACUCGGUGAGACGGAGGGCGUGCGCGGUAGUCGAUUCGUCGCUGCCGCGUCACGGUAUUCUGGAUCCAAGG--GAGUUGCGGUCGCGGGCGCCACU----
---------------GGAGCGC--GGGA--C--UCGG--GGG-G-CGGUC--GUUCGGG-CUG-GGGGCCUAC------UCUUCGGCCCGCGGC---GUCG------CCUCUCGUC-- CGCCC--CG--
UUCCUAGCCCGUGUUUAUCGCUCCCGAUCCGAUUCGAGGACACCGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCUAGCUCAGCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGCUCAGUACGCAUAGAGACUGCGAAAGCACGGGCUAUCGAUCCUUUUGGC------
UUGGGGAGUUUCCA-gcaagaggugucagaauag-uuaccacAG[   ]
]
[Callibaetis_ferrugineus_AY859557   ACUGUGAGGAGACAUGAGAGGUGUAGAAUAAGUGGGAGG--UGCUU---------------------GCACCGACAGUGAAAUA
CCACUACUCUCAUCGUUUCCUCACUUACUCGGUGAGGCGGAGCGCGUGCGU--UCGUC-----UCGUACGCUUCGC-ACGGUGUUCUCGCGCUAAGG--???????????????????????----
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?????--??--???????????????????-----CGAUCCGAUCCGAGGACACUGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-CAAUAACGCAGGUGUCCUAA
GGCCAGCUCAGCGAGGACAGAAACCUCGCGUAGAGCAAAAGGGCAAAUGCUGGCUUGAUCC-CGAUGUUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGU------
AUGGAGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[   ]
Dilta_littoralis_AY859571   ACUGUGAGGAGACAUGAGAGGCGCAGAAUAAGUGGGA??--?????---??????-??????-??????????GACCGUGAGAUACCACUA
CUUUCAUAGUCUGUUCACUUACCCGGUGAGGCGGAGGGCG???????????????????
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AGUUUGGCUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCAGCGAGGACAGAAACCUCGCGAGGAGCACAAGGGCAAAUGCUGGCUUGAUCC-
CGGUGUUCAGUACGCACAGGGACUGCGAAAGCACGGCCCAGCGAUCCUUUUGGC------UUGGAGAGUUUCCA-GCGAGAGGUGUCAGAAAAA-UUACCACAG[   ]
Ctenolepismalongicaudata   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGA--CUCCUCUGG------------------GGUCGCCGGUGAAAUA
CCACUACUUUCAUCGUUUCUUUACUUACUCGGUUAGGCGGAGCGCGUGCGUCGUUCUU------CGUGUUCGGCGU-ACGGUCUUCUUGAACCAAGU--CUGGCAAGCUAGUCUUCUUGCC-----
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---------------------------GGACAAUCCGAUCCGAGGACACUGCCAGGCCGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGC
UCAGCGAGGACAGAAACCUCGCGUAGAGCAAAAGGGCAAAAGCUGGCUUGAUCC-CGAUGUCCAGUAAGCAUAGGGACUGCGAAAGCAAGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[   ]
EU376048_Lepisma_saccharina   GCUGUCGGGAGACGUGA[C]GAGGUGUAGCAUAAGUGGGAGG-----------------GCUCCUUCGGGUGCCCGCCGGUGAAAUA
CCACUACUCUCACGGUUUCCCGACUCACCCGGUUGGGCGGGACGCGGGCGUCGGGGCU-----CCGGCUUCGUCGC-ACGCCGUUCAUGAACCA-------------------------------
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AGGCCCCUGCUACUGGCCGGCCGGACCGGACUCCCGGUCCGUGCCGGACAGGGGGCCGACCCGAUCCGGGGACAACGGCAGGUGGGGAGUUCGUCUGGGGCGGAACAUCUGUCAAA-
GGAUAACGCAGGUGUCCUAAGGGCGGCUCACCGAGGCCAGAAACCUCGGGUAGAGCGAAAGGGCAAAAGCCGCCCUGAUCC-GCACCCUCAGUACGGGUGGGACCCGGGAAACCGGGG
CCUAUCGAUCCUCCCCGU------CCGAAGGAUCUUCG-GCGGGAGGUGACAGAAAAG-UUACCACAG[   ]
Gromph_laevigata_AY210819   ACUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGG--CGCGG----------GGUUCG-CUCCGUCGUCGUCAGUGAAAUACCACUA
CUUUCAUCGUUUCUUUACUUACUCGGUUGGGCGGAGCGCGUGCGUCGGAUGCCGCUCG-CGGCCCGUCGUCACGGUGUUCUCGCGCCA-------------??????????????------------
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?????????????????????GCGCGAUCCGAUUCGAGGACACUGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUGGAGCAAAAGGGCAAAAGCUGGCUUGAUCC-CGAUGUUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[   ]
EU414717_Isoperla   AUUGUAAGGAGACAUGAGAGGUGUAGCAUAAGUGGGAGA--?????GGUUAAUAGCUGCGGCGCUCCCUUGUCGACGGUGAAAUACCACUA
CUUUCAUCGUUUCUUUACUUACUCGGUUGAGCGGAACGCGUGC????????????????????????UGUCACGG??UUCUCGCACCAAA-------------------------CGUGCAUGGG--
--------GGUUGCAAGUGUCCGGCGUUCGCAAAUUCGGCAGCGCGGCGGCGUGUGCGCGUGCG---UUCG----CGUGCGUGUGCGCGUCUCGUGCGGUCGGACGACGUG
GCGUCGCGACCUAAAGCAACCGAA-------UAUCCCCGGCGUGAUCCGAUUCGAGGACAUUGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCCAGCUCAGCGAGGACAGAAACCUCGCGUAGAGCAAAAGGGCAAAAGCUGGCUUGAUCU-CGAUGUUCAGUACGCAUAGAGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUAAAGAGUUUUUA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[   ]
EF199981_Machilis_hrabei   AUUGUAAGGAGACAUGAGAGGUGUAGAAUAAGUGGGAGG------------------------CUC--CGGCCGACGGUGAAAUACCACUA
CUUUCAUCGUUUCUUUACUUACUCGGUGAGGCGGAGGGCGUCCG???????????????????????CGG-ACGGUCUUCUGGAGCCAAGG------------------------
CGGGGACCUUCGCGGCCC---
---------------------------------CGUCGAUUCGAUCCGAGGACACCGUCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAA
GGCCAGCUCGGCGAGGACAGAAACCUCGCGUAGAGUAAAAGGGCAAAAGCUGGCUUGAUCC-CGAUGUUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------
UUGGAGAGUUUCCA-GCAAGAGGUGUCAGAAAAG-UUACCACAG[   ]
AY859546_Gomphocerinae   ACUGUGAGGUGACAUGAGAGGUGUAGCAUAAGUGGGAGA-------UGGCA-----------------ACAUCGCCGGUGAAAUACCACUA
CUUUCAUUGUUUCUUUACUUACUCGGUUAGGCGGAGCGCGUGCG???????????????????????CGUCACGGUGUUCUCGAGCCAAG-------------------------CGUGUUAGGG--

-------UUGCGUUCGCGCCGCGGCUCCGCGUCCGUGCGCCACAGCGCGCGGUGCGUGUGGGC---GCAA----GCCUGCGCGUGCCGUGCGUCCCGUGUGCGUCGGCGCGUCCGCGCGUGCG GCGCAGUU-
---------UACUCCCUCGCGUGAUCCGAUUCGAGGACACUGCCAGGCGGGGAGUUUGACUGGGGCGGUACAUCUGUCAAA-GAAUAACGCAGGUGUCCUAAGGCCAGCUCA
GCGAGGACAGAAACCUCGCGUAGAGCAAAAGGGCAAAAGCUGGCUUGAUCC-CGAUGUUCAGUACGCAUAGGGACUGCGAAAGCACGGCCUAUCGAUCCUUUUGGC------ UUGGAGAGUUUCCA-
GCAAGAGGUGUCAGAAAAG-UUACCACAG[ ]
]
[90 91
94 94b 95 96 97
94bâ€šÃ„Ã´ 94â€šÃ„Ã´ 98
98â€šÃ„Ã´ 90â€šÃ„Ã´
93 73]
Unaligned D12???-??-
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Unaligned_Zygoptera D12???-???????????????????????????????????
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Protosticta_sp_A_ZPA GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGGGCCGGGAGGCUUGAAACACUU--GAGACGCGCUCCUA-AUCGGCGCCCCUCG--CA--CAG-U-GGGGCGUCGGCAUCCGA
GCCCACUUGCCGCACGGGGACAUC---GGGGCACCCGGGGGGUAUCCAGCCCCGACG-GG-ACGCCCCCCCCUAGCGGUCGAACAUGGGUGACCAACCGAGGACGGcgucgggu-cuc
ggaaucuuc-ug??
Protosticta_curiosa_ZPCs_BPCp ??-??????????????
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Protosticta_sanguinostigma ??-???????????????????????????????????
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Sinosticta_ogatai_ZSOg ggauaacuggcuuguggcggccaagcguucauagcgacgucgcuuuuugauccuucgauguc-ggcucuuccuaucauugcgaagcagaauucgccaa gcguu-
ggauuguucacccaccaauaggg-aacgugagcuggguuuagaccgucgugagacagguuaguuuuacccuacugaugac--cg-gucguugcgauagua
auccugcucaguacgagaggaaccgcagguucggacauuugguucacguacucggucgagcggccgauggugcgacgcuaccauccuugggauuaugccugaacgccucuaaggcagaauccccucua
gccgaugaggcaauggu-gauuugaggagacccgagggccgggaggcucgagauacuu--ga--cgcgcucuua-gucgccgccccucg--cc--cag-g-ggggcgucggcauccga
gcccacuagccgaacggggaaacg---ggggcucccggggggguauCCagccccgacg-gg-acgccucccccuagcggucgaacgugggugacgaac?gacgacggcgucgggu-cuc
ggaaucuuc-ug??
Palaemnema_paulicoba_ZPP GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGGGCCGGGAGGCUCGAGACACUU--GAGACGCGCUCCUA-GUCGGCGCCCCUCG--CCU-CAG-G-GGGGCGUCGGCAUCCGA

GCCCACUUGCCGCACGGGGAACGCUACGGGGCACCCGGGGGGUAUCCAGCCCCGACG-GG-ACGCCCCCCCCUAGCGGUCGAACAUGGAUGACCAACUGACGACGGCGUCGGGU-CUC
GGAAucuuc-ug??
Palaemnema_domina_ZPDm   ggauaacuGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCAAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGGGCCGGGAGGCUCGAAAAACUUUUGA-UUUUGCUCUUA-GUCGGCGCCCACGCCCUUUCAG-G-GGGGCGUCGGCAUCCGA
GCCCGCUUGCCGAUCGGGGAAACC---GGGGCUCCCGGGGGGUAUCUAGCCCCGACG-GG-ACGCCCCCCCCAGCGGUCGAACAugggugacgaacugaggacggcgucgggu-cuc
ggaaucuuc-ug??
Palaemnema_melanostigma   ??-???????????????????????????????????
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Isosticta_robustior   ??-???????????????????????????????????
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Rhadinosticta   ??-???????????????????????????????????
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Amphisticta_silvarum_ZAS   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGUGAGGCUCGAGACACUU--GA--AUAGCUCUUA-GUCGACGCCCCUCG--CU--CAG-G-GGGGCGUCGGCAUCCGA
GCCCACUUGCCGAAUGGGGAAACC---GGGGCUCCCGGGGGGUAUCCAGCCCCGAAG-GG-AUGCCUCCCCCUAGCGGUCGAACUUGGGUGACGAACUGAUGACGGCGUCGGGU-CUc
ggaaucuuc-ug??[-   ][-   ]
Labidosticta_vallisi_OLVa   ggauaacuggcuuguggcggccaaGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AAUGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAAUGGU-GAUUUGAGGAGACCCGAGAGCCGUGAGGCUCGAGACACUU--GA--AUAGCUCUUA-GUCGGCGCCCCUCG--CC--UAG-G-GGGGCGUCGGCAUCCGA
GCCCACUUGCCGAAUGGGGAAACC---GAGGCUCCCGGGGGGUAUCCAGCCCCGAAG-GG-AUGCCUCCCCCUAGcggucgaacgugggugacga???????????????????-???
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Orosticta_filiciola_ZOF   ggauaacuggcuugugGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AAUGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAAUGGU-GAUUUGAGGAGACCCGAGAGCCGUGAGGCUCGAGACACUU--GA--AUAGCUCUUA-gucggcgccccucg--cu--cag-g-ggggcgucggcauccga
gcccacuugccgaauggggaaauc---gaggcucccgggggguauccagccccgaag-gg-augccucccccuagcggucgaacuugggugacgaucugacgacggcgucgagu-cuc
ggaauuguc-ugua[-   ][gacgacuuauguaccgggcaugcauacuacug][-   ]
Platycnemis_pennipes_OPPp   ggauaacuggcuuguggcggccaaGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUAAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--GA--AUCUCUCUUA-GUCGGCGCCCCACG--CU--UAG-A-GGGGCGUCGGCAUCCGU
GCCCACUUGCCGAAUGGGGAAACC---GGGGCUCCCGGGGGGGAUCUAGCCCCGACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUGGGugacgaacugaggacggcgucgggu-uuu
ggaauuguc-ug??

Copera_annulata_OCAn ggauaacuggcuuGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--GA--AUCUCUCUUA-GUCGGCGCCCCACG--CU--CAG-C-GGGGCGUCGGCAUCCGU
GCCCACUUGCCGAAUGGGGAAAUC---GGGGUUCCCGGGGGGGAUCUAGCCCCGACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUGGGUGACGAACUGAGGACGGCGUCGGGU-CUC
GGAAUUGUC-UG??
Copera_vittata ??-???????????????????????????????????
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Copera_marsouipes_ZCM ggauAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--GA--AUCUCUCUUA-GUCGGCGCCCCACG--CU--UAG-C-GGGGCGUCGGCAUCCGU
GCCCACUUGCCGAAUGGGGAAAUC---GGGACUCCCGGGGGGGAUCUAGCCCCGACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUGGGUGACGAACUGAGGACGGCGUCGGGU-CUC
GGAAUUGUC-Ug??
Coeliccia_albicauda_OCAL ??-???????????????????????????????????
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Coeliccia_cyanomelas ??-???????????????????????????????????
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Calicnemia_miles_OCMi GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUUAGGCAAUGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--GA--CUAGCUCUUA-GUCGGCGCCCCACG---U--CAG-G-GGGGAGUCGGCAUCCGA
GCCCACUUGCCGAAUGGGGACCAC----GGGCUCCCGGGGGGUAUUCAGCCCCGGCG-GG-AAGCCUACCCCUAGCGGUCGAAUAUGGGUGACGAAUUAAGGACGGCGUCGGGU-CUc
ggaauuguc-ug??
Prodasineura_vittata_OPV GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--GA--CUCGCUCUUA-GUCGGCGCCCCACG--UCU-CAG-A-GGGGCGUCGGCAUCCGU
GCCCACUUGCCGAAUGGGGAAACC---GGGGCUCCCGGGGGGGAUCCAGCCCCGACG-GG-ACGCCUCCCCCUAGCGGUCGAACAUGGGUGACGAACUAAGGACGgcgucgggu-cuc
ggaau????-????
Chlorocnemis_abboti GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--GA--CUCGCUCUUA-GUCGGCGCCCCACG--UCU-CAG-A-GGGGCGUCGGCAUCCGU
GCCCACUUGCCGAAUGGGGAAACC---GGGGCUCCCGGGGGGGAUCCAGCCCCGACG-GG-ACGCCUCCCCCUAGCGGUCGAACAUGGGUGACGAACUGAGGACGGCGUCgggu-cuc
ggaaucuuc-ug??[-   ][-   ]
Nososticta_solida GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA

GCCGAUGAGGCAGCGGU-GAUUUGAGGAGACCCGAGGGCCGGGAGGCUCGAGACACUU--GA--UU-UCUCUUA-GUCGGCGUCCCACG--CUU-CAG-C-GGGACAUCGGCAUCCGU
GCCCACUUACCGAACGGGGAAACC---GGGGCUCCCGGGGGGGAUCCAGCCCCGACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUGGGUGACGnnnnnnnnnnnnnnnnnnn-nnn nnnnnnnnn-
nnnn[-]
Phylloneura_westermanni_BPW???-??????????????????????????????????
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Onychargia_atrocyana_ZOA ??-???????????????????????????????????
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Argia_moesta_OAM ggauaacuggcuuguggcggccaagcguucauagcgacgucgcuuuuugauccuucgauguc-ggcucuuccuaucauugcgaagcagaauucgccaa gcguu-
ggauuguucacccaccaauaggg-aacguGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAAUGGU-GAUUUGAGGAGACUCGAGAGCCGGGAGGCUCGAAAAACCA-----CUUCAUUCUUA-GUCGGCACCCCACG--CU--UAG-G-GGGGUGCCGGCAUCCGA
GCCCACUAGCCGAGCGGGGAAUUU---GGGGAUCACGGGGGGUAUCCAGCC-CGACG-CG-AUCCCCCCCUCUAGCGGUCGAACAUGGGAGACGAACUCAGUUCGACGUCgggu-cuc
ggaauuguc-ug??
Argia_nahuana ??-???????????????????????????????????
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Argiocnemis_rubescens_ZAR ??-???????????????????????????????????
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Mortonagrion_binocellata ??-???????????????????????????????????
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Agriocnemis_pygmaea_OAP ggauaacuggcuuguggcggccaagcguucauagcgacgucgcuuuuugauccuucgauguc-ggcucuuccuaucauugcgaagcagaauucgccaa gcguu-
ggauuguucacccaccaauaggg-aacgugagCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUCAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGACAGGCUCCAGACAAUU--U--C---CUUCUUA-GCCCUCGUCUCUCG--CU---AG-G-GAGGCGAGGGCAUCCGA
GCCCACUUGCCGAAUGGGGAAacc---ggggcuuccggggcguauccagcgccgacg-gu--ugccucccucaaacggucgaacaugggunaccaauucaggacggcgucgggu-cuc
ggaaucuuc-ug??
Austroagrion_watsoni_ZAW GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGCAGGCUCGAGACACUU--UA--CU-GCUCUUA-GUCGACGCCCCUCG--CU-UAG-G-GGGGCGCCGGCAUCCGA
GCCCACUUGCCGAUCGGGGAAAUC---GGGGCUCCCGGGGCGUAUCCAGCGCCGACG-GG-AUGCCUCCCCAAGCGGUCGAACAUGGGUGACC????????????????????-???
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Archibasis_viola_ZAV ??-???????????????????????????????????
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Coenagrion_puella_AJ488546 ??-???????????????????????????????????
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Coenagrion_resolutum ??-???????????????????????????????????
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Pseudagrion_cingillum_OAAL ggauaacuggcuuguggcggccaagcguuCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--AA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAAUGGU-GAUUUGAGGAGACCCGAGAGCCGGCAGGCUCGAGACACUU--UA--CUCACUCUUA-GUCGUCGCCCCACG--CU--CAG-G-GGGGCGACGGCAUCCGA
GCCCACUUACCGAUCGGGGAAACU---GGGGCUCCCGGGGCGUAUUCAGCGCCGACG-GG-AUGCCUCCCCAAAGCGGUCGAACAUGGGUGACCAACUGAGGACGGCGUCGGGU-cuc
ggaaucguc-ug??
Pseudagrion_aureofrons ??-???????????????????????????????????
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Pseudagrion_ignifer_OPi GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--AA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAAUGGU-GAUUUGAGGAGACCCGAGAGCCGGCAGGCUCGAGACACUU--UA-CU-CACUCUUA-GUCGUCGCCCCACG--CU--CAG-G-GGGGCGACGGCAUCCGA
GCCCACUUACCGAUCGGGGAAACU---GGGGCUCCCGGGGCGUAUUCAGCGCCGACG-GG-AUGCCUCCCCAAAGCGGUCGAACAUGGGUGACCAACUGAGGACGGcgucgggu-cuc
ggaaucuuc-uga?[-   ][-   ]
Erythromma_najas_1238 ??-???????????????????????????????????
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Cercion_plagiosum_AB127430 GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCC??
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Cercion_lindenii_AJ488550 ??-??????????????
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Paracercion_hieroglyphicum_AJ488551   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
 UUGCGAAGCAGAAUUCGCC---
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Acanthagrion_quadratum_ZAQ   ggauaacuggcuuGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGCAGGCUCGAGACACUU--UU-AU-UGCUCUUA-GUCGACGCCCCUCG--AU--CAG-G-GGAGCGUCGGCAUCCGA
GCCCACUUGCCGAUCGGGGAAACC---GGGGCUCCCGGGGCGUAUCCAGCGCCGACG-GG-AUGCCUCCCCCAAGCGGUCGAACAUGGGUGACCGACUGAGgacggcgucgggu-cuc
ggaauuguc-ugua[-   ][gacgacuuaaguaccgga][-   ]
Leptobasis_vacillans_ZLV   ??-???????????????????????????????????
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Amphiagrion_saucium_OAS   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGCAGGCUCGAGACACUU--UU-CU-CGCUCUUA-GUCGACGCUCCUCG--CU--CAG-G-GGAGCGUCGGCAUCCGA
GCCCACUUGCCGAUCGGGGAAAUC---GGGGCUCCCGGGGCGUAUCCAGCGCCGACG-GG-AUGCCUCCCCCAAGCGGUCGAACAUGGGUGACCGACUGAGGACGGCGUCGGGU-CUC
GGAAUUguc-ugua[-   ][gacgaacuuaaguaccgga][-   ][-   ]
Amphiagrion_abbreviatum   ??-???????????????????????????????????
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Xiphiagrion_cyanomelas_ZXC   ??-???????????????????????????????????
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Hesperagrion_sp_AY750044   ??-???????????????????????????????????
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Ischnura_elegans_1239   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCC??
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Ishnura_barberi              ??????????????????????????????????????????????????????????????-???????????????????????????????????
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Ischnura_graellsi_AJ488545   ??????????????????????????????????????????????????????????????-???????????????????????????????????
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Anomalagrion_hastatum_OAH    ggauaacuggcuuguggcggccaaGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGCAGGCUCGAGACACUU--UU-CU-UGCUCUUA-GUCGACGCGCCUCG--CU--CAG-G-GGUGCGUCGGCAUCCGA
GCCCACUUGCCGAUCGGGGAAACC---GGGGCUCCCGGGGCGUAUCCAGCGCCGACG-GG-AUGCCUCCCCCAAGCGGUCGAACAUGGGUGACCGACUGAGGacggcgucgggu-cuc
ggaauuguc-ugua[-    ][gacgaacuuaaguaccgga][-    ]
Enallagma_parvum_AJ420939    ??????????????????????????????????????????????????????????????-???????????????????????????????????
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Enallagma_granti_AJ420937    ??????????????????????????????????????????????????????????????-???????????????????????????????????
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E_nigridorsumAJ420938        ??????????????????????????????????????????????????????????????-???????????????????????????????????
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Enallagma_cyathigerum_0110   ??????????????????????????????????????????????????????????????-???????????????????????????????????
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Enallagma_sp                 ??????????????????????????????????????????????????????????????-???????????????????????????????????
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E_aspersum_DQ087506          ??????????????????????????????????????????????????????????????-???????????????????????????????????
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Aciagrion   ???-??-
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Aciagrion_borneense_ZAB   ??-???????????????????????????????????
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Protoneura_capillaris   ??-???????????????????????????????????
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Protoneura_cara_ZPC   ??-???????????????????????????????????
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Psaironeura_remissa_PRN   ??-???????????????????????????????????
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Elattoneura_analis_or_glauca??-???????????????????????????????????
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Neoneura_aaroni   ggAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GAUUUGAGGAGACCCGAGGGCCGGGAGGCUCGAGACACUA--AA--AUUUUUCUUA-GUCGGUACCCCACG--CUU-CAG-G-GGGGUGCCGGCAUCCAA
GCCCAUUAGCCGAACGGGGAA-CC---GGGGCUCCCGGGGGGUAUCCAGCCCCGACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUUGGAGACUAACUGAUGACGGCGUUGGGu-cuc
ggaaaaauc-uucu[-   ][gaa????????????????][-   ][-   ]
Neaneura_amelia_ZNA   ??-???????????????????????????????????
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Neoneura_maria ??-???????????????????????????????????
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Ceriagrion_aeruginosum_ZCAeggauaacuggcuuguggcGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCnUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUA--AU--CUCACUCUUA-GUCGGCACCCCACG--UC--CAG-G-GGGGUGCCGGCAUCCGA
GCCCACUUGCCGAAUGGGGAAACC---GGGGCUCCCGGGGGGUAUCCAGCCCCGACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUGGGUGACCAacugaggacggcgucgggu-cuc
ggaauuguc-ugua[-   ][gacgacuuaaguaccgga][-   ]
Telebasis_salva_ZTS ??-???????????????????????????????????
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Leptagrion_elongatum_ZLE ??-???????????????????????????????????
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Metaleptobasis_manicaria_ZMMr ??-??????????????
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Diceratobasis_sp_A_ZDA ggauaacuggcuuguggcggccaagcguuccuagcgacgucgcuuuuugauccuucgauguc-ggcucuuccuaucauugcgaagCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUC--GA--UUUACUCUUA-GUCGGCACCCCACG--UC--CAG-G-GGGGUGCCGGCAUCCGA
GCCCACUAGCCGAAUGGGGAAACC---GGGGCUCCCGGGGGGUAUCCAGCCCCGACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUGGGUGACCAACUGAGGACGGCGUCGGGU-CUC
GGAAUCCUC-UG??
FJ596559_Pyrrhosoma_nymphula GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGA???????????????????????????????
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Chromagrion_conditum_OCCn GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA

GCCGAUGGGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUA--AA--CUUACUCUUA-GUCGGCGCCCCACG--UC--CAG-G-GGGGUGCCGGCAUCCGA
GCCCACUAGCCGAAUGGGGAAACU---GGGGCUCCCGGGGGGUAUCCAGCCCCGACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUGGGUGACGAACUGAGGACGGcgucgggu-c??
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Teinobasis_alluaudi_ZTA2   GGAUAACUGGCuuguggcggcca???????????????????????????????????????-???????????????????????????????????
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Nehalennia_gracilis_ONG   ggauaacuggcuuGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUA--AA--CUUACUCUUA-GUCGGCCCCCCACG-UUU--CAG-G-GGGGUGCCGGCAUCCGA
GCCCACUAGCCGAACGGGGAAACC---GGGGCUCCCGGGGGGUAUCCAGCCCCGACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUGGGUGACGAAcugaggacggcgucgggu-cuc
ggaauuguc-ugua[-   ][gacgaacuuaaguaccgga][-   ]
Coryphagrion_grandis_ZCG   ??-???????????????????????????????????
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Microstigma_rotundatum_OMRt??-???????????????????????????????????
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Microstigma_anomalum   ??-???????????????????????????????????
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Mecistogaster_ornata_ZMO_BML??-???????????????????????????????????
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Mecistogaster_linearis   ??-???????????????????????????????????
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Megaloprepus_caerulatus   ??-???????????????????????????????????
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Haplostigma_modesta_ZHM   ??-???????????????????????????????????
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Pseudostigma_aberans_OPA   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGGAACCGCAGGUUCgGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUG--AU--CUUACUCUUA-GUCGGCACUCCACG--UC--CAG-G-GAGGUGCCGGCAUCCGA
GCCCACUAGCCGAACGGGGAAACC---GGGGCUCCCGGGGGGUAUCCAGCCCCGACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUGGGUGACGAACUGAGGACGGCGUCGGGU-CUC
GGAAUUCUC-UGua[-   ][gacgaacuuaaguaccgga?][-   ]
Rhinagrion_mima_ZRM   ??-???????????????????????????????????
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Sciotropis_cyclanthorum_BSC??-???????????????????????????????????
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Heteragrion_mitratum_ZHMt   ggauaacuggcuuguggcggccaagcguucauagcgacgucgcuuuuugauccuucgauguc-ggcucuuccuaucauugcgaagcagaauucgccaa gcguu-
ggauuguucacccaccaauaggg-aacgugagcuggguuuagaccgucgugagacagguuaguuuuacccuacugaugac--cg-gucGUUGCGAUAGUA
AUCCUGCUCAGUACGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUG--AU--CUUACUCUUA-GUCGGCACACCACG--UC--CAG-G-GAGGUGCCGGCAUCCGA
GCCCACUAGCCGAACGGGGAAAUC---GGGGCUCCCGGGGGGUAUCCAGCCCCGACG-GG-AUGCCUCCCCCUAGCggucgaacaugggugacgaacugaggacggcgucgggu-cuc
g????????-????
Heteragrion_sp   ??-???????????????????????????????????
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Oxystigma_cyanifrons_ZOC   ??-???????????????????????????????????
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Dimeragrion_percubitale_ZDPggauaacuGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUG
AC--CG-GUCGUUGCGAUAGUAAUCCUGCUCAGUACGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUU
GGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUAGCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGGGCCGGGAGGCUCGAGACACUU--UC--AUAGCUCUUA-
GUCGGCGCCCCACG--CU--CAG-G-GGUGCGUCGGCAACCGAGCCCACUUGCCGAAUGGGGAAACC---GGGGCUCCCGGGGGGGAUCCAGCCCCGACG-GG-
AUGCCUCCCUCCAGCGGUCGAACAUGGGUGACGAAcugaggacggcgucgggu-cucggaauug??-????
Tatocnemis_malgassica_ZTMa   ??-???????????????????????????????????
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Philogenia_cassandra   ??-???????????????????????????????????
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Philogenia_terraba_ZPBn_ZPT??-???????????????????????????????????
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ZPBn_Philogenia_bernice   ??-???????????????????????????????????
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Teinopodagrion_venale_ZMV_BTV   ??-??????????????
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Teinopodagrion_lepidum_ZTL ggauaacuggcuuguggcggccaagcguucauagcgacgucucuuuuugauccuucgauguc-ggcucuuccuaucauugcgaagcagaauucgccaa gcguu-
ggauuguucacccaccaauaggg-aacgugagcuggguuuagaccgucgugagacagguuaguuuuacccuacugaugac--cg-gucguugcgauagua
auccugcucaguacgagAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUCAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--GA--CUCGCUCUUA-GUCGGCGCCUCGCG--UC--CAG-A-GGGGCGUCGGCAUCCGA
GCCCACUAGCCGAAUGGAGAAACC---GGGGCUCCCUGGGGGUAUCCAGCCCCGAAG-GG-ACGCCUCCUCCUAGCGGUCGAACAUGGGUGACGAACUGAGGACGGCGUCGGGU-CUc
G????????-????
Amanipodagrion_gilliesi_ZAGggauaacuggcuuguggcggccaagcGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUCGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGGGCCGGGAGGCUCGAGACACUU--GA--CUCGCUCUUA-GCCGGCGACCCUCG--CC--CAG-G-GGGACGUCGGCAUUCGA
GCCCACUAACCGAAUGGGGAAACU---GGGGCucccgggggcauuuagccccgacg-gg-augccucccccuaguggucgaacaugggugacgaacug???????????????-???
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Nesolestes_elizabethae_ZNE   ??-??????????????
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Protolestes_kerckhoffae_ZPKc[?]   ??-??????????????
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Argiolestes_ochrostomas_ZAOcGGAUAA-UGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA-UGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GAUUUGAGGAGACUCGAGAGCCGGGAGGCUCGAGACACUU--GA--AU-GCUCUUA-GUCGACGCCCCACG--CU--CAG-G-GGGGCGUCGGCAUCCGA
GCCCACUUGCCGAAUGGGGAAAUU---GGGGCUCCCGGGGGGUAUUUGGCCCCGACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUGGGugacgaacuaaggacggcgucgggu-cuc
g????????-????
Argiolestes_sidonia ??-???????????????????????????????????
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Caledopteryx_maculata ??-???????????????????????????????????
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Trineuragrion_percostale_BTP??-???????????????????????????????????
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Caledargiolestes_uniseries ??-???????????????????????????????????
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Podopteryx_roseonotata_ZPR ggauaacuGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACUCGAGAGCCGGGAGGCUCGAGACACUU--U?--AAUGCUCUUA-GUCGGCGCCCCACG--CU--CAG-G-GGGGCGUCGGCAUCCGA
GCCCACUUGCCGAAUGGGGAAUC----GGGGCUCCCGGGGGGUAUUUAGCCCCGACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUgggugacgaacugaggacggcgucgggu-cuc
ggaaucuuc-ug??
Austroargiolestes_icteromelas_OAIc ggauaacuggcuuguggcggccaagcGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCC
CUCUAGCCGAUGAGGCAACGGU-GAUUUGAGGAGACUCGAGAGCCGGGAGGCUCGAGACACUU--GA--CU-GCUCUUA-GUCGGCGCCCCACG--CU--CAG-G-GGGGCGUCGGC
AUCCGAGCCCACUUGCCGAAUGGGGAAACU---GGGGCUCCCGGGGGGUAUUUAGCCCCGACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUGGGUGACGAAcugaugucggcgucgggu-cuc
ggaauuguc-ug??
Griseargiolestes_albescens ??-???????????????
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Grisagriolestes_eboracus_ZGE_BGA ??-???????????????
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Miniargiolestes_minimus_ZMMn??-???????????????????????????????????
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Lestomima_flavostigma_OPBc3ggauaaCUGgcuugUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGCGGCAACGGU-GAUUUGAGGAGACACGAGGGCCGGGAGGCUCGAGACACUU--GA--UUCUCUCUUA-GUCGGCGCCCCACG--CU--CAG-G-GGGGCGUCGGCAUCCGA
GCCCACUAACCGAAUGGGGAAACC---GGGGCGCCCGGGGGGUAUCCAGCCCCGACG-GG-AUGCCUCCCCCUAGCGGUCGAAAAugggugaaaaacugaggacggcgucgggu-cuc
ggaaucuuc-ug??
_Rhipidolestes_hiraoi_ORH   ggauAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGGGCCGGGAGGCUCGAGACACUU--GA--CUCGCUCUUA-GUCGGCGCCCCACG-CUU--CAG-G-GGGGUGUCGGCAACCGA
GCCCACUAGCCGAAUGGGGAAACC---GGGGCUCCCGGGGGGUAUCCAGCCCCGACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUGGGUGACCAACUGAGGACGgcgucgggu-cuc
ggaaucuuc-uga?[-   ]
Rhipidolestes_aculeata   ??-???????????????????????????????????
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Paraphlebia_zoe_OPZ   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGGGCCGGGAGGCUCGAGACACUU--GA--CUCGCUCUUA-GUCGGCGCCCCACG--CU--CAG-G-GGGACGUCGGCAACCGA
GCCCACUAGCCGAAUGGGGAAACA---GGGGCUCCCGGGGGGUAUCCAGCCCCGACG-GG-AAGCCUCCCCCUAGCGGUCGAACAUGGGUGACGAACUGAGGACGGCGUCGGGU-CUC
GGAAucuuc-ug??
Thaumatoneura_inopinata_OTI3ggauaaCUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGGGCCGGGAGGCUCGAGACACUU--GA--CUCGCUCUUA-GUCGGCGCCCCACG--CU--CAG-G-GGGGCGUCGGCAACCGA
GCCCACUAGCCGAAUGGGGAAACC---GGGGCACCCGGGGGGUAUCCAGCCCCGACG-GG-ACGCCUCCCCCUAGCGGUCGAACAUGGGUGACGAACUgaggacggcgucgggu-cuc
ucaacucuc-ug??
Hypolestes_clara_OHC   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUCCUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGCGGCAACGGU-GAUUUGAGGAGACCCGAGAGCAGGGAGGCUCGAGACACUU--U---CUCAAUCUUA-GUCGGCGCCUCACG--UC--CAG-G-GGGGCGUCGGCAUCCGA
GCCCAAUUACCGAACGGGGAAGUC---GGGGCUCACGGGGGGUAUCCAGCCCCGCCG-UA-AAGCCUCCCCCUAGCGGUCGAACAUGGGUGACGAACUGAGGACGGcgucgggu-cuc
ggaaucuuc-ug??
Hypolestes_sp   ??-???????????????????????????????????
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Agriomorpha_fusca_ZAF6 ggauaACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGGGCCGGGAGGCUCGAGACACUU--GA--CUAGCUCUUA-GUCGGCGCUCCACG--CU--CAG-G-GGAGCGUCGGCAACCGA
GCCCACUAACGGAAAGGGGAAACC---GAGGCUCCCGGGGGGUAUCCAGCCCCGAUG-GG-AUGCCUCCCCCUAGCUGUCGAAUAUGGGUGACGAACGGaggacggcgucgggu-cuc
ggaaucuuc-ug??
Sinocnemis_yangbingi_ZSY ??-???????????????????????????????????
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Miocora_peraltica_ZMP ??-???????????????????????????????????
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Cora_marina_OCMr GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--GA--CUCGCUCUUA-GUCGGCGCCCCACG--CU--CAG-G-GGGGCGUCGGCAUCCGA
GCCCACUAGCCGAAUGGGGAAACU---GGGGCUCCCGGGGGGGAUCUAGCCCCGACG-GG-AUGCCUCCCCAUAGCGGUCGAACAUGGGUGACGAACUGAGGACGGCgucgggu-cuc
ggaaucuuc-ug??
Cora_cyane ??-???????????????????????????????????
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Polythore_sp_Z_ZPZ_BPB ggauaacuggcuuguGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--GA--CUCGCUCUUA-GUCGGCGCCCCACG--CU--UAG-G-GGGGCGUCGGCAUCCGA
GCCCACUAGCCGAAUGGGGAAACU---GGGGCUCCCGGGGGGGAUCUAGCCCCGACG-GG-AUGCCUCCCCAUAGCGGUCGAACAugggugacgaacugaggacggcgucgggu-cuc
ggaaucuuc-ug??
Polythore_boliviana ??-???????????????????????????????????
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Euthore_fasciata_ZEFs_BEFs ggauaacuggcuuguggcggccaagcguucauagcgacgucgcuuuuugauccuucgauguc-ggcucuuccuaucauugcgaagcagaauucgccaa gcguu-
ggauuguucacccaccaauaggg-aacgugagcuggguuuagaccgucgugagacagguuaguuuuacccuacugaugac--cg-gucguugcgauagua
auccugcucaguacgagaggaaccgcagguucggacaUUUGGUUCACGUAcUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--GA--CUCGCUCUUA-GUCGGCGCCCCACG--CU--CAG-G-GGGGCGUCGGCAUCCGA
GCCCACUAGCCGAAUGGGGAAACU---GGGGCUCCCGGGGGGGAUCUAGCCCCGACG-GG-AUGCCUCCCCAUAGCGGUCGAACAUGGGUGACGAACUgaggacggcgucgggu-cuc
ggaaucuuc-ug??
_Rimanella_arcana_ORA ggauaacuggcuUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA

GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--GA---UCGCUCUUA-GUCGACGCUCCACG--UU--UAG-G-GAGGCGUUGGCAUCCGA
GCCCAAUAGCCGAAUGGGGAAAUC---GGGGCACCCGGGGGGGAUCCAGCCCCGACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUGGGUGACGAACUGAGGACGGcgucgggu-cuc ggaaucuuc-
uga?[-   ]
_Pentaphlebia_stahli_OPSt   ggauaaCUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GACGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGGGCCGGGAGGCUCGAAACACUU--GA--CUCGCUCUUA-GUCGGCGCCCCACG--UC--CAG-G-GGGGCGCCUGCAUCCGA
GACCnnnnnnnnnnnnnnnnnnnn---nnnnnnnnnnnnnnnnnnnnnnnnnnnnnn-nn-nnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnn??-???
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Devadatta_podolestoides_BDP??-??????????????????????????????????????
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Amphipteryx_longicaudata_ZAL5   ggauaACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCC
CUCUAGCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGGGCCGGGAGGCUCGAGACACUU--GA--CUCGCUCUUA-GUCGGCGCCCCACG--CU--CAG-G-GGGGCGUCGGC
AACCGAGCCCACUAGCCGAAUGGGGAAACC---GGGGCUCCCGGGGGGUAUCCAGCCCCGACG-GG--UGCCUCCCCCUAGCGGUCGAACAUGGGUGACGAAAUGaggacggcgucgggu-cuc
ggaaaucuc-ug??
Pseudolestes_mirabilis_OPMbggauaacuggcuuguggcggccaagcguucauagcgacgucgcuuuuugauccuucgauguc-ggcucuuccuaucauugcgaagcagaauucgccaa gcguu-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGcGACGCUACCAUCCUCGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GAUUUGAGGAGACCCGAGGGCCGGGAGGCUCGAGACACUC--GA-UUGCGAUUUUA-GUCGGCGCCCCUCG-CCU--CAG-G-GGGGCGCCGGCAACCGU
GCCCGCUCGccgaacggggaaacc---ggggcuuccggggggguaucc-gccccgacg-ga-acgccucccccagcggucgaacaugggugacgaccugaggacggcgucgggu-cuc
ggaaucuuc-ug??
_Philoganga_vetusta_OPVt_BPVt   ??-??????????????
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Philoganga_robusta_OPRb2   ggauaacuggcuuguggcggccaagcguucauaGCGACGUCGCUUUUUGAUCCUUCGAUGUUUGGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUAUUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGGGCCGGGAGGCUCGAGACACUC--GA--CUCGCUCUUA-GUCGGCGCCCCACG--CU--CAG-G-GGGGCGUCGGCaaccgu
acccacucgccgaauggggaaaca---gggg????????????????????????????-??-??-???
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Lestoidea_conjuncta_ZLC   ggauAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAAACACUU--GA--CUCUAUCCUA-GUCGGCGCCCCUCG--CU--CAG-G-GGGGCGUCGGCAACCGA
GCCCACUAGCCGAACGGGGAAACC----GGGCUCCCGGGGGGUAUCCAGCCCCGAAG-GG-AUGCCUCCCCCUUGCGGUCGAACAUGGGUGACGAACUAAGGACGGCGUCGGGU-CUC
ggaaucuuc-ug??
Diphlebia_lestoides_ZDL   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAAACACUU--GA--CUGAAUCUUA-GUCGGCGCCCCUCG--CU--CAG-G-GGGGCGUCGGCAACCGA
GCCCACUAGCCGAACGGGGAAACC---GGGGCUCCCGGGGGGUAUCCAGCCCCGACG-GG-ACGCCUCCCCCUUGCGGUCGAACAUGGGUGACGAACUAAGGACggcgucgggu-cuc
ggaaucuuc-ug??

Diphlebia_coerlescens_ODC   ggauaacuggcuugugGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAAACACUU--GA--CUGAAUCUUA-GUCGGCGCCCCUCG--CU--CAG-G-GGGGCGUCGGCAACCGA
GCCCACUAGCCGAACGGGGAAACC---GGGGCUCCCGGGGGGUAUCCAGCCCCGACG-GG-ACGCCUCCCCCUUGCGGUCGAACAUGGGUGACGAAcuaaggacggcgucgggu-cuc
ggaauuguc-ug??
Bayadera_melanopteryx_ZBM   ggauaacuggcuuguggcGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUC--GA--AUUUAUCUUA-GUCGGCGCCCCGCG--CU--CAG-G-GGGGCGUCGGCAACCGA
GCCCACUAGCCGAAUGGGGAAACC---GGGGCUCCCGGGGGGUAUCCGGCCCCGACG-GG-AUGCCUCCCCCUUGCGGUCGAACAUGGGUGACGACcugaggacggcgucgggu-cuc
ggaauuguc-ug??
Bayadera_brevicauda   ??-???????????????????????????????????
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Dysphaea_gloriosa_ODG[?]   ggauaacuggcuuguggcggccaagcguucauagcgacgucgcuuuuugauccuucgauguc-ggcucuuccuaucauugcgaagcagaauucgccaa
gcguu-ggauuguucacccaccaauaggg-aacgugagcuggguuuagaccgucgugagacagguuAGUUUUA?????????????--??-???????????????
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Euphaea_formosa   ??-???????????????????????????????????
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Euphaea_decorata   ggauAACUGGCUuguggcggccaagcguucauagcgacgucgcuuuuugauccuucgauguc-ggcucuuCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCUCUCUA
GCCGAUGGGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGAAGGCUCGAGACACUU--GA--AUUUUUCUUA-GUCGGCGCCCCGCG--CU--CAG-G-GGGGCGUCGGCAACCGA
GCCCACUAGCCGAAUGGGGAAACC---GGGGCUCCCGGGGGGUAUCCGGCCCCGACG-GG-AUG
CCUCCCCCUUGCGGUCGAACAUGGGUGACGACCUAAGGACGGCgucgggu-cucggaauuguc-ugua[-   ][gacgacuuaaguaccgg]   [-   ]
Anisopleura_sp_A_ZAA   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUA--GA--AUUUCUCUUA-GUCGGCGCCCCGCG--CU--CAG-G-GGGGCGUCGGCAACCGA
GCCCACUAGCCGAAUGGGGAAACC---GGGGCUCCCGGGGGGUAUCUUGCCCCGACG-GG-AUGCCUCCCCCUUGCGGUCGAACAUGGGUGACgaacugaggacggcgucgggu-cuc
gga??????-????
Disparocypha_biedermanni_ZDBggauaacuggcuuguggcggccaagcguucauagcgacGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCaauaggg-aacgugagcuggguuuagaccgucgugagacagguuaguuuuacccuacugaugac--cg-gucguugcgauagua
auccugcucaguacgagaggaaccgcagguucggacauuugguucacguacucggucgagcggccgauggugcgacgcuaccauccuugggauuaugccugaacgccucuaaggcagaaucccccucua
gcccaugaggcaacggu-gauuuaaggagauccgagagccgggaggcucgagacacuu--ga--guguaucuua-gucggcgccccucg---u--cag-g-gggacgucggcauuccc
gcccacucgccgaacggggaacuc---ggggcucccgggggguauccagccucgacg-gg-aagccucccccuagcggucgaacaugggugaccaacuaaguucgacgucggga-???
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Libellago_semiopaca   ??-???????????????????????????????????
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Heliocypha_biseriata ??-???????????????????????????????????
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Platycypha_caligata_OPC ggAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCCAUGAGGCAACGGU-GAUUUAAGGAGAUCCGAGAGCCGGGAGGCUCGAGACACUU--GA--CUAAUUCUUA-GUCGGCGCCCCUCG---U--CAG-G-GGGGCGUCGGCAUUCGU
GCCCACUCGCCGAAUGGGGAAACU---GGGGCUCCCGGGGGGUAUCCAGCCUCGACG-GG-AUGCCUCCCCUAGCGGUCGAACAUGGGUGACCAAcuaaguucgacgucggga-???
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Chlorocypha_curta_AJ746319_ZCC ??-??????????????
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Sundacypha_petiolata_CHL ??-???????????????????????????????????
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Rhinocypha_fenestrella_ORF ggaUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCCAUGAGGCAACGGU-GAUUUAAGGAGAUCUGAGAGCCGGGAGGCUCGAGACACUU--GA--CUCUAUCUUA-GUCGGCGCUUCUCG---U--CAG-G-GGGGCGUCGGCAUUCGU
GCCCACUCACCGGACGGGGAAAUC---GGGGCUCCCGGGGGGUAUCCAGCCUCGUCG-GG-AUGCCUCCCUCUAACGGUCGAACAUUGGUGACCAACCAAGUACGGCGUCGGgu-cuc
ggaaucuuc-ug??
Rhinocypha_tincta ??-???????????????????????????????????
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Heliocharis_amazona_ZHAz3 GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGGGCCGGGAGGCUCGAGAAACUU------UUUUCUCUUA-GUCGGCGCCCCACG--CC--CAG-G-GGGGCGUCGGCAACCGA
GCCCACUUGCCGAAUGGGGAAUC-----GGGCACCCGGGGGGUAUUCAGCCCCGGCG-GG-AUGCCCACCCAUAGCGGUCGAACAUGGGUGACGAUCUGAGgacggcgucgggu-cuc
ggaaucuuc-ug??
Hetaerina_americana_OHA2 ggauaacuggcuuguggcggccaagcguucauagcgacgucgcuuuuugauccuucgauguc-ggcucuuccuaucauugcgaagcagaauucgccaa gcguu-
ggauuguucacccaccaauaggg-aacgugagcuggguuuagacCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CA-GCCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAG-CAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--GA---UUCUUGUUA-GUCGGCGCCCCACG--CU--UAGGG-GGGGCGUCGGCAUCCGA
GCCCACUUGCCGAAUGGGUAAACU---GGGGCUCCCGGggggguauccagccucgacg-gg-acgccuc-cccuagcggucgaacuugggugacacaaucaguucgacgucggg?-???
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Caliphaea_confusa_ZCC GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCcUcCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--GA--CUAGCUCUUA-GUCGGCGCCCCACG--CU--UAG-G-GGGGCGUCGGCAUCCGA
GCCCACUUGCCGAAUGGGGAAUCC---GGGGCUCCCGGGGGGUAUCCAGCCCCGACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUGGGUGAC????????????????????-???
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Noguchiphaea_yoshikoae ??-???????????????????????????????????
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Vestalis_beryllae ??-???????????????????????????????????
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Matrona_basilaris ??-???????????????????????????????????
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FJ596560_Atrocalopteryx_atrata GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGA???????????????????????????????
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Echo_modesta ??-???????????????????????????????????
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Neurobasis_ianthinipennis ??-???????????????????????????????????
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Sapho_orichalcea_OSO gGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGAUGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--GA--AUAGCUCUUA-GUCGGCACCCCACG---U--CAG-G-GAGGAGUCGGCAUCCGA
GCCCACUUGCCGAAUGGGGAUCCC----GGGCUCCCGGGGGGUAUUCAGCCCCGACG-GG-AUGCCUACCCCUAGCGGUCGAACAUGGGUGACGAACUUAGGACGGcgucgggu-cuc
ggaaucuuc-ug??
Calopteryx_amata_OCAm_BCS ggauaacuggcuuguggcggccaagcguucauAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA

GCCGAUUAGGCAAUGGU-GAUUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--GA--CUAGCUCUUA-GUCGGCGCCCCACG---U--CAG-G-GGGGAGUCGGCAUCCGA
GCCCACUUGCCGAAUGGGGAUCAC----GGGCUCCCGGGGGGUAUUCAGCCCCGGCG-GG-AUGCCUACCCCUAGCGGUCGAACAUGGGugacgaauuaaggacggcgucgggu-cuc ggaauuguc-
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DCS_Calopteryx_splendens   ??-?????????????????????????????????????
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Calopteryx_aequabilis   GGauaacuggcuUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCC??
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Iridictyon   ??-?????????????????????????????????????
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Iridictyon_trebbaui_ZIT   ??-?????????????????????????????????????
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Unaligned_lestoid   D12???-?????????????????????????????????????
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Nubiolestes_diotima_OND   ggauaACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACUCGAGAGCCGGGAGGCUCGAGACACUUUUGA----CGUUCUUA-GCGGGCGUCUCGCG-UUC--GCG-G-GAAACGCCCGCAUCUGA
GCCCGCUAGCCGAAUGGGG-AAUC---GGGGCCCCCGGAGGGUAUUCAGCCCUGACG-GG-ACGCCCccccauagcggucgaacaugggugacgaacacaguacggcgucgggu-cuc
ggaaucuuc-ug??
Perilestes_kahli_ZPK2_BPK   ??-?????????????????????????????????????
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Perissolestes_remotus   ??-?????????????????????????????????????
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Perissolestes_magellenae     ??????????????????????????????????????????????????????????????-???????????????????????????????????
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Chlorolestes_umbrata         GnnnnnCUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACUCGAGAGCCGGGAGGCUCGAGACACUUUUGA----CGUUCUUA-GCGGGCGUCUCGCG-UUC--GCG-G-GAGACGUCCGCAUCUGA
GCCCGCUUGCCGAAUGGGGAAU-C---GGGGCCCCCGGAGGGUAUUCAGCCCUGACG-GG-AUGCCCCCCAUAGCGGUCGAACAUGGGUGACGAACAAUGUACGGCGUCGGUU-CUC
GGAAUCGUC-UG??[-    ]
Euchlorolestes_tessellata    ??????????????????????????????????????????????????????????????-???????????????????????????????????
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Phylolestes_ethelae          ??????????????????????????????????????????????????????????????-???????????????????????????????????
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Synlestes_weyersii           ggauaacuggcuUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACUCGAGAGCCGGGAGGCUCGAGACACUUUUGA----CGUUCUUA-GCGGGCGUCUCGCG-UUC--GCG-G-GAGACGUCCGCAUCUGA
GCCCGCUAGCCGAAUGGGGAAC-U---GGGGCCCCCGGAGGGUAUUCAGCCCUGACG-GG-AUGCCCCCCAUAACGGUCGAACAUGGGUGACGAACAAAGUACGGgcgucnggu-cuc
ggaauu???-????[-    ][-     ]
Synlestes_tropicus           gGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACUCGAGAGCCGGGAGGCUCGAGACACUUUUGA----CGUUCUUA-GCGGGCGUCUCGCG-UUC--GCG-G-GAGACGUCCGCAUCUGA
GCCCGCUAGCCGAAUGGGGAAC-C---GGGGCCCCCGGAGGGUAUUCAGCCCUGACG-GG-AUGCCCCCCAUAGCGGUCGAACAUGGGUGACGAACAAAGUACGGgcgucuggu-cuc
ggaau????-???-[-    ]
Chorismagrion_risi           ggauAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACUCGAGAGCCGGGAGGCUCGAGACACUUUUGA----CGUUCUUA-GCGGGCGUCUCGCG-UUC--GCG-G-GAGACGUCCGCAUCUGA
GCCCGCUAGCCGAAUGGGGAAU-C---GGGGCCCCCGGAGGGUAUUCAGCCCUGACG-GG-AUGCCCCCCAUAGCGGUCGAACAUGGGUGACGAACACAGUACGGgcgucgggu-cu?
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Episynlestes_cristatus       ??????????????????????????????????????????????????????????????-???????????????????????????????????
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Episynlestes_albicauda       ??????????????????????????????????????????????????????????????-???????????????????????????????????
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Megalestes_micans   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AAUGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACUCGAGAGCCGGGAGGCUCGAGACACUUUUGA----CGUUCUUA-GCGGGCGUCUCGCG-UUC--GCG-G-GAGACGUCCGCAUCUGA
GCCCGCUUGCCGAAUGGGGAAU-C---GGGGCCCCCGGAGGGUAUUCAGCCCUGACG-GG-AUGCCCCCCAUAGCGGUCGAACAUGGGUGACGAACAAAGUACGGCGUCGGGU-CUC
ggaauykuc-ugua[-   ][gacgacuuaaguaccgga??][-   ]   [-   ]
Megalestes_kurahashii   ??-????????????????????????????????????
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Orolestes_octomaculatus   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUAnUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACUCGAGAGCCGGGAGGCUCGAGACACUUUUGA----CGUUCUUA-GCGGUCGUCUCGCG-UUC--GCG-G-GGGACGACCGCAUCUGA
GCCCGCUAGCCGAAUUGGGAAC-U---GGGGCCCCCGGAGGGUAUUCAGCCCUGACG-GG-AUGCCCCCCAUAGCGGUCGAACAUGGGUGACGA???????????????????-???
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Austrolestes_annulosus   ??-????????????????????????????????????
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Sympecma_paedisca   ??-????????????????????????????????????
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Sympecma_fusca_ZSF   ??-????????????????????????????????????
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Austrolestes_analis_OAAn   GgauaaCUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACUCGAGAGCCGGGAGGCUCGAGACACUUUUGA----CGUUCUUA-GCGGUCGUCUCGCG-UUC--GCG-G-GGGACGACCGCAUCUGA
GCCCGCUUGCCGAAUGGGGAAC-C---GGGGCCCCCGGAGGGUAUCCAGCCCUGACG-GG-AUGCCCCCCAUAGCGGUCGAACAUGGGUGACGAACAAAGUACGGCGUCGGGU-CUC
GGAAUUGUC-UGUA[-   ][Gacgacuuaaguaccgga][-   ]
Indolestes_pergrinus_OIP   ggauAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACUCGAGAGCCGGGAGGCUCGAGACACUUUUGA----CGUUCUUA-GCGGUCGUCUCGCG-UUC--GCG-G-GGGACGACCGCAUCUGA
GCCCGCUUGCCGAAUUGGGAAU-C---GGGGCCCCCGGAGGGUAUCCAGCCCUGACG-GG-AUGCCCCCCAUAGCGGUCGAACAUGGGUGACGAACACAGUACGGCGUCGGGU-CUc
ggaauuguc-ug??[-   ]

Indolestes_cyanea ??-???????????????????????????????????
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Chalcolestes_viridis_ZCV ??-???????????????????????????????????
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Archilestes_grandis_OAG GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUAcUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCCAUGAGGCAACGGU-GAUUUGAGGAGACUCGAGAGCCGGGAGGCUCGAGACACUUUUGA----CGUUCUUA-GCGGUCGUCUCGCG-UUC--GCG-G-GGGACGACCGCAUCUGA
GCCCGCUAGCCGAAUGGGGAAC-C---GGGGCCCCCGGAGGGUAUUCAGCCCUGACG-GG-AUGCCCCCCCCUAGCGGUCGAACAUGGGUGACGAACAAAGUACGGCGUCGGGU-CUC
GGAAUUGUC-UGUA[-   ][Gacgacuuaaguaccgg][-   ]
Lestes_rectangularis_OLR GGauaacuggcuuguggcggccaagcguucauagcgacgucgcuuuuugauccuucgauguc-ggcucuuccuaucauugcgaagcagaauucgccaa gcguu-
ggauuguucaccCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGCCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GAUUUGAGGAGACUCGAGAGCCGGGAGGCUCGAGACACUUUUGA----CGUUCUUA-GCGGGCGC-ACGCG-UUC--GCG-G-GUGGCGACCGCAUCUGA
GCCCGCUAGCCGAAUGGGGAAU-C---GGGGCCCCCGGAGGGUAUUCAGCCCUGACG-GG-AUGCUcccccauagagcccgaacacgggugacgaacaaaguucgacgucgggu-cuc
ggaauuguc-ug??[-   ]
Lestes_eurinus_OLE GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUAUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA
GCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGA
GCUGGGUUUAAACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUC
GGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACAAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUAGUCGAUGAGGCAACGGU-GAUUUGAG
GAGACUCGAGAGCCGGGAGGCUCGAGACACuuuugu----uuuucuua-gcgggcgucucccg-uuc--gcg-g-ggaacgaccgcaucugagcccacuagccgaaugggg-aauc---
ggggcccccggaggguauucagcccugacg-gg-augccucccuauagcggucuaacaugggugacgaacaaagu?cg?cgucgggu-cucggaauuguc-ug?? Hemiphlebia_mirabilis
GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGAUGGUGCGACGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCC
CUCUAGCCGAUGAGGCAACGGU-GACUUUAGGAGACCCGAGGGCCGCAAGGCUCGACACACUU--GA-UC-UAUUCUUA-GCUGACGUCCCACG-UUA----G-G-GGGGCGUCAGC
AUCUGAGCCCACUUGCCGCACCGGGACUAA---GGGGCCCCCGGGGGGUAUUCAGCCCCGACG-GGGACGCCUCCCCGAAGCGGUCGAAUAUGGGUGAAGAACUAACUACGGCGUUGGGU-CUC
ggaaucuuc-ug-a[-   ]
Unaligned_Anisoptera D12??-???????????????????????????????????
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Epiophlebia_superstes GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCC??
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Epiophlebia_laidlawi ??-???????????????????????????????????
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Unaligned_Aeshnoid D12???-????????????????????????????????????
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Archipetia_auriculata GgauaacuggcuuguggcggccaagcguucauAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUCGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GACUUGAGGAGACACGAGAGCCGGGAGGCUCGAGACACUA--UAU---CUUUCUUAGGCU-GCGACUUCCG-AUC--AAG-G-GGGUCGCUAGCCUCUGA
GCCCAAUUGCCGAAAGGGGAAU-A---GGGGCGCCCGGAGGGUAUCCAGCCCUGACG-GG-AUGCCCCCCUCCAACGGUCGAACAUGGGUGACGGUUACAGGACGGcgucgggu-cuc
ggaaucuuc-ug-a[-]
Austropetalia_victoria ggauAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUCGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GACUUGAGGAGACACGAGAGCCGGGAGGCUCGAGACACUA--UAU---CUUUCUUAGGCU-GCGACUUCCG-AAC--AAG-G-GGGUCGCUAGCCUCUGA
GCCCAAUUGCCGAAAGGGGAAU-A---GGGGCGCCCGGAGGGUAUCCAGCCCUGACG-GG-AUGCCCCCCUCCAACGGUCGAACAUGGGUGACGGUUACAGGACGGcgucgggu-yyy
ggaaucuuc-ug??[-]
Hypopetalia_pestilens ???-????????????????????????????????????
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A_FJ596639_Phyllopetalia_apicalis ???-??????????????
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A_EU055322_Phyllopeta ???-????????????????????????????????????
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Eurypetalia_altarensis ???-????????????????????????????????????
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Ophiopetalia_diana ????????GGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUCGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GACUUGAGGAGACACGAGAGCCGGGAGGCUCGAGACACUA--UAU---CUUUCUUAGGCU-GCGACUUCCG-AUU---AG-G-GGGUCGUUAGCCUCUGA
GCCCAAUUGCCCAAUGGGGAAU-C---GGGGCGCCCGGAGGGUAUCCAGCCCUCUCG-GG-AUGCCUCCCUCAAACGGUCGAACAUGGGUGACGGUUACAGGACGGCGUCGGGU-CUC
GGAAUCGUC-UGUA[-]

Gomphaeschna_furcilata GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUCGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GACUUGAGGAGAUUCGACAGCCGGGAGGCAUGAGACACUA--GAU---ACUUAUUAGGGU-GCGACUUCCG-UCU--AAG-G-GGGUCGCACGCCUCUAA
GCCCAAUUGCCGAAUGGGGAUA-C---GGGGCUCUCGGAGGGUAUCCAGCCCUGGCG-GG-AAGCCCCCCUCCAACGGUCGAACAUGGUCGACGGUUACCGGACGGCGUCGGGU-CUC
GGAAUGGCC-UGUA[-   ]
Oligoaeschna_pryeri ??-???????????????????????????????????
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Austroaeschna_parvistigma ??-???????????????????????????????????
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Telephlebia_tillyardi ??-???????????????????????????????????
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Boyeria_vinosa_OBV ??-???????????????????????????????????
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FJ596627_Boyeria_irene ??-???????????????????????????????????
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EU424323_Brachytron_pratense??-???????????????????????????????????
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Epiaeschna_heros ??-???????????????????????????????????
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FJ596626_Caliaeschna_microstigma ??-?????????????
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FJ596628_Anaciaeschna_isoceles   ???-???????????????
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A_GQ118298_Oplonaesch   ??-?????????????????????????????????????
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Aeshna_canadensis   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUCGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GACUUGAGGAGAUCCGACAGCCGGGAGGCAUGAGACACUA--GAUA--CUUUAUUAGGCU-GCGACUUCCG--UU--UAG-G-GGGUCGCACGCCUCUAU GCCCAAUUGCCGAA-
GGGGACU-C---GGGGCUCUCGGAGGGUAGACAGCCCUGGCG-GG-ACGCCCCCCUcuaacggucgaauauggucgacgguuaccggacggcgucgggu-cuc
ggaauccuu-ccga[-   ]
A_EU055242_Rhionaeschna_multicolor   ???-???????????????
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Aeshna_cyanea_1203   ??-?????????????????????????????????????
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FJ596630_Aeshna_grandis   ??-?????????????????????????????????????
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FJ712316_Gynacantha_japonica_or_bullata??-???????????????
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Austrogynacantha   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUCGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GACUUGAGGAGAUCCGACAGCCGGGAGGCAUGAGACACUA--GAU--AUUUUAUUAGGCU-GCGACUUCCG--CU--UAG-G-GGGUCGCACGCCUCUAC GCCCAAUUGCCGAA-
GGGGACU-C---GGGGCUCCCGGAGGGUAGACAGCCCUGGCG-GG-ACGCCCCCCUCUAACGGUCGAAUAUGGUCGACGGUUACCGGACGGCgucgggu-cuc
ggaauccuu-ccga[-   ]

Hemianax_ephippiger ??-???????????????????????????????????
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Anax_junius_OAJ ggauaacuggcuuguggcggccaagcguucauagcgacgucgcuuuuugaUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCAAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUCGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GACUUGAGGAGAUCCGACAGCCGGGAGGCAUGAGACACUA--GAU---UUCUAUUAGGCU-GCGACUUCCG--CU--CAG-G-GGGUCGCACGCCUCUAU GCCCAAUUGCCGAA-
GGGGACU-C---GGGGCUCCCGGAGGGUAGACAGCCCUGGCG-GG-ACGCCCCCCUCUAACggucgaauauggucgacgguuacaguucgacgucgggu-cuc
ggaauggcc-ugua[-   ]
FJ596632_Anax_imperator ??-???????????????????????????????????
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Unaligned_Gompid D12???-???????????????????????????????????
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Sinogomphidia_kruegeri ??-???????????????????????????????????
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Ictinogomphus_australis ??-???????????????????????????????????
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Ictinogomphus_sp ??-???????????????????????????????????
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FJ712322_Onychogomphus_sp_mistake GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGKRRGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUAGGA???????????????????????????????
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Phyllogomphoides_stigmatus_APS ??-???????????????
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Progomphus_obscurus GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCAAUGCGGCAACGGU-GACUUGAGGAGACCCGAGAGUCGAAAGGCUUGAGAUACUUCA-UUGA-C--UCUUAGGCG-GCGGCUUCCG-AUU--UAG-G-GUGUCGCUCGCCUCUGA
GCCCAAUUGCCGGUCGAGGUAA-C---GGAGCGCCCGGAGGGUAUUCAGCCCUCGCG-AG-AUGCUCCCCUCUAUCGGUCGAACAUGGGUGAUUGUUUAAACACGGCGUCGGGU-CUC
GGAAUCUUC-UGUA[-]
EU055271_Progomphus_Neaprogomp_borealis ??-??????????????
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Hagenius_brevistylus GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGUGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGAAGGCUCGAGAUAUCUU-UCU-----UUCUUAGGCG-GCGGCUUCCG-AUU--AAG-G-GGGUCGCUCGCCUCCGA
GCCCAAUUGCCGAGUGAGGAAC-U---GGGGCGCUCGGAGGGUAUUCCGCCCUCGCG-AG-AUGCCUCCCUCAGGCGGUCGAACAUGGGUGACUGUUUAAGUACGGCGUCGGGU-CUC
GGAAUCUUC-UGUA[-]
Lanthus_vernalis GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGUGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGAAGGCUUGAGAUAUUUA--CU-U-CGUUCUUAGGCG-GCGGCUUCCG-AUU--CAG-G-GGGUCGCUCGCCUCUGA
GCCCAAUUGCCGAGUGAGGAAC-C---GGGGCGCUCGGAGGGUAUUCAGCCCUCGCG-AG-AUGCCUCCCUCAAGCGGUCGAACAUGGGUGACUGUUUAAGUACGGCGUCGGGU-CUC
GGAAUCGCC-UGUA[-]
Davidius_nanus ??-????????????????????????????????????
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Neogomphus_edenticulatus GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGuc-ggcucuuccuaucauugcgaagcagaauucgccaa gcguu-
ggauuguucacccaccaauaggg-aacgugagcuggguuuagaccgucguGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGUGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGAAGGCUUGAGAUAUUUA--CU-U-CGUUCUUAGGCG-GCGGCCUCCG-ACU--CAG-G-GGGUCGCUCGCCUCUGA
GCCCAAUUGCCGAGCGAGGAAC-C---GGGGCGCUCGGAGGGUAUUCAGCCCUCGCG-GG-AUGCCCCCCUCAAGcggucgaacaugggugacuguuuaaguacggcgucgggu-cuc
ggaa?????-????[-]
Armagomphus_armiger_AAAr GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGUGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGAAGGCUCGAGAUAUUCG--CU-U-CUUUCCUAGGCG-GCGGCCUCCG-ACU--CAG-G-GGGUCGCUCGCCUCCGA
GCCCAAUAGCCGAGCGGGGAAC-C---GGGGCGCUCGGAGGGUAUUCAGCCCUCGCG-AG-AUGCCCCCCUCAAGCGGUCGAACAugggugacuguuuaaguacggcgucgggu-cucg-
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Hemigomphus_comitans_AHC ??-????????????????????????????????????
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AFJ596622_Hemigomphus_heteroclytus    ???????????????????????????????????????????????????????????????-??????????????
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EU055228_Hemigomphus_magela_BYB       ???????????????????????????????????????????????????????????????-??????????????
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Trigomphus_sp                ??????????????????????????????????????????????????????????????-???????????????????????????????????
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FJ596615_Stylogomphus_Lanth_albistylus???????????????????????????????????????????????????????????????-??????????????
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FJ712325_Stylogomphus_shirizui        ???????????????????????????????????????????????????????????????-??????????????
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EU055286_Davidioides_martini          ???????????????????????????????????????????????????????????????-??????????????
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Burmagomphus_collaris        gGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCAAUGUGGCAACGGU-GACUUGAGGAGACCCGAGGGCCGGAAGGCUUGAGAUAUUU-----AUUCUUUCUUAGGCG-GCGGCUUCCG-AUU--CAG-G-UUGUCGCUCGCCUCUGA
GCCCAAUAGCCGAGUGAGGAAC-U---GGGGCACUCGGAGGGUAUCCAGCCCUCUCG-AG-ACGCCUCCCUCAAGCGGUCGAACAUGGGUGACUGUuuacguaaggcgucgggu-cuc
ggaaucuuc-ug??[-    ]
EU055285_Cyclogomphus_heterostylus    ???????????????????????????????????????????????????????????????-??????????????
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Anisogomphus_pinratani_not_pinratanai??????????????????????????????????????????????????????????????-??????????????
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FJ596613_Dromogomphus_spinosus                  GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGG-???????????????????????????????
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Arigomphus_villosipes       GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCAAUGUGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGAAGGCUCGAGAUAUCUUU-UUUA-U-UUCUUAGGCG-GCGGCUUCCG-ACU--CAG-G-UUGUCGCUCGCCUCUGA
GCCCAAUAGCCGAGCGAGGAAC-U---GGGGCACUCGGAGGGUAUCCAGCCCUCUCG-AG-ACGCCUCCCUCAAGCGGUCGAACAUGGGUGACUGUUUCAGUACGGCGUCGGGU-CUC
GGAAUCUUC-UGUA[-    ]
Arigomphus_cornutus_        ??????????????????????????????????????????????????????????????-????????????????????????????????????
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FJ712319_Stylurus_intricatus???????????????????????????????????????????????????????????????-???????????????????????????????????
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Stylurus_amnicola           ??????????????????????????????????????????????????????????????-????????????????????????????????????
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FJ596610_Stylurus_nagoyanus??????????????????????????????????????????????????????????????-???????????????????????????????????
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FJ596612_Gomphurus_Gomphus_externus   ??????????????????????????????????????????????????????????????-???????????????
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FJ596611_Asiagomphus_melaenops                  GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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FJ596614_Gomphus_Phanogomphus_exilis ???-??????????????
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Gomphus_Gomphus_graslini_AF266051???-??????????????
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Gomphus_adelphus GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGCGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGAAGGCUUGAGAUAUUUUU-GU---UUUUCUUAGGCG-GCGGCUUCCG-ACU--CAG-G-UCGUCGCUCGCCUCUGA
GCCCAAUAGCCGAGCGAGGAUCAC---GGGGCACUCGGAGGGUAUCCAGCCCUCUCG-GG-ACGCCUCCCUCAAGCGGUCGAACAUGGGUGACUGUUUCAGUACGGCGUCGGGU-CUC
GGAAUCUUC-UGUA[-]
FJ712320_Gomphus_Gomphus_vulgatissimus???-??????????????
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Megalogomphus_sommeri ??-??
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FJ712321_Onychogomphus_uncatus GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA????????????????????????????????
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FJ596620_Onychogomphus_forcipatus_unguGGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA????????????????????????????????
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FJ596617_Lindenia_tetraphylla_mistake GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA????????????????????????????????
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Ophiogomphus_carolus GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA

GCCAAUGCGGCAACGGU-GACUUGAGGAGACCCGAGGGCCGGAAGGCUUGAGAUAUGU--AUUUUG--UUCUUAGGCG-GCGGCUUCCG-ACA--UAG-G-UGGUCGCUCGCCUCUGA
GCCCAAUUGCCGAGCGAGGAGU-U---GGGGCACUCGGAGGGUAUUCAGCCCUCGCG-AG-ACGCCUCCCUCAAACGGUCGAAUAUGGGUGUCUGUUUCAGUACGGCGUCGGGU-CUC GGAAUCUUC-
UGUA[-   ]
Ophiogomphus_severus_5283   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA
GCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUA???????????????????????????????????????--??-???????????????
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Ophiogomphus_Ophiogomphus_caecilia   ??-??????????????
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Leptogomphus_elegans   ??-????????????????????????????????????
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Leptogomphus_sauteri_FJ596609   ??-??????????????
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Epigomphus_compactus   ??-????????????????????????????????????
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Microgomphus_chelifer_FJ712323   ??-??????????????
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Heliogomphus_retroflexus   ??-????????????????????????????????????
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Macrogomphus_parallelogramma??-????????????????????????????????????
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Ceratogomphus_pictus ggauaacuggcuuguggcggccaagcguucauagcgacgucgcuuuuugauccuucgauguc-ggcucuuCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCGGCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGUGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGAAGGCUCGAGAUAUUUAU-UU-----UUCUUAGGCG-GCGGCUUCCG-ACU--UAG-G-UGGUCGCUCGCCUCUGA
GCCCAAUAGCCGAGUGAGGAAU-A---GGGGCUUUCGGAGGGUAUUCAGCCCUCGCg-ag-augccucccucaagcggucgaauaugggugacuguuuaaguucgacgucggg?-???
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Lestinogomphus_angustus ??-???????????????????????????????????
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Austrogomphus_guerini_AAG GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGCGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGAAGGCUCGAGAUAUUUAU-UU---ACUUCUUAGGCG-GCGGCUUCCG-AUU--CAG-G-UUGUCGCUCGCCUCUGA
GCCCAAUAGCCGAGUGAGGAACC----GGGGCACUCGGAGGGUAUUCAGCCCUCGCG-AG-ACGCCUCCCUCAAGCGGUCGAACAUGGGUGACUGUU-CA-UACGCgguccggu-cuc
ggaaucuuc-ug??
EU055267_Austrogomphus_amphiclitus ??-??????????????
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EU055261_Antipodogomphus_acolythus ??-??????????????
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Unaligned_Petalurid D12???-???????????????????????????????????
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Tanypteryx_hageni GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GAAUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACAUCU--GAAUUUCUUUCUUAGGCG-GCGACCUCCG-UCC---AG-G-GGGCCGCACGCCUCCGA
GCCCAAUUGCCGGACGGGGAAUC----GGGGCGCCCGGAGGGUAUACAGCCCUGUCG-GG-AUGCCUCCCUCCAACGGUCGAACaugggugaagguucaaguacggcgucggg?-???
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Tanypteryx_sp ??-???????????????????????????????????
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FJ712330_Tanypteryx_pryeri ??-???????????????????????????????????
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Tachopteryx_thoreyi   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GAAUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACAUCU--GAAUUUCUUUCUUAGGCG-GCGACCUCCG-AUU---AG-G-GGGCCGCACGCCUCUGA
GCCCAAUUGCCGGACGGGGAACC----GGGGCGCCCGGAGGGUAUACAGCCCUGUCG-GG-AUGCCUCCCUCCAACGGUCGAACAUGGGUGAAGGUUACAGUACGGCGUCGGGU-CUC
GGAAU????-????[-   ]
Phenes_raptor   ggauaacuggcuuguggcggccaagcguucauagcgacgucgcuuuuugauccuucGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GAAUUGAGGAGACCCGAGAGCUGGGAGGCUCGAGACAUCU--GAAUUUGUUUCUUAGGCG-GCGACUUCCG-UUC--GCG-G-GGGCCGCUCGCCUCUGA
GCCCAAUUGCCGGACGGGGACCA----GGGGCGCCCGGAGGGUAUACAGCCCUGUCG-GG-Augccucccuccaacggucgaacaugggugacgguuacaguucgacgucgg??-???
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Phenes_centralis   ggauaacuggcuuguggcggccaagcguucauagcgacgucgcuuuuugauccuucgauguc-ggcucuuccuauca
uugcgaagcagaauucgccaagcguu-ggauuguucacccaccaauaggg-aacgugagcuggguuuagaccgucgugagacagguuaguuuuacccuacugaugac--ug-gucguugcga
uaguaauccugcucaguacgagaggaaccgcagguucggacauuugguucacguacucggucgagcggccgguggugcgaagcuaccauccuuggga??????????????????????????????
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Uropetalura_carvori   ???-???????????????????????????????????
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Petalura_hesperia   ggauaacuggc-uguggcggccaagcguucauagcgaCGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGUGGCAACGGU-GAAUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACAUCU--GAAUUUGUUUCUUAGGCG-GCGACUUCCG-UUC--GCG-G-GGGCCGCUCGCCUCUGA
GCCCAAUUGCCGGACGGGGACCA----GGGGCGCCCGGAGGGUAUACAGCCCUGUCG-GG-AUGCCUCCCCCCAUCGGUCGAACAUGGGUGACGGUUAcaguacggcgucgggu-cuc
ggaaucuuc-ugna[-   ]
A_EU055252_Petalura_gig   ???-???????????????????????????????????
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Petalura_litolae   ggauaacuggcuuguggcggccaagcguucauagcgacgucgcuuuuugauccUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGUGGCAACGGU-GAAUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACAUCU--GAAUUUGUUUCUUAGGCG-GCGACUUCCG-UUC--GCG-G-GGGCCGCUCGCCUCUGA
GCCCAAUUGCCGGACGGGGACCA----GGGGCGCCCGGAGGGUAUACAGCCCUGUCG-GG-AUGCCUCCCCCCAUCGGUCGAACAUGGGUGACGGuuacaguucgacgucgg??-???
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Petalura_ingentissima   ggauaacuggcuuguggcggccaagcguucauagcgacgucgcuuuuugauccuucgauguc-ggcucuuccuaucauugcgaagcagaAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGUGGCAACGGU-GAAUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACAUnU--GAAUUUGUUUCUUAGGCG-GCGACUUCCG-UUC--GCG-G-GGGCCGCUCGCCUCUGA
GCCCAAUUgccggacggggacca----ggggcgcccggaggguauacagcccugucg-gg-augccuccccccaucggucgaacaugggugacgguuacaguacggcgucgg-u-cu?
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Zoraena_bilineata ??-???????????????????????????????????
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Taeniogaster_obliqua GGAUAACuggcuuguggcggccaagcguucauagcgacgucgcuuuuugauccuucgauguc-ggcucuuCCUAUCAUUGCGAAGCAGAAUUCGCCAA
GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACAUUU--GAAUUUCGUUCUUAGGCG-GCGACUUCCG-ACC---AG-G-GGGCCGCACGCCUCUGA
GCCCAAUUGCCGGACGGGGAACcc---ggggcgcccggaggguauccagcccugucg-gg-augccccccccuaacggucgaacaugggugacgguuacaguucgacgucgg??-???
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Kalyptogaster_erronea GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACAUUU--GAAUUUCGUUCUUAGGCG-GCGACUUCCG-ACC---AG-G-GGGCCGCACGCCUCUGA
GCCCAAUUGCCGGACGGGGAACCC---GGGGCGCCCGGAGGGUAUCCAGCCCUGUCG-GG-AUGCCCCCCCCUAACGGUCGAACAUGGGUGACGGUUACAGUACGGCGUCGGGU-CUC
GGAAUCUUC-UGUA[-   ]
FJ712317_Cordulegaster_maculata ??-??????????????
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EU055277_Cordulegaster_dorsalis ??-??????????????
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FJ596634_Cordulegaster_boltonii ??-??????????????
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FJ596637_Cordulegaster_picta ??-??????????????
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FJ596638_Anotogaster_sieboldii ??-??????????????
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Neopetalia_punctata -GAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA
GCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA

AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACAUUU--GAAUUUCGUUCUUAGGCG-GCGACUUCCG-AUU---AG-G-GGGCCGCACGCCUCUGA
GCCCAAUUGCCGGACGGGGAACCC---GGGGCGCCCGGAGGGUAUCCAGCCCUGUCG-GG-AUGCCCCCCCCUAACGGUCGAACAUGGGUGACGGUUACAGUACGGCGUCGGGU-CUC
GGAAUCUUC-UGUA[-   ]
Chloropetalia_soarer   ggauaacuggcuuguggcggccaagcguucauagcgacgucgcuuuuugauccuucgauguc-ggcucuuccuaucauugcgaagcagaaUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UC-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACAUUU--GAAUCACUUUCUUAGGCG-GCGACUUCCG-AAU---AG-G-GGGccgcacgccucuga
gcccaauugccggacggggaaacc---ggggcgcccggaggguauccagcccugucg-gg-cu-cccccccauaccggucgaacauggguugacgguuacaguucgacgucgggu-c??
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Sinorogomphus_nasutus   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UC-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACAUUU--GAAUCGCUUUCUUAGGCG-GCGACUUCCG-AAU---AG-G-GGGCCGCACGCCUCUGA
GCCCAAUUGCCGGACGGGGAAACC---GGGGCGCCCGGAGGGUAUCCAGCCCUGUCG-GG-CU-CCCCCCCAUACCGGUCGAACAUGGGUGacgguuacaguucgacgucgg??-???
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FJ596635_Chlorogomphus_brunneus   ??-??????????????
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Chlorogomphus_sp   ??-???????????????????????????????????
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Synthemis_eustalacta   ggauaacuggcuUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--GCAUUUCGUUCUUAGGCG-GCGACCUCCG-UUU--ACG-G-GGGCCGAUCGCCUCUGA
GCCCAAUUGCCGGACGGGGAAACA---GGGGCGCUCGGAGGGUAUCCAGCCCUGUCG-GG-AUGCCCCCCUCUACCGGUCGAACAUGGGUGACGGUUAUAGUACGGCGUCGGGU-CUC
GGAAUCUUC-UGUA[-   ]
Archaeosynthemis_marcrostigma_   ??-??????????????
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Archaeosynthemis_leachii_   ??-???????????????????????????????????
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Eusynthemis_brevistyla   ????????????uguggcggccaagcguucauagcgacgucgcuuuuugauccuucgauguc-ggcucuuccuaucauugcgaagcagaauucgcCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU-UUUAUUUCGUUCUUAGGCG-GCGACCUCCCCUUCG-CGGGGGGGGCCGAUCGCCucuga

gcccaauugccggacggggaaaca---ggggcgcucggaggguauccagcccugucg-gg-augccccccucuaacggucgaacauggugacgguuacaguucgacgucgg??-???
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FJ596573_Eusynthemis_guttata   ???-??????????????
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EU055262_Eusynthemis_nigra ???-???????????????????????????????????
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EU055263_Choristhemis_flavoterminata ???-??????????????
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Synthemiopsis_gomphomac   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGGGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--GGAUUUCGUUCUUAGGCG-GCGACCU-CCGUUU--ACG-G-GGGCCGAUCGCCUCUGA
GCCCAAUUGCCGGACGGGGAAACA---GGGGCGCUCGGAGGGUAUCCAGCCCUGUCG-GG-AUGCCCCCCUCUACCGGUCGAACAUGGGUGACGGUUACAGUACGGC???????-???
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Gomphomacromia_chilensis   ???-???????????????????????????????????
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FJ712318_Gomphomacromia_paradoxa   ???-??????????????
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A_GQ329652_Syncordulia_serendipator   ???-??????????????
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A_GQ329654_Syncordulia_venator   ???-??????????????
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EU055287_Idionyx_imbricata   ??-???????????????????????????????????
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Idionyx_selysi   ??-???????????????????????????????????
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Macrom   ???-??-
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EU424325_Oxygastra_curtisii??-????????????????????????????????????
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EU055244_Cordulephya_pygmaea   ??-???????????????
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Pseudocordulia_circularis   ??-???????????????????????????????????
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Hesperocordulia_berthoudi   ??-???????????????????????????????????
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Lathrocordulia_metallica   ??-???????????????????????????????????
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Micromidia_convergens   ??-???????????????????????????????????
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Micromidia_atrifrons ??-???????????????????????????????????
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Austrophya_mystica ??-???????????????????????????????????
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Austrocordulia_refracta ??-???????????????????????????????????
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Archaeophya_magnifica ??-???????????????????????????????????
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Epophthalmia_elegans ??-???????????????????????????????????
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Didymops_transversa GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--UAGUCAAUUUCAUAGGCG-GCGACCU-CCCUUC--GGG-G-GGGCCGCCCGCCUCCGA
GCCCAAUAGCCGGGCGGGGAAGCU---GGGGCGCCCGGAGGGUAUCUGGCCCUGUCG-GG-AUGCCCCCCUCAAACGGUCGAACAUGGGUGCACGUACUAGUACGGCGUCGGGU-CUC
GGAAUC???-????[-   ]
Macromia_illinoiensis gGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCGAUGAGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--UCGUCCAUUUCAUAGGCG-GCGACUU-CCCUUC--GGG-G-GGGCCGCCCGCCUCCGA
GCCCAAUAGCCGUGCGGGGAAGCC---GGGGCGCCCGGAGGGUAUCUGGCCCUGUCG-GG-AUGCCCCCCUCAAACGGUCGAACAUGGGUGCACGUAAAAGUACGGCGUCGGGU-CUC
GGAAUCUUC-UGUA[-   ]
FJ596570_Macromia_amphigena GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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Macromia_eurynome ??-???????????????????????????????????
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Macromia_magnifica ??-???????????????????????????????????
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FJ712329_Macromia_splendens GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAG--------------???????????????????????????????
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FJ596571_Phyllomacromia_sp GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGG-GGUGCGAAGCUACCUGCU------??????????????????????????????
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FJ596572_Idomacromia_proavita GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UC-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA??????????????????????????????
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Aeschnosoma_forcipula ??-???????????????????????????????????
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Pentathemis_membranulata ??-???????????????????????????????????
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Tetragoneuria_cynosure GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UC-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GUCGAUGAGGCAACGGU-GACUUGAGGAGACCCGAGGGCCGGGAGGCUCGAUUUACUU--UUGUUAUGU-CUUAGGUG-GCGGUUU--CCUUC--CGG-G-GGACCGCUCGCCUCUGA
GCCCACUUGCCGGAUGGGGAAG-U---GGGGCGCCCGGAGGGUAUCCAGCCCUGUCG-GG-AUGCCUCCCUCUAUCGGUCGAACAUGGGUGACGAUUAUAGUGCGGCGUCGGGU-CUC
GGAAUCUUC-UGUA[-   ]
Tetragoneuria_costalis ??-???????????????????????????????????
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FJ596567_Tetragoneuria_canis   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UC-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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FJ596565_Epitheca_princeps   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UC-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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FJ596561_Epitheca_marginata   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UC-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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FJ596564_Epitheca_bimaculata   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UC-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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Rialla_villosa   ???-???????????????????????????????????
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Cordulia_aenea_1236   ???-???????????????????????????????????
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Cordulia_shurtleffii   ???-???????????????????????????????????
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FJ596568_Somatochlora_alpestris   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UC-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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Somatochlora_flavomac_1242   ??-???????????????????????????????????
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FJ596569_Somatochlora_metallica   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UC-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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Somatochlora_tenebrosa   ggaUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UC-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCAAUGAGGCAACGGU-GACUUGAGGAGACCCGAGGGCCGGGAGGCUCGAUUUACUU--UUUUUACGU-CUUAGGCG-GCGG-CU-UCCUUC--CGG-G-GGACCGCUCGCCUCUGA
GCCCGCUUGCCGGAUGGGGAAACC---GGGGCGCCCGGAGGGUAUCCAGCCCUGUCG-GG-AUGCCUCCCUCUAACGGUCGAACAUGGGUGacgauuacaguucgacgucggg?-???
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FJ596562_Hemicor_mindana_nipponica   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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EU055266_Hemicordulia_australiae   ??-???????????????
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EU055254_Procordulia_jacksoniensis   ??-???????????????
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Unaligned_Libellulid   D12???-???????????????????????????????????
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FJ596583_Notiothemis_robertsi   ??-???????????????
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FJ596578_Tetrathemis_irregularis ??-??????????????
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EF631495_318_222_Tetrathemis_polleni ??-??????????????
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FJ596587_Urothemis_signata ??-???????????????????????????????????
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EF631421_313_217_Urothemis_assignata ??-??????????????
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FJ596588_Macrodiplax_cora GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA????????????????????????????????????
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EU055229_Macrodiplax_balteata ??-??????????????
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EF631458_344_253_Zyxomma_elgneri ??-??????????????
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Zyxomma_petiolatum_GU196340GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA????????????????????????????????????
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Zygonyx_torrida ??-???????????????????????????????????
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EU055233_Nannophlebia_sp ??-????????????????????????????????????
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Bironides_sp_HOL_2010_GU196365 GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAU--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUCGGGA???????????????????????????????
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Huonia_epinephela_GU196370 GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA????????????????????????????????????
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EF631477_361_270_Huonia_oreophila ??-???????????????
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A_EF631485_367_278Onycothemis_testacea??-???????????????
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FJ596582_Rhyothemis_variega_imperatrix??-???????????????
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Rhyothemis_fuliginosa_GU196333 GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCC---
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Miathyria_marcella ??-????????????????????????????????????
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Miathyria_simplex_GU196345   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CC-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA????????????????????????????????????
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FJ596577_Tholymis_citrina   ???-????????????????????????????????????
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EF631403_298_202_Tholymis_tillarga   ???-???????????????
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EF631487_369_280_Pantala_flavescens   ???-???????????????
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Traemea_lacerata   ???-????????????????????????????????????
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FJ596586_Tramea_calverti   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CC-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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Sympetrum_janeae   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCAAUGUGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--CAUUC-CGAUCUUAGGCG-GCGACCU-CCGUU----AG-G-GGGCCGUCCGCUUCUGU
GCCCAAUUGCCGGACGGGGAAAUC---GGGGCGCUCGGAGGGUAUCCAUCCCUGUCG-AG-AUGCCCCCCUCUAACGGUCGAACAUGGGUGACGUUUGCAGUACGGCGUCGGGU-CUC
GGAAUCGCC-UGUA[-   ]
Sympetrum_Kalosympetrum_obtrusum_   ???-???????????????
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FJ596606_Sympetrum_Sympetrum_vulgatum???-???????????????
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AB127406_Sympetrum_pedemontanum_elatum GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCC???????-???????????????????????-??--??-??????????
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Sympetrum_Nesogonia_blackburni_ ??-??????????????
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Sympetrum_sanguineum GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA
GCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUA???????????????????????????????????????--??-???????????????
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EU055230_Sympetrum_Tarnetrum_corruptum??-??????????????
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Sympetrum_fonscolombei_GU196359 GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA??????????????????????????????
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Sympetrum_Tarnetrum_illotum??-???????????????????????????????????
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AB127407_Sympetrum_infuscatum GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCC???????-???????????????????????-??--??-??????????
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EU424330_Sympetrum_danae GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA??????????????????????????????
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Sympetrum_meridionale_GU196334 GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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Leucorrhinia_pectoral_0610 ???-???????????????????????????????????
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Leucorrhinia_glacialis ???-???????????????????????????????????
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Celithemis_elisa GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCAAUGUGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--CAUUC-CGAUCUUAGGCG-GCGACCU-CCGUCC---AG-G-GGGCCGUCCGCUUCUGU
GCCCAAUUGCCGGACGGGGAAACC---GGGGCGCCCGGAGGGUAUCCAUCCCUGUCG-GG-AAGCCCCCCUCUAACGGUCGAACAUGGGUGACGUUUGCAGUACGGCGUCGGGU-CUC
GGAAUCUUC-UGUA[-   ]
Celithemis_eponina_1233 ???-???????????????????????????????????
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Brachymesia_gravida ???-???????????????????????????????????
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Brachymesia_herbida_GU196344GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGACGCUACCAUCCUUGGGA????????????????????????????????????
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EF631463_349_258_Brachythemis_leucostic ??-??????????????
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Brachythemis_contaminata ???-???????????????????????????????????
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Deielia_phaon_GU196343 GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CU-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA?????????????????????????????????????
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EF631398_294_198_Pachydiplax_longipenni ??-??????????????
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AY750042_Erythemis_sp ???-????????????????????????????????????
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FJ596592_Acisoma_panorpoides???-???????????????????????????????????
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EU055239_Erythrodiplax_minuscula ??-??????????????
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Erythrodiplax_basalis_ ???-????????????????????????????????????
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AB127415_Crocothemis_servilia GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCC???????-????????????????????????-??--??-?????????
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Crocothemis_erythraea_GU196335 GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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FJ596590_Rhodothemis_rufa   ??-????????????????????????????????????
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Neurothemis_fulvia   ??-????????????????????????????????????
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Neurothemis_ramburii_GU196339   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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Diplacodes_lefebvrii   ??-????????????????????????????????????
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Diplacodes_trivialis_GU196342   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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EF631462_348_257Bradinopyga_strachani??-??????????????
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Brachydiplax_denticauda   ??-????????????????????????????????????
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FJ596585_Brachydiplax_chalybea_flavovit   ??-??????????????
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FJ596584_Chalcostephia_flavifrons   ??-??????????????
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EF631393_291_195_Micrathyria_aequalis??-??????????????
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Micrathyria_atra   ??-???????????????????????????????????
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Micrathyria_didyma_GU196361GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA????????????????????????????????????
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Uracis_imbuta_GU196363   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA????????????????????????????????????
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Uracis_infumata   ??-???????????????????????????????????
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FJ596589_Nannophya_pygmaea ??-???????????????????????????????????
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EF631412_307_210_Nannothemis_bella   ??-??????????????
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EF631492_373_Paltothemis_lineatipes   ??-??????????????
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Brechmorhoga_mendax   ??-????????????????????????????????????
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Brechmorhoga_praedatrix_GU196346   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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Dythemis_fugax_   ??-????????????????????????????????????
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A_FJ596580_Trithemis_aurora??-????????????????????????????????????
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FJ596581_Trithemis_africana   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--UU-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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Trithemis_arteriosa   ??-????????????????????????????????????
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Perithemis_tenera   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCAAUGUGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--CAUUC-CGAUCUUAGGCG-GCGACCU-CCGUCU--CAG-G-GGGCCGUCCGCUUCUGU
GCCCAAUUGCCGGACGGGGAAACC---GGGGCGCCCGGAGGGUAUCCAUCCCUGUCG-GG-AAGCCCCCCUCUAACGGUCGAACAUGGGUGACGUUUGCAGUACGGCGUCGGGU-CUC
GGAAUCUUC-UGUA[-   ]
A_EU055236_Perithemis_intensa   ??-???????????????
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Perithemis_lais_GU196362   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????????

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Palpopleura_lucia_GU196337   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--UU-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA?????????????????????????????????????
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FJ596579_Diastatops_pullata???-????????????????????????????????????
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Zenithoptera_fasciata_GU196364   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA??????????????????????????????
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EF631486_368_279_Neodythemis_pauliani???-??????????????
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Selysiothemis_nigra   ???-????????????????????????????????????
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Trithetrum_navasi   ???
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Porpax_risi   ???-????????????????????????????????????
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Micromacromia_camerunica_GU196367   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--AA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA??????????????????????????????
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FJ596594_Allorhizuch_preussi   ??-??????????????
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Neodythemis_klingi   ??-???????????????????????????????????
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FJ596575_Hadrothemis_infesta   ??-??????????????
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FJ596595_Thermorthemis_madagascariensis   ??-??????????????
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FJ596599_Agrionoptera_insignis   ??-??????????????
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FJ596593_Cratilla_metallica??-???????????????????????????????????
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Pseudoleon_superbus   ??-???????????????????????????????????
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FJ596597_Orthemis_cultriformis   ??-??????????????
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EF631471_265_Orthemis_ferruginea   ??-??????????????
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FJ596601_Orthetrum_albistylum   ??-??????????????
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EF631473_267_Orthetrum_pruinosum   ??-??????????????
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Orthetrum_coerulescens_   ??-???????????????????????????????????
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FJ596600_Lyriothemis_elegantissima   ??-??????????????
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A_FJ596602_Ladona_fulva   ??-???????????????????????????????????
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Ladona_julia   ??-???????????????????????????????????
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A_FJ596598_Ladona_depressa   ??-???????????????????????????????????
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Plathemis_subornata   ??-???????????????????????????????????
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Plathemis_lydia ??-????????????????????????????????????
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Libellula_quadrimaculata_GU196332 GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--AA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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Libellula_Syntetrum_angelina??-????????????????????????????????????
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Libellula_Eolibellula_semifasciata ??-??????????????
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Libellula_Belonia_saturata_AY338674 ??-??????????????
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Libellula_Eotainia_composita??-????????????????????????????????????
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Libellula_pulchella GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--AA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGAUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCCUCUA
GCCAAUGUGGCAACGGU-GACUUGAGGAGACCCGAGAGCCGGGAGGCUCGAGACACUU--CAUUC-CGAUCUUAGGCG-GCGACCU-CCGUUU--CAG-G-GGGCCGUCCGCUUCUGU
GCCCGCUUGCCGGACGGGGAAAUC---GGGGCGCCCGGAGGGUAUCCAUCCCUGUCG-GG-AAGCCCCCCUCUACCGGUCGAACAUGGGUGACGUUUGCAGUACGGCGUCGGGU-CUC
GGAAUCUUC-UGUA[-]
Libellula_Holotania_comanche_ ??-??????????????
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Libellula_Holotania_auripennis_ ??-??????????????
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Libellula_Holotania_axilena???-??????????????????????????????????
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Libellula_Holotania_luctuosa??-???????????????????????????????????
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Aethriamanta_rezia_GU196369GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA????????????????????????????????????
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Tetrathemis_corduliformis_GU196368   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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Diplacina_ismene_GU196366   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--AA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA????????????????????????????????????
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Erythemis_vesiculosa_GU196360   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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Nannophyopsis_clara_GU196358GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA????????????????????????????????????
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Oligoclada_amphinome_GU196357   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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Idiataphe_sp_HOL_2010_GU196356   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA??????????????????????????????
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Atoconeura_sp_HOL_2010_GU196355   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA??????????????????????????????
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Elga_leptostyla_GU196354   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????????
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Fylgia_amazonica_GU196353   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????????
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Hemistigma_albipunctatum_GU196352   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA??????????????????????????????
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Porpacithemis_sp_GU196351   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--UC-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????????
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Thermochoria_equivocata_GU196350   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA??????????????????????????????
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Malgassophlebia_bispina_GU196349   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA??????????????????????????????
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Micromacromia_zygoptera_GU196348GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA
GCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--AA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????????

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Argyrothemis_argentea_GU196347   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA????????????????????????????????
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Pseudothemis_zonata_GU196341GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA?????????????????????????????????????
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Oxythemis_phoenicosceles_GU196338   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAG--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA????????????????????????????????
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Olpogastra_lugubris_GU196336GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGAUAGUAAUCCUGCUCAGU
ACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???
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Misagria_parana_GU196331   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--AA-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA?????????????????????????????????????
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Neogomphus_edenticulatus_FJ712324   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA????????????????????????????????
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Aeshna_mixta_FJ712315   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCKKRAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUCGGGA?????????????????????????????????????
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Gomphaeschna_furcillata_FJ712314   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGR-AMSGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUCGGGA????????????????????????????????

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Teinobasis_fortis_OD203 ---

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Mecistogaster_modestaOD198 ---

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Anomisma_abnormeOD193 ---

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Lestes_sponsa ---

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Asiagomphus_melaenops GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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Orthemis_discolor GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--AA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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Leucorrhinia_dubia GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUU-GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAA--CA-GUCGUUGCGA
UAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGUACUCGGUCGAGCGGCCGGUGGUGCGAAGCUACCAUCCUUGGGA???????????????????????????????
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Unaligned_Orders ??-???????????????????????????????????
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Ephemerella_sp   ???-?????????????????????????????????
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Paraleptophlebia_sp   ???-?????????????????????????????????
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Anthopotamus_sp   ???-?????????????????????????????????
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Caenis_luctuosa   ???-?????????????????????????????????
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Ephemera_sp   ???-?????????????????????????????????
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Callibaetis_ferrugine   ???-?????????????????????????????????
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Callibaetis_ferrugineus_AY859557   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCA
UUGCGAAGCAGAAUUCGCCAAGCGUC-GGAUUGUUCACCCGCCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUAAC--CG-GUCGUUGCGA
UAGUAAUCUUGCUCAGUACGAGAGGAACCGCAAGUUCGGACAUUUGGUUCACGCACUCGGUCGAGAGGCCGGUGGUGCGAAGCUACCAUCCGUCGGAUUACGCCUGAACGCCUCUAAGGCAGAAUCCG
CGCUAGUCAUGGUUGCAACGAU-AACUCGAGGAGUCCCGCGAGCUGAAAGGCUCGAACCUG--ACACUGCUCAGG-----CCC-GCGCGCACCC-CUC--GGG-A-CGCGCGC-GGG
UCGACGGCCCCUUCGCCGCUCGGGGAAACA---CGUGUCGCGCGAGGGCUA-U-GCCCUGCCC-GCGUGCGUCUCCUCAAGCGGUCGACCCUGGGUGCACA-UG---UUCAGCGUCGGGA-CUC
GGAAUCGUC-UGUA[-   ][GACGACUUACGUACCAAGCGGGGUGUUGUACUCGGUAGAGCAGUUACCACG]
Baetis_buceratus   ???-?????????????????????????????????
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Hexagenia_rigida ??-???????????????????????????????????
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Cloeon ??-??-
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Leucrocuta_aphrodite ??-???????????????????????????????????
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Centroptilum_luteolum ??-???????????????????????????????????
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Stenonema_sp ??-???????????????????????????????????
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Trigoniopthalmus_altern ??-???????????????????????????????????
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Allomachilis_froggart ??-???????????????????????????????????
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EF199981_Machilis_hrabei GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UG-GUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGCACUCGGCCGAUCGGCCGGUGGUGCGAAGCUACCAUCCGUGGGUUUAUGCCUGAACGCCUCUAAGGCAGAAUCCCGUCUA
GACAU-G-GGCAACGAU-????????GAGCCCCG???????????????????????????????-?????????GCC-GCGAGACGCAU---------GCGUCUCGC-GGCAGUCGA
GCCCACUUCCGA????????????---??????????????????????????????-??-??????ACCUCAAUCGGCAGAACAUGGGU???????????UUCACUGUCGGGGUCUC
UGAAUCGUC-UGUA[-   ][GACGACUUGGGUACCGGGCGGGGUGUCGUACUCGGUAGAGCAGCUGCCAUAA]
Dilta_littoralis_AY859571 GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUAUUGAUCCUU???????-???????????????????????????????????
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Ctenolepisma_longicaudata   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUUCUAUCAUUGGGAAGCAGAAUUCCCCAA GCGUU-
GGAUUGUUCACCCACUAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUG-CG-UU-UUCGUUGCCAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCAUGCACUCGGCCGAGCGGCCGGUGGUGCGAAGCUACCAUCCGUGGAAUUAUACCUGAACGCCUCUAAGGUAGAAUUCCUUCUA
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UGAAUCUUC-UGUA[-   ][AACGACUUAAGUACCGGGCGGGGUGUUGUGAACGGUAGAGCAGUUGCCACG][-   ]
Lepisma_sp   ??-???????????????????????????????????
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EU376048_Lepisma_saccharinaGGAUAACUGGCUCGUGGCCGCCAAGCGUUCAUAGCGACGCGGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCUUACCGUGGGGACGCAGCGCUCCCCGA GCGUA-
UGAUUGUUCACCAACCAACAAGG-AACGUG??--??-???????????????
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Thermobia_domestica   ??-???????????????????????????????????
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Tricholepidion_gertschi   ??-???????????????????????????????????
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Gromph_laevigata_AY210819   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACCAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGACGUCG-GUCGUUGCGACAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGCACUCGGUCGAGGGGCCGGUGGUGCGAAGCUACCAUCCGCGGGAUUAUGCCUGAACGCCUCUAAGGCCGUAUCCCGUCUG
?????????GCAACGAU-????????GAGUCCCGUGGGUCGAAAGGCUCGAAGCAA?????????-????????????-???????-??????--????--?????????????????
?????????????????????????---?????????????????????????????-??-?????????????????????????????GGGUCGUUCGGUUCGAAGUCGGGA-CUC
GGAAUCGUC-UGUA[-   ][GACGACUUAGGUACCGGGCGGGGUGUUGUACUCGGUAGAACAGUUGCCACG][-   ]
Isoperla_davisi_AY125288   ??-???????????????????????????????????
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?????????-????[-   ]
EU414717_Isoperla   GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
AGAUUGUUCACCUACAAAUAGGGGAACGUGAGCUGGGUUUAGUACCGUGCGUGAAAGGUUAGUUUUACCCUACUGAUGAC--AC-GUUGUUGCAACAGUA
AUCCUGCACAGUACGAGAGGAACUGCAGGUUCGGACAUUUGGUUCAUGCACUCGGUCGAGCGGCCGUUGGUGCGAGGCUACCAUCCGUGGGAUUAUGCCUGAACGCCUCUAAGGCCGUAUCCCUUCUU
?????CGUGGCAAGAAU-????????GACUCUGU-GAGUCAAAAGGCUC????????????????-???????????????????????-???--???-?-?????????????????
??????????????????????-?---??????????????????????????????-???CGAGA-CUU
AGAACCGUCCUGUA[-   ][GCAGAACUGCUACGGGA]

AY859546_Gomphocerinae GGAUAACUGGCUUGUGGCGGCCAAGCGUUCAUAGCGACGUCGCUUUUUGAUCCUUCGAUGUC-GGCUCUUCCUAUCAUUGCGAAGCAGAAUUCGCCAA GCGUU-
GGAUUGUUCACCCACUAAUAGGG-AACGUGAGCUGGGUUUAGACCGUCGUGAGACAGGUUAGUUUUACCCUACUGAUGAC--UGUGUCGUUGCGAUAGUA
AUCCUGCUCAGUACGAGAGGAACCGCAGGUUCGGACAUUUGGUUCACGCACUCGGCCGAGCGGCCGGUGGUGCGAAGCUACCAUCCGUGGGAUUAAGCCUGAACGCCUCUAAGGCCGAAUCCCGUCUA
GCCAUUGUGGCAACGAU-????????GAGUCCCGAGAGUCGAAAGGCUC????????????????-?????????GGC-GCGGUCGACCCAC--GUGG---CG-CCGC-GCCGUACGG
GCCC?????????????????????---???????????????????????????????-??-?????????????CCGGUCGACCAUGGGU???????????UUCGAUGUCGGGA-CUC
GGAAUCGUC-UGUA[-][GACGACUUAGGUACCGGGCGGGGUGUUGUACUCGGUAGAGCAGUUGCCACG]

[20â€šÃ„Ã´ 21â€šÃ„Ã´ 19â€šÃ„Ã´ 3â€šÃ„Ã´ 22 23
25 23â€šÃ„Ã´ 27 22â€šÃ„Ã´
31 2â€šÃ„Ã´ 32 33 34 35 36
38 39 40 39â€šÃ„Ã´ V7 38â€šÃ„Ã´ 36â€šÃ„Ã´
34â€šÃ„Ã´ 45 47]
Unaligned 8888888888------9999999999999999999999999---1111111111----
2222222222222222222222222222222222222222-----------33333333333333333333333333333333333333333333333---4444444444----555555555555----
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---555555---7777777--------
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888888888888888888888888888------------[-????]
Unaligned_Zygoptera ----------------999999999999999999---------1111111111----
2222222222222222222222222222222222222222------------------333333333333333333333333333333333333--------------------555555555555----
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888888888888888888888888888------------[-????]
Protosticta_sp_A_ZPA GUCGCGGUUAUACG-AUAG-GUGAUUGAAU-UGU---UC-UCAGUUU-----UCA-GUAAAUUUUAAUUU------
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UCUUAUUUUAAAUGUUAAUUUU-----UACUU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAUAGGAUUU-GGCGGUA-UUUUAU-U-C-UACUCAGAGGAAC-CUG-UC-CCUUAA- UUGACAAU-
CCA-CGAUUAUAAUGUACUUU--GGUUUGUU--UUGCAGCUUGUAUACCGCCG-UC-AUCA-GAAUAU-CCU-UUUAGGG-GU---AAUUUUCUUUC-UAUUUUUAU-AAAU AAUAUGUCAGGUC-
AAGGUGCAGCUU-AUAGC-A-AAG--UGAUG--A-GAUGGGUUACAUUAAU---UUAU-A--AUUU--UA-CGGAU--UCUGAUA---AUUG-UU---UAUUGGG-- UAAAGU-UGGA[-????]
ZPCs_BPCp --

---UU---UUUAAUU-- UGAAGG-
UGGA[-????]
Protosticta_sanguinostigma_BPS ??????????????-???-?--????????????-????-????????--?--???-?-------------------
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??????????????????????----?????-?????GUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGCA-UUUUAU-U-C-CUUUCAGAGGAAC-CUG-UC-CCUUAA- UUGACAAU-
CCA-CGAUUGUAAUGUACUUU-AACUUUGUC--UUUCAGCUUGUAUACCUCCG-UC-AUCA-GAAUAU-CUU-UUUAGAG-UU---CAUUUUCUUUU-UAUUAUAUA-AAAU AAUAUGUCAGGUC-
AAGGUGCAGCUU-AUAGU-A-AAG--UGUUG----GAUGGGUUACAUUAAU---UUUU-A--GUUA--AA-UGGAU--UUUGAUG---AUUG-UU---UAUCAAA-- UGAAGG-UGGA[-????]
Sinosticta_ogatai_ZSOg GCCGCGGUUAUACG-AUUG-AUGUUAGAAU-UGUU-AAU-UGGUUAA------UUA-GUUAAUUUGUUUUU------
-----UAUUAAUUUUUUGAUUUUUAGGUGAAAUUUAUAUUUUUUAA------------AAUAUAUAAUUUUUGAUGCUAUG---AAA--UUUA-UUUUA----U-AAACGGGGAUUAGAUACCC-
CCUUAUUUUAAGUGUUAAUUUU---GUUGCCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UC-CCUUUA- UCGACAUU-
CCA-CGAUU-UAAUUUACUCU--AUCUUGUA--UAUCAGUUUGUAUACCUCCG-UC-AUCA-GAAUAU-CUU-UUUAGAG-UU---AAUUUUCUUUU-UAUUUAUUG-AAAU AGUAUGUCAGGUC-
AAGGUGCAGCUU-AUGAU-U-GAG--CGGUAUUA-GAUGGGUUACAAAAAA----GUU-A--UUUA--UA-UGGAC--UUAAUGU---UUUG-UUGU-UCUUUAA-- UGAAGG-UGGA[-????]
Palaemnema_paulicoba_ZPP GCCGCGGUUAUACG-AUGG-GAGGAAGAGU-UGA--UUU-UGGUUAAU--U--UUA-GUAAAUUUUUAUUU------
----UUAAUUUCUUUUUAUUUUUUAGGUGAAAUUUAUAUUUAAUUG-----------UGAUUUAUUUUUGUUGAUUCUAUG---AAAUUUUGA--UUUA----U-AAACGAGGAUUAGAUACCC-

UCUUAUUUUUGAUGUUAAUUUU-----UACCA-GGGUAGUAUUA-GU-UAUGAU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAU-U-C-UGUUCAGAGGAAC-CUG-UC-CCUUAA- UUGAUGCU-
CCA-CGAUUGUUACGUACUUC--CCUUUGU---UUUCAGUUUGUAUACCUCCG-UC-AUCA-GAAUAU-CUU-UUUAGGG-UU---AAUUUUCUUUU-UAUUCUUU--UUAU AAUAUGUCAGGUC-
AAGGUGCAGUUU-AUGGG-G-AAG--UGUUG--A-GAUGGGUUACAGUAGA--UAUUU-A--UUUA--UA-CGGAU--UUAAAAA---CUUG-UUUA-UUUUUAA-- UGAAGG-UGGA[-????]
Palaemnema_domina_ZPDm ??????????????-???-?--????????????-????-??????-------???-?------------------
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???????????????????????----?????-?????GUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-CUUUAU-U-C-UGUUCAGAGGAAC-CUG-UC-CCUUAA- UUGAUAUU-
CCA-CGAUUUUUAUUUACUUU--CUUUUGUU--UAACAGCUUGUAUACCUCCG-UC-AUCA-GAAUAU-CUU-UUUAGGG-UU---AAUUUUCUUAU-CAUUCUUU--UAAU AUUAUGUCAGGUC-
AAGGUGCAGUUU-AUAGG-G-AAG--UGCUG--A-GAUGGGUUACAAUAUU--UAUUU-A--UUUA--UA-CGGAU--UUAAUAA---UUUG-AUU--UUUUUAA-- UGAAGG-UGGA[-????]
Palaemnema_melanostigma_BPM ??????????????-???-?--????????????-????-??????-------???-?------------------
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???????????????????????----?????-?????GUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-CUUUAU-U-C-UGUUCAGAGGAAC-CUG-UC-C CUUAA-
UUGAUAUU-CCA-CGAUUUUUAUUUACUUU--CUUUUGUU--UAACAGCUUGUAUACCUCCG-UC-AUCA-GAAUAU-CUU-UUUAGGG-UU---AAUUUUCUUAU-C AUUCUUU--
UAAUAUUAUGUCAGGUC-AAGGUGCAGUUU-AUAGG-G-AAG--UGCUG--A-GAUGGGUUACAAUAUU--UAUUU-A--UUUA--UA-CGGAU--UUAAUAA---UUUG- AUU--UUUUUAA--
UGAAGG-UGGA[-????]
Isosticta_robustior_BIR ??????????????-???-?--????????????-????-??????-------???-?------------------
--------------------????????????--?????---???--????-?????----?-???????????????????-
???????????????????????----?????-?????GUAUUA-GU-UAAGAU-CUUGAAAUCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UC-CCUUAA- UCGACAAU-
CCA-CGAGAUU-AAUUACUUU--CUUUUGU---UUUCAGUUUGUAUACCUCCG-UC-AUAA-GGAUGU-CCU-UAUAGGG-UU---AAUUUUCUUGA-UUAAUCAA--UUUA AUUAUGUCAGGUC-
AAGGUGCAGUUU-AUGAG-A-AAG--UGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--AAAUGGU---UUUG-AA---GCCGUUU-- UGAAGG-UGGA[-????]
Rhadinosticta_simplex_ZRS ACCGCGGUUACACU-AUAA-GGGGUAAGGA-AUA--UUGUUAGUUA-------AUA-GUAAACGUUAGUUU------
----UUAUUAAAUUUUUAAUUUUUAGGUGAAAUUUUUAUUUUUUUG-----------AAAAAUAUAUAUUGUGAUCCUAUG---AAA--CUUA-UUUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUAUUAAGUGUUAAUUUUU---AAACUU-GGGUAGUAUUA-GU-UAAGAU-CUUGAAAUCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAGC-CUG-UU-CCUUAA- UCGAUAGU-
CCA-CGAUAUA-AUUUACUUU--UUCUUGU---UUUCAGUUUGUAUACCUCCG-UC-AUAA-GGAUGU-CCU-AUUAGGG-GU---AAUUUCCUUGA-UUAAUAAA--UUUA AUUAUGUCAGGUC-
AAGGUGCAGUUA-AUGAA-A-AAG--UGG----A-GAUGGGCUACAAUAAA----CCU-A--UUUA--UA-UGGAU--AAGUGGA---AUUA-UA---UUUAUUU-- UGAAGG-UGGA[-????]
Amphisticta_silvarum_ISO_ZAS ??????????????-????-???????GGA-AUA--UUAUUAGUUU-------GUA-GUUAGCUUUUAUUA------
--UAUUAUUAAGCUUUUAAUUUUUAGGUGAAAUUUUUAUUUUCUUG------------GAAUAUAUAUUUGUGAAUCUAUG---AAA--CCUA-UCUUA----A-AGACAAGGAUUAGAUACCC-
UUUUAUAUUAGGCGUUAAUUUU----AAACUU-GGGUAGUAUUA-GU-UAAGAU-CUUGAAAUCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UC-CCUUAA- UCGACAAU-
CCA-CGAUAUU-AAUUACUUU--CUUUUGUU--UAUCAGUUUGUAUACCUCCG-UC-AUAA-GGAUGU-CCU-UUUAGGG-UU---AAUUUCCUGGA-UUAUCAAA--UUUG UUUAUGUCAGGUC-
AAGGUGCAGUUU-AUAAG-G-AAGA-UGG----A-GAUGGAUUACAAUAGU----AUU-A--UUUA--UA-CGGAU--AAAUAAG---GUUG-UA---CUUGUUU-- UGAAGG-UGGA[-????]
Labidosticta_vallisi_OLVa_BLVa ??????????????-???-?--????????????-????-??????-------???-?------------------
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??????????????????????----??????-?????GUAGUA-GU-UAAGAU-CUUGAAAUCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UC-CCUUAA- UCGACAAU-
CCA-CGAUAUU-AUUUACUUU--CUUUUGUC--UUUCAGUUUGUAUAUCUCCG-UC-AUAA-GGAUGU-CCU-UUUAGGG-UU---AAUUUCCUGGA-UUAUCAAA--UAUA AUUAUGUCAGGUC-
AAGGUGCAGUUU-AUGGG-A-AAG--UGG----A-GAUGGAUUACAAUAAU----AUU-A--UUUA--UA-CGGAU--UUUUAUA---UUUA-UA---UGUUUUU-- UGAAGG-UGGA[-????]
Orosticta_filiciola_ISO_ZOF ??????????????-???A-GGGGUAAGGA-AAA---UA-UUGGUUU------GUA-GUUAAUUUAUUUUUU-----
-----UAUUAAAUUUUAAAUUUUUAGGUGAAAUUUUAUUUUAUUUU-------------AAUAUAUUUUUGUGAUUCUAUG---AAA--UUUA-UUUUA----U-AGACAAGGAUUAGAUACCC-
UUUUAUAUUAAGUGUUAAUUUU----CAUCCG-GGGUAGUAUUA-GU-UAAGGU-CUUGAAAUCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UC-CCUUAA- UCGACAAU-
CCA-CGAUAUU-AUUUACUUU--CUUUUGU---UUUCAGUUUGUAUACCUCCG-UC-AUAA-GGAUAU-CCU-UUUAGGG-UU---AAUUUUCUGGA-UUAUUAAA--UAUA AUUAUGUCAGGUC-
AAGGUGCAGUUU-AUGGG-A-AAG--UGG----A-GAUGGAUUACAAUAAU----AUU-A--UUUA--UA-CGGAA--CUUUAUA---UUUA-UA---UGUAAUU-- UGAAGG-UGGA[-????]
Platycnemis_pennipes_OPPp ACCGCGGUUACACG-AUU-GGAGAAAAAGA-UUA-UUAU-CGGUUA-------GUA-GUCAAUAUUUAUUUU-----
-----UAUUUUCUUUAAAUUUUUUAGGUGAAAUUUAUAUUUUUAUAU-----------AAAAUAAUUUUUUAUACUCUACG---AAA--UUUA-GAAAU----U-AAACUAGGAUUAGAUACCC-
UUUUAUGCUGAAUGUAAAUGAA----AUACCU-GGGUAUUAUUA-GG-UAUGGU-CUUUAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UC-CCGUAA- UCGACAAC-
CCA-CGAUUUU-AUGUACUUU--AAUUUGU---AUGCAGUUUUUAUACCUCCG-UC-AUAA-GAAUAU-CCU-UUUAGGG-UU---AAUUUUCUUAA-UUAUUUAA-GAUUA

AU-AUGUCAGGUC-AAGGUGAAGCUU-AUAUU-C-AAG--UGG----A-GAUGGGUUACAAUAAA----GUU-A--UUUA--UG-CGGAU--UUUUAUA---CUUA-UA---UUUAUGA-- UGAAGU-
UGGA[-????]
Copera_annulata_OCAn_ZCAn ??????????????-????????????GGA-UCU-UUUU-UGGUUA-------AUA-GAUACUGUUUUGUUU-----
-----UAUUUUAUUUAAAUUUUU-AGGUGAAAUUUAUAUUUUUAUAU-----------AAAAUAAUUUUACAUAAUCUGUG---AAA--CUUG-GAAUA----U-AAACUAGGAUUAGAUACCC-
UUUUAUGCUAAGUGUAAAUUUU----AUACCC-GGGUAUUAUUA-GU-UAUGGC-CUUCAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-CC-CCGUAA- UCGACAGU-
CCA-CGAUUUA-AUUUACUUA--AAAUUGU---AUUCAGUUUUUAUACCUCCG-UC-AUAA-GAAUAU-AUU-UAUAGAG-AU---AAUUUUCUUAA-UAACUUAA--GGUU AAAAUGUCAGGUC-
AAGGUGAAGCUU-AUAUU-U-AAG--GGG----A-GGUGGGUUACAAUAAA----AUU-A--UUUA--UG-CGGAA----UUAUA---CUAG-UG--UAUUAUAA-- UGAAGA-UGGA[-????]
EU055007_Copera_vittata ---

---------------------------UUAUUA-GU-UAUGGU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UC-UCGUAA-UUGACAUU- CCA-CGAUUUU-
GUUUACUUA--ACUUUGU---AUUCAAUUUUUAUACCUCCG-UC-AUAA-GAAUGU-CUU-UAUAGAG-UU---AAUUUUCUUAG-UUAUUUAA--GAUAAAAAUGUCA GGUC-AAGGUGAAGUUU-AUAGU-
U-AAG--AGA----U-GAUGGGUUACAAUAAA----AUU-A--UUUA--UA-CGAAU--GUAUAUG---AUUA-UA----UUAUAU--UGAAGG-
UGGA[-????]
Copera_marsouipes_PLA_ZCM UCCGCGGUUAUACG-UUUAG-GAAAAAGGG-GUA-AUAU-UGGUUA-------AUA-GUAAUUAUUAAUUU------
----UUAUUUCUUUUAAAAUUUUUAGGUGAAAUUUGUUUUUUAUUU------------AAAAUAAGGUUUUAGAUUCUAUG---AAA--UUUG--AAUA---UU-AAACUAGGAUUAGAUACCC-
UGUUAUAUCAAGUGUAAAUUUU---GAUACCU-GGGUAUUAUUA-GU-UAUGGU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UC-UCGUAA- UUGACAUU-
CCA-CGAUUUU-GUUUACUUA--ACUUUGU---AUUCAAUUUUUAUACCUCCG-UC-AUAA-GAAUGU-CUU-UAUAGAG-UU---AAUUUUCUUAA-UUAUUUAA--GAUA AAAAUGUCAGGUC-
AAGGUGAAGUUU-AUAGU-U-AAG--AGA----U-GAUGGGUUACAAUAAA----AUU-A--UUUA--UA-CGAAU--AUAUAUG---AUUA-UA----UUAUAU-- UGAAGG-UGGA[-????]
Coeliccia_albicauda_OCAL_BCC ??????????????-???-?--????????????-???-???????-------???-?------------------
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??????????????????????----??????-?????GUAUUU-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UC-CCUUAA- UCGAUAAU-
CCA-CGAUUAU-AAUUACUUA--GUUUUGUU------AGUUUUUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-UU---AAUUUUCUUAA-UAGUAAGA--AGUU ACUAUGUCAGGUC-
AAGGUGAAGCUU-AUAAU-U-AAG--UGG----A-GAUGGAUUACAAUAAA---UUUU-A--UUUA--UA-UGGAU--AUAAAGU---GUUA-UA----CUUUUU-- UGAAAG-UGGA[-????]
EU054985_Coeliccia_cyanomelas ---
--???????????-??
????????????????????----??????-?????GUAUUU-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UC-CCUUAA- UCGAUAAU-
CCA-CGAUUAU-AAUUACUUA--GUUUUGUU------AGUUUUUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-UU---AAUUUUCUUAA-UAGUAAGA--AGUU ACUAUGUCAGGUC-
AAGGUGAAGCUU-AUAAU-U-AAG--UGG----A-GAUGGAUUACAAUAAA---UUUU-A--UUUA--UA-UGGAU--AUAAAGU---GUUA-UA----CUUUUU-- UGAAAG-UGGA[-????]
Calicnemia_miles_PCN_OCMi ??????????????-????????GGUAUGC--UA-UUUU-UGGUUU-------AUA-GUAUAAUUGAUUU-------
---AUUAAUAUUUUAAUUAUUUUUAGGUGAAAUUUAUAAUUAUUAAU-----------AAUUUAUUUAUUUUGAUUCUAUG---AAA--AUUA-GAUUU----U-AAACUAGGAUUAGAUACCC-
UUUUAUGCUAAAUGUUAAUUUA----UUACUU-GGGUAAUAUUA-GU-UAUGUU-CUUUAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UAUUCAGAGGAAU-CUG-UC-CCUUAA- UCGAUAGU-
CCA-CGAUUUA-AAUUACUUA--UUUUAGUU--A---AGUUUUUAUACCUCCG-UC-AUUA-GAAUAU-CUU-UUUAGAG-UA---AAUUUUCUAAA-UUUUUAGA--AGCU AUUAUGUCAGGUC-
AAGGUGAAGCUU-AUGAA-U-AAG--UGG----A-GAUGGAUUACAAUAGG---UUUU-A--ACUA--AA-CGGAU--UUGGAG----AUUA-UA----AUUCAA-- UAAAGG-UGGA[-????]
Prodasineura_vitatta_OPV_PRN ??????????????-?????????????GA-UUA-AUUU-UGGUUA-------UUA-GUUAAUUUUAUUUA------
---UUUAUUUUGUUUGGAAAUUUUGGGUGAAAUUUAUAAUUUUAUUU-----------AAUAUAUUUUUAUUGAUUCCAUU---AAA--CUUA-GAUUU----U-AAACGAGGAUUAGAUACCC-
UCUUAUACUUAGUGUGGUUUAU-----UGCUU-GAGUAGUAUUA-GU-UAUGUU-CUUGAAACUCAAAGGAUUU-GGCGGGA-UUUUAU-U-C-CAUUCAGAGGAGU-CUG-UC-CUGUAA- UCGAUAUC-
CCA-CGAUUUU-AUUUACUUA--CUUUUGU---UUUCAGUUUUUAUACCUCCG-UC-AUAA-GAAUUU-CUU-UUUAGAG-UU---AAUUUUCUUAA-UUACUAAA--UGUA AAGAUGUCAGGGC-
CAGGUGAAGCUU-AUAUG-U-AAG--UAG---UU-GAUGGGCUACCAUAAA----UUU-A--UUUA--UA-CGGAU--CUUUUGA---CUUA-UG---UUGAAUU-- UGAAGG-UGGA[-????]
Chlorocnemis_abboti_PRO_ZCAb ??????????????-????GGA--GAAAGA-UUA-AUUU-UGGUUA-------UUA-GUUAAUUUUAUUU-------
-AUUUAUUUUGUUGAAAGAUUUUUGGGUGAAAUUUAUAAUUUUAUUU-----------AAUAUAUAUAUUUUGAUUCUAUU---AAA--CUUG-GAUUU----U-AAACGAGGAUUAGAUACCC-
UCUUAUACUUAGUGUAGUUAUU-----UACUU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAU-U-C-UAUUCAGAGGAGC-CUG-UC-CUGUAA- UCGAUAUU-
CCA-CGAUUGU-AUUUACUUA--UUUUUGU---UUUCAGUUUUUAUACCUCCG-UC-AUAA-GAAUAU-CUU-CUUAGAG-UU---AAUUUUCUUGA-UUAUUUAA--UAUA AAUAUGUCAGGUC-
AAGGUGAAGCUU-AUAUA-U-AAG--UGG---UU-GAUGGGCUACAAUAAA----UUU-A--UUUA--UA-UGGAU--AUUUUGA---CUUA-UG---UUAAAUU-- UGAAGG-UGGA[-????]

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Nososticta_solida_ZNSo                          ??CGCGGUU-U-CG-AUU-GGAGGGAAAGA-UUU-AUUU-UGGUUUG------AUA-GUAUUCUUUAUUU-------
--GUUAUUAUUGUUUUGAAUUUUUAGGUGAAAUUUAUAUUUAUUUAA-----------AAUAUAUAAUUUUUAAUUCUAUG---AAA--UUUG-GAUGUA-A-U-AAACUAGGAUUAGAUACCC-
UUUUAUACCAAAUGUUAAUU-------UACCU-GGGUAGUAUUA-GU-UAUGUU-CUUUAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UC-CCGUAA-    UUGAUAUU-
ACA-CGAUAAG-AUUUACUUG--UUUUUGUU--AUUCAGUUUUUAUAUCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-UU---AAUUUUCUUAA-UUUUUUAA-GAUAA
A-UAUGUCAGGUC-AAGGUGAAGCUU-AUAAA-C-AAG--AGG----A-GAUGGGUUACAAUAAA----UCU-A--UUUA--UA-ACGAA--UUUUUUA---UUUA-AA--UUUAAAAU-- UGAAGG-
AGGA[-????]
Phylloneura_westermanni_BPW                     ??????????????-???-?--????????????-???-????????------???-?------------------
--------------------????????????---------------------------------------------?????---???--????-??????-?-?-???????????????????-
???????????????????????----?????-?????GUAUUA-GU-UAUUUU-CUUAAAACCCAAAGGAUUU-GGCGGUA-UUUUAU-U-C-UAUUUAGAGGAAC-CUG-UU-CUUUAA- UUGAUAUU-
CCA-CGAUUUU-AUUUACUUA--AUUUUGU---AUUCAGUUUUUAUACCUCCG-UC-AUAA-GAGUGU-CUU-GUUAGAG-UU---AAUUCUCUUGA-UUUUUAAAAGAUAA AG-AUGGCAGGUC-
AAGGUAAAGCUU-AUAAU-U-AAG--UGG----A-AAUGGGUUACAAUAAU----AUU-A--UUUA--UA-CGGAU--UCUUUUA---UUUA-UA---AAUUAGU-- UGAAGG-UGGA[-????]
Onychargia_atrocyana_ZOA                        UCCGCGGUUAUACG-AUUAGG-UAAAAAGA-UUA-UUAU-UGGUUU-------AUA-GUAAAAUUUUUAA-------
-UAUUUAUUAAUUUUUAAUUUUUUAGGUGAAAUUUAUGUUUUUUUG-----------UGUUUUAUUUUUCUUGACUCUAUG---AAA--UCUA-GAUUUG---U-AAACGAGGAUUAGAUACCC-
UUUUAUACUAGAUGUUAAUUUUG----AGCUU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-UU-CUAUUA- UCGAUAAU-
CCA-CGAUUUU-GUGUACUUG--UUUUUGU---UUUCAGUUUUUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-CA---AAUUUUCUUAA-UUAUAUUA--UUUA AGAAUGUCAGGUC-
AAGGUGAAGCUA-AUAAG-C-AAG--UUG----A-AAUGGGUUACAUUAAA----UUU-A--UUUA--UA-CGGAA--AAAUGGCA--UGAA-UU--GGUCUUUU-- UGAAGG-CGGA[-????]
Argia_moesta_COE_OAM                            UCCGCGGUUAUACG-AUUAGG-GAAAAAGA-UUA-UUAU-UAGUUA-------AUA-GUUAAUAUAAUUA-------
---AUUAUUAAAAUUGGAAUUUUUAGGUGAAAUUUAUAUUUUUAUA-----------UAAUAUAUUAUUUAUUAUUCUAUG---AAA--UUUA-UAUUGU---U-AAACAAGGAUUAGAUACCC-
UUUUAUAUUAAAUGUUAAUUUUU----UGCUU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUCCAGAGGAGC-CUG-UU-CUGUAA- UCGAUAAU-
CCA-CGUUUUU-AUUAACUUA--UAAUUGU---UGUCAGUUUUUAUACCUCCG-UC-AUAA-GAAUAU-UUU-UUUAGAA-UA---AAUUUUCUUGA-UUAUCAAA--GAUA AAUAUGUCAGGUC-
AAGGUGAAGCUA-AUGUA-U-AAG--UAG----A-AAUGGGCUACAAUAAA----UUU-A--UUUA--UA-UGAAU--AGUAAUUU----UU-AA--UUUUUAUU-- UGAAGG-UGGA[-????]
Argia_nahuana_BAN                               ??????????????-???-?--????????????-???-???????-------???-?------------------
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???????????????????????----?????-?????GUAUUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUCCAGAGGAAC-CUG-UU-CUGUAA- UCGAUAGU-
CCA-CGGUUUU-AUAAACUUA--UAAUUGU---UUUCAGUUUUUAUACCUCCG-UC-AUAA-GAAUAU-UUU-UUUAGAA-UA---AAUUUUCUUAA-UUAUCAAA--AAUA AGUAUGUCAGGUC-
AAGGUGAAGCUA-AUAUA-U-AAG--UAG----A-AAUGGGUUACAAUAAU----AAU-A--UUUA--UA-CGGAU--UUUAGAAA----UU-AA--AGUCUAUU-- UAAAGG-UGGA[-????]
Argiocnemis_rubescens_ZAR                       GCCGCGGUUACACG-AUU-GGAGCAAAGAA-UUA-UUAU-UAGUUA-------GUA-GUUAUUUUUUAUU-------
----UUAUUAAUAUUUUAAUUUUUAGGUUAAAUUUAUAUUUUAUAUA---------UUAUAAUAUUUAUUUUGAUUCUACGUUUAAA--UUUA-GGUUA----U-AAACAGGGAUUAGAUACCC-
CUUUAUACUGAAUGUCAAUUUAUUUUUUACUU- GGGUAGUAUCA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-CC-CUGUAA- UCGAUGUU-
CCA-CGAUUUU-AUUUACUUG--UGUUUGU---UUCCAGUUUUUAUACCUCCG-UC-AUAA-GGAUAU-UUU-UUUAGAA-UA---AAUUUUCUUUU-UUGUUAAA--UUCA AGUAUGUCAGGUC-
AAGGUGAAGUUU-AUACA-C-AAG--AAG----U-GGUGGGUUACAAUGUA----AUU-A--UAUA--CA-CACGG--AUUUAUUUAUU-UU-AU--GUUUAUAA-- AGAAGG-AGGA[-????]
Mortonagrion_binocellata_BMB                    ??????????????-???-?--????????????-???-???????-------???-?------------------
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???????????????????????----?????-???????????-??-??????-?????AACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAGC-CUG-CC-CUUUAA- UCGAUAUU-
CCA-CGAUUUU-AUUUACUUG--UAAUUGU---UUACAGUUUUUAUACCUCCG-UC-AUAA-GAAUAU-UUU-UUUAGAA-UU---AAUUUUCUUUU-UUGUUAAA--UGCA AAAAUGUCAGGUC-
AAGGUGAAGCUA-AUAUA-C-AAG--AAG----A-GGUGGGCUACAAUAUA----GUU-A--UUUA--UA-CGGAU--UUAUAUAU----UU-AU--AUAUUUAA-- UAAAGG-UGGA[-????]
Agriocnemis_pygmaea_OAP_BAP                     ??????????????-???-?--????????????-???-???????-------???-?------------------
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???????????????????????----?????-?????GUAUUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UU-CUUUAA- UCGAUAAU-
CCA-CGAUUUU-AUUAACUUC--UUCUUGU---UUUCAGUUUUUAUACCUCCG-UC-AUAA-GAAUAU-UUU-UUUAGAA-UA---AAUUUUCUUUU-UUGUUAAA---ACA AAGAUGUCAGGUC-
AAGGUGAAGCUU-AUGUA-G-GAG--UAG----A-AAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UUAUUUAAU---UU-AU--AUUAAUAA-- UGAAGG-UGGA[-????]
Austroagrion_watsoni_ZAW                        GCCGCGGUUAUACG-AUU-GGAGUAAAAGA-UUG-UUAU-UAGUUU-------AUA-GUAAAUUUUAUCUU------
---UUUAUUAAUUUUUUAUUUUUUAGGUGAAAUUUAUAUUUAUAUAA-----------AAUAUAUUUAUUUUUAUUCUAUG---AAA--UUUU-UUUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUAUUUAAUGUUAAUUUUA---GCACUU-GGGUAGUAUUA-GU-UAAGUU-CUUGAAACCCAUAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUUUAGAGGAAC-CUG-UC-CUAUAA-
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UCGACAAU-CCA-CGAUUUU-AUCAACUUA--UUCUUGU---GUUCAGUUUUUAUAUCUCCG-UC-AUAA-GAAUAU-UUU-UUUAGAA-AA---AAUUUUCUUGA-UUGUUUAA---GCA
AUUAUGUCAGGUC-AAGGUGAAGCUU-AUGGA-U-AAG--UAG----A-GAUGGGUUACAUUAAU---AAUU-A--UUUA--UA-CGGAU--UUUUAAAUU---UA-AU--UUUAUUAU-- UGAAGG-
UGGA[-????]
Archibasis_viola_ZAV ---

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AF232897_Coenagrion_puella ---

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JQ966640_Coenagrion_resolutum ---

--------------------------------------GUAGUA-GU-UAUGUC-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UU-CUGUAA- UCGAUAGU-
CCA-CGAUUUU-AUUAACUUA--UGUUUGU---UUUCAGUUUUUAUAUCUCCG-UC-AUAA-GAAUAU-UUU-UUCAGAA-UU---AAUUUUCUUAA-UUAUUAAA--GAUA AUUAUGUCAGGUC-
AAGGUGAAGCUU-AUACA-U-AAG--UAG----A-AAUGGGUUACAAUAAA----UUU-A--UUUA--AA-CGGAU--UUUAAAUU----UU-AU---UUUUAUU-- UGAAGG-AGGA[-????]
Pseudagrion_cingillum_COE_OAAL_BPA ??????????????-???-?--????????????-????-??????------???-?-------------------
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???????????????????????----?????-?????GUAUUA-GU-UAUGUU-CUUGAAACUCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUUUAGAGGAAC-CUG-UU-CUGUAA- UCGAUAUU-
CCA-CGAUUUU-AUUAACUUA--CUUUUGU---UUUCAGCUUUUAUAUCUCCG-UC-AUAA-GGAUAU-UUU-UUUAGAA-UU---AAUUUUCUUAA-UUGUCUGA--UACA GGUAUGUCAGGUC-
AAGGUGAAGCUU-AUGAG-U-AAG--UAG----A-AAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UAUUUAUU----UU-UU--AUGAAAUA-- UGAAGG-UGGA[-????]
EU054967_Pseudagrion_aureofrons ??????????????-????---????????????-????-????????-----???-?-------------------
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???????????????????????----?????-??---GUAUUA-GU-UAUGUU-CUUGAAACUCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUUUAGAGGAAC-CUG-UU-CUGUAA- UCGAUAUU-
CCA-CGAUUUU-AUUAACUUA--CUUUUGU---UUUCAGCUUUUAUAUCUCCG-UC-AUAA-GGAUAU-UUU-UUUAGAA-UU---AAUUUUCUUAA-UUGUCUGA--UACA GGUAUGUCAGGUC-
AAGGUGAAGCUU-AUGAG-U-AAG--UAG----A-AAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UAUUUAUU----UU-UU--AUGAAAUA-- UGAAGG-UGGA[-????]
Pseudagrion_ignifer_COE_OPi ??????????????-?????--GGUAAAGA-UUA-UUAU-UGGUUG-------AUA-GGUUUAUUAUUGUUG-----
----UUAUUAUUAUUGAAAUUUUUAGGUGAAAUUUAUAUUUUUAUGU-----------AAUAUAUUUAUUUUUGUGCUGUG---AAA--CUUG-AAUUA----U-AGACAAGGAUUAGAUACCC-
UUUUAUAUUGAGCGUUAAUUUUG----CACUU-GGGUAGUAGUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUUUAGAGGAAC-CUG-UU-CUGUAA- UCGAUACU-
CCA-CGAUUUU-AUCAACUUG--UUUUUGU---UUUCAGUUUUUAUAUCUCCG-UC-AUAA-GAAUUU-UUU-UUUAGGA-UG---AAUUUUCUUGA-UUGCUUAA--GGCA AUUAUGUCAGGUC-
AAGGUGAAGCUA-AUAGA-C-AAG--UAG----A-AAUGGGUUACAAUAAC----AUU-A--UUUA--UA-CGGAU--UAUUAUUU----UU-GU----UAAAUA-- UGAAGG-UGGA[-????]
EU055105_Erythromma_najas ---

--------------------------------------GUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UU-CUGUAA- UCGAUAAU-
CCA-CGAUUUU-AUUGACUCA-CGCUUUGU---UUUCAGUUUUUAUAUCUCCG-UC-AUAA-GAAUAU-UUU-UUUAGAA-AA---AAUUUUCUUAA-UUGUCAAA--CACA AUUAUGUCAGGUC-
AAGGUGAAGCUA-AUAGU-U-GAG--UAG----A-AAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UUUUUAUA----UU-GU--AAUGAUUA-- UGAAGG-UGGA[-????]
Cercion_plagiosum_AJ488552 ---

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EU477628_Cercion_lindeni                         ------------------GGG-C-AAAAGA-UUA-UUUU-UGGUUA-------AUA-GUCAUUAUUAUCUUUU----
-----UAUUAAUUUUAAACUUUUUAGGUGAAAUUUUUAUUUUUAUUA----------UAAUAUAUUUAUUUACAUUCUGUG---AAA--CUUA-AGUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUAUUAAGUGUUAAUUUUU----UACUU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UU-CUGUAA- UCGAUAAU-
CCA-CGAU-UUUAUUGACUCA-UGUUUUGU---UUUCAGUUUUUAUAUCUCCG-UC-AUAA-GAAUAU-UUU-UUUAGAAGAA---AUUUUCUUAAU--UGUUUAA--UGCA AUUAUGCCAGGUC-
AAGGUGAAGCUA-AUAUC-U-GAG--UAG----A-AAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UUUUUAA----AUU-GU--AGUAAUUU-- UGAAGG-UGGA[-????]
Paracercion_hieroglyphicum_AJ488551              -----------------------------------------------------------------------------
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Acanthagrion_quadratum_COE_ZAQ                   UCCGCGGUUAUACG-AUUGGGAC-AAAAGA-UUU-UUUU-UAGUAG-------GUA-GUAAUUGAUAACU-------
---UUUAAUAUCUUUAGAAAUUUUAGGUUAAAUUUAUAUUUUUAUG-------------AAAAAUUAUUUUUUGUUCUAUG---AAA--UUUA-GAAUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUACUGAAUGUUAAUAUUA----CACUU-GGGUAGUAGUA-GU-UAAGAU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UU-CUUUAA- UCGAUAAU-
CCA-CGAUUUU-AUCUACUUA--UAUUUGU---UUUCAGUUUUUAUACCUCCG-UC-AUAA-GAAUGC-UUU-UUUAGAA-UA---AGGUUUCUAAA-UUAUUGAA--UAUU UAAAUGUCAGGUC-
AAGGUGAAGCUU-AUGUA-U-AAG--AAG----U-AAUGGGUUACAUUAAA----UUU-A--UUUA--UA-CGGAU--AUUUUGAU----UU-AA--UUUGAAAU-- UAAAGG-UGGA[-????]
Leptobasis_vacillans_ZLV                         UCCGCGGUUAUACG-AUUGGAAC-AAAAGA-UUA-UUAU-UAGUAU-------GUA-GUUAUUUAUAUUU-------
--AAUUAAUUCUAUUUAAAAUUUUAGGUUAAAUUUAUAUUUUUUUU---------AAAAAAUUAUUAAUUAUAAUUCUAUG---AAA--UUUA-GAUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUACUGAAUGUUAAUUAGA----AACUU-GGGUAGUAACA-GU-UAAGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UU-CUUUAA- UUGAUAAU-
CCA-CGAUUUU-AUGAACUUA--UACUAGU---AUUCAGUUUUUAUACCUCCG-UC-AUAA-GAAUAU-UUU-UUUAGUA-UA---AAUUUUCUUAA-UUGUUAAA--UACA UAAAUGUCAGGUC-
AAGGUGAAGCUU-AUGUA-U-AAG--UAG----A-AAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--AUUUAAUU----UU-AA--AUUUAAAU-- UGAAGG-UGGA[-????]
Amphiagrion_saucium_OAS                          UCCGCGGUUAUACG-AUUGGGAC-AAAAGA-UUA-UUAU-UGGUUU-------GUA-GUAACUUUUUAAU-------
--UUUUAUUAAAAUUUAGAAUUUUAGGUUAAAUUUAUAUUCUUUUU----------UGAACUUAUAAAUUUUUAUUCUACG---AAA--UUUA-GAUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUACUAAAUGUUAAUUUUU----CACUU-GGGUAGUAUUA-GU-UAAGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UU-CUUUAA- UCGAUAAU-
CCA-CGAUUUU-AUCCACUUA--CAUUUGU---UUUCAAUUUUUAUACCUCCG-UC-AUAA-GAAUAU-UUU-UUUAGAA-CA---AAUUUUCUUAA-UUGUUAAA--UACA AAUAUGUCAGGUC-
AAGGUGAAGUUU-AUAUG-U-AAG--UAU----U-AAUGGGUUACAAUAAA----AUU-A--UUUA--UA-CGAAA--AUUUAAAU----AU-AU--AUUUAAAU-- UAAAGG-UGGA[-????]
EU054983_Amphiagrion_abbreviatum                 ??????????????-????---????????????-????-????????-----???-?-------------------
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CCA-CGAUUUU-AUCCACUUA--CAUUUGU---UUUCAAUUUUUAUACCUCCG-UC-AUAA-GAAUAU-UUU-UUUAGAA-CA---AAUUUUCUUAA-UUGUUAAA--UACA AAUAUGUCAGGUC-
AAGGUGAAGUUU-AUAUG-U-AAG--UAG----U-AAUGGGUUACAAUAAA----AUU-A--UUUA--UA-CGAAU--AUUUAAAU----AU-AU--AUUUAAAU-- UAAAGG-UGGA[-????]
Xiphiagrion_cyanomelas_ZXC                       -----------------------------------------------------------------------------
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Hesperagrion_heterodoxum_WHH                     ??????????????-???-?--????????????-????-??????-------???-?-------------------
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UAUUAUACUAAAUGUUAAUUUUG----CACCU-GGGUAGUAAUA-GU-UAAGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UAUUCAGAGGAAC-CUG-UU-GUAUAA- UCGAUAAU-
CCA-CGAUUUU-AUUUACUUA--UAUUUGU---AUUCAGUUUUUAUACCUCCG-UC-AUAA-GAAUGU-UUU-UUUAGAA-UA---AAUUUUCUUGA-UUGUUCAA--UACA UAUAUGUCAGGUC-
AAGGUGAAGCUU-AUGUA-U-AAG--UAC----U-AAUGGGUUACAAUAAA----ACU-A--UUUA--UA-CGGAUC-UUUUAAU-----UU-AC--AUUUAAAU-- UGAAGG-UGGA[-????]
Ishnura_elegans_1239                             -----------------------------------------------------------------------------
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EU054942_Ishnura_barberi                  ------------------------------------------------------------------------------
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--------------------------------------UUAGUA-GU-UAAGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UU-GUGUAA- UCGAUAAU-
CCA-CGUUUUU-AUUCACUUU--UAUUUGU---UUACAGUUUUUAUACCUCCG-UC-AUAA-GAAUGU-UUU-UUUAGAA-UU---AAUUUUCUUAA-UUGUUAAA--UACA UAAAUGUCAGGUC-
AAGGUGAAGCUU-AUAUA-U-AAG--UAC----U-AAUGGGUUACAAUAAA----AUU-A--UUUA--UA-CGGAU--UUUUCAU----UUU-AU--AUUGAAAU-- UGAAGG-UGGA[-????]
                            HQ834798_Ischnura_graellsii_1a                   --------------------NNNNNNNNNN-NNN-NNNNNNNNNNNN--
NNNNNN-NNNNNNNNNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNN--NNNNNNNCCNUAUUAUACUAGACGUUAAUAUAU----UACCU-GGGUAGUAAUA-GU-UAAGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUA G-U-C-
UUUUCAGAGGAAC-CUG-UU-GUGUAA-UCGAUAAU-CCA-CGUUUUU-AUUUACUUA--UGCUUGU---ACUCAGUUUUUAUACCUCCG-UC-AUAA-GAAUAU-UUU- UUUAGAA-UU---
AAUUUUCUUAA-UUGUUAAA--UACAUAUAUGUCAGGUC-AAGGUGAAGCUU-AUGCA-U-AAG--UAC----U-AAUGGGUUACAAUAAA----UUU-A--UUUA-
-UA-CGGAU--UUUUUAA----UUU-AU--AUUAAAAU--UAAAGG-UGGA[-      ]
Anomalagrion_hastatum_OAH                 ??????????????-?????--???AAAG--UUAUUUCU-UGGUUG-------GUA-GUAUUUUAUUUA--------
--UCUUAUUAUCUUUUAAAAUUUUAGGUUAAAUUUAUAUUUUUUU----------AUAAUAAUAUUUAUUUGUAAUUCUACG---AAA--UUUA-GAUUA----U-AGACAAGGAUUAGAUACCC-
UUUUAUACUAAAUGUUAAUUUUG----CACCU-GGGUAGUAAUA-GU-UAAGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UAUUCAGAGGAAC-CUG-UU-GUAUAA- UCGAUAAU-
CCA-CGAUUUU-AUUUACUUA--UAUUUGU---AUUCAGUUUUUAUACCUCCG-UC-AUAA-GAAUGU-UUU-UUUAGAA-UA---AAUUUUCUUGA-UUGUUCAA--UGCA nnnAUGUCAGGUC-
AAGGUGAAGCUU-AUGUA-U-AAG--UAC----U-AAUGGGUUACAAUAAA----AUU-A--UUUA--UA-CGGAUC-UUUUAAU-----UU-AC--AUUUAAAU-- UGAAGG-UGGA[-????]
Amphiallagma_parvum_AJ420939              ------------------------------------------------------------------------------
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Azuragrion_granti_AJ420937                ------------------------------------------------------------------------------
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Azuragrion_nigridorsum_AJ420938           ------------------------------------------------------------------------------
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Enallagma_cyathigerum_0110                ------------------------------------------------------------------------------
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EU054946_Enallagma_sp                     ------------------------------------------------------------------------------
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--------------------------------------GUAAUA-GU-UAAGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UAUUCAGAGGAAC-CUG-UU-GUUUAA- UCGAUAGU-
CCA-CGAUUUU-AUUCACUUA--UGCUUGU---UUUCAGUUUUUAUACCUCCG-UC-AUAA-GAAUGU-UUU-UUCAGAA-UA---AAUUUUCUUAA-UUGUUAAA--UACA AUUAUGUCAGGUC-
AAGGUGAAGCUA-AUGCU-U-AAG--UAU----U-AAUGGGUUACAAUAAU----AAU-A--UUUA--UA-UGGAU--UUUUAAG----UUU-AA--ACUUAAAU-- UGAAGG-UGGA[-????]
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E_aspersum_DQ087506   ---

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Aciagrion   ??????????????-???-?--????????????-????-??????-------???-?-------------------
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Aciagrion_borneense_ZAB   ??????????????-???-?--????????????-????-??????-------???-?-------------------
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Protoneura_capillarisBPCp   ---

---GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-AUUUAG-U-C-UUUUCAGAGGAAC-CUG-UU-ACAUAA- UUGAUAAU-
CCA-CGAUUUU-GUUUACUUA--UAUUUGUA--UAUCAAUUUUUAUACCGCCG-UC-AUAA-GAAUAU-UUU-UUUAGAA-CG---AAUUUUCUUGA-UUUAUUAA--UUAA AGUAUGUCAGGUC-
AAGGUGAAGUUU-AUAUG-U-AAG--UGU----U-AAUGGGUUACAUUGGA----UUU-A--UCUA--UA-UGGAU--AAUUAAU---UUGU-UU---UUUAAUU-- UGAAGG-UGGA[-????]
Protoneura_caraZPC[FIXED]   ucCGCGGUUAUACG-AUU-GGGAUAAAAGA-UUA-UUAU-UGGUUAAU--A--GUA-GAUUUUUAGUUUUU------
------AUAAUAAAUUGAAAUUUUAGGUGGAAUUUAUAUUUGUUU-----------GUAAUAUAUUUGUUUUUAUUCUGUG---AAA--CUUU-AGUCUU---U-AAACAAGGAUUAGAUACCC-
UUUUAUAUUUAGUGUUAAUUGUU----UACUU-GGGUAGUAUUA-GU-UAUGAU-CUUGAAACCCAAAGAAUUU-GGCGGUA-AUUUAG-U-C-UUUUCAGAGGAAC-CUG-UU-GUUUAA- UUGAUAUU-
CCA-CGAUUUG-GUUUACUUG--UACUUGUA--GUUCAGUUUUUAUAUCGCCG-UC-AUAA-GAAUAU-UUU-UGUAGAA-UA---AAUUUUCUUAA-UUUAUUAA--UUUA AGUAUGUCAGGUC-
AAGGUGAAGCUA-AUGUU-C-AAG--UAU----U-AAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UUUUUAU----UUG-AA--AGUGGAUU-- UGAAAG-UGGA[-????]
ZPRm_Psaironeura_remissa   ---

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Elattoneura_analis_glauca   ---

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Neoneura_aaroni_PRN_ONA   ??????????????-????????????GAG-GAUAUUAU-UAGAUUA-----AUA-GUAAAUUUUAGGUU------
----UUAUUAAUUUUGGAAAUUUUAGGUAAAAUUUAUAUUUUUGUA-----------UAAUAUAUUAUUAUUGAUGCUAUG---AAA--CUUA-GAUUUG---U-AGACAAGGAUUAGAUACCC-
UUUUAUUCUUAGUGUAAAGGUUU----UACUU-GGGUAGUAUUA-GU-UAUUUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-GCUUAA-U-C-UUAUCAGAGGAAC-CUG-UU-GUGUAA- UUGAUAAU-
CCA-CGAUUUA-AUUUACUUU--UUUUUGUU--UAUCAAUUUUUAUACCUCCG-UC-AUAA-GAAUAU-UUU-UAUAGAA-UA---AAUUUUCUUUU-UUAAUGAA--GUUA AAUAUGUCAGGUC-
AAGGUGAAGUUA-AUAAA-G-AAG--UAC----U-AAUGGGUUACAAUGAA----AUU-A--UUUA--UA-UGAAU--UUUUAAU-----UU-UA--AAUUAAAU-- UGAAGG-UGGA[-????]
Neoneura_amelia_ZNA   ??????????????-?????--????????????-????-???????------???-?-------------------
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??????????????????UUUUUU---UACUU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUCCGGAGGAAC-CUG-UU-CUGUAA-

UUGAUAAU-CCA-CGAUUUU-AUUUACUUA--AUCUUGUU--ACUCAGUUUUUAUACCUCCG-UC-AUAA-GAAUAU-UUU-UUUAGAA-UA---AAUUUUCUUAA-UUAUUUAA--UAUA
AAAAUGUCAGGUC-AAGGUGAAGCUA-AUGUU-U-AAG--UAG----A-AAUGGGUUACAAUAAC----UUU-A--UUUA--UA-CGAAU--AACUAUUU----UU-AA--CUCUGGUU-- UGAAGG-
UGGA[-????]
EU054991_Neoneura_maria ---

--------------------------------------GUAUCA-GU-UAUUUU-CUUUAAACCCAAAGAAUUU-GGCGGUA-GUUUAA-U-C-UUAUCAGAGGAAC-CUG-UU-GUGUAA- UUGAUAGU-
CCA-CGAUUUU-AUUUACUUG--UUUUUGUU--UUUCAAUUUUUAUACCUCCG-UC-AUAA-GAAUAU-UUU-UAUAGAA-UA---AAUUUUCUUUU-UUAAUAAA--GUUA AGUAUGUCAGGUC-
AAGGUGAAGUUA-AUGUA-C-AAG--UAC----U-AAUGGGUUACAAUAAG----GUU-A--CUUA--UA-CGAAA--AUUUAAUG----UU-UA---AUUAAGU-- UGAAGG-UGGA[-????]
Ceriagrion_aeruginosum_COE_ZCAe ??????????????-?????--????????????-????-???????------?UA-GUUCUUUUUGCUU-------
---AUGUAUCGUUGGGGUCACAUCGCCCGGAAUUUCUCUCUAUUUU-----------UAAUGUAUUUAUUUUUAUUCUAUG---AAA--CUUA-AAUAU----U-AAACAAGGAUUAGAUACCC-
UUUUAUAUUAAGUGUUAAUUUUU----CACUU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUCCAGAGGAAC-CUG-UU-CUGUAA- UUGAUAUU-
CCA-CGAUUUU-AUUUACUUA--GUUUUGU---AUUCAGUUUUUAUACCUCCG-UC-AUAA-GAAUAU-UUU-UUUAGAA-UA---AAUUUUCUUAA-UUAUUUAA--UAUA AAGAUGUCAGGUC-
AAGGUGAGGCUU-AUAUC-U-AAG--UAG----A-AAUGGGUUACAAUAAA----UUU-A--UUUA--CA-UGAAU--AUCUAAAU----UU-AU--AUUUAGAU-- UGAAGG-UGGA[-????]
Telebasis_salva_ZTS ??????????????-????-????-?????????-????-???????-----???-?------------------
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??????-?---??????????UUUUUU---UACUU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUCCGGAGGAAC-CUG-UU- CUGUAA-
UUGAUAAU-CCA-CGAUUUU-AUUUACUUA--AUCUUGUU--ACUCAGUUUUUAUACCUCCG-UC-AUAA-GAAUAU-UUU-UUUAGAA-UA---AAUUUUCUUAA-U
UAUUUAA--UAUAAAAAUGUCAGGUC-AAGGUGAAGCUA-AUGUU-U-AAG--UAG----A-AAUGGGUUACAAUAACUUU-------AUUUA--UA-CGAAU--AACUAUUU---UU--AA-
-CUCUGGUU--UGAAGG-UGGA[-????]
Leptagrion_elongatum_ZLE ??????????????-???-?--????????????-????-???????-----???-?------------------
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?????????????-????????????-?????-?????--???----?-????????????????----???-?--????--??-?????--????????----??-??--????????--
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Leptagrion_sp ??????????????-?????--????????????-????-???????-----???-???????????????----
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--???????--??????-????[-????]
Metaleptobasis_manicaria_ZMMr UCCGCGGUUAUACG-AUU-AGAGGAAAAGA-UUA-UUAU-UAGUUA-------AUA-GUAUUAAUUUUU--------
--AUUUAUUAUUUUUAAAAUUUUUAGGUGAAAUUUAUAUUUUUUUGU-----------AAAGUAUUCGUUUUUAUUCUGUG---AAA--CCUA-UUUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUUGUAGGUGUUAAUUUUU--UUUACUU-GGGUAGUAUUC-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUCCAGAGGAAC-CUG-UU-CCUUAA- UUGAUAUU-
CCA-CGAUUUU-AUUUACUUA--UUCUUGU---UUUCAGUUUUUAUACCUCCG-UC-AUAA-GAAUAU-UUU-UUUAGAA-UU---AAUUUUCUUGA-UUAUUAAA--UAUA CAAAUGUCAGGUC-
AAGGUGAGGCUA-AUGUU-U-AAG--UGG----A-AAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGAAU--UAUUGGUU----UU-AU--AACUAAUU-- UGAAGG-UGGA[-????]
Diceratobasis_sp_A_ZDA ??????????????-?????????????GA-UUA-UUAU-UGGUUA-------GUA-GUAUUAAUUUUUU-------
--AUUUAUUAUUUUUUGAAUUUUUAGGUGAAAUUUAUAUUUUUUUGU-----------AAAGUAUUUAUUUUUAUUCUAUG---AAA--UCUA-UACUA----U-AAACGAGGAUUAGAUACCC-
UCUUAUAUUAGAUGUUAAUUUUU----UGCUU-GGGUAGUAUUU-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUCCAGAGGAAC-CUG-UU-CCUUGA- UUGAUAAU-
CCA-CGAUUUU-AUUUACUUA--UUCUUGU---UUACAGUUUUUAUACCUCCG-UC-AUAA-GAAUAU-UUU-UUUAGAA-UU---AAUUUUCUUAA-UUAUUAAA--UAUA AGAAUGUCAGGUC-
AAGGUGAAGCUA-AUGGU-U-AAG--UGG----A-AAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGAAU--UUUUAAUU----UU-AU--AAUUAAUU-- UGAAGG-UGGA[-????]
Pyrrhosoma_nymphula_1202 ---

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Chromagrion_conditum_OCCn GCCGCGGUUAUACG-AUU-GG-GAAAAAGA-UUA-UUAU-UGGUUG-------GUA-GUAUAUUUUAUUU-------
----UUAUUAAUUUUUUAAUUUUUAGGUGAAAUUUAUAUUUAUUUAU-----------AAUAUAUUUAUAUUUAUUCUAUG---AAA--CUUA-UUUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUAUUAAGUGUUAAUUUUU----UACUA-GGGUAGUAUUU-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUCCAGAGGAAC-CUG-UU-CUGUAA- UCGAUAGU-
CCA-CGAUUUU-AUUUACUUG--UGAUUGU---AAUCAGUUUUUAUAUCUCCG-UC-AUAA-GAAUAU-UUU-UUUAGAA-UC---AAUUUUCUUAA-UUAUUUAA--GAUA AGUAUGUCAGGUC-
AAGGUGAAGCUA-AUGCA-C-AAG--UAG----A-AAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGAAU--UUUUAAUU----UU-AU--AAUUAAUU-- UGAAAG-UGGA[-????]
Teinobasis_alluaudi_ZTA2 UCUGCGGUUAUACG-AUU-GGAGGAAAAGA-UUA-UUAU-UAGUUA-------GUA-GUAUUAAUUUUAU-------
----UUAUUAAUUUUUAAUUUUUUAGGUGAAAUUUAUAUAUUUUUGU-----------AAAAUAUUAUUUUUUAUUCUAUG---AAA--CUUA-AAUAA----U-AAACAAGGAUUAGAUACCC-
UUUUAUAUUGAGUGUUAAUUUUUU-UUUACUU-GGGUAGUAUUA-GU-UAUGGU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUCAGAGGAAC-CUG-UU-CUUUAA- UUGAUAGU-
CCA-CGAUUUU-AUUUACUUA--UUUUUGU---AUUCAGUUUUUAUAUCUCCG-UC-AUAA-GAAUAU-UUU-UAUAGAA-UU---AAUUUUCUUAA-UUGUUAAA--UGCA AUAAUGUCAGGUC-
AAGGUGAAGCUA-AUAUA-U-AAG--UAG----U-AAUGGGUUACAAUAAG----UUU-A--UUUA--UA-UGAAU--UAUUGAUU----UU-AU--AAUUGAUU-- UGAAGG-UGGA[-????]
Nehalennia_gracilis_COE_ONG ??????????????-?????????????GA-UCA-UUAU-UAGUUG-------AUA-GUAUUAAUCUAUAU------
---UUUAUUAUCCCUUUAAUUUUUAGGUGAAAUUUAUAUUUAUUUAU-----------AAAAUAUUCAUUUUUAUUCAAUG---AAA--UCUA-GAUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUACUAGAAGUAAAUUUUUU---UACUU-GGGUAGUAGCA-GU-UAUGUU-CUUUAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUCCAGAGGAAC-CUG-UU-CUGUAA- UCGAUAUU-
ACA-CGAUUUU-AUUCACUUA--UAUUUGU---AUUCAAUUUUUAUACCUCCG-UC-AUAA-GAAUAU-UUU-UAUAGAA-UC---AAUUUUCUUAA-UUAUUCAA--UAUA UAAAUGUCAGGUC-
AAGGUGAAGUUA-AUAUA-U-AAG--UAG----A-AAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGAAU--UUUUAAUU----UU-AU--AUUUAUUA-- UGAAAG-UGGA[-????]
ZCG_Coryphagrion_grandis ACUGCGGUUAUACG-AUU-GGAACAAAAGA-UUA-UUAU-UAGUUG-------ACA-GUAAUAUUUUAUA-------
---UUUAUUAAUAUUUAAAUUUUUAGGUAAAAUUUAUAUUUAUAUUU-----------AAUAUAUUUAUUUUUAUUCUGUG---AAA--CUUA-UGUUA----U-AGACUAGGAUUAGAUACCC-
UAUUAUAAUAAGAGUUAAAAUUA----CGCUU-GGGUAGUAGUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-CUUUCAGAGGAAC-CUG-UU-CUAUAA- UUGAUAUU-
CCA-CGAUUUU-AUUUACUUA--UAUUUGU---AGUCAGCUUUUAUAUCUCCG-UC-AUAA-GAAUUU-UUU-UGUAGAA-UU---AAUUUUCUGGA-UUAUUUAA--UAUA AAUAUGUCAGGUC-
AAGGUGAAGUUA-AUAUA-U-AAGA-AAG----A-AAUGGGUUACAAUCAU----UUU-A--UUGA--AA-UGAAU--UUUUAUAU----UU-AU--AUGUAAUU-- UGAAGG-UGGA[-????]
Microstigma_rotundatum_PST_OMRt_BMRt ??????????????-??????GGGGAAAAA-UUA-UUAU-UAGUUA-------GUA-GUAUUUUUUUAAAA------
-UUAUCAUUAUUUUUUUUAUUUUUAGGUAAAAUUAUUUUUUUGUUUU-----------UAAAAUGUUAUUUUUAUUCUAUG---AAG--CCUG-AAUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUAUUAGGUGU-UGUUUUU----UACUU- GGGUAGUAUUA-GG-UAUGUU-CUUUAAACUUAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUCCAGAGGAAC-CUG-UU-CUUUAA- UUGAUAAU-
CCA-CGAUUUU-AUUUACUUA--UAUUUGU---AAUCAGUUUUUAUAUCUCCG-UC-AUAA-GAAUAU-UUU-UAUAGUA-UU---AAUUUUCUUGA-UUAUUAAA-GA-UG AAUAUGUCAGGUC-
AAGGUGAAAUUU-AUAUA-U-AAG--UAG----A-AAUGGGUUACAAUAAA----UAU-A--UUUA--UA-UGAAU--GAUUAAUA----UU-AU--AAUUUCUU-- UGAAGG-AGGA[-????]
EU055022_Microstigma_anomalum ---

--------------------------------------GUAUUA-GU-UAUGUU-CUUUAAACUUAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUCCAGAGGAAC-CUG-UU-CUUUAA- UUGAUAAU-
CCA-CGAUUUU-AUUUACUUG--UAUUUGU---AAUCAGUUUUUAUAUCUCCG-UC-AUAA-GAAUAU-UUU-UAUAGUA-UU---AAUUUUCUUGA-UUAUUAAA-GAUUA
A-UAUGUCAGGUC-AAGGUGAAAUUU-AUAUA-U-AAG--UAG----A-AAUGGGUUACAAUAAA----UAU-A--UUUA--U-AUGAAU--AAUUAAUA----UU-AU--AAUUUGUU-- UGAAGG-
AGGA[-????]
Mecistogaster_ornata_ZMO ??????????????-?????--???AGGGA-UUA-UUUU-UGGAUA-------AUA-GUAUUUUAUUUAAU------
---UUAUUAUUAUUUUUAGUUUUUAGGUGAAAUUUUAUUUAAUUUAU-----------AAUUUAUUUGGUUUUAUUCUAUA---AAA--UCUG-UUCUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUAAUAGAUAUUAAUUUUA----UUCCU-AGUUAGUAAUA-GU-UG-GUU-CUUGAAAUCUAAACAAUUU-GGCGGUA-UUUUAC-U-C-UUUUCAGAGGAAC-CUG-UU-CUUUAA- UUGAUAUU-
CCA-CGAUUUU-AUUUACUUA--GGUUUGU---AUCCAGUUUUUAUAUUUCCG-UC-AUAA-GAAUAU-UUU-UAUAGGA-UA---AAUUUUCUUAA-AUACUUUA-AGGUA CAAAUGUCAGGUC-
AAGAUGAAAUUG-AUACU-U-AAG--UAG----U-AAUGGGUUACAAUAAA----AUU-A--UUUA--UA-UGGAU--UUUUAGUU----UU-AU--AAUUAUUU-- UAAAGG-UGGA[-????]
EU477624_Mecistogaster_linearis --------------------GGGUUAGGAA-UUA-UUAU-UGGUUA-------AUA-GUAUUUAAUAUUAAUU----
-----UAUUUUUUUUGUUGUUUUGAGGUGAAAUUUU-AUUUUAUUUA----------UAAUAUAUUUAAUUUUAUUCUAUG---AAA--UUUA-UUUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUAAUAAAUAUUAAUUUUG----UUCCG-GGUUAGUAUUA-GU-UA-GUU-CUUGAAAUCCAAAUAAUUU-GGCGGUA-UUUUAU-U-C-UUUUCAGAGGAAC-CUG-UU-CUUUAA- UUGAUAAU-
CCA-CGAUUUU-AUUUACUUG--GUCUUGU-UUAUACAGUUUUUAUAUUUCCG-UC-AUAA-GAAUAU-UUU-UAUAGAA-UG---AAUUUUCUUGA-UUAUUUGA-AAGUA AGAAUGUCAGGUC-
AAGAUGAAAUUA-AUGAU-U-AAG--UGG----U-AAUGGGUUMCAAUAAA----UUU-A--UUUA--U-AUGAAU--AUAUAAUU----UU-AU--AAUUAUUU-- UGAAGG-UGGA[-????]
Megaloprepus_caerulatus_PSE_ZMC UCCGCGGUUAUACG-UUUAUAGGGGAAAAAAUUA-UUGU-UAGUUA-------AUA-GUAUUAUUUUAAU-------
UUGUUAUGCUUUUUUUUAAUUUUUAGGUGAAAUUAUUUUUAAUUUUA------------AUGUAUUUUAUUUUAUUCUAUG---AAA--UCUA-GAUUG----U-AAACAAGGAUUAGAUACCC-
UUUUAUAUUAGGUGU-AAUUUUU----UACUU- GGGUAGUAUUA-GU-UAUGUU-CUUGAAACUUAAAAAAUUU-GGCGGUA-UUUUAU-U-C-UUUCCAGAGGAAC-CUG-UU-CUUUAA-

UUGAUAAU-CCA-CGAUUUU-AUUUACUUA--UAUUUGU---AAGCAAUUUUUAUAUCUCCG-UC-AUAA-GAAUAU-UUU-GUUAGAA-UA---AAUUUUCUUGG-UUAUUUAA-GGUUA AA-AUGUCAGGUC-AAGGUGAAAUUU-AUGUA-U-AAG--UAG----A-AAUGGGUUACAAUAAU----AUU-A--UUUA--UA-UGGAU--AGUAUGUG----UU-AU--AUUGUAUU-- UGAAGG-UGGA[-????]
Haplostigma_modesta_ZHM UCCGCGGUUAUACA-AUU-GGUGAUAGAGG-UUA-UUUU-UAGUUA-------AUA-GUAUUUAUUUUAUU------
-----UAUUAUUUUUGUAAUUUUUAGGUGAAAUUUUUAUUUUAUUAU-----------AAAAUAUUUGUUUUUAUUCUAUG---AAA--UCUA-UUUUA----U-AGACAAGGAUUAGAUACCC-UUUUAUAUUAGGUGUUAAUUUUU----UGCUU-GGUUAGUAUUA-GA-U-UAUU-CUUGAAAUCCAAAUAAUUU-GGCGGUA-UUUUAU-U-C-UAUUCAGAGGAAC-CUG-UU-CUUUAA- UUGAUAAU-CCA-CGAUUUU-AUAUACUUA--AUCUUGU--AUAACAGUUUUUAUAUUUCCG-UC-AUAA-GGAUAU-UUU-AUUAGGA-UA---AAUUUUCUUAA-UUAUUAAA--GGUA AAAAUGUCAGGUC-AAGAUGAAAUUA-AUGUU-U-AAG--UAG----A-AAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGAAU--UUUUAAUU----UU-AU--AUUUAUUU-- UGAAGG-AGGA[-????]
Pseudostigma_aberrans_OPA UCCGCGGUCAUACA-AGU-GGGGGUAGAGA-UUA-UUUU-UAGUUA-------AUA-GUAUUUAUUUUAU-------
---UUAUUUUUGUUAUAUAUUUUUAGGUGAAAUUUUUAUUUUAUUAU-----------AAAAUAUUUAUUUUUAUUCUAUG---AAA--UUUAUUUUUA----U-AAACAAGGAUUAGAUACCC-UUUUAUAUUGAAUGUUAAUUUUU--AUUGCUU-GGUUAGUAUUA-GA-U-UAUU-CUUGAAAUCCAAAUAAUUU-GGCGGUA-UUUUAU-U-C-UAUUCAGAGGAAC-CUG-UU-UUUUAA- UUGAUAAC-CCA-CGAUUUU-AUAUACUUA--AUCUUGU--AUAUCAGUUUUUAUAUUUCCG-UC-AUAA-GAAUAU-UUU-AAUAGAA-UA---AAUUUUCUUAA-UUAUUAAA--GGUA AGUAUGUCAGGUC-AAGAUGAAACUA-AUGUU-U-AAG--UAA----A-AAUGGGUUACAAUAAA----AUU-A--UUUA--UA-UGGAU--UUUUGGUU----UU-AG--UUAAUUAU UUUGAAGG-UGGA[-????]
Rhinagrion_mima_ZRM GUCGCGGUUAUACG-AUUA--GGAUAAAGAAAUAUUUAU-UGGUUU-------AUA-GUGAAAUUGCGGGC------
---GUUAUUUUUAUUUUGAUUUUUAGGUGAAAUUUAUAAUUUUUUAU----------AAUAUAUUUAUUGUUGAUUCUAUG---AAA--CUUG-AAUUU----A-AAACAAGGAUUAGAUACCC-UUUUAUAUUGAGUGUUAAUUUUU-----ACUU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUCCAGAGGAGC-CUG-UC-CCUUAA- UCGAUAAU-CCA-CGAUUUGAGUUUACUUA--UUUUUGU---UUUCAGCUUGUAUACCUCCG-UC-AUAA-GAAUAU-UUU-UUUAGAA-UU---AAUUUUCUGAU-UUGUUUAA--UACA AAUAUGUCAGGUC-AAGGUGCAGCUU-AUAAA-U-AAG--UGG----A-GAUGGGCUACAAUGAU----UUU-A--UUUA--UA-CGAAU--GUUUAAU---UAGU-UU--AUUUAUAC-- UGAAGG-UGGA[-????]
Sciotropis_cyclanthorum_BSC ??????????????-????---????????????-????-??????------???-?------------------
--------------------????????????--?????---???--????-?????----?-???????????????????-???????????????????????----?????-?????GUAUUA-GU-UAGGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUUAGAGGAAC-CUG-UC-CCGUAA- UCGACAUU-CCA-CGAUUUA-GUUUACUUU--CUUUUGU---AUACAGUUUGUAUACCUCCG-UU-AAAA-GGAUUU-CUU-UUUAGAG-AA---AAUUUCCCUUU-AUGUUAAA--GACA UUUAUUUCAGGUC-AAGGUGCAGCUU-AUAAG-UAAAG--UGG----A-GAUGGGUUACAAUAAU----UUU----UUUA--UA-UGGAU--GUAUUGU---U-UU-GU--UAUAAUAU-- UAAAGG-UGGA[-????]
Heteragrion_mitratum_ZHMt ACUGCGGUUAUACG-AUGG-GGGAUAAGGA-AUA-UUUU-UGGUUA-------AUA-GUUAAUUUUUAUUUU---- A----UUAUUAUUUUAUUAAUUUUUAGGUGAAAUUUAUUUUUAUUUAU------------AUAUUUAUUUUAUGAGGCUAUG---AAA--CUUA-AACUAA---U-AAACAAGGAUUAGAUAC
CC-UUUUAUUCUAAGUGUUAAUUUUU----UACCU-GGGUAGUAUUU-GA-UAUGUU-CUUCAAACCUAUAGGAUUU-GGCGGUA-UUUUAA-U-C-UUUUCAGAGGAAU-CUG-UC- CCUUAA-UCGAUAGU-CCA-CGAUUUU-GUUUACUUA--UUUUUGU----CUUAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAGAUUU-AAAUUUUCUUUU-U
UAUUUAA--AAUAAAUAUGUCAGGUC-AAGGUGCAGCUU-AUAAA-U-AAG--UGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UUGGGUA---UAUU-UU--UAUCCCAU--UGAAGG-UGGA[-????]
EU477623_Heteragrion_sp ---GGG-AUAAGGAAUAUUUUUGGUU---- A----UUAUUAUUUUAUUAAUUUUUAGGUGAAAUUUAUUUUUA--------------------------UUAUGAGGCUAUG---AAA--CUUA-AACUAA---U-AAACAAGGAUUAGAUAC
CC-UUUUAUUCUAAGUGUU-----------UACCU-GGGUAGUAUUU-GA-UAUGUU-CUUCAAACCUAUAGGAUUU-GGCGGUA-UUUUAA-U-C-UUUUCAGAGGAAU-CUG-UC- CCUUAA-UCGAUAGU-CCA-CGAUUUU-GUUUACUUA--UUUUUGU-------AGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-----AAAUUUUCUUUU-U
UAUUUAA--AAUAAAUAUGUCAGGUC-AAGGUGCAGCUU-AUAAA-U-AAG--UGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UUGGGUA---UAUU-UU--UAUCCCAU--UGAAGG-UGGA[-????]
Oxystigma_cyanifrons_ZOC ??????????????-????---????????????-????-????????-----???-?------------------
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ZDP_Dimeragrion_percubitale GCCGCGGUUAUACG-AUAG-GGAAAAGGGA-UUA-UUUU-UAGUUUA-------CA-UUGAACAUUUUUUUA-----
-----UUUUAGUUUUGUAUUUUUUGGGUGAAAUUUAUUUUUAUGAUUA---------UUUAAUUAAGUUUUGUGAUGAUGUG---AAA--UCUA-AACUUU---A-AAACAAGGAUUAGAUACCC-UUUUAUAUUAGACGUUAAUUUUU----UACUA-GGGUAGUAUUA-GUAUAAGUU-CUUGAAACCUAUAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUCAGAGGAAC-CUG-UC-CCUUAA- UCGAUAGC-CCA-CGUUUUU-AUUUACUUA--CUUUUGUU-UUGUCAGUUUGUAUAUCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-AA---AAUUUUCUUUU-UUAUUUAA--GGUA AGUAUGUCAGGUC-AAGGUGCAGCUU-AUGGG-U-AAG--UGGU---A-GAUGGGUUACAAUAAU----UUU-A--UUUA--UA-UGGCU--AUAUUUU---UUUA-UG----GAGUAU-- AAAAAG-UGGA[-????]

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Tatocnemis_malgassica_ZTMa                                GCCGCGGUUAUACG-AUUG-GUGCUAAAGA-UUA-UUUU-CAGUAA-------AUA-GUAAAUUUAAUUUU------
-----UAUUAGCUUUUUAAUUUUUAGGUGAAAUUUAUAUUUAAUUAU-----------AAGAUAUGAUUAUUGAUUCUGUG---AAA--CUUA-UAUUU----A-AGACAAGGAUUAGAUACCC-
UUUUAUAUUGAGUGUAAAUUUUA----UACUU-GGGUAGUAAUA-GU-UAAGUU-CUUGAAACCUAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UC-CCUUAA- UCGAUAGU-
CCA-CGAUUUA-AUUUACUUG--UUUUUGUU--AAGCAGUUUGUAUACCUCCG-UC-AUAA-GGAUGU-CUU-UUUAGAG-AC---AACUUCCCCGA-UUGUUUAA--ACCA AAAAUGUCAGGUC-
AAGGUGCAGCUU-AUGAA-C-AUG--UGG----A-GGUGGGGUACAAUAGA----ACU-A--UUUA--UA-CGAAU--UUGUGGA---GGGU-UG-GCCCAGCAA-- UGAAGG-GGGA[-????]
Philogenia_cassandra_BPCs                                 ??????????????-???--???--?????????-????-??????-------???-???????????????-----
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??????????????????????----?????-?????GUAUUA-GU-UAAGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-AUUUAG-U-C-UUUUCAGAGGAGC-CUG-UC-CCUUUA- UCGAUAGU-
CCA-CGAUAAG-ACUUACUUG--UUUUUGUA---UUCAGUUUGUAUACCUCCG-UC-AUAA-GGAUAU-CUU-UUUAGAG-UG---AAUUUCCUUUU-UUAUUUAA--UAUA AAUAUGUCAGGUC-
AAGGUGCAGCUU-AUAAA-U-AUG--UGG----A-GGUGGGCUACAAUAAA----AUU-A--UUUA--UA-CGGAA--AUUUAUU---UUUA-AU--UUUAAUAU-- CAAAGG-UGGA[-????]
Philogenia_terraba_bernice_ZPT_ZPBn                       ??????????????-????---?????????????????-??????-------???-???????????????----
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ZPBn_Philogenia_bernice                                   -----------------------------------------------------------------------------
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Teinopodagrion_venale_ZMV_BTV                             ??????????????-????---?????????????????-????????-----???-??????????????------
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??????????????????????----?????-?????GUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CAUUUAGAGGAAC-CUG-UC-UCGUAA- UCGAUAUU-
CCA-CGAUUUU-AUGUACUUA--AUUUUGUU--UGUCAGUUUAUAUACCUCCG-UC-UUAA-GAGUGU-CUU-UUUAGAG-UA---AAUUCUCUUAA-UAAUUUAA--UGUA AUUAUGUCAGGUC-
AAGGUGUAGCCU-AUAAU-U-AAG--UGUA---U-GGUGGGUUACAAUAAU----UUU-A--UUUA--UA-CGGAU--AAAGGGU---UGUA-UU-UGUUUUUUU-- UGAAGG-UGGA[-????]
Teinopodagrion_lepidum_ZTL                                UCCGCGGUUAUACU-AUAA-GAAAAAGAGA-UAG-UUCU-CGGUUUAA-----UUA-GUUAAUUUUUAGAU------
-----UAUUAUUUUGUAAUUUUUUAGGUGAAAUUUAUAAUUUGCA-----------UUUUUUAUUUUUUGUGAUUUCUAUG---AAA--CUUG-AAAUUU---A-AGACAAGGAUUAGAUACCC-
UUUUAUAUUAAGUGUUAAUUUUC----UGCUU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-AUUUAG-U-C-CGUUUAGAGGAAC-CUG-UU-UCGUAA- UCGAUAUU-
CCA-CGAUUUU-AUGUACUUA--AUUUUGUU--UAUCAGUUUAUAUACCUCCG-UC-UUAA-GGGUGU-CUU-UUUAGAG-UG---AAUUCUCUUAA-UUAUUUAA--UGUA GUUAUGUCAGGUC-
AAGGUGUAGCUU-AUAAU-U-AAG--UUUA---G-GAUGGGUUACAAUAAU----AAU-A--UUUA--UA-UGGAU--AAAAGGU---UUUA-CU---UGCUUUU-- UGAAGG-UGGA[-????]
Amanipodagrion_gilliesi_ZAG                               ??????????????-???--????????GA-AUUAUUUU-UGGUUG-------AUA-GUAAAUUUUGUUU-------
----UUAUUAUUUUUACAUUUUUUAGGUGGAAUUUAUAAUUGUAUA------------UUUUUAUAUUUAAUGAUUCUAUG---AAA--CUUA-UAUUU----A-AAACAAGGAUUAGAUACCC-
UUUUAUAUUAAGUGUUAAUUGAU----UGCUU-GGGUAGUAUUA-GU-UAUGUU-CUGGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UAUUCAGAGGAAC-UUG-UC-CCUUAA- UCGAUAAU-
CCA-CGAUUAUUAUUUACUUA--AUUUUGU---UUACAGCUUGUAUACCUCCG-UC-AUAA-GAAUUU-CUU-GUUAGAG-AA--UAAUUUUCUUUU-UUGAUGAA--GUUA AAGAUGUCAGGUC-
AAGGUGCAGUUU-AUGAU-U-AAG--UGG----A-GGUGAGUUACAUUAUA----UUU-A--UAUG-----CGGAU--GUAUUUA---U-UU-AU---AGGUUAU-- UGAAGG-UGGA[-????]
Nesolestes_elizabethae_ZNE                                cccgcgguuauaca-aUAA-GGGAGAAGA--AUA-UUUUUUGGCUU-------GUA-GUUAAUUUAUUUAUUUUA--
------AAAAUAUUUUGGUCUUU-GGGUGAAAUUUAUGAUUAUGAAAA----------AAUUUAUUUUUUAUGAUUCUAUG---AAA--UUCA-UUUUA----U-AGACGAGGAUUAGAUACCC-
UCUUAUUUUGAGUGUUAAAUUU-----UGCCU-GGGUAGUAGUA-GU-UUAGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CAUUCAGAGGAAU-CUG-UC-CCGUGAA UGAUAGU--C-
A-CGAUUAU-AUUUACUUG--UUUUUGUU---UUCAGUUUUUAUACCUCCG-UC-AUAA-GAGUGU-CUU-UUUAGGG-UU---AAUUCUCUUAA-UUGUGUUAAUUAAU AUUAUGUCAGGUC-
AAGGUGCGGCUC-AUAAA-U-AAG--UGGC---G-GAUGGAUUACAAUAUU----AUU-A--UUUA--UA-CGAAU--GUAAAGC---UUUG-UC---GUUUUUU-- UGAAGG-UGGA
Protolestes_kerckhoffae_ZPKc                              ??????????????-???----????????????-????-??????------???-?------------------
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Argiolestes_ochrostomas_ZAOc                    GCCGCGGUUAUACG-AUUA-UGGAGAGGAU-UUA-AUUU-UGGUUU-------GUA-GUUAAUUUCUUUU-------
---UUAUUAAAUUUUUAAUUUUUUAGGUGAAAUUUAUAAUUAUUUU-------------UUUAAUAUUAGUUGGUUCUAUG---AAA--UUUA-AAAUG----G-AAACAAGGAUUAGAUACCC-
UUUUAUAUUAGAUGUUAUUGUU-----UGCUU-GGGUAGUAUUA-GU-UAAGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-CC-CCUUAA- UCGACAGU-
CCA-CGAUUUU-AUUUACUUA--UUUUUGUU--UAUCAGUUUGUAUACCUCCG-UC-AUCA-GAGUAU-UCU-UUUAGGG-UA---AAUUCUCUAUUUUUUGUGAA-UAAAA AA-AUGUCAGGUC-
AAGGUGCAGCUU-AUAAU-U-AAG--UGG----A-GGUGGGUUACAAUAAU----UUU-A--UUUA--UA-UGGAA--GUUUUCA----GUU-AU--UUGGAGAC-- UGAAGG-UGGA[-????]
Argiolestes_sidonia_BAS                         ??????????????-????-???--?????????-????-??????-------???-?------------------
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???????????????????????----?????-?????GUAUUA-GU-UACGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-UC-CCUUAA- UCGAUAUU-
CCA-CGAUUUU-AUAUACUUU--AUUUUGUU--UAGCAGCUUGUAUACCUCCG-UC-AUAA-GAAUUU-UCU-UUUAGGA-UA---AAUUUUCUUGAUUUUGUG-AAUAUAA AA-AUGUCAGGUC-
AAGGUGCAGCUU-AUAAU-U-AAG--UGG----A-GGUGGGUUACAAUAAG----UUU-A--UUUA--UA-CGGAU-GUUCUUAG----GUG-UU---AUUGAGA AUUGAAGG-UGGA[-????]
Caledopteryx_maculata_BCM                       ??????????????-????-???--?????????-????-??????-------???-?------------------
--------------------????????????-----------------------------------------?????---???--????-?????----?-???????????????????-
???????????????????????----?????-?????GUAUUA-GU-UAGGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-CC-CCUUAA- UCGACAGU-
CCA-CGGUUUU-GUUUACUUG--UUUUUGUU---UUCAGCUUGUAUACCUCCG-UC-AUAA-GAGUGU-CUU-UUUAGGG-AU---AAUUCUCUUAAUUUUUGU-UA-GUAA AG-AUGUCAGGUC-
AAGGUGCAGCUU-AUGGU-C-AAG--UGUG---A-GGUGGGUUACAAUAGU----UUU-A--UCUA--UA-CGAAU--ACUGGUU----UUG-UC--AAACCUGU-- UGAAGG-UGGA[-????]
Trineuragrion_percostale_BTP                    ??????????????-????-???--?????????-????-??????--
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?-?????????????-???-??-??????-??????UU-CCA-CGAUUUA-AUUUACUUG--UUCUUGUU--UAACAGCUUGUAUACCUCCG-UC-AUAA-GAGUGU-CUU-UUUAGAG- UA---
AAUUCUCUUUUUUUUGUUAAUUAUAAAA-AUGUCAGGUC-AAGGUGCAGCUU-AUGAA-C-AAG--AGG----U-GAUGGGUUACAAUAAU----AUU-A--UUUA--UA-
UGGAU--AUAUCUU---AGGG-UUGUAUUGAUAU--UGAAGG-UGGA[-????]
Caledargiolestes_uniseries_BCU                  ??????????????-???----????????????-????-??????-------???-?------------------
--------------------????????????-----------------------------------------?????---???--????-?????----?-???????????????????-
???????????????????????----?????-?????GUAUUA-GU-UAUGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-CUUUAG-U-C-CUUUCAGAGGAAC-CUG-CC-CCUUGA- UCGACAAU-
CCA-CGAUUUU-GUUUACUUG--UUCUUGUU--UAUCAGUUUGUAUACCUCCG-UC-AUAAAGAGUGU- CUU-UUUAGGG-UU---AAUUCUCUUAAUUUUAUUAAUAAUAA GG-AUGUCAGGUC-
AAGGUGCAGCUU-AUGUA-C-AAG--UGUG---U-GGUGGGUUACAAUAAU----UAU-A--UUUA--UA-UGAAU--UUGGGGC----UUG--C--GGUCCCAC-- UGAAGG-UGGA[-????]
Podopteryx_roseonotata_ZPR                      ??????????????-???----?GUGAGAG-GGAUAUUU-UGGUU--------AUA-GUUAAUUUAAUUU-------
----UUAUUAGUUUUUUAAUUUUUGGGUGAUAUCUAUAAUUAUUUU-----------UAUAAUAUUUUAUUUGAUGCUAUG---AAA--UUUA-AUUUU----A-AGACAAGGAUUAGAUACCC-
UUUUAUAUUAAAUGUUAUUUUUU---UUACUU-GAUUAUUACUA-GU-UAAGUU-CUUUAAAUUCAAAGAAUUU-GGCGGUA-UCUUAG-U-C-UUUUCAGAGGAAC-CUG-UC-CCUUAA- UCGAUAUU-
CCA-CGAUUUU-AUUUACUUG--AUUUA-----UUUCAGUUUGUAUAUCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGGG-UU---AAUUCUCUUAUUUUUAUUAA-AAUAU AA-AUGUCAGGUC-
AAGGUGCAGCUU-AUAAU-U-AAG--UGG----A-GGUGGGUUACAAUAAU----UAU-A--UUUA--UA-CGGAU--AUAUUUU-----UU-AU---AUUUUAU-- UGAAGG-UGGA[-????]
Austroargiolestes_icteromelas_OAIc              ??????????????-???----???UGGGA-UUA-UUUU-UAGCUU-------GCA-GUUUUUUAUUUUU-------
-----UACUAGUUUUUUAAUUUUUAGGUGAAAUUUAUAUCUAUUUAU----------AUAAUAUAUUUAUUUGAUGCUGUG---AAA--UUUA-AAAUU----G-AAACAAGGAUUAGAUACCC-
UUUUAUAUUAGAUGUUAUUUUA-----UGCUU-GGGUAGUAUUA-GU-UAAGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-CC-CCUUAA- UCGACAAU-
CCA-CGAUUUU-AUUUACUUG--UUUUUGUU----UGAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CCU-UUUAGGG-UA---AAUUCUCUUAAUUUUGUUAA-UAUAA AU-AUGUCAGGUC-
AAGGUGCAGCUU-AUAAU-C-AAG--UGG----A-GGUGGGUUACAAUAAU----UAU-A--CUUA--UA-CGGAU--AUAUUUU-----UU-AU--UAUUUUAU-- UGAAGG-UGGA[-????]
Griseargiolestes_albescens_eboracus_BGA_ZGE     ??????????????-????-???--?????????-????-??????-------???-????????????--------
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???????????????????????----?????-?????GUAUUA-GU-UAAGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUCUCAGAGGAGC-CUG-CC-ACUUAA- ACGACAGU-
CCA-CGAUUUU-AUUUACUUG--AAUUUGUU--UAUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUUU-CUU-UUUAGGG-UA---AAUUCUCUUGA-UUAUGUUAA-UAUU CAUAUGUCAGGUC-
AAGGUGCAGCUC-AUAUU-U-AAG--UGU----A-GGUGGGCUACAAUAAU----UUU-A--UUUA--CA-CGGAC--AUGUUUC----UUU-AU--AGUUUCAU-- UUAAGG-UGGA[-????]
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Grisagriolestes_eboracus_ZGE_BGA   ---

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Miniargiolestes_minimus_ZMMn   GCCGCGGUUAUACA-AUUG-GGGAAAGGGA-UUA-AUUU-UGGCUA-------AUA-GUUAAUUUAUUUUU------
-----UAUUAAUUUUUUAAUUUUUAGGUGGAAUUUAUAAUUAUUUA-----------UAUAAUAUUUUAUUUGAUGCUGUG---AAA--UUUA-AAUUU----A-AAACAAGGAUUAGAUACCC-
UUUUAUAUUAAGUGUCAUUUCU-----UGCUU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUCUCAGAGGAAC-CUG-CC-CCUUAA- UCGACAAU-
CCA-CGAUUUU-AUUUACUUG--UUUUUGUU--UAUCAGCUUGUAUAUCUCCG-UC-AUAA-GAGUGU-CUU-UUUAGGG-UU---AAUUCUCUUAA-UUUUAUAUA-UAUA UAAAUGUCAGGUC-
AAGGUGCAGCUU-AUGAA-U-AAG--UGG----A-GGUGGGUUACAAUAUU----UUU-A--UGUA--UA-UGGAU--GUAAUUU----UUA-UA---UAAUUAC-- UGAAGG-UGGA[-????]
Lestomima_flavostigma_OPBc3   ??????????????-????-???--?????????-????-??????-------???-????????????--------
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Rhipidolestes_hiraoi_ORH   ??????????????-????-????????-C-UAU-UUUU--GGUUA-------GUA-GUAAUUUUAUUAAG------
----UUAUGAUUUUUAUAAUUUUUAGGUGAAAUUUAUAAUUAUAUU-----------UAGAAUAUUUAUUUUGAUUCUAUG---AAA--UUUA-AAAUU----A-AAACAAGGAUUAGAUACCC-
UUUUAUAUUAGAUAUAAAAUUUU----UACUU-GGGUAGUAUUA-GU-UAAGUU-CUUGAAACCUAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UC-CCUUAA- UCGAUGAC-
CCA-CGAUUUU-AAUUACUUA--UCUUUGU---AUUCAGUUUGUAUAUCUCCG-UC-AUAA-GGAUAU-CUU-UUUAGAG-AA---AAUUUCCUUAA-UUGUUAAA-UAUCA AU-AUGUCAGGUC-
AAGGUGCAGCUU-AUAGA-U-AAG--UGG----U-GAUGGGGUACAAUAAU----UAU-A--UUUA--UA-CGGAU--AUAUACA----CUU-UU---GGUAUAU-- UGAAGG-UGAA[-????]
Rhipidolestes_aculeata_BRA   ??????????????-????-???--?????????-????-??????-------???-?------------------
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???????????????????????--?-?????-?????GUAGUA-GU-UAAGUU-CUUGAAACCUAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UC-CCUUAA- UCGAUGAC-
CCA-CGAUUUU-AAUUACUUA--UCUUUGU---AUUCAGUUUGUAUAUCUCCG-UC-AUAA-GGAUAU-CUU-UUUAGAG-GU---AAUUUCCUUAA-UUAUUAAA--UAUA AAUAUGUCAGGUC-
AAGGUGCAGCUU-AUAGA-U-AAG--AGG----U-GAUGGGUUACAAUAAU----UUU-A--UUUA--UA-UGAAU--AUAUAUA----CUU-GU---GGUGUAU-- UGAAGG-UGAA[-????]
Paraphlebia_zoe_OPZ   ??????????????-????-????????GA-UUA-UUUU-UGGUUA-------GUA-GUUAAUUUAUUUU-------
---GUUAUUUUUAUUUUAAUUUUUAGGUGAAAUUUAUAAUUAUAUUU-----------AAUUUAUUUGGUUUGAUUCUAUG---AAA--UUUA-UAUUU?---A-AGACAAGGAUUAGAUACCC-
UUUUAUAUUAGACAUAAAAUUUUA---UGCUU-GGGUAGUAUCA-GU-UAAGUU-CUUUAAACCUAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAGC-CUG-CC-CCUUAA- UCGAUAGU-
CCA-CGAUUUA-AUUUACUUG--UUCUUGC---UUACAGUUUGUAUAUCUCCG-UC-AUAA-GGAUGU-CUU-UUUAGAG-UU---AACUUCCUGGA-UUAUUUAU--UAUA AGUAUGUCAGGUC-
AAGGUGCAGCUU-AUGGA-UACAG--UGG----A-GGUGGGCUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UUGUAAG-----UU-GA--UUGUACAA-- UGAAGG-UGGA[-????]
Thaumatoneura_inopinata_THA_OTI   GCCGCGGUUAUACG-AUUG-GUGCUAAAGA-UUA-UUUU-CAGUAA-------AUA-GUAAAUUUAAUU--------
---UUUAUUAGCUUUUUAAUUUUUAGGUGAAAUUUAUAUUUAAUUAU-----------AAGAUAUGAUUAUUGAUUCUGUG---AAA--CUUA-UAUUU----A-AGACAAGGAUUAGAUACCC-
UUUUAUAUUGAGUGUAAAUUUUA----UACUU-GGGUAGUAAUA-GU-UAAGUU-CUUGAAACCUAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UC-CCUUAA- UCGAUAGU-
CCA-CGAUUUA-AUUUACUUG--UUUUUGUU--AAGCAGUUUGUAUACCUCCG-UC-AUAA-GGAUGU-CUU-UUUAGAG-AC---AACUUCCUAGA-UUGUUUAA--ACCA AAAAUGUCAGGUC-
AAGGUGCAGCUU-AUGAA-C-AUG--UGG----A-GGUGGGUUACAAUAGA----ACU-A--UUUA--UA-CGAAU--UUGUGGAGGG--UU-GG--CCCAGCAA-- UGAAGG-GGGA[-????]
Hypolestes_clara_HYP_OHC   GCCGCG-UUACACG--UAA-GUGCUAAAUC-UAC-UUUU--GGCUG----AUAAUA-GAGGAAGUAAU---------
--------UUUUAUAUAGGUUCUUUGGUGAAAUCUAUAUUUAUUUAU-----------UGGUAUUUUUUAUUGUUUCUAUG---AAA--CUUU-UAUUUU---U-GGACAAGGAUUAGAUACCC-
UUUUAUAUUAAGUGUUAACUUUU----UGCCG-GGGUAGUAUUC-GU-UAAGAU-CUUGAAACCCAAAGAAUUU-GGCGGCA-UUUUAU-U-C-UUUUCAGAGGAAC-CUG-UC-CCUUAA- UCGACAAC-
CCA-CGAUUAUUAUUUACUCU--CUUUUGU---UUUCAGUUUAUAUACCUCCG-UU-AUAA-GGAUAU-CUU-UCUAGAG-UU---AAUUUCCUUUU--UAUUUAA--GAUA UGAAUUUCAGGUC-
AAGGUGUAGCUU-AUAAG-G-GAG--UGG----A-GAUGGGUUACAAUGAAUUUAUUU-A--UUUA--UA-CGGAU--UUAUUUU-----UU-GU---UAGAUAC-- UAAAGG-AGGA[-????]
EU054992_Hypolestes_sp   ---

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UCGACAAU-CCA-CGAUUACUAUUUACUCU--CUUUUGU---UUUCAGUUUAUAUACCUCCG-UU-AUAG-GGAUAU-CUU-UUUAGAG-CU---AAAUUUCCUUU-UUAUUUAA--GAAA
UGGAUUUCAGGUC-AAGGUGUAGCUU-AUAAG-G-GAG--UGG----A-GAUGGGUUACAAUGGA----UUU-A--UUUA--UC-UAUACGAAUUUA-----UUUUUU-UGUUUAAUAU-- UAAAGG-
UGGA[-????]
Agriomim_fusca_ZAF6 --

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Sinocnemis_yangbingi_ZSY ??????????????-???----????????????-????-???????-----???-?-------------------
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?????????????-????????????-?????-?????--????---?-????????????????----???-?--????--??-?????--????????----??-??--????????--
??????-????[-????]
Miocora_peraltica_ZMP ??????????????-????-???--?????????-????-???????-----???-?-------------------
--------------------????????????--?????---???--????-??????---?-???????????????????-
???????????????????????----?????-?????GUAUUA-GU-UAUUUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-CU-CUUUAA- CCGAUAGU-
CCA-CGUUUUC-AUUUACUUA--UUUUAUAU--UAAUGGUUUGUAUACCUCCG-UC-AUAA-GGAUGU-CUU-AUAAGGG-UU---AAUUUCCUAUU-UUACUUUA--UGUA AAAAUGUCAGGUC-
GAGGUGCAGCUU-AUGAA-U-AAG--GGAG---U-AGUGGGUUACAUUGAU----UUU----AUUU--U--UGGAU--UUCCUUAA----UU-AG--UUAAGGUC-- UGAAAU-UGGA[-????]
Cora_marina_POL_OCMr ??????????????-???----???????????C-UUGA-AGGAUUU-----GGG-GGGAACUUUUUAAUU---- U-----
UCAUCUUUAUCUACUUUUUCGGUGAAAUUUGUAUUUUUGGAU--------UAUUAUUAUAUUUUGGUGACUUCUGUG---AAA--UCUG-AAAUU----A-AGACAAGGAUUAGAUAC
CC-UUUUACU-UAGGUGUAAAUUUUU---UCUCU--GGGUAGUAUUA-GU-UAUUUU-CUUCAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-CU- CUCUGA-
CCGAUAGU-CCA-CGUUUUU-AUUUACUUG--UUCUUU----UAGUGGUUUGUAUACCUCCG-UC-AUAA-GGAUGU-CUU-AUAAGGG-UG---AAUUUCCUAUU-U
UACUUUA--UGUAAAUAUGUCAGGUC-GAGGUGCAGCUU-AUGAA-U-AAG--GGAG---U-AGUGGGUUACAUUACC----UUU----AUUA--U--UGGAU--UUCUUUUU----UU-AU-
-UUAAGGUU--UGAGAU-UGGA[-????]
Cora_cyane_BCC ??????????????-???----????????????-????-???????-----???-?-------------------
--------------------????????????--?????---???--????-??????---?-???????????????????-
???????????????????????----?????-?????GUAUUA-GU-UAUUUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-CU-CUUUAA- CCGAUAGU-
CCA-CGUUUUC-AUUUACUUA--UUUUAUAU--UAAUGGUUUGUAUACCUCCG-UC-AUAA-GGAUGU-CUU-AUAAGGG-UU---AAUUUCCUAUU-UUACUUUA--UGUA AAAAUGUCAGGUC-
GAGGUGCAGCUU-AUGAA-U-AAG--GGAG---U-AGUGGGUUACAUUGAU----UUU----AUUU--U--UGGAU--UUCCUUAA----UU-AG--UUAAGGUC-- UGAAAU-UGGA[-????]
Polythore_sp_Z ??????????????-?????--????????????-????-???????------???-???????????????----
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???????--?????????????????-????????????-?????-?-???--???----?-????????????????----???-?--????--??-?????--???????--?????-??-
--???????--??????-????[-????]
EU055034_Polythore_boliviana --

--UUA-GU-UAUUUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-CU-CCCUAA- CCGAUAGU-
CCA-CGUUUUU-AUUUACUUG--UCUUUGUA---UUCAGUUUGUAUACCUCCG-UC-AUAA-GGAUGU-CUUGUCUAGGG-UA---AAUUUCCUGUU-CUGUUCAA--UAUA GAUAUGUCAGGUC-
GAGGUGCAGCUU-AUAGA-U-AAG--GGGG---U-AGUGGGUUACGUUUA-----GCU-----UAA-UUG-UGGAU--AAUUAAUGG---UU-GG---CCUCAUUU- UGAAAU-UGGA[-????]
Euthore_fasciata_ZEF3_BEFs ??????????????-????-???--?????????-????-???????-----???-?-------------------
--------------------????????????--?????---???--????-??????---?-???????????????????-
???????????????????????----?????-?????GUAUUA-GU-UAUUUU-CUUGAAACCCAGAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-CU-CCCUAA- CCGAUAAU-
CCA-CGUUUUU-AUUCACUUG--UCUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GGAUGU-CUU-UUUAGGG-UU---AAUUUCCUGUA-CUAUUAAA--UGUA GAUAUGUCAGGUC-
GAGGUGCAGCUU-AUGGA-U-AAG--GGGG---U-AGUGGGUUACUUUUAA----UGU----UUAA-UGA-UGAAU--AGUUAAUAG---UU-GG--CUUUAAUU-- UGAAAU-UGGA[-????]

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Rimanella_arcana_ORA                          GCCGCGGUUAUACG-GUUU-AAGGGGAAGG-AUUAUUUU-UGGUUU-------AUA-GUUUAAUUUAAUUUU-----
-----UAUUCCUUUUAAUAUUUUUGGGUGAAAUCUUUUUUUUAUUU------------AAGAUAUUUUUGUUAUUUUCUGUG---AAG--CUUA-GUUUUA-UAU-AAACAAGGAUUAGAUACCC-
UUUUAUUCUAAGUGUUAAUU-------UUCCU-GGGUAGUAUCA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-CUUUAU-U-C-UUUUCAGAGGAAU-CUG-CC-CCUUAA- UCGACAGC-
CCA-CGCUUUG-AUUUACUUG--UUUUUGUU---UUCAGCUUGUAUACCUCCG-UC-GUAA-GGGUAU-CUU-UUUAUAG-UU---AAUUCCCUUUU-UUAUUUAA--UAUA UAAAUGUCAGGUC-
AAGGUGCAGCUU-AUGAA-U-AAG--UGG----A-GGUGGAUUACAAUAAU----UUU-A--UUUU--UA-CGGAU--UUUUUAU----UUU-GU---UAUAAAAU- UGAAGG-UGGA[-????]
Pentaphlebia_stali_OPSt                       GCCGCGGUUAUACG-GUAG-GGAUU-AGGG-AUUAUUUU-UGGUUUAU-----GUA-GUAAUAUUUAUUUGU-----
---UUAUUUUUUUGAUUAGUUUUUAGGUGAAAUUUAUAAUUUUCUU------------CAAUGUAUUUGUUUUAUUCUGUG---AAA--UCUA-AUUAUU---U-GGACAAGGAUUAGAUACCC-
UUUUAUUUUGGAUGUUAGAUGU-----UACCU-GGGUAGUAUUC-GU-UAUUUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UCUUAC-U-C-CUUUUAGAGGAAC-CUG-CC-CCUUAA- UCGACAUU-
CCA-CGAUUUU-AUUUACUUA--UUUUUGUU--UAUCAGUUUGUAUACCUCCG-UCGAUCA-GGGUAU-UUU-UUUAGGAUUA--UAAUUCCCUCAA-AUAUUUUU--UGUU UUUAUGUCAGGUC-
AAGGUGCAGCUU-AUAAA-U-AAG--UGG----A-GGUGGGUUACAAUAAU----UUU-A--UUUA--UA-CGGAG--GCGUGGUA----UA-UU--UAUUGCGU-- UGAAGG-UGGA[-????]
Devadatta_podolestoides_BDP                   ??????????????-?????????-?????????-????-????????-----???-?------------------
--------------------????????????------------------------------------------?????---???--????-??????---?-???????????????????-
??????????????????????-----?????-?????GUAUUA-GU-UAGGUU-CUUAAAACCCAAAGGAUUU-GGCGGUA-UUUUAA-U-C-UGCUUAGAGGAGC-UUG-UC-CCUUAA- UCGAUAAU-
CCA-CGAUUUU-AUUUACUUU--UAUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAAUUU-CUU-UAUAGAG-GA---UAUUUUCUUUA-UUAUCUUA--AAUA AAAAUGUCAGGUC-
AAGGUGCAGCUU-AUAUA-A-AAG--GGG----A-GAUGGGCUACAAUAGA---AUUU-A--UUUU--U---GGAU--UUUUCCAA----UU-AG--UUGUUAAA-- UGAAAC-UGGA[-????]
Amphipteryx_longicaudata_ZAL5                 ??????????????-????-???--?????????-????-???????------???-?------------------
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??????-????[-????]
Pseudolestes_mirabilis_OPMb                   ACCGCGGUUAUACG-AUGG-GAGGUUAGGA-CUGAUUAU-UGGUUUAU--A--GUA-AUAUUUUUGUUUUU------
------AUUUAUAUUUUAAUUUUUGGGUGAAAUUUGUUUUAUUUUUG------------AAGUAUUUUAUGUGAUUCUGUG---AAA--UUUG--AGUUA---U-AAACGAGGAUUAGAUACCC-
UUUUAUUUCGAGUGUAAAUUUUU----AACUU-GGGUAGUGGUA-GU-UAAGAU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UC-CCUUAA- ACGACGAU-
CCA-CGAUUUG-AAUUACUUA--UUUUUGU---GUUCAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGGG-UA---AAUUUUCUUAU-UAUUUUAA--GAAU AGUAUGUCAGGUC-
AAGGUGCAGCUU-AUGAG-U-AAG--UGG----A-GUUGGGUUACAUUGUA----UUU----UAUA--AG-CGGAU--UUAUUUGU----UU-GU--UUAUGUAA-- UGAAGU-UGGA[-????]
Philoganga_vetusta_OPVt_BPVt                  ??????????????-????-???--?????????-????-????????--?--???-?------------------
--------------------????????????------------------------------------------?????---???--????-?????--?-?-???????????????????-
??????????????????????----??????-?????GUAUUA-GU-UAAGUU-CUUGAAACCCAGAGGAUUU-GGCGGUA-UUUUAU-U-C-UUUCCAGAGGAAC-CUG-UC-CCUUAA-
UCGAUAUU?CCA?CGAUUUU-AAUUACUUA--UUUUUGUA---UUCAGCUUGUAUACCUCCG-UC-AUAA-GGAUGU-CUU-UUUAGAG-UU---AAUUUCCUAUU-UUAUUUAA--UGUA
AAAAUGUCAGGUC-AAGGUGCAGUUU-AUGGA-U-AAG--UGG----A-GGUGGGUUACAAUAAU----AUU-A--UUUA--UA-UGGAA--ACAUAAA-----UU-UA--AUUUAUGU-- UGAAGG-
UGGA[-????]
Philoganga_robusta_PGN_OPRb2                  UCCGCGGUUAUGCG-AGGG-AGGUUAAGGA-UUA-UUAU-UUGUU---------UA-GUGAUAUAUUUAUU------
UUUUAUUAAAUUUUUAUUAUUUUUAGGUGAA-UUUAUAUUUAUUUAUU------------AUUUAUUUUUUUUGAUUCUAUG---AAA--UAUU-UA-UUA---U-AAACAAGGAUUAGAUACCC-
UUUUAUUUUAGAUGUAAAUUCA--UUUUCCUU-GGGUAGUAUUA-GU-UAAGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UU-CUUUAA- UCGAUAAU-
CCA-CGAUUUU-AUUUACUUG--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-UA---AAUUUUCUUUU-UUGAUAAA--ACAA AGAAUGUCAGGUC-
AAGGUGAAGCUU-AUGUA-G-GAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UUAUUAAA----UU-UAU-AUUAAUAA-- UGAAGG-UGGA[-????]
Lestoidea_conjuncta_ZLC                       GUCGCGGUUAUACG-UUAA-GAGGAAUAGA-CUA-UUUU-UAGUUA-------GUA-AUUAAUUUUGUUACU-----
----UUAUUAUUUUUGAGAUUUUUAGGUGAAAUUAAUAAUUUCAUUA-----------UUUUUAUUCAUUUUUGAUUUUAUG---AAA--UCUA-GAAGUA---A-AGACAAGGAUUAGAUACCC-
UUUUAUGCUAGAUGUAAAUUUU--AUAUACUU-GGGUAGUAUUU-GU-UAAGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-UC-CCUUAA- UCGACAAU-
CCA-CGAUUUA-AUUUACUUA--UUUUUGUA--UACCAGUUUGUAUACCUCCG-UC-AUAA-GGAUGU-CUU-UUUAGAG-UU---AAUUUCCUUUU-CUAUUAAA--UAUA GAUAUGUCAGGUC-
AAGGUGCAGCUU-AUAUU-U-AAG--UGG----A-GAUGGGUUACAAUAGG-UUUAAU-A--CUUA--AA-CGGAU--UUAUUUUU----UU-GA---UGUAUAA-- UGAAGG-CGGA[-????]
Diphlebia_lestoides_ZDL                                GUCGCGGUUAUACG-UUAA-GAGGAAAAGA-CUG-UUUU-UGGUUA-------AUA-GUAAAAUUUACUUAU-----
UUAUUUAUUACUUUUUAAUUUUUUAGGUGAAAUUUAUAUGUUUAUGA------------AAUAUAUUUGUUUUGAUCAUAUG---AAA--CUUA-UU-CUA---U-AGACAAGGAUUAGAUACCC-
UUUUAUAUUAAGUGUUAAUUU---AUGUGCUU-GGGUAGUAUUU-GU-UAAGUU-CCUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUUAGAGGAAC-CUG-UC-CCUUAA-
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UCGACAUU-CCA-CGAUUUU-AUUUACUUA--AUUUUGU---UUUCAGUUUGUAUACCUCCG-UC-AUAA-GGAUGU-CUU-UUUAGAG-AG---AAUUUCCUGUA-CUAUUAUU--UAUA
GGUAUGUCAGGUC-AAGGUGCAGCUU-AUAAU-U-AAG--UGG----A-GAUGGGUUACAAUAGA----CUU-A--UUUA--AA-CGGAU--AUUUAGUA----UU-AUU-UACUUAAU-- UGAAGG-
UGGA[-????]
Diphlebia_caerlesaens_ODC ??????????????-????-??GG-AAAGG-CUG-UUUU-UGGUUUA------AUA-GUUAAAUUAAUUAAU---- U-----
UAUUAAUUUUGAAUUUUUUAGGUGAAAUUUAUAUUUUUGAA-----------AAAUCUAUUUAGUUUGAUCUUAUG---AAA--CUUG-GA-GUA---U-AAACAAGGAUUAGAUAC
CC-UUUUAUGCUAGGUGUUAAUUUU--AUCUACUU-GGGUAGUAUUU-GU-UAAGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUUAGAGGAAC-CUG-UC- CCUUAA-
UCGAUAGU-CCA-CGAUUUU-AUUUACUUG--GUCUUGUU--UAUCAGUUUGUAUACCUCCG-UC-AUAA-GGAUGU-CUU-UUUAGAG-UU---AAUUUCCUAUU-C
UAUUAAA--UAUAGAUAUGUCAGGUC-AAGGUGCAGCUA-AUGAU-C-AAG--UGG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAA-AAUUUGGUA----UU-AU-
-UACCUAAU--UGAAGG-UGGA[-????]
Bayadera_melanopteryx_EUP_ZBM ??????????????-????-??????AUGA-UUA-UUUU-UGGUGA-------GUA-GUUCAUUUGAUUUU------
-----UAUUUUGUUUUUAAUUUUUAGGUGAUAUUUAUAAUUAAAAUU-----------AUAUUUAAUUUUAUUGUCCUAUG---AAA--CUUG-GA-GUU---G-AGACAAGGAUUAGAUACCC-
UUUUAUACCAGGCGUAAAUUUA--UUUUGCUU-GGGUAGUAUUA-GU-UAAGUU-CUUGAAACCUAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-UC-CCUUAA- UCGAUAAU-
CCA-CGAUUUU-AUUUACUUG--AUUUUGU----UU-AGUUUGUAUACCUCCG-UC-AUAA-GGAUGU-CUU-UUUAGAG-AU--UAAUUUCCCUUU-CUAUUAAA--UGUU GAUAUGUCAGGUC-
AAGGUGCAGCUU-AUAAU-U-AAG--UGG----U-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--GUAAAAGUU---UA-AU--UUUUUUAC-- UUAAGG-UGGA[-????]
EU054987_Bayadera_brevicauda --

--------------------------------------GUAUUU-GU-UAAGUU-CUUGAAACCUAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-UC-CCUUAA- UCGAUAAC-
CCA-CGAUUUU-AUAUACUUA--AUUUAUU-----UUAGUUUGUAUACCUCCG-UC-AUAA-GGAUGU-CUU-UUUAGAG-UU---AAUUUUCUCUU-CUAUUAAA--UAUA GAUAUGUCAGGUC-
AAGGUGCAGCUU-AUGAU-U-AAG--UGG----A-GAUGGGUUACAAUAAU----AUU-A--UUUA--AA-CGGAU--UUACUUAU----UU-AU--UUUUGUAA-- UUAAGG-UGGA[-????]
Dysphaea_gloriosa_ODG ??????????????-???----????????????-????-???????------???-?------------------
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??????-????[-????]
Euphaea_formosa GUCKCGGUUAUACG-UUAG-GGGARAAAGA-CUA-UUUU-UGGCUA-------GMA-GUUAAUUUUAUUUUU-----
-----UAUUUUUGUUUUAAUUUUUAGGUGAAAUUUAUAAUUAAUUKU------------AUUUUAUUCUUUUUGUUCUGUG---AAA--CUUG-GA-RUU---A-AGACAAGGAUUAGAUACCC-
UUUUAUACCAUGUGUUAAUUUA--UUAUGCUU-GGGUAGUAUUU-GU-UAAGUU-CUUGAAACCUAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-UC-CCUUAA- UCGACAUU-
CCA-CGAUUUU-AUUUACUUA--AUUUUGU---AUUCAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-UU---AAUUUUCUUUU-UUAUUAAA--UAUA UAUAUGUCAGGUC-
AAGGUGCAGCUU-AUAGU-U-AAG--UGG----A-GAUGGGUUACAUUAAA----AUU-A--UUUA--UA-CGGAU--GUACAUUU----UU-AU---UUUGUGC-- UUAAGG-UGGA
Anisophaea_decorata_ZAD_OED GUCGCGGUUAUACG-UUAG-GGGAGAAAGA-CUA-UUUU-UGGUUA-------GCA-GUAAAAUCUUAUUU------
---UUUAUACUUAUUUUAAUUUUUAGGUGGAAUUUAUAAUUUAUUAU------------AUUUUAUCCUUUUUGUUCUGUG---AAA--CUUG-GA-GUU---A-AGACAAGGAUUAGAUACCC-
UUUUAUACCAGGUGUUAAUUUA--UUAUGCUU-GGGUAGUAUUU-GU-UAAGUU-CUUGAAACCUAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-UC-CCUUAA- UCGACAUU-
CCA-CGAUUAUUAAUUACUUA--GUUUUGU---AUUCAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-UU---AAUUUUCUUUU-CUAUUAAA--UGUA AAAAUGUCAGGUC-
AAGGUGCAGCUU-AUAAU-U-AAG--UGG----A-GAUGGGUUACAUUGGA----AUU-A--UUCA--UA-CGGUU--ACACAUUU----UU-AU---UUUGUGU-- UUAAGG-CGGA[-????]
Anisopleura_sp_A_EUP_ZAA ??????????????-???G-GGGUUCGAUU-AAG-UUUU-UGGCUA-------GUA-GUUUAGUUUAUUAUA---- UG----
UUUAAUUCUUUUCCCCACUAGGUAAAAUUUAUAAUUUGAAU-----------AUUUAGGAUUUUUUCUGUUAUAUG---AAA--UUUG-GAUUUU---A-AAACGAGGAUUAGAUAC
CC-UUUUAUACCAAAUGUUAAAUU---GUUUACUA-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCUAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAGC-CUG-UC- CCUUAA-
UCGAUAAU-CCA-CGUUUGU-ACGUACUUG--UUUUUGU---UUUCAGUUUGUAUAUCUCCG-UC-AUAA-GGAUAU-CUU-UUUAGAG-UU---AAUUUUCUUUU-C
UAUUAAA--UAUAAGUAUGUCAGGUC-AAGGUGCAGCUU-AUAGA-C-AAG--UGG----A-GAUGGGCUACAAUAGA---UUUU-A--UUUA--UA-CGGAU--AUAUUUAU----UU-GU-
-UUAGGUGU--UUAAGG-UGGA[-????]
Disparocypha_biedermanni_ZDB ACCGCGGUUAUACA-AUGG-GGACAAGAAA-AUA-UUUU-UAGUUUA-------UA-GUGAUAUUAUUUUUA---- A----
UUUUAAAUAUAUUAAUUUUUGGGUGAAAUUUAUAAUUUUUAUU-----------UUUUAAAUUAUUUGGAUUCUAUG---AAA--UUUA-UG-UCA---A-AAACAAGGAUUAGAUAC
CC-UUUUAUUGUAAAUGUUAAUUUG--UUAUACUU-GGGUAGUAUUA-GU-UAUGUA-CUUGAAACCUAAAGGAUUU-GGCGGUG-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UC- CCUUAA-
UCGAUAGU-CCA-CGAUUAG-AUUUACUUU--UGCUUGUG--UAUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUUU-CUU-UUUAGAG-AU---AAUUCUCUUUA-U
UAUGAAA--AUUAAUAAUGUCAGGUC-AAGGUGUAGUUU-AUGUA-A-AAG--UGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA-UUA-CGAAU--AUUUAGUU----UU-AA-
-UUUUGAUU--UGAAGG-UGGA[-????]

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Libellago_semiopaca_BLS                          ??????????????-????-???--?????????-????-????????--??-???-???????????????----
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??-??????????????????????----??????-?????GUAUUA-GU-UAUGUU-CUUCAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UC- CCUUAA-
UCGAUGGU-CCA-CGAUAAU-AAUUACUUU--UAUUUGU---AUUCAGUUUAUAUACCUCCG-UC-AUAA-GAAUUU-CUU-UUUAAGG-AA---AAUUUUCUUUGUU
AUUAAAU--UAUUAAUAUGUCAGGUC-AAGGUGUAGCUU-AUAUA-A-AAG--AGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA-AUA-UGGAU--UUUUUUUG----UU-AU-
-UAAUUAAA--UGAAGG-UGGA[-????]
Heliocypha_biseriata_BHB                         ??????????????-????-???--?????????-????-????????--??-???-???????????????----
?-------?????????????????????????---------------------------------------------?????---???--????-?????----?-?????????????????
??-??????????????????????----??????-?????GUAGGA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU?GGCGGUG-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-CC- CCGUAA-
UCGAUAUU?CCA?CGAUAUA-AUUUACUUU--UAUUUGU---UUUCAGUUUAUAUACCUCCG-UC-AUAA-GAAUUU-CUU-UUUAGAG-UU---AAUUUUCUUUA-U
AAUUAAA--UGUAAAUAUGUCAGGUC-AAGGUUUAGUUU-AUGUA-A-AAG--UGG----A-GGUGGGUUACAAUAAA----UUU-A--UUUA-UUA-CGAAU--AAUUAUAA----UU-AA-
-UUAUGAUU--UGAAGG-UGGA[-????]
Platycypha_caligata_OPC                          ??????GUUAUACA-UUAA-GGGGGAGAAA-AUA-UUUU-UGGUGU-------AUA-GUUUAUUAUUUUGUU-----
-------UUAAUAUAAUAAUUUUUAGGUGAAAUUUAUAAUUUUUGUUU-----------UUUAAUAUAUUUUGAUUCUAUG---AAA--CUAA-UU-UAA---U-AGACGAGGAUUAGAUACCC-
UCUUAUUUUUAGUGUUAAUUAU---AAUUCUU-GAGUAGUAUUU-GU-UAUGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UC-CCUUAA- UCGAUGAU-
CCA-CGAUAUU-AAUUACUUU--UGUUUGU---AUACAAUUUAUAUACCUCCG-UC-AUCA-GGAUUU-CUU-UUUAGAG-UU---AAUUUUCUUUU-UUGAUUAA--UUCA AAUAUGUCAGGUC-
AAGGUGUAGUUU-AUAUA-A-AAG--UGG----A-GGUGGAUUACAAUAGA----UUU-A--UUUA--UA-CGAAU--AUUUAUUU----UU-AA--AUUUAAUU-- UGAAGG-UGGA[-????]
ZCCt                                             ??????????????-???----?????????????????-????????--?--???-??????????????------
-----???????????????????????????-------------------------------------------?????---???--????-??????---?-???????????????????-
??????????????????????--????????-?????GUAGGA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUG-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-CC-CCGUAA- UCGAUAUU-
CCA-CGAUAUA-AUUUACUUU--UAUUUGU---UUUCAGUUUAUAUACCUCCG-UC-AUAA-GAAUUU-CUU-UUUAGAG-UU---AAUUUUCUUUA-UAAUUAAA--UGUA AAUAUGUCAGGUC-
AAGGUUUAGUUU-AUGUA-A-AAG--UGG----A-GGUGGGUUACAAUAAA----UUU-A--UUUA-UUA-CGAAU--AAUUAUAA----UU-AA--UUAUGAUU-- UGAAGG-UGGA[-????]
Sundacypha_petiolata                             ------------------------------------------------------------------------------
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Rhinocypha_fenestrella_ORF                       ??????????????-???-?--????????????-UUUU-UUGUGC------AUUA-UUUCUUUAUCUUGUU-----
-------UUAAUAUAAUAAUUUUUAGGUGAAAUUUAUAAUAUUUGUUU-----------AUUAAUUUACUUUGAUUCUAUG---AAA--CUUA-UU-UGA---U-AAACGAGGAUUAGAUACCC-
UUUUAUUUUAAGCGUUAAUUUU---AAGACUU-GGGUAGUAUGA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-CC-CCUUAA- UCGAUAUU-
CCA-CGAUAUA-AUUUACUUU--UAUUUGU---UUUCAAUUUAUAUACCUCCG-UC-AUAA-GAAUUU-CUU-UUUAGAG-UU---AAUUUUCUUUA-UAAUUUAA--GAUA AGGAUGUCAGGUC-
AAGGUUUAGUUU-AUGUG-A-AAG--UGG----A-GGUGGGUUACAAUAAA----AAU-A--UUUA-UUA-UGAAU--AGUCAUUU----UU-AA--UUUUGGUU-- UGAAGG-UGGA[-????]
EU054949_Rhinocypha_tincta                       ------------------------------------------------------------------------------
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--------------------------------------GUAUUA-GU-UAUGAU-CUUGAAACCCAAAGGAUUU-GGCGGUG-CUUUAG-U-C-UUUUCAGAGGAAU-CUG-UC-CCGUAA- UCGAUGUU-
CCA-CGAUAUG-UUUUACUUU--UAUUUGU---UUACAGUUUAUAUACCUCCG-UC-AUAA-GAAUUU-CUU-UUUAGAG-UU---AAUUUUCUUA---AAUAUUAAAUGUU CAUAUGUCAGGUC-
AAGGUUUAGCUU-AYGUA-A-AAG--AGG----A-GGUGGGUUACAAUAAA----UAU-A--UUUA-AUA-CGA----AAAUUUAAUU--UU-AA--UUUUGUUU-- UGAAGG-CGGA[-????]
EU477615_Heliocharis_amazona                     -------------------UGUGUUAGAUA-CCA-UUUU-UGGC----------UA-GUAGUUAAUUUUUUU-----
---UUCAUUAUUUUUAUAAUUUUUAGGUGGAAUUUAUAAUUUUAUAUA------------UUUUGUUUCUUUUGUUCUGUG---AAA--ACUAGGA-UUU---A-AACCAAGGAUUAGAUACCC-
UUUUAUUCUAGUCGUUAUUUUU-----GGCUU-GGGUAGUAUUA-GU-UUCGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-CC-CCUUAA- UUGAUGUU-
CCA-CGAUUUU-AUCUACUUU--UUCUUGU---UUUCAGUUUGUAUAUCUCCG-UC-AAAA-GGAUAU-UUU-UUAAAAG-UU--UUAUUUCCUUU--CCAUUAUUUGGGUG UUGAUGUCAGGUC-
AAGGUGCAGUUU-AUGGA-A-AAG--UGG----A-GGUGGGUUACAAUAAU----UUA-A--UUUA--UA-CGGAU--ACUUAUUU----AU-U--GAUUAAAGU-- UGAAGG--GGA
Heterinia_americana_CAL_OHA2                     GCCGCGGUUAUACG-AAAG-GGAUAAGUGA-AUA-UUAU-UGGCUGAG--UUUGCA-GUUAGAAAGUUUUUA-----
---UUUAUUAAAGUUUUUAUUUUUGGGUGAAAUCUCUAAAUUUUUUAU----------UAAUUAUAUUUAUUGAAGCUGUG---AAA--CUUA-AU-UUU---A-AAACAAGGAUUAGAUACCC-
UUUUAUCUUAAGUGUUAAAAUU-----AGCCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAGC-C
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UG-UU-CUUUAA-UCGAUAAU-CCA-CGAUAAU-UUUUACUUG--UAUUUGU---UUUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUGU-CCU-UUUAGGG-AG---AACUCUCUUAA-U UAUUAAA--
UGUAAGAAUGUCAGGUC-AAGGUGCAGCUU-AUAUA-C-AAGU-AGG----U-AAUGGGCUACAAUAAU----UUU-A--UUUA--AA-CGGAU--GUACUUUA----UC-UU-
--AGGGUAC--UGAAGG-CGGA[-????]
Caliphaea_confusa_ZCC   GCCGCGGUUAUACU-AUAG-GAAAUAAGGA-UUA-UUUU-UGGUUA------GUA-GUAAUUUUGUUUUAU-----
----UUAUUAAUUUUGAGUUUUUUAGGUGAAAUUUAUAUAUUUUGUUA-----------AUGUAUUUUUUGAUAUUCUACG---AAA--CUUU-UU-UGG---A-AGACAAGGAUUAGAUACCC-
UUUUAUU-AUAGUGUUAAUUUU-----UGCUU- GGGUAGUAUUA-GU-UAAGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAGC-CUG-UC-CCUUAA- UCGACAAU-
CCA-CGAUUUG-UUUUACUUA--UUCUUGUA-UUAUCAGUUUGUAUACCUCCG-UC-AUCA-GGUUAU-CUU-UGAAGGG-GA---AAUUACCGGUU-CUAUUAAA--UAUU AAUAUGUCAGGUC-
AAGGUGCAGCUU-AUGAA-U-AAG--UGG----A-GAUGGGCUACAAUAAU----UAU-A--AUUA--UA-CGGAU--AUUAAUUU----UU-AU-UAGAUUAAU-- UCAAGG-UGGA[-????]
Noguchiphaea_yoshikoae_AJ459228   ---

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EU055012_Vestalis_beryllae   ---

--------------------------------------GUAUUA-GU-UAUGUU-CUUUAAACUCAAAGGAUUU-GGCGGUA-UUUUAU-U-C-CUUUCAGAGGAGC-CUG-UU-CUGUGA- UCGACAAU-
CCA-CGAUGGU-UUUUACUUG--GUCUUGU---UUCCAGUUUGUAUACCUCCG-UC-AUAA-GGGAGU-UUU-UAAAGAA-UU---AAUUUCCUACU-ACAUU--UAAUUUG UUUAUGUCAGGUC-
AAGGUGCAGCUU-AUGGC-C-AAG--UUG----A-GAUGGGCUACAAUAAU----UUU-A--UUUA--UA-CGGAA-UUGAACU------UUGAA---UGGUUCAU- UGAAGG-UGGA[-????]
Matrona_basilaris_BMB   ---

---AU--AUAUUUAA-- UAAAGG-
UGGA[-????]
CAlopteryx_atrata_EF032699_AF170953   ---

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EU055003_Echo_modesta   ---

--------------------------------------GUAUUA-GU-UAUGUU-CUUAAAACCCAAAGGAUUU-GGCGGUA-UUUUAU-U-C-CUUUCAGAGGAGC-CUG-UC-CUGUAA- UCGAUAGU-
ACA-CGAUGCU-UUAUACUUA--CCUUUGU---UUUCAGUUUGUAUACCUCCG-UC-AUAA-GGGUGU-CUU-UUUAGAG-UC---AAUUCCCUUUU-UCAUUUAA--UAUU UCUAUGUCAGGUC-
AAGGUGCAGCUU-AUGGG-U-AAG--UUG----A-GAUGGGCUACAAUAAA----UUU-A--UUUA--UA-CGAAU--AUUAUUC----UUUAG---UUGCUUAGU- UGAAGG-UGGA[-????]
EU054952_Neurobasis_ianthinipennis   ---

--------------------------------------GUAUUA-GU-UAAGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAGC-CUG-UC-CUGUAA- UCGACAUU-
CCA-CGAUAGG-UUUUACUUA--UUCUUGU---GUUCAGUUUGUAUACCUCCG-UC-AUAA-GGGUAU-UUU-AUCAGAG-UA---AAUGCCCACU---AAUAUUUAAUAUU AAUAUGUCAGGUC-
AAGGUGCAGCUU-AUGAA-U-AAG--GUG----A-GAUGGGCUACAAUAGA----CUU-A--UUUA--AA-CGGAU--UUCUUUAU----UU-A---UAUUAGAA-- UGAAGG-CGGA[-????]
Sapho_orichalcea_OSO   ??????????????-????-GAAAUAAAA--UUA-UUUU-UGGUCU-------AUA-GUUAGAUGAGAUUUU-----
-----UAUUAAUUUAGGAGAUUUUAGGUGAAAUUUAUAUUUUCUUU------------AAUAUAUGGAUGACGAUAUUGUG---AAA--UUUG-AA-GUU---G-AGACGAGGAUUAGAUACCC-
UUUUAUUUUAAAUGUAAAUGUU-----UACUA-GGGUAGUAUUU-GU-UAUGUU-CUUGAAACCCAUAGGAUUU-GGCGGUU-UUUUAU-U-C-UUUUCAGAGGAGC-CUG-UC-CUGUAA- UCGACACU-
CCA-CGAUAUA-UUUUACUUG--CAAUUGU---UUUCAGUUUGUAUACCUCCG-UC-AUCA-GGGUAU-CUU-UUUAGAG-AU---AAUUCCCAUUU-AUUAUAUAA-AGUC UAUAUGUCAGGUC-
AAGGUGCAGCUU-AUGUG-U-AAG--UUG----A-GGUGGGCUACAAUAAU----UUU-A--UUUA--UA-CGGAU--GUUA--------UU-AA-------UAU-- UGAAGG-UGGA[-????]

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Calopteryx_amata_CAL_OCAm                        GCCGCGGUUAUACG-AUUA-GAGGUAGGGA-CUA-CUUU-UGGUUA-------ACA-GUAAUUUUUUGUUAU-----
--UAUUUCUUUAUUUAUUAAUUUUAGGUGAAAUUUAUAUUUUUAAUUA-----------AUGUAAUUUUAAGGAGUCUGUG---AAA--CUUA-UAUUU----A-AGACUAGGAUUAGAUACCC-
UAUUAUAUUAGGUGUUAAUUUU-----UGCCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAGC-CUG-UC-CUAUAA- UCGACAUU-
CCA-CGAUAUA-UCCUACUUA--UAUUGGU---UUUCAGUUUGUAUACCUCCG-UC-AUAU-GGGUAU-UUU-UUUAGAA-UU---AAUUCCCAUGC-ACAUUUAA--UGUG AUUAUGUCAGGUC-
AAGGUGCAGCUU-AUAUG-U-AAG--UUG----A-GAUGGGCUACAAUAAU----UUU-A--UUUA--GA-CGGAU-UUAUUU-----AUAU-AUA---UAAAUAU- UGAAGG-UGGA[-????]
EU477613_Calopteryx_splendens                    --------------------GAGGUAGGGA-CUA-CUUU-UGGUUA-------ACA-GUAAUUUUUUGUUAU-----
--UAUUUCUUUAUUUAUUAAUUUUAGGUGAAAUUUAUAUUUUUAAUUA-----------AUGUAAUUUUAAGGAGUCUGUG---AAA--CUUA-UAUUU----A-AGACUAGGAUUAGAUACCC-
UAUUAUAUUAGGUGUUAAUUUU-----UGCCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAGC-CUG-UC-CUAUAA- UCGACAUU-
CCA-CGAUAUA-UCCUACUUA--UAUUGGU---UUUCAGUUUGUAUACCUCCG-UC-AUAU-GGGUAU-UUU-UUUAGAA-UU---AAUUCCCAUGC-ACAUUUAA--UGUG AUUAUGUCAGGUC-
AAGGUGCAGCUU-AUAUG-U-AAG--UUG----A-GAUGGGCUACAAUAAU----UUU-A--UUUA--GA-CGGAU-UUAUUU-----AUAU-AUA---UAAAUAU- UGAAGG-UGGA[-????]
EU054934_Calopteryx_aequabilis                   ??????????????-????---????????????-????-????????-----???-?------------------
--------------------????????????-----------------------------------------?????---???--????-?????----?-???????????????????-
???????????????????????----?????-??---GUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAGC-CUG-UC-CUGUAA- UCGACAUU-
CCA-CGAUGUA-UCUUACUUA--UAUUGGC---UUUCAGUUUGUAUACCUCCG-UC-AUAA-GGGUAU-UUU-UUUAGAA-UU---AAUUCCCAUUC-AUAUUUAA--UGUA AUUAUGUCAGGUC-
AAGGUGCAGCUU-AUGUA-U-AAG--UUG----A-GAUGGGCUACAAUAAU----UUU-A--UUUA-AAA-CGGAU--AUACUU----UUGU-AUG--UGAGUGU-- UGAAGG-UGGA[-????]
Iridictyon                                       ??????????????-???-?--????????????-????-??????-------???-?------------------
--------------------????????????-----------------------------------------?????---???--????-?????----?-???????????????????-
???????????????????????----?????-???????????-??-??????-???????????????????-???????-??????-?-?-?????????????-???-??-??????-
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?????????????-????????????-?????-?????--???----?-????????????????----???-?--????--??-?????--????????----??-??--????????--
??????-????[-????]
Iridictyon_trebbaui_ZIT                          GCCGCGGUUAUACG-UUUA-GUGGAUGAGA-UUA-UUUU-UAGUUG-------AUA-GUAAUUUUUUUAUUU-----
-----UGUUUUCUUUUUAUUUUUUAGGUGAAAUUUAUAUAUAUAAAU------------AAUUCAUUUUUAUUAUUCUAUG---AAA--CUUA-A-GUUU---A-AGACGAGGAUUAGAUACCC-
UUUUAUAUUAAGUGUUAAUUUU-----UACUU-GGGUACUAUUA-GU-UAUGUU-CUUUAAACCCAGAGGAUUU-GGCGGUA-UUUUAG-U-C-CAUUCAGAGGAGC-CUG-UC-CUUUAA- UUGAUUUU-
CCA-CGAUAUU-UUUUACUUU--AUUUUGU---UUUCAGCUUGUAUACCUCCG-UC-AUCA-GGGUAU-CUU-UUUAGAG-UU---AAUUUCCGGUA-UUAUUUAA--AGUU UUUAUGUCAGGUC-
AAGGUGCAGUUU-AUGAU-A-AAG--UUG----A-GAUGGGCUACAAUAAA----UUU-A--UUUA--UA-UGGAA--GUUUAUU----UUA-AAU--GGUUUAC-- UGAAGG-UGGA[-????]
Unaligned_Lestoidea                              ------------------------------------------------------------
222222222222222222222222222222------------------------3333333333333333333333333333333---------------------------------------
------------------------------444444444-------------------------------------------------------------------------------------
-------------------------------------------------555555-----------------------------------------------------------------------
----------------------------------------------------------------------------------8888888888888-------------88--
888888888888888888888888---------------[-????]
Nubiolestes_diotima_PER_OND                      ACCGCGGUUAUACG-AAAG-GUAUAAGAAA-AUA-UUAU-GGGUUUUA-----UUA-GUUAGUUUUUGUUUA---- A------
-UAAAAGUUUUUAUUUUUAGGUGAAAUUUAUAAUUAAGAUUU-------AAUAUAU--CGUUAUGAUGAUUCUAUG---AAA--CUUC-UUUUA----U-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAGUGUUAAU--------UUCCU-GGGUAGUAGUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-CUUUAG-U-C-UUGUCAGAGGAAC-CUG-CC-
CCUUAAUUCGAUAUA-CCA-CGAUUAAGAUUAACUUU--UUCUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGAGU-CUU-UUUAGAG-UC--AAAUUUUCUUUU-C
CUUUAAA--UGAGAAUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-A-AAG--UGG----A-GGUGGGUUACAAUAUU----UUA-AA-UAUA---A-UGGAU--UAUUUAA---UAUU-AU-
--AUUAGUA--CGAAGG-UGGA[-????]
Perilestes_kahli_ZPK2_BPK                        ??????????????-??AG-GCAU-AGGG--AUA-UUAU-UGGUUGU------UUA-GUGAGCUUUGUUUUG-----
-UUUAUUUAUUUUAUUUUGUUUUUGGGUGAAAUUUAUAAUUUGUUAUU-------AAUUUUU--UUUUGUGAU-UUUCUGAG---AAA--CUUAUUUUUA----U-AAACGAGGAUUAGAUACCC-
UUUUAUGUUAAGCGUUAAUUU------GACUA-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCUAAAGGAUUU-GGCGGUA-UUUUAC-U-C-UAACCAGAGGAAC-CUG-CC-CCUUAAA CCGAUAAA-
CCA-CGAUUAUUAUUUACUUU--UAUUUGUA---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGAUU-CUU-UUUAGAG-GG---AAUUUUCUUUU-UAUUUUAA--AAAU AAUAUGUCAGGUC-
AAGGUGCAGCUU-AUAUA-A-AAG--UGGA---A-GGUGGGUUACAAUUUU----UGU-A--AAAA--AA-CGGAU--UAUUAGU----AGU-AUU--AUUAUUA-- UGAAGG-UGGA[-????]
Perissolestes_remotus_BPR                        ??????????????-????????--?????????-????-????????-----???-???????????????-----
-???????????????????????????????-----------------------------------------?????---???--????-?????----?-???????????????????-
???????????????????????----?????-?????GUAUUA-GU-UAUGUU-CUUGAAACCUAAAGGAUUU-GGCGGUA-UUUUAC-U-C-UAACCAGAGGAAC-CUG-CC-CCUUAAA
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CCGAUAAA-CCA-CGAUUAUUAUUUACUUU--UAUUUGUA---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAG-AUUCUU-UUUAGAG-GG---AAUUUUCUUUU-UAUUUUAA--AAAU
AAUAUGUCAGGUC-AAGGUGCAGCUU-AUAUA-A-AAG--UGGA---A-GGUGGGUUACAAUUUU----UGU-A--AAAA--AA-CGGAU--UAUUAGU----AGU-AUU--AUUAUUA-- UGAAGG-
UGGA[-????]
Perissolestes_magdalenae_OPMg ACCGCGGUUAUACG-AAAG-AUGUAUAGGA-AUU-UUUU-UGAUCUAA-----UUA-GUAAUUUUUAUUUUU---- U-----
AAUUAUAUAUUUAAUUUUUAGGUGAAAUUUAUAAUUUGAUAAU------UAAUUUUUU-UUUGAUGAUUUUUCUAUG---AAA--UUUA-UUUUU------AAACGAGGAUUAGAUAC
CC-UUCUAUUUUAAAUGUAAAUUUU-----GGUUU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAAGAUUU-GGCGGUA-UUUUAG-U-C-UGCUCAGAGGAAC-CUG-CU-
CCUUAAUUUGACAUU-CCA-CGAUUAU-UUUUACUUU--UAUUUGUU--UAUCAGUUUGUAUAUCUCCG-UC-AUAC-GAAAUU-CUU-UUUAGAG-UU---AAUUUUCUUUU-C
CUUUUAA--UAAGAAUAUGUCAGGUC-AAGGUGCAGUUA-AUGUA-A-AAG--UGG----A-GGUGGGUUACAAUAUA----UCU-A--UAUA--UA-UGGAU--UAUUUUA--UUUGU-U--
--AUUA-UA--UGAAGG-UGGA[-????]
Chlorolestes_umbrata_SLE_OCU ACCGCGGUUAUACG-AAAG-GUGGGAGGGA-ACA-UUAU-UGGCUUU-----UUA-GUUAAUUUUUUAUUU---- U------
UCAAUUAUUUUAAUUUUUAGGUGGAAUUUAUGAUUAAAUUAC-------AAUAUUA--UUUUGUGGUGAUGCUAUG---AAA--CUUA-UUUUA----C-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAGCAUUAAAUUUU----UGCCC-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-CUUUAG-U-C-UUUUCAGAGGAAC-CUG-CC-
CCUUAAUUCGACACC-CCA-CGAUUUUUAUGUACUUU--UGUUUGUA-AUUACAGUUUGUAUAUCUCCG-UC-AUAA-GAGAAU-CUU-UUUAGAG-UU---AAUUUUCUUUU-C CUUUAAA--
UGAGAAUAUGUCAGGUC-AAGGUGCAAUUU-AUGCA-A-AAG--UGG----A-GGUGGGUUACAAUAUA----UUU-A--UAUA-GAA-CGGAG--UAGUAUU---UAUU- AUU--AUUGUUA--
UGAAGG-UGGA[-????]
Euchlorolestes_SLE_OET GCCGCGGUUAUACG-AAAG-GUGGAUGGAA-AUA-UUAU-UGGCUUU------UUA-GUUAAUUUUUUUUA----
A------AAAAUUGUUUUAAUUUUUAGGUGGAAUUUAUAAUUAAAUUAU-------AAUAUUAA-UUUUGUAAUGAUUCUAUG---AAA--CUUA-UUUUA----C-AAACAAGGAUUAGAUAC CC-
UUUUAUUUUAAGCAUUAAAUUUU----UGCCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-CC-
CCUUAAUUCGACACC-CCA-CGAUUAGUAUGUACUUU--UUUUUGU---UUUCAGUUUGUAUAUCUCCG-UC-AUAA-GAGAAU-CUU-UUCAGAG-U---AAAUUUUCUUUU-U
CUUUAAA--UGAGAAUAUGUCAGGUC-AAGGUGCAAUUU-AUACA-G-AAG--UGG----A-GGUGGGUUACAAUGUA----UCU-A--UAUA--AA-CGGAU--UAUUAAA---UGUU-AU-
--AUUAAUA--UGAAGG-UGGA[-????]
Phylolestes_ethelae_OPE GCCGCGGUUAUACG-AGAG-GUAUAAGAAA-UUA-UUUU-UGGU-UU------GUA-GUUAUCUUUAUUAUU---- U------
UAAAUUAUUUUAAUUUUUAGGUGGAAUUUAUAAUUAGGAUUU-------AAUAUUAAUUUUUAUGGUGAGACUAUU---AAA--CUUA-UCAUA----U-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAGUGUUAAUUU------UGCCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAGC-CUG-CC-
CCUUAAUUCGACAUC-CCA-CGAUUUU-AUUUACUUU--UAU-------UAUUAGUUUGUAUACCUCCG-UC-AUAA-GGUGGU-CUU-UUUAGAG-UU---AAUUUCCUUUU-C
CUUUAAA--UGAGAAUAUGUCAGGUC-AAGGUGCAACUU-AUGUA-A-AAG--GGG---GA-GGUGGGCUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAAUAGG----UUU-AU-
--UUUAUUA--UGAAGG-UGGA[-????]
Synlestes_weyersii_ZSW GCCGCGGUUAUACG-AAGG-GUAUAAGAAA-AUA-UUAU-UGGU-GA------UUA-GUUAAUUUUUUCAU-----
----UUUCAUUCUUUUUAAUUUUUAGGUGGAAUUUAUAAUUAAUUUU-----------GAAUUUUACUUUAAUGACACUAUG---AAA--CUUA-UUUUU----U-AAACAAGGAUUAGAUACCC-
UUUUAUUUUAAGUGUUAAUUUUUU---UGCCA-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-CC-CCUUAAU UCGACAUU-
CCA-CGAUUAU-GGUUACUCU--UGUUUGUU--UAUCAGUUUGUAUAUCUCCG-UC-AUAA-GAGAGU-CUU-UUUAGAG-A---AAAUUUUCUUGC-UCUUUAAA--UAAG UUUAUGUCAGGUC-
AAGGUGCAAUUU-AUGCA-G-GAG--AGG----A-GGUGGGUUACAAUAUA----UUU-AU-UGUA--UA-CGGAU--UAAUAUC----UUG-AU---UUUAUUA-- UGAAGG-UGGA[-????]
Synlestes_tropicus_ZST GCCGCGGUUAUACG-AAGG-GUAUAAGAAA-AUA-UUAU-UGGU-GA------UUA-GUUAAUUUUUUUUAC-----
----UUUCAUUCAUUUUAAUUUUUAGGUGGAAUUUAUAAUUAAUUUU-----------GAAUUUUAUUUCGGUGAUGCUAUG---AAA--CUUA-UUUUU----U-AAACAAGGAUUAGAUACCC-
UUUUAUUUUAAGUGUUAAUUUGU----UGCCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUCUAG-U-C-UUUUCAGAGGAAC-CUG-CC-CCUUAAU UCGACAUC-
CCA-CGAUUAU-GGUUACUCU--UGCUUGUU--UAUCAGUUUGUAUAUCUCCG-UC-AUAA-GAGAGU-CUU-UUUAGAG-G---GAAUUUUCUUGU-UCUUUAAA--UGAU UGUAUGUCAGGUC-
AAGGUGCAAUUU-AUGCA-G-GAG--AGG----A-GGUGGGUUACAAUGCA----UUU-AU-UUUA--UA-CGGAU--UAAUAUU---GUGG-AU---AUUAUUA-- UGAAGG-UGGA[-????]
Chorismagrion_risi_CHO_ZCRi GCCGCGGUUAUACG-AGAG-GCGUAAGGGA-GUA-UUAU-UAGUUUA------UUA-GUUAAUCUUUUUAAU-----
----UUUUAAUUAUCUUAUUUUUUAGGUGGAAUUUAUAAUUGAGGCUU------UAAUUUUGAAAUUUUUGCUGAUACUAUG---AAA--CUUA-UUUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUUUUAAGUGUUAAUUUUUU---UGCUU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACUCAUAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-CC-CCGUAAU UCGACACC-
CCA-CGUUUAU-AUUUACUUU--UGUUUGUU--UAUCAGUUUGUAUACCUCCG-UC-AUAA-GAGAGU-CUU-UUUAGAG-C---AAAUUUUCCUUU-UCUUUUAA--UGAG AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUACA-G-AAG--UGG----A-GGUGGGUUACAAUAUA----UUU-AA-UGUA--UA-UGGAU--UAGUGAC----UUU-GU---GUUGCUA-- UGAAGG-UGGA[-????]
Episynlestes_cristatus_SYN_ZEC GCCGCGGUUACACG-AAGG-ACGUGUGGGA-AUA-UUAU-UGGU-UU------GUA-GUUAAUUUGUUUUA------
----UUUCAAUUAUUUUAAUUUUUAGGUGGAAUUUAUUAUUAUGAUCU-------AAUGUUGUUAGGUUUAAUGAGGCUAUG---AAA--UUUA-UAUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUUUUAAGCGUUAAUUUU-----UGCCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUCCAGAGGAAC-CUA-CC-CCUUAAU UCGACACC-
CCA-CGAUUUU-AUUUACUUU--UAUUUGUU---CUCAGUUUAUAUACCUCCG-UC-AUAA-GAGAGU-CUU-UUUAGAG-A---AAAUUUUCUUUU-CCUUUAAA--UGAG AAUAUGUCAGGUC-
AAGGUGUAGCUU-AUAUA-A-AAG--UGG----A-GGCGGGUUACAAUUUA---UAUU-A--UGAG-----UGGAA--CAAUGUC----UUG-UA---UACAUUA-- AGAAAA-UGGA[-????]

Episynlestes_albicaudus_BEA ??????????????-????????--?????????-????-???????------???-?------------------
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???????????????????????----?????-?????GUAUUA-GU-UAUGUG-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUCCAGAGGAAC-CUG-CC-CCUUAAU UCGACAUC-
CCA-CGAUUUU-AUUUACUUU--UAUUUGUU---UUCAGUUUAUAUACCUCCG-UC-AUAA-GAGAGU-CUU-UUUAGAG-A---AAAUUUUCUUUU-CCUUUAAA--UGAG AAUAUGUCAGGUC-
AAGGUGUAAUUU-AUAUA-G-AAG--UGG----A-GGUGGGUUACAAUUUA---UUUU-A--UGAG-----UGGAG--UAAUAUU----UUA-UU---UAUAUUA-- GGAAAA-UGGA[-????]
Megalestes_micans_ZMMc GCCGCGGUUAUACG-A-GG-GUAUAAGAGA-AUA-UUAU-UGGCUUA------UUA-GUUAAUUUUUUUAUA-----
-----UUAAAUUUUUUUAAUUUUUAGGUGGAAUUUAUAAUUAAUUUAU-------AAUAUUGUUUUGUUAAAUGAUACUAUG---AAA--CUUA-UUUUA----U-AAACGAGGAUUAGAUACCC-
UUUUAUUUUAAGUAUUAAUAGUUU---UGCUU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UC-CCUUAAU UCGACAUU-
CCA-CGAUUAUAAUUAACUUU--UGCUUGUA--UUUCAGUUUGUAUAUCUCCG-UC-AUAA-GAGAGU-CUU-UUCAGAG-U---AAAUUUUCUUUU-CCUUUAAA--UAAG AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGCA-A-AAG--UGG----A-GGUGGGUUACAAUAUA----AUU-A--AAUA--UA-UGGAU--CAGUAUU----AUU-AU---AAUGGUG-- UGAAGG-UGGA[-????]
Megalestes_kurahashii ??????????????-?????--????????????-????-???????------???-???????????????----
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Orolestes_octomaculatus_ZOO GCCGCGGUUAUACG-AAAG-GUAAAAGAGA-GCA-UUUU-UGAUUU-------UUA-GUUAUUUUUGUCUA------
----UUUAAACCGUUCUAAUUUUUAGGUGGAAUUUAUAAUUAGGGACU-------AAUAUUAAUAUUUUUAAUGAUGCUAUG---AAA--CUUA-UAAUA----U-AGACAAGGAUUAGAUACCC-
UUUUAUUUUAAGCAUUAAUUUU-----UGUCA-GGGUAGUAUUU-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UGUUCAGAGGAAC-CUG-CC-CCUUAAU UCGACAUC-
CCA-CGAUUUU-AUUUACUUU--UAUUUGUU--UAUCAGUUUGUAUAUCUCCG-UC-AUAA-GAGAGU-CUU-UUCAGAG-U---AAAUUUUCUUUU-CCUUUAAA--AAAG AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGUA-A-AAG--UGG----A-GGUGGGUUACAAUAUA----UUU-A--UAUA--AA-CGGAA--UGGAAUC----UUU-AU---AUUUUCA-- UGAAGG-CGGA[-????]
Austrolestes_annulosus_BAA ??????????????-????????--?????????-????-???????------???-?------------------
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???????????????????????----?????-?????GUAUUU-GU-UAUGUU-CCUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-C-C-CUUUCAGAGGAAC-CUG-CC-CCUUAAU UCGACAUC-
CCA-CGAUUUU-ACUUACUUU--UACUUGUA--UGUCAGUUUGUAUAUCUCCG-UC-AUAA-GAGAGU-CUU-UUUAGAG-U---AAAUUUUCUUUU-UCUUUAAA--UAAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGUA-A-AAG--UGG----A-GGUGGGUUACAAUAUA----UUU-A--UAUA--CA-UGGAU--UGAUGUU----UUU-AU---AGCAUUA-- UGAAGG-UGGA[-????]
Sympecma_paedisca_BSP ??????????????-????????--?????????-????-???????------???-?------------------
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???????????????????????----?????-?????GUAUUU-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-CC-CCUUAAU UCGACAUC-
CCA-CGAUUUC-AUUUACUUU--UGCUUGUU--AUUCAGUUUGUAUAUCUCCG-UC-AUAA-GAGAGU-CUU-UUUAGAG-U---AAAUUUUCCUUU-UCUUUAAA--UAAG AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGUA-A-AAG--UGG----A-GGUGGGUUACAAUAUA----UUU-A--UGUA--UA-UGGAU--UGAUAUU----UUU-GU---AGUAUCA-- UGAAGG-UGGA[-????]
ZSF_Sympecma_fusca GCCGCGGUUAUACG-AAAG-GUAAAAGAGA-ACA-UUAU-UGGCUUU------UUA-GUUAAUUUUUAUUAA---- U------
UUAAAUGGCUUAGUUUUUAGGUGGAAUUUAUAACUAUGUUGU-------AAUAUUUUUAAUUAUAAUGAUGCUAUG---AAA--CUUA-UAAUA----U-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAGUAUUAAUUUUU----UGCCU-GGGUAGUAUCU-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-CC-
CCUUAAUUCGACAUC-CCA-CGAUUUC-AUUUACUUU--UGCUUGUU--AUCCAGUUUGUAUAUCUCCG-UC-AUAA-GAGAGU-CUU-UUUAGAG-U---AAAUUUUCUUUU-C
CUUUAAA--UAAGAAUAUGUCAGGUC-AAGGUGCAAUUU-AUGUA-A-AAG--UGG----A-GGUGGGUUACAAUAUA----UUU-A--UAUA--UA-UGGAU--UGAUAUU----UUU-GU-
--AGUGUCA--UGAAGG-UGGA[-????]
Austrolestes_analis_OAAn GCCGCGGUUAUACG-AAAG-GUAAAAGAGA-ACA-UUAU-UGGCUUU------UUA-GUUAAUUUUUUACAU---- U-----
UCCAAUUGGUCUAAUUUUUAGGUGGAAUUUAUAACUAGAUUAU-------AAUAUUGAUAAUCAUGAUGAUGCUAUG---AAA--CUUA-UGAUA----U-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAGUAUUAAUAUUU----UGCCU-GGGUAGUAUUU-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-C-C-CUUUCAGAGGAAC-CUG-CC-
CCUUAAUUCGACAUC-CCA-CGCUUUC-AUUUGCUUU--UGCUUGUA--UAUCAGUUUGUAUACCUCCG-UC-AUAA-GAGAGU-CUU-UUUAGAG-U---AAAUUUUCUUUU-U
CUUUAAA--UAAGAAGAUGUCAGGUC-AAGGUGCAAUUU-AUGUA-A-AAG--UGG----U-GGUGGGUUACAAUAUA----UUU-A--UAUA--CA-UGGAU--UGAUAUU----UUU-AU-
--AGUAUCA--UGAAGG-UGGA[-????]
Indolestes_pergrinus_LES_OIP GCCGCGGUUAUACG-AAAG-GUAAAAGAGA-ACA-UUAU-UGGC-UU------UUA-GUUAAUUUUUUGUAU---- U-----
UUAAAUUGGUUUAGUUUUUAGGUGGAAUUUAUAACUAGAUUAU------AAUAUUGUUAAUUUUAAUGAUUACUAUG---AAA--CUUA-UAAUA----C-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAGUAUUAAAUUU-----UGCCU-GGGUAGUAUUU-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-CC-

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CCUUAAUUCGACACC-CCA-CGAUUUU-AUUUACUUU--UACUUGUU--UAUCAGUUUGUAUAUCUCCG-UC-AUAA-GAGAGU-CUU-UUCAGAG-U---AAAUUUUCUUUU-U
CUUUAUA--AGAGCACAUGUCAGGUC-AAGGUGCAAUUU-AUGUA-A-AAG--UGG----A-GGUGGGUUACAAUAUA----UUU-A--UAUA--CA-UGGAU--UGAUAAU----UUU-AU-
--AUUGUCA--UGAAGG-UGGA[-????]
Indolestes_cyaneus                               ??????????????-???-?--????????????-????-??????------???-?--------------------
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Chalcolestes_viridis_LES_ZCV                     ??????????????-?????????-?????????-????-???????-----???-?--------------------
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???????????????????????----????C-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-CC-CCUUAAU UCGACACC-
CCA-CGAUUUU-AUUUACUUU--UACUUGUA--UAUCAGUUUGUAUACCUCCG-UC-AUAA-GAGAGU-CUU-UUUAGAG-U---AAAUUUUCUUUU-UCUUUAAA--UAAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGUA-A-AAG--UGG----U-GGUGGGUUACAAUGUA----GUU-A--UAUA--AA-CGGAU--UGGAAUU----UUU-AC---AUUUUCA-- UGAAGG-UGGA[-????]
Archilestes_grandis_OAG_BAG                      ??????????????-?????????-?????????-????-???????------???-?-------------------
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???????????????????????----?????-?????GUAGUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-CC-CCUUAAU UCGACAUU-
CCA-CGAUUCA-AUUUACUUU--UGCUUGUC--UAUCAGUUUGUAUAUCUCCG-UC-AUAA-GAGAGU-CUU-UUUAGAG-U---AAAUUUUCUUUU-UCUUUAAA--UAAG AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGCA-A-AAG--UGG----A-GGUGGGUUACAAUAUA---GAGG-A--AAUA--UA-CGGAU--UAAUAUU----UUU-AU---AUUAUUG-- UGAAGG-UGGA[-????]
Lestes_rectangularis_OLR                         ACCGCGGUUAUACG-AAAG-GUAAAAGAGA-ACA-UUAU-UGGCUUU------UUA-GUUAAUUUUUUAUAA---- U-----
UUAAAUUGUUUUAGUUUUUAGGUGGAAUUUAUAACUAAAUUAU-------AAUAAUAUUUAUUACUAUGAUACUAUG---AAA--CUUA-UAUUA----A-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAGUAUUAAUUUU-----UGCCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-CC-
CCUUAAUUCGACAUC-CCA-CGAUUCA-AGUUACUUU--UGCUUGUU--UAUCAGUUUGUAUAUCUCCG-UC-AUAA-GAGAGU-CUU-UUUAGAG-U---AAAUUUUCUUUU-U
CUUUAAA--UAAGAAUAUGUCAGGUC-AAGGUGCAAUUU-AUGUA-A-AAG--UGG----A-GGUGGGUUACAAUAUA----CUU-A--UAUA--CA-UGGAU--UGAAAUU----UUU-AU-
--AGUUUCA--UGAAUG-UGGA[-????]
Lestes_eurinus_LES_OLE                           ACCGCGGUUAUACG-AAAG-GUGAAAAAGA-AUA-UUGU-UGGCUUU------UUA-GUUAAUUUUUUAUGA---- U----
UAUGAAUUAUUUUAGUUUUUAGGUGGAAUUUAUAACUAAAUUUU------AAUAUUAUUUAUUAUUGAUGAUACUAUG---AAA--CUUA-UAAUA----A-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAGUGUUAAUUUU-----UGCCU-GGGUAGUAAUC-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-CC-
CCUUAAUUCGACAUU-CCA-CGAUUCA-AUGUACUUU--UAUUUGUU-UUAUCAGUUUGUAUAUCUCCG-UC-AUAA-GAGAGU-CUU-UUCAGAG-U---AAAUUUUCCUUU-C
CUUUAAA--AAAGAAAAUGUCAGGUC-AAGGUGCAAUUU-AUAUA-A-AAG--UGG----A-GGUGGGUUACAAUAUA----GGU-A--UAUA--UA-CGGAU--UGACAUU----AUU-AU-
--AAUGUCA--UGAAGG-UGGA[-????]
Hemiphlebia_mirabilis_OHM                        ??????????????-?????--????????????-????-???????------???-???????????????----
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Unaligned                                        8888888888------9999999999999999999999999---1111111111----
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Epiophlebia_superstes_OES                        ACCGCGGUUAGACG-AAAGUGUAGUAGAAA-AUA-UUAU-UGGUUUA------GCA-GUUAUUUUUUAAUUA---- U---
UUUAUUAUAUCAUUAAUUUUUAGGUGGAAUUUAUAAUUUUUGUUU-------AUUUAUUUAUUUUUAAAAGAAGCUGUG---AAA--UUUA-UAAUA----A-AAACGAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUAAAUAUA-----AACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-C-C-UCUUUAGAGGAAC-CUG-UC- CCUUAA-
UCGAUAGU-CCA-CGAUUUG-AUUUACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-U---AAAUUUUCUUUU-U
AUUAUAA--AUAUAAUAUGUCAGGUC-AAGGUGCAGUUU-AUGGA-U-AAG--UGG----A-GGUGGGUUACAAUAAA----AUU-A--UUUA--UA-CGGAU--UAGGAUU--UUUAA-AU-
--UGUUUUA--UGAAGG-UGGA[-????]
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Epiophlebia_laidlawi ??????????????-?????--????????????-????-???????------???-???????????????----
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Unaligned_Aeshnoidea ---
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Archipetalia_auriculata_AAAu GCCGCGGUUAUACG-AAAG-GAAAAAGUGA-AUA-UUAU-UGGUUAA------AUA-GUUAAUUAAUUUUAU-----
-----UUUUAAAAAGAUAAUUUUUAGGUGAAAUUUAUAUUUGUUUU-----------UGAAUUAUAUUUAAUGAAGCUAUG---AAA--UUUA-UAUUA----A-AGACGAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAAAUAUA-----AGCCU-GGGUAUUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UU-CUAUCA- UCGAUAAC-
CCA-CGAAGUG-AUUGACUUA--AUUUUGUU-AAUUCAGUUUGUAUACCUCCG-UC-AUAA-GGAUAC-CUU-UUUAGAG-U---AAGUUUUCUUUU-CAUAUUAA--GUAU AAUAUGUCAGGUC-
AAGGUGCAACUA-AUAAU-U-AAG--UAG----A-AAUGGAUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAAAUUA--UUUAA-AU----AUU-UA-- UGAAGG-UGGA[-????]
Austropetalia_victoria_AAV GCCGCGGUUAUACG-AAAG-GAAA-AGUGA-AUA-UUAU-UGGUUAA------AUA-GUUAAUUAAUUAAAU-----
-----UUUUAAAAAGAUAAUUUUUAGGUGAAAUUUAUAUUUGUUUU-----------UGAAUUAUAUUUAAUGAAGCUAUG---AAA--UUUA-UAUUA----A-AGACGAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAAAUAUA-----AACCU-GGGUAUUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UU-CUAUAA- UCGAUAAC-
CCA-CGAAGUG-AUUGACUUG--AUUUUGUU-AAUUCAGUUUGUAUACCUCCG-UC-AUAA-GGAUAC-CUU-UUUAGAG-U---AAGUUUUCUUUU-CAUAUUAA--GUAU AAUAUGUCAGGUC-
AAGGUGCAACUA-AUAAU-U-AAG--UAG----A-AAUGGAUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UGGAUUA--UUUAA-AU----GUU-UA-- UGAAGG-UGGA[-????]
Hypopetalia_pestilens_OHPe GCCGCGGUUAU-CGGAAGG-GGAAAAGUGA-AUG-UUAU-UGGUUUA------CUA-GUUAAUUAAUCUUAUU----
-----UUUUAAAAUGAUAAUUUUUAGGUGAAAUUUAUAUUUGUUUU-----------UGAAAUAUAUUUAAUGAAGCUAUG---AAA--UUUA-UAUUA----A-AGACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAAAUAUG-----AGCCU-GGGUAUUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UU-CCAUUA- UCGAUAAC-
CCA-CGAAGUG-AUUAACUUG--AUUUUGUU-AUUUCAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-U---AAAUUUUCUUUU-UAUAUUAA--GUAU AAUAUGUCAGGUC-
AAGGUGCAACUA-AUAAU-U-AAG--UGG
----A-AAUGGAUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UGAAUUA--UUUAA-AU----GUU-UA--UGAAGG-UGGA[-????] Rheopetalia_Phyllopetalia_apicalis
GCCGCGGUUAUACG-AAAG-GAAAAAGUGA-AUA-UUAU-UGGUUUA------AUA-GUUAAUUAAUUUAUUU----
-----UUUUAAAAUAAUAAUUUUUAGGUGAAAUUUAUGAUUAUUUU-----------UAAAAUAUAUUUAAUGAAGCUAUG---AAA--UUUA-UCUUA----A-AGACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUUAAUAUG-----AGCCU-GGGUAUUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UU-CCAUUA- UCGAUAAU-
CCA-CGAAGUG-AUUAACUUG--AUUUUGUU-AAUUCAGUUUGUAUACCUCCG-UC-AUAA-GGAUAU-CUU-UUUAGAG-U---GAAUUUUCUUUU-CAUAUUAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAACUA-AUAGU-C-AAG--UGG----A-AAUGGAUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UGAAUUA--UUUAA-AU----GUU-UA-- UGAAGG-UGGA[-????]
EU055033_130_Rheopetalia_Phyllopetalia_apollo ------NNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN------NNN-NNNNNNNNNNNNNNNN----
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN---NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNNN NNNNN
NNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN----NNNNN-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UU- CCAUUA-UCGAUAAU-CCA-
CGAAGUG-AUUAACUUG--AUUUUGUU-AAUUCAGUUUGUAUACCUCCG-UC-AUAA-GGAUAU-CUU-UUUAGAG-U---GAAUUUUCUUUU-C
AUAUUAA--AUAUAAUAUGUCAGGUC-AAGGUGCAACUA-AUAAU-C-AAG--UGG----A-AAUGGAUUACAAUAAA----CUU-A--UUUA--UA-UGGAU--UAAAUUA--UUUAA-AU-
---AUU-UA--UGAAGG-UGGA[-????]
Eurypetalia_altarensis_OEA_AUS GCCGCGGUUAUACG-AAAG-G-AAAAGUGA-AUA-UUAU-UGGUUUA------AUA-GUUAAUUAAUUUUAUU----
-----UUUUAAAAUAAUAAUUUUUAGGUGAAAUUUAUAAUUGUUUU-----------UAAAAUAUAUUUAAUGAAGCUAUG---AAA--UUUA-UAUUA----A-AGACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUUAAUAUA-----AGUCU-GGGUAUUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UU-CCAUUA- UCGAUAAU-
CCA-CGAAGUG-AUUAACUUG--AUUUUGUU-AAUUCAGUUUGUAUACCUCCG-UC-AUAA-GGAUAU-CUU-UUUAGAG-U---AAAUUUUCUUUU-CAUAUUAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAACUA-AUAGU-C-AAG--UGG----A-AAUGGAUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAAAUUA--UUUAA-AU----GUU-UA-- UGAAGG-UGGA[-????]
Ophiopetalia_diana_OOD GCCGCGGUUAUACG-AAAG-G-AAAAGUGA-AUA-UUAU-UGGUUUA------AUA-GUUAAUUAUUUUUAUU----
-----UUUUAAAGUAAUAAUUUUUAGGUGAAAUUUAUAAUUGUUUU-----------UAAAAUAUAUUUAAUGAAGCUAUG---AAA--UUUA-UAUUA----A-AGACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUUAAUAUA-----AGUCU-GGGUAUUAUUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UU-CCAUUA-

UCGAUAAU-CCA-CGAAGUG-AUUAACUUG--AUUUUGUU-AAUUCAGUUUGUAUACCUCCG-UC-AUAA-GGAUAU-CUU-UUUAGAG-U---AAAUUUUCUUUU-CAUAUUAA--AUAU
AAUAUGUCAGGUC-AAGGUGCAACUA-AUAGU-C-AAG--UGG----A-AAUGGAUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UGAAUUA--UUUAA-AU----GUU-UA-- UGAAGG-
UGGA[-????]
Gomphaeschna_furcillata_OGF GCCGCGGU-AUACG-AAAG-G-GA-AGUGA-AUA-UUAU-UGGUUUA-----AUA-GUUAAUAUUUAAUUUU----
---UUGUUUNAAUUUUUAAUUUUUAGGUGAAAUUUAUAAUUAUUGU---------UUAUACAUAUAUUUGAUGAAGCUAUG---AAA--UUUA-UAUGA----A-AGACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAAGAAUG-----AACCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UC-CCGUUA- UCGACAAU-
CCA-CGAAUAG-AUGUACUUG--AUUUUGU---AUUCAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-U---AAAUUUUCUUUA-UAUAAUAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGGU-C-AAG--UGG----A-GAUGGAUUACAAUAAA----UUUUA--UUUA--UA-UGGAU--UAAAUUA--UUUAA-AU----UUU-UA-- UGAAGG-UGGA[-????]
AF266043_Oligoaeshna_pryeri NNNNNNNNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN-----NNN-N------------------
--------------------NNNNNNNNNNNN---NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNN------NNNNN-NN----NNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNN-NNN-NN- NNNNNN-
NNNNNNNN-NNN-NNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN------NN-NNN-NNNNNNNNNNNNNNNNN-N
NNNNNNN---NNNNNNNNNN-------NNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNN---NNNNNNN--NNNN--NN-
--NNNN-NN--NNNNNN-NNN-[-????]
Austroaeschna_parvistigma_AAPs ACCGCGGUUAUACG-AAAG-GAAAAAGUGA-AUA-UUCU-UGGUUUA-----AUA-GUUAGUUUAGUUUAAA----
---UUAUUUAUAUUGAUAGUUUUUAGGUGAAAUUCAUAAUUGUUGA---------AUAAUUAAUUUAUU-AAUGAAGCUAUG---AAA--UUUA-UGAUA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAACAAUU-----AACCU-GGGUAGUAUUA-GU-UAAGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC-CCGUUA- UCGACAGC-
CCA-CGAAUAG-AAAUACUUA--AUUUUGCU-U-UACAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-U---GAAUUUUCUUUA-UAUAAUAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUA-AUAGU-U-AAG--UGG----A-GGUGGAUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAAAUUA--UUUAA-AU----UUU-UA-- UGAAGG-UGGA[-????]
Telephlebia_tillyardi_ATT ??????????????-???----????????????-????-????????--?--???-?------------------
--------------------????????????---?????---???--????-?????----?????????????????????-
??????????????????????--????????-?????-?????-?????????-???????????????????-???????-??????-?-?-?????????????-???-??-???????
????????-???-?????????????????--????????-?????????????????????-??-????-??????-???-???????-????????????????-????????--?-??
?????????????-??????????????????-?????--???----?-????????????????----???-?--????--??-?????--???????--?????-??--????????-
???????-????[-????]
Boyeria_vinosa_OBV -----------------------aaaguga-aua-uucu-ugguuua-----aua-guuaauuuauuUAAUU----
----UAUUUAUAUUAAUAAUUUUUAGGUGAAAUUUAUAAUUAUUAU---------AUAAUUAAUUUAU---AUGAAGCUAUG---AAA--UUUA-UAUAA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAACAAUU-----AACCU-GGGUAGUAUUA-GU-UAAGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CCUUCAGAGGAAU-CUG-UU-CCGUCA- UCGACAAC-
CCA-CGAAUAG-UAAUACUUG--AUUUUGUU-U-UACAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-U---AAAUUUUCUUUA-UAUAAGAA--AUAU AGGAUGUCAGGUC-
AAGGUGCAAUUA-AUAAU-C-AAG--AGG----A-AAUGGAUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UGAAUUA--UUUAA-AU----AUU-UA-- UGAAGG-UGGA
EU477640_Boyeria_irene --------------------GAAAAAGUGA-AUA-UUCU-UGGUUUA-----AUAUGUUAAUUUAUUUAAUU----
----UAUCUAUAUUAAUAAUUUUUAGGUGAAAUUUAUAAUUAUUAA---------AUAAUUAAUAUAU---AUGAAGCUAUG---AAA--UUUA-UAUAA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAACAAUU-----AACCU-GGGUAGUAUUA-GU-UAAGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UU-CCGUAA- UCGACAGU-
CCA-CGAGUAG-AAGUACUUG--AUUUUGUU-U-UGCAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-U---AAAUUUUCCUUA-UAU-AUAAA-AUAU AGAAUGUCAGGUC-
AAGGUGCAAUUA-AUAAU-C-AAG--AGG----A-AAUGGAUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAAAUUA--UUUAA-AU----AUU-UA-- UAAAGG-UGGA[-????]
Brachytron_pratense_AES ACCGCGGUUAUACG-AAAG-GAAAAAGUGA-AUA-UUCU-UGGUUUA-----AUA-GUUAAUUUAUUUACUU----
----UAUUUAUACUAAUAAUUUUUAGGUGAAAUUUAUAAUUAUUAU---------AUAAUUAAUCUAU--AAUGAAGCUAUG---AAA--UUUA-UAUAA----A-AGACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAACCAUU-----AACCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UU-CCGUUA- UCGACAAC-
CCA-CGAAUAG-AAGUACUUG--AUUUUGUU-U-UUCAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-A---AAAUUUUCUUUA-UAUAAUAA--AUAU AGUAUGUCAGGUC-
AAGGUGCAAUUG-AUAAU-C-AAG--UGG----A-AAUGGAUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAAAUUA--UUUAA-AU----UUU-UA-- UGAAGG-UGGA[-????]
Epiaeschna_heros_OEH ACCGCGGU-AUACG-AAAG-GAAAAAGUGA-AUA-UUCU-UGGUUUA-----AUA-GUUAAUUUAUUUAAAU----
---UUAUUUAUAUUAAUAAUUUUUAGGUGAAAUUUAUAAUUAUUAU---------AUAAUUAAUUUUU--AAUGAAGCUAUG---AAA--UUUA-UAUAA----A-AGACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAAAUAUU-----AACCU-GGGUAGUAUUA-GU-UAAGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UU-CCGUUA- UCGACAAC-
CCA-CGAAUAG-AAGUACUUG--AUUUUGUU-U-UUCAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-A---AAAUUUUCUUUA-UAUAAUAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUG-AUAAU-C-AAG--UGG----A-AAUGGAUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAAAUUA--UUUAA-AU----UUU-UA-- UGAAGG-UGGA[-????]

EU477639_Caliaeschna_microstigma --------------------GAAAAAGUGA-AUA-UUCU-UGGUUAU---A--AUA-GUUAAUUUAAUUAAU-----
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UUUUAUUAUAAAUGUAACAAUU-----AACCU-GGGUAGUAUUA-GU-UAAGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UU-CCAUUA- UCGACAAC-
CCA-CGAAUAG-AAGUACUUG--AUUUUGUU-UAUACAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-U---AAAUUUUCUUUA-UAUAAUAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUA-AUAAU-C-AAG--UGG----A-AAUGGAUUACAAUAAA----AUU-A--UUUA--UA-UGGAU--UAAAUUA--UUUAA-AU----AUU-UA-- UAAAGG-UGGA[-????]
EU477649_Anaciaeschna_isoceles --------------------GAAAAAGUGA-AUA-UUCU-UGGUUUA------AUA-GUUAUUUUGUUUAAC-----
---UUAUUUAUAUUAAUAAUUUUUAGGUGAAAUUUAUAAUUAUUAU---------AUAAUUAAAUUUAU-AAUGAAGCUGUG---AAA--UUUA-UAUAA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAACAAUU-----AACCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UU-CCGUUA- UCGACAAC-
CCA-CGAAUAG-AAAUACUUG--AUUUUGUU-U-UACAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-A---AAAUUUUCUUUA-UAUAAUAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUAAU-C-AAG--UGG----A-AAUGGAUUACAAUAAA----UUU-A--UUUA--CA-CGGAU--UAAACUA--UUUAA-UU----UUU-UA-- UGAAGG-UGGA[-????]
GQ118252_82_Oplonaeschna_sp ------NNNNNNNN-NNNN---NNNNNNNNN----NNNN-NNNNNNN------NNN-N------------------
--------------------NNNNNNNNNNNN---NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNNNNU-
-AUUAUUAUAAAUGUAACAAUU-----AACCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UU-CCGUCA- UCGACAAC-
CCA-CGAAUAG-AAGUACUUG--AUUUUGUU-U-UACAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-U---AAAUUUUCUUUA-UAUAAUAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUAAU-C-AAG--UGG----A-AAUGGAUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UAAAUUA--UUUAA-UU----UUU-UA-- UGAAGGNUGGA[-????]
Aeschna_canadensis_OAC GCCGCGGUUAUACG-AAAG-GAAAAAGUGA-AUA-UUCU-UGGUUUA------AUA-GUUAAAUUAUUUUAU-----
---UUAUUUAUAUUGAUAAUUUUUAGGUGAAAUUUAUAAUUAUUAU---------AUAAUUAAUUUAAU-AGUGAAGCUAUG---AAA--UUUA-UAUAA----A-AGACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAACAAUU-----AACCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UU-CCGUUA- UCGACAAC-
CCA-CGAAUAG-AAAUACUUG--AUUUUGUU-U-UACAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-U---AAAUUUUCUUUA-UAUAAUAA--AUAU AGUAUGUCAGGUC-
AAGGUGCAAUUA-AUAGU-C-AAG--UGG----A-AAUGGAUUACAAUAGA----UUU-A--UUUA--UA-CGGAU--UAAAUUA--UUUAA-UU----UUU-UA-- UGAAGG-UGGA[-????]
EU054953_5053_Aeshna_Rhionaeschna_multicolor NNNNNNNNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN------NNN-N------------------
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NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN---GUAUUA-GU-UAUGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UU- CCGUUA-
UCGACAAC-CCA-CGAAUAG-AAGUACUUG--AUUUUGUU-U-UACAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-G---GAAUUUUCUUUA-U
AUAAUAA--AUAUAAUAUGUCAGGUC-AAGGUGCAAUUA-AUAGU-C-AAG--UGG----A-AAUGGAUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAAAUUG--UUUAA-UU-
---AUU-UA--UGAAGG-UGGA[-????]
AF268609_Aeshna_cyanea NNNNNNNNNNNNNN-NNNN---NNNNNNNNN-NN-NNNN-NNNNNNN------NNN-N------------------
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NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNNNNNNNNNNNNNNNNNNN NNNNNN-
NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNNNNN-NNNNNNNNNNNNNNNN-N
NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNNNNNNN----NNNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNNN--NNNNNNN--NNNNN-NN-
---NNN-NN--NNNNNNNNNN[-????]
EU477645_Aeshna_grandis --------------------GAAAAAGUGA-AUA-UUCU-UGGUUUA------AUA-GUUAAUUUAUUUAUA-----
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UUUUAUUAUAAAUGUAACAAUU-----AACCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UU-CCGUUA- UCGACAAC-
CCA-CGAAUAG-AAGUACUCG--AUUUUGUU-U-UCCAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-U---AAAUUUUCUUUA-UAUAAUAA--AUAU AGUAUGUCAGGUC-
AAGGUGCAAUUA-AUAGU-C-AAG--UGG----A-AAUGGAUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UAAAUUA--UUUAA-UU----UUU-UA-- UGAAGG-UGGA[-????]
EU477643_Gynacantha_japonica --------------------GAAAAAGUGA-AUA-UUCU-UGGUUUA------AUA-GUUAAUUUAUCUAUUU----
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UUUUAUUAUAAAUGUAACAAUU-----AACCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UU-CCGUUA- UCGACAAC-
CCA-CGAAUAG-AAAUACUUG--AUUUUGUU-U-ACCAAUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-A---AAAUUUUCUUUA-UAUAAUAA--AUAU AGUAUGUCAGGUC-
AAGGUGCAAUUU-AUGGU-C-AAG--UGG----A-AAUGGAUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UAAAUUA--UUUAA-CU----UUU-UA-- UGAAGG-UGGA[-????]
Austrogynacantha_heterogena_AAH ---GCGGUUAU-CG-AAAG-GAAA-AGUGA-AUA-UUCU-UGGUUUA------AUA-GUUAAUUUAUUUAUUU----
---UUAUUUAUCUUGAUAAUUUUUAGGUGAAAUUUAUAAUUAUUAA---------AUAAUUAAAUUUUU-AAUGAAGCUGUG---AAA--UUUA-UAUAA----A-AGACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAACAAUU-----AACCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UU-CCAUUA-

UCGACAAC-CCA-CGAAUAG-AAGUACUUG--AUUUUGUU-U-UACAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-A---AAAUUUUCUUUA-UAUAAUAA--AUAU
AAUAUGUCAGGUC-AAGGUGCAAUUU-AUAAU-C-AAG--UGG----A-AAUGGAUUACAAUAAA----AUU-A--UUUA--UA-CGGAU--UGAAUUA--UUUAA-UU----UUU-CA-- UGAAGG-
UGGA[-????]
EU477650_Hemianax_ephippiger   --------------------GAAAAAGUGA-AUA-UUCU-UGGUUUA------AUA-GUUAAUUUAUUUAAU-----
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UUUUAUUAUAAAUGUAACAAUU-----AACCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACUCAAAGGAUUU-GGKGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UU-CYGUUA- UCGACAAC-
CCA-CGAAUAG-AAGUACUUG--AUUUUGUU-U-UACAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-U---AAAUUUUCUUUA-UAUAAUAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUAAU-C-AAG--UGG----A-AAUGGAUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UAAAWUA--UUUAA-UU----UUU-UA-- UGAAGG-UGGA[-????]
Anax_junius_OAJ   GCCGCGGUUAUACG-AAAG-GAAAAAGUGA-AUA-UUCU-UGGUUUA------AUA-GUUAAUUUAUUUUAU-----
--UUUAUUUAUACUAAUAAUUUUUAGGUGAAAUUUAUAAUUAUUAU--------AUAAUUAAUUUUUU-AAUGAAGCUAUG---AAA--UUUA-UAUAA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAACAAUU-----AACCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UU-CCGUCA- UCGACAAC-
CCA-CGAAUAG-AAGUACUUG--AUUUUGUU-U-UACAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-U---AAAUUUUCUUUA-UAUAAUAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUAAU-C-AAG--UGG----A-AAUGGAUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UAAAUUA--UUUAA-UU----UUU-UA-- UGAAGG-UGGA[-????]
EU477652_Anax_imperator   --------------------GAAAAAGUGA-AUA-UUCU-UGGUUUA------AUA-GUUAAUUUAUUUUAUU----
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UUUUAUUAUAAAUGUAACAAUU-----AACCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACUCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UU-CCGUUA- UCGACAAC-
CCA-CGAAUAG-AAGUACUUG--AUUUUGUU-U-UACAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-U---UAAUUUUCUUUA-UAUAAUAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUAAU-C-AAG--UGG----A-AAUGGAUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UAAAUUA--UUUAA-UU----UUU-UA-- UGAAGG-UGGA[-????]
Unaligned_Gompidae   --111111111---------
22222222222222222222222222222222222-----------------------3333333333333333333333---
-------------------------------444444444---
--555555---7777777-----------

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Sinogomphidia_kruegeri_ASK   ACCGCGGUUAUACG-AGGAGGAGAAAGUAA-ACA-UUAU-UGGUUAUU--U--GCA-GUUAAAUAUUUCUUU-----
-----UAUUAAAAUAAUUAUUUGUAGGUGAAAUUUUAAAUAUUUUAA-----------UAAUUAUAUUUUUUGAAGCUGUG---AAA--UUCA-AAUUA----A-AGACAAGGAUUAGAUACCC-
UUUUAUUUUGAAUGUUAAUUUU-----AACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-UC-CCGUAA- UCGACAAU-
CCA-CGAGAAG-AAGUACUUG--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUCA-GGGAAU-CUU-UUUAGAG-AA--AAAUUUUCUUAA-AAUAAUAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAACUU-AUAAG-C-AAG--AGG----A-GAUGGGUUACAAUAAA----ACU-A--UUUA--AA-CGGAU--UGAGUUA--UUUA--AU---UUUU-CA-- UGAAGG-UGGA[-????]
EU054969_5066_Ictinogomphus_australis   NNNNNNNNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN-----NNN-N--------------------
--------------------NNNNNNNNNNNN--NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN---GUAGUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-CUUUAG-U-C-CUUUCAGAGGAAC-CUG-UC- CCGUAA-
UCGAUAUU-CCA-CGAGAAG-AAUUACUUG--UUUUUGCU---UUCAGUUUGUAUACCUCCG-UC-AUCA-GAGAAU-CUU-UUUAGAG-UUAAUAAUUUUCUUGA-G
AUAGUGA--AUAUAGUAUGUCAGGUC-AAGGUGCAGCUU-AUAAA-U-GAG--UGG----A-GAUGGGUUACAAUAAU----AAU-A--UUUA--GA-CGGAU--UAGGGUA--UUUAU-AU-
--UAUUCUA--UGAAGG-UGGA[-????]
Ictinogomphus_sp   ---

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EU477674_Lindenia_tetraphylla   --------------------GAGAAAGUAA-ACA-UUAU-UGGUUAAU--UU-GCA-GUUAAAUAUUAAUUU-----
----UUAUUAAAAUAAUUAUUUGUAGGUGAAAUUUUAAAUUUUUUA-----------GUAAAUAUAUUUUUUGAAGCUGUG---AAA--UUCA-UUUUA----A-AGACGAGGAUUAGAUACCC-
UCUUAUUUUGAAUGUUAAUUUU-----AACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CCUUCAGAGGAAC-CUG-UC-CCGUAA- UCGACAGU-
CCA-CGAGAAG-AUUUACUUG--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUCA-GAGAAU-CUU-UUUAGAG-AU--AAAUUUUCUUAA-AAUAAUAA--AUAU AGUAUGUCAGGUC-
AAGGUGCAAUUU-AUGAA-C-AAG--UGG----A-GAUGGGUUACAAUAAU----UUU-A--UUUA--AA-CGGAG--UGAAUAA--UUUA--AU---AAUU-CA-- UGAAGG-UGGA[-????]

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Phyllogomphoides_stigmatus_GOM                    gccgcgguuauacg-aaag-GAGA-AGAUA-AAUUUUAU-UGGUUAA---AUUUCA-GUUAAAUGUUAUUUU-----
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UUUUAUUUUAAAUGUUAAUUUU-----AACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-UC-CCGUAA- UCGACACC-
CCA-CGAGAAG-AUGUACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUCA-GGGAAU-CUU-UUUAGAG-AU-UUAAUUUUCUUAA-UAUAUUUU--AUAU AAGAUGUCAGGUC-
AAGGUGCAGUUU-AUGAA-U-AAG--AGG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UGAUUCA--UUUA--AU---UUUU-CA-- UGAAGG-UGGA
AF266080_Progomphus_obscurus                      GCCGCGGUUAUACG-AAAG-GGAUAAGUGA-AUA-AUAU-GGGCUGGU--UU-GCA-GUUUAAAGUUUUUAU-----
----UUAUUAAAGUUUUUAUUUUUGGGUGAAAUCUCUAAAUUUUUUA----------UUAAUUAUAUUUAUUGAAGCUGUG---AAA--CUUA-AUUUU----A-AAACAAGGAUUAGAUACCC-
UUUUAUCUUAAGUGUUAAAAUU-----AGCCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGCA-UUUUAC-C-C-CUUUCAGAGGAAU-CUG-UC-CCGUAA- UCGACAGC-
CCA-CGAGAAG-AUUUACCUG--UUCUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUCA-GAGAAU-CUU-UUUAGAG-AA--GAAUUUUCUUAA-UAUAAUGA--AUAU AGGAUGUCAGGUC-
AAGGUGCAAUUU-AUGGA-C-AGG--UGG----U-GAUGGAUUACAAUAAA----CUU-A--UUUA--UA-UGGAU--UGACUUA--UUUA--AU---UUGU-CA-- UGAAGG-UGGA[-????]
EU054982_5078_Progomphus_borealis                 NNNNNNNNNNNNNN-NNNNNNNNNNNNNN----N-NNNN-NNNNNNN-----NNN-N-----------------
-------------------NNNNNNNNNNNN-------------------------------------------NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN---GUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC- CCGUAA-
UCGACAGU-CCA-CGAUCAG-GUUUACCUG--UUCUUGUU---UACAGUUUGUAUACCUCCG-UC-AUCA-GAAAAU-CUU-UUUAGAG-AG--AAAUUUUCUUAA-U
AUAAUAA--AUAUAAUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-C-AGG--AGG----A-GAUGGAUUACAAUAAA----UAU-A--UUUA--AA-UGGAU--UGACAUA--UUUA--AU-
--UUGU-CA--UGAAGG-UGGA[-????]
EU477667_Hagenius_brevistylus                     --------------------GGGAAAAUAA-AUA-UUAU-UGGUUG-------GUA-GUUAAUUUUUUUUUA-----
---UUUAUGAGAUUAAUUAUUUUUAGGUGAAAUUUUAAUUUUUUAA------------UAUUUAUAUUAUAUGAAGCUACG---AAA--UUUA-UUUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAAAUACU--GU-GACCA-GGGUAGUAUUA-GU-UAUGUA-CUUUAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC-CCGUAA- UCGAUAAU-
CCA-CGAGAUA-UAUUACUUG--UCUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGAAU-CUU-UUUAGAG-UU--AAAU-UUCUUAA-UACAUUUG--GUGU AUCAUGUCAGGUC-
AAGGUGCAAUUU-AUAGA-U-AAG--UGG----A-GAUGGAUUACAAUAAA----AUU-A--UUUA--AA-CGGAA--UGGAUUG--UUUA--CU---CUUUCUA-- UGAAGG-UGGA[-????]
Lanthus_vernalis_OLV                              ACCGCGGU--UACG-GGAAGGGGAAAGUGAAAUA-UUAU-UGGUUUA------AUA-GUUAGUAUUAAUAUU-----
----UUAUAAAAAUGUUUAUUUUUAGGUGAAAUUUUAAUUUUCUAA------------UAUUUAUAUUUUACGAAGCUAUA---AAA--UUUA-UGUUA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAAAUAUU--AU-AACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC-CCAUAA- UCGACAUU-
CCA-CGAGAUG-AUUUACUUG--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-ACAA-GAGAAU-CUU-UUCAGAG-GUU-AAAUUUUCUUUA-UAUAAUAA--AUAU AUUAUGUCAGGUC-
AAGGUGCAAUAU-AUAAA-C-AAG--AGG----A-GAUGGAUUACAAUAAA----AUU-A--UUUA--AA-CGGAU--UAAAUUA--UUUA--AU---UUUU-UA-- UGAAGG-UGGA[-????]
EU477668_Davidius_nanus                           --------------------GAGUAAGUAA-GCA-UUAU-UGGUUCU------AUA-GUUAAUGAGAAAGUG-----
--UUUAUAAAAUGAUAUGUUUAUUAGGUGAAAUUUUAAUUUUCUAU------------UAUUUAUAUUGUGUGAAGCUAUG---AAA--UUUA-UAUUA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUAUAAAAGUGAAUUUU--UAAAGCCA-GGGUAGUAUUA-GU-UAUGUU-CUUUAAACCCAGAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC-CCGUAA- UCGACAGC-
CCA-CGUGAAGUGUUUACCUA--GUUUUGUU-U-AUCAGUUUGUAUACCUCCG-UC-AUAA-GAGAAU-CUU-UUUAGAG-UU--AAAUUUUCUUAA-UAUAUUUG--UUAU ACUAUGUCAGGUC-
AAGGUGCAGCUU-AUAAU-U-AGG--AGG----A-GAUGGAUUACAAUAUU----UAU-A--UGUA--UA-CGAAG--UAAAAUA--AUUG--UC---UUUUUUA-- UGAAGG-UGGA[-????]
EU477680_Neogomphus_edenticulatus                 -----------------------------------------GGUUAAU-----AUA-GUGAAAUBAGUUAUU-----
---UUUAUAAAAMUAAUUAUUUGURGGUGAAAUUUUAAAUUUUUUA-----------AUAAAUAUACUUUUUGAGGCUAUG---AAA--UUUA-UUUUA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUUUAGAUGUUAAUUUU-----AACUU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-UC-CCUUAA- UCGACAGU-
CCA-CGAGAA-GAUGUACUUG--UAUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUCA-GAGAAU-CUU-UUUAGAG-UU--UAAUUUUCUUAA-UAUAUUAA--AUAU AGUAUGUCAGGUC-
AAGGUGCAAUUU-AUAUA-U-AAG--UGG----A-GAUGGGUUACAAUAAA----AUU-A--UUUA--AA-CGGAU--UGAAAUA--UUUA--AU---UUUU-CA-- UGAAGG-AGGA[-????]
Armagomphus_armiger_AAAr                          ------GUUAAACG-G-A-GGGGAAAGUGA-A-G-UUCU-UGGUAAUA-----GUA-GGUGAUUUAUUGUUU-----
----UAUUAAAAUGAUGAUUAUAUAGGUGAAAUUUUGAUUUUUUAA------------UAUUUAUAUUUUAUGAGGCUACG---AAA--UUUA-UUUUA----A-AGACAAGGAUUAGAUACCC-
UUUUAUUUUAAAUGUAAAUAUU-----AACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC-CCAUAA- UCGAUAUU-
CCA-CGAUAAUGAUUUACUUG--CCCUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUCA-GUAAAU-CUU-UUUAGAG-UUUUUAAUUUUCUUAU-CACAUUUA--UUGU UUUAUGUCAGGUC-
AAGGUGCAACUU-AUGGG-C-AAG--GGG----A-GAUGGAUUACAAUAAA----UAU-A--UUUA--GA-CGGAU--UAAAUUA--UAUA--UU---UUUUUUA-- UGAAGG-UGGA[-????]
Hemigomphus_comitans_AHC                          gccgcgguuauacg-aaa-ggaggAAGUGA-AAU-UUAU-UGGUUAU----A-ACA-GUUAAUUUUAUUUUG-----
---UUUAUUAUGUUUAUAAUUUUUAGGUGAAAUUUUGAUUAUUUAA------------UAAAUAUAUUUUUUGAGGCUGUG---AAA--UUUA-UUUUA----A-AGACAAGGAUUAGAUACCC-
UUUUAUUUUAAAUGUAAAUAUU-----AACCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-UC-CCGUAA-
```

UCGAUAGU-CCA-CGAUAAUGAUUUACUUA--UAUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUCA-GCGAAU-CUU-UUUAGAG-UU-UUAAUUUUCUUAA-UACAAUAA--AUGU
AAUAUGUCAGGUC-AAGGUGCAAUUU-AUAUA-U-AAG--AGG----A-GAUGGGUUACAAUAAU----UUU-A--UUUA--AA-UGGAU--UAAAUUA--UUUA--UU---UUUUUUA-- UGAAGG-UGGA
EU477683_Hemigomphus_heteroclytus ----------------------GGAAGUGA-AAU-UUAU-UGGUUAU----A-GUA-GUUAAAUUUAUUUUA-----
---UUUAUUAUAUUUAUAAUUAUUAGGUGAAAUUUUGAUUAUUUGG-------------UAAAUAUAUUUUUUGAAGCUGCG---AAA--UUUA-UUUUA----A-AGACAAGGAUUAGAUACCC-
UUUUAUUUUAAAUGUAAAUAUU-----AACCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-UC-CCGUAA- UCGAUAGU-
CCA-CGAUAAUGAUUUACUUA--UAUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUCA-GCGAAU-CUU-UUUAGAG-UA-UUAAUUUUCUUUA-UACAAUGA--AUGU AGUAUGUCAGGUC-
AAGGUGCAAUUU-AUAUA-U-AAG--AGG----A-GAUGGGUUACAAUAAU----UUU-A--UUUA--UA-UGGAU--UAAAUUA--UUUA--UU---UUUUUUA-- UGAAGG-UGGA[-????]
EU054939_5039_Hemigomphus_magela NNNNNNNNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN------NNN-N-------------------
--------------------NNNNNNNNNNNN---NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN---GUAUUA-GU-UAUGUU-CUUGAA-CCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-UC- CCGUAA-
UCGAUAGU-CCA-CGAUAAUGAUUUACUUA--UGUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUCA-GCGAAU-CUU-UUUAGAG-UU-UUAAUUUUCUUUA-U
ACAAUAA--AUGUAGUAUGUCAGGUC-AAGGUGCAAUUU-AUAUA-U-AAG--AGG----A-GAUGGGUUACAAUAAU----UUU-A--UUUA--AA-UGGAU--UAAAUUA--UUUA--UU-
--UUUUUUA--UGAAGG-UGGA[-????]
Trigomphus_sp ---

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EU477665_Stylogomphus_albistylus --------------------GGAAAGGUAA-ACA-UUAU-CGGCCUA------GCA-GUUAAUAGUGAUUGU-----
----UUAUUAAAAUGUUAAUUUUUAGGUGAAAUUUUAAUUUUCUAAU-----------ACUUAUGUUGUAUGA--GGCUGUG---AAA--UUUA-UGUUA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUGUAAAUGUUAAUUUU--U-AGGUCA-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC-CUGUAA- UCGACUUU-
CCA-CGAGAUU-AAGAACUUG--AAUUUGUU--UAUCAGUUUGUAUACCUCCG-UC-AUAA-GAGAAU-CUU-UUUAGAG-UU-AAAAUUUUCUUAU-UAUAUUAA--GGAU AAUAUGUCAAGUC-
AAGGGGCAAUUG-AUGAA-U-AAG--UUG----A-GAUGGAUCACAAUAAA----UUU-A--UUUA--GG-CGGAA--UAAAUUA--UUUA--GU----UUUUUA-- UGAAGA-UGGA[-????]
EU477679_Stylogomphus_shirizui --------------------GAAAAGGUAA-AUA-UUAU-CGGCUUG------GCA-GUUAGUAGUGUUAUA---- A----
UUAUUAAAAUGUUAAUUUUUAGGUGAAAUUYUAAUUUUCUAA-------------UAUUUAUAUUUUAUGAAGCUGUG---AAA--UUUA-UGUUA----A-AAACAAGGAUAAGAUAC
CC-UUUUAUUGUAGAUGUUAAUAUU--U-AGGCCA-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC- CUGUAA-
UCGACAAU-CCA-CGAGAUU-AGUUACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAAAAU-CUU-UUUAGAG-UU-UCAAUUUUCUUAU-U
AUAUUAA--GUAUGUUAUGUCAGGUC-AAGGUGUAGCUU-AUGAA-U-AAG-UUGG----UAGAUGGAUUACAAUAAA----UUU-A--UUUA--AG-CGGAA--UAAAUUA--UUUA--UU-
--UUUUUUA--UGAAGA-UGGA[-????]
EU054997_5093_Davidioides_martini NNNNNNNNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN------NNN-N-------------------
--------------------NNNNNNNNNNNN---NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN---GUAAUA-GU-UAUGUU-CUUGAAACCCAGAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC- CCGUAA-
UCGACAUC-CCA-CGAGAUG-AUGUACUUA--UUCUUGUU---UUCAGUUUGUAUACCUCCG-UC-GUAA-GAGAAU-UUU-UUUAGAG-UA--UAAUUUUCUUUA-U
AUAUUAA--AUAUAUUAUGUCAGGUC-AAGGUGCGAUUU-AUGAA-U-AAG--UGG----A-GAUGGAUUACAAUAAG----UAU-A--CUUA--AA-UGGAU--UGGAUUA--UUUA--AU-
--UUUUCUA--UGAAGG-UGGA[-????]
Burmagomphus_collaris_ABC -CCGGUUAUAGGAC-GGGAGAAAAAAGUAA-AUA-UUAU-UGGUUU-------AUA-GUUAUUGUUAAUUUU---- A---
UUUAUUAAAGUUUAAAUUUUUAGGUGAAAUUUUAAUUUUUUAUU-------------AUUUAUUUUUUAUGAAGCUAUG---AAA--UUUGCUUGGA----A-AAACGAGGAUUAGAUAC
CC-UUUUAUUGUAAAUGUAAAUAUU----UAACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC- CCGUAA-
UCGACAAC-CCA-CGAGAUA-AUUUACUUA--UUUUUGUU-A-UUCAGUUUGUAUACCUCCG-UC-AUAA-GAAGAU-CUU-UNUAGAG-GC-UUAAUUUUCUUAA-U
AUAUUAA--AUAUAAGAUGUCAGGUC-AAGGUGCAAUUU-AUAAA-U-AAG--AGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAAAUUA--UUUA--AA-
--UUUU-UA--UGAAGG-UGGA[-????]
EU054996_5092_Cyclogomphus_heterostylus NNNNNNNNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN------NNN-N-------------------
--------------------NNNNNNNNNNNN---NNNNN---NNN--NNN-NNNNNN----N-NNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN---GUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC- CCGUAA-
UCGACACC-CCA-CGAGAUA-AUUUACUUA--UUUUUGUA---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAAGGU-CUU-UUUAGAG-AU-UUAAUUUUCUUAA-U
CCAUUAA--GUGGAAUAUGUCAGGUC-AAGGUGCAAUUU-AUAAA-U-AAG--UGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGAAU--UGGAUUA--UUUA--AU-
--UUUUCUA--UGAAGG-UGGA[-????]

Anisogomphus_pinratanai   ---

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Dromogomphus_spinosus_GOM   ACCGCGGUUAGACG-GGAA-GAAAAAGUAA-AUA-UUAU-UGGUUUA-----GUA-GUU
AGUAUUAAUUUU----G---UUUAUUAAAAUUAUAAUUUUUAGGUGAAAUUUUAAUUUUUUAAU------------AUUUAUAUUAAAUGAGGCUAUG---GAA--UUUA-CUUUA----A-AGAC
GAGGAUUAGAUACCC-UUUUAUUGUGAAUGUGAAUUUU--U-AAACCA-GGGUAGUAAUA-GU-UAAGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGG AAU-CUG-UC-
CCAUAA-UCGACAAC-CCC-CGAGAUA-AUUUACUUA--UUCUUGUA-U-UCCAGUUUGUAUACCUCCG-UC-AUAA-GAAGAU-CUU-UUUAGAG-AU-UAAAUUUUC   UNAA-UAUACUAA--
AUAUAGGAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--UGG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAAAUUG--   AUUA--AU---UUUU-UA--
UGAAGG-UGGA[-????]
Arigomphus_villosipes_OAV   --------------GAAA-GAA--AGUGA-ACA-UUAU-UGGUU-G-----AUA-GUUAGUGUUAGAUUA---- U---
UUAUAAAAAUUGAGGUUUAUUAGGUGAAAUUUUAAUUUUUUAA------------UAUUUAUGUUAAUUGAAGCUAUG---AAA--UUUA-UUUUA----A-AGACGAGGAUUAGAUAC
CC-UUUUAUUAUAAAUGUUAAUUUU--UAAUACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC- CCGUAA-
UCGACAAU-CCA-CGAGAUAAAAUUACUCA--UUUUUGUA-U-UUCAGUUUGUAUACCUCCG-UC-AUAA-GAAGAU-CUU-UUUAGAG-AU---AAUUUUCUUAA-U
AUAUUGA--AUAUAAAAUGUCAGGUC-AAGGUGCAAUUU-AUAAA-U-GAG--AGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAGAUUA--UUUA--AU-
--UUUUCUA--UGAAGG-UGGA[-????]
Arigomphus_cornutus   ACCGCGGUUAGACG-GGAA-GAAAAAAUGA-ACA-UUAU-UGGUU-A-----AUA-GUUAAUGUUAAAUUA---- U---
UUAUAAAAAUUGAGGUUUAUUAGGUGAAAUUUUAAUUUUUUAA------------UAUUUAUAUUUAUUGAAGCUAUG---AAA--UUUA-UUUUA----A-AGACGAGGAUUAGAUAC
CC-UUUUAUUAUAAAUGUUAAUUUUU--GAUGCCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC- CCGUAA-
UCGACAAU-CCA-CGAGAUGAAAUUACUCA--UUUUUGUA-U-UUCAGUUUGUAUACCUCCG-UC-AUAA-GAAGAU-CUU-UUUAGAG-AU---AAUUUUCUUAA-U
AUAUUAA--AUAUAAAAUGUCAGGUC-AAGGUGCAAUUU-AUAGA-U-GAG--AGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAGAUUA--UUUA--AU-
--GUUUCUA--UGAAGG-UGGA[-????]
Stylurus_intricatus_GOM   ACCGCGGUUAGACG-GUAG-GGAAAAGUAA-ACA-UUAU-UAGUUUA-----AUA-GUUAUUGUUAAUUUU-----
---AUUAUUAGAGUUUAAAUUUUUAGGUGAAAUUUUAAUUUUUUUG------------UAUUUAUAUCGUAAGAAGCUAUG---AAA--UUUA-UUUUA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUUUAAAUGUAAAAUUU--U--AACUA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC-CCGUAA- UCGACAUU-
CCA-CGAGAUG-AUGUACUUA--UUCUUGUA---AUCAGUUUGUAUACCUCCG-UC-AUAA-GAAGAU-CUU-UUUAGAG-AU-GUAAUUUUCUUAA-UAUAUUAA--GUAU AAAAUGUCAGGUC-
AAGGUGCAAUUU-AUGAA-U-AAG--UGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAAAUUA--UUUA--AU---UUUU-UA-- UGAAGG-UGGA[-????]
Stylurus_amnicola   ACCGCGGUUAGACG-GUAA-GGAAAAGUGA-AUA-UUAU-UAGUUUA-----GUA-GUUAUUAUUAAUUUU---- U---
AUUAUUAAAAUUUAAAUUUUUAGGUGAAAUUUUAAUUUUUUUA------------UAUUUAUAUUAUAAGAAGCUAUG---AAA--UUUA-UUUUA----A-AAACAAGGAUUAGAUAC
CC-UUUUAUUGUAAAUGUAAAUUUUU----AACUG-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAA-U-C-CUUUCAGAGGAAU-CUG-UC- CCGUAA-
UCGACAGC-CCA-CGAGAUG-AAAUACUUA--UUCUUGUA---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAAGAU-CUU-UUUAGAG-AU-AAAAUUUUCUUAA-U
AUAUUAA--GUAUAAAAUGUCAGGUC-AAGGUGCAAUUA-AUGAA-U-AAG--UGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAAAUUA--UUUA--AU-
--UUUU-UA--UGAAGG-UGGA[-????]
EU477659_Stylurus_nagoyanus   -----------------G-GGAAAAGUAA-AUA-UUAU-UAGUUUA-----AUA-GUUAUUGUUAGAUUU---- A----
UUAUUAAAAUUUAAAUUUUUAGGUGAAAUUUUAUUUUUUUUA------------UAAUUAUGUUGGAAGAAGCUAUG---AAA--UUUA-UUUAA----C-AAACAAGGAUUAGAUAC
CC-UUUUAUUGUAAAUGUAAAAUUU--U--AACUA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC- CCGUAA-
UCGACAGC-CCM-CGAGAUA-AUGUACUUA--UUCUUGUA---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAAGAU-CUU-UUUAGAG-AU-AAAAUUUUCUUAA-U
AUAUUAA--GUAUAGUAUGUCAGGUC-AAGGUGCAAUUU-AUGGA-U-AAG--UGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAAAUUA--UUUA--AU-
--UUUU-UA--UGAAGG-UGGA[-????]
Gomphurus_Gomphus_externus   ACCGCGGUUAGACG-GGAA-GAGAAAGUGA-AUA-UUAU-UGGUU-A-----GUA-GUUAAUGUGAAAUUA---- U-
GAUUUAUUAAAAUUGAGAUUUUUAGGUGAAAUUUUAAUUUUUCAA------------UAUUUAUAUUGUGUGAAGCUACG---AAA--UUUA-UUUAA----A-AGACGAGGAUUAGAUAC
CC-UCUUAUAAUAAAUGUGAAUUUU--U-AUGCCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC- CCGUAA-
UCGACAGU-CCA-CGAGAUA-AUUUACUUA--UCCUUGUA-U-UUCAGUUUGUAUACCUCCG-UC-AUAA-GAAGAU-CUU-UUUAGAG-AU--AAAUUUUCUUAA-U
AUACUAA--GUAUAAAAUGUCAGGCC-AAGGUGCAAUUU-AUGGA-U-GAG--UGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAAAUUA--UUUA--AU-
--UUUU-UA--UGAAGG-UGGA[-????]
EU477664_Asiagomphus_melaenops   -------------------GAAGAAGUAA-AUA-UUCU-UGGUGCA-----GUA-GUUAAUUUUAUCUUU---- A--
GUUUAUUAAAAUAAAAAUUUUUAGGUGAAAUUUUAAUUUUUUAA------------UAUUUAUGUUGGAUGAAGCUAUG---AAA--UUUA-UUUGA----A-AGACGAGGAUUAGAUAC
CC-UUUUAUUAUAAAUGUUAAUUUU--G-CAACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC-

CCGUAA-UCGACAUU-CCA-CGAGAUG-AUUUACUUA--UUUUUGUA-G-UUCAGUUUGUAUACCUCCG-UC-AUAA-GAAGAU-CUU-UUUAGAG-AU-AAAAUUUUCUUAA-U
AUAUUAA--AUGUAAUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--AGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UGAAUUA--UUUA--AU-
--UUUU-UA--UGAAG--GGGA[-????]
Gomphus_Phanogomphus_exilis ACCGCGGUUAGACG-GGAA-GAAAAAGUGA-AUA-UUAU-UGGUUUA-----GUA-GGUAAUAUUUAUUUG---- U----
UUAUUAAAAUUAUAAUUUUUAGGUGAAAUUUUAAUUUUUUAA------------UAUUUAUAUUUAUUGAAGCUAUG---GAA--UUUA-UACUA----A-AAACGAGGAUUAGAUAC
CC-UUUUAUUGUUAAUGUAAAAUUU--UUAAACCA-GGGUAGUAAUA-GU-UAAGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC- CCAUAU-
UCGACGGU-CCA-CGAGAGA-AUUUACUUA--UUCUUGUA-U-UUCAGUUUGUAUACCUCCG-UC-UUAA-GAAGAU-CUU-UUUAGAG-AU-GGAAUUUUCUUGA-U
AUAUAAA--UUAUAAGAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAA--AGG----A-GAUGGAUUUCAAUAAA----UGG-A--UUUA--CA-CGGAU--UGAAUUA--UUUG--AU-
--UUUUUUA--UGAAGG-GGGA[-????]
Gomphus_Gomphus_graslini ---GCGGUUAGACG-GGAA-GAAAAAGUAA-AUA-UUAU-UGGUUUA-----GUA-GUUAGUGUUAGGUUU---- U-----
UAUUAAAAUUGGAAUUUUUAGGUGAAAUUUUAAUUUUUUAA------------UAGUUAUAUUAAACGAAGCUAUG---AAA--UU-A-UUUUA----A-GGACGAGGAUUAGAUAC
CC-UUUUAUUGUAAAUGUAAAUUUU---AAAACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC- CCGUGA-
UCGACAGC-C-A-CGAGAUA-UUUUACUUA--UUCUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAAGAU-CUU-UUUAGAG-AU-GGAAUUUUCUUAA-U
AUAUUAA--AUAUAAUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--UGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAGAUUA--UUAG--UU-
--UUUU-UA--UGAAGG-UGGA[-????]
Gomphus_Hylogomphus_adelphus_OGA ACCGCGGUUAGACG-GAAA-GARAAAGUAA-AUA-UUAU-UGGUUUA-----GUA-GUUAAUAUUAGUUUU---- U-----
UAUUAAAUUUGAAAUUUUUAGGUGAAAUUUUAAUUUCUUAA------------UAUUUAUAUUAAGUGAAGCUAUG---AAA--UUUA-UUUUA----A-AGACGAGGAUUAGAUAC
CC-UUUUAUUGUAAAUGUGAAUUUU--UAAGACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC- CCAUAA-
UCGACAGC-CCA-CGAGAUA-AUUUACUUA--UUUUUGUA-U-UUCAGUUUGUAUACCUCCG-UC-AUAA-GAAGAU-CUU-UUUAGAG-AU-AAAAUUUUCUUAA-U
AUAUAAA--UUAUAGUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--AGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAAAUUA--UUUA--AU-
--UUUUUUA--UGAAGG-UGGA[-????]
Gomphus_Gomphus_vulgatissimus ACCGCGGUUAGACG-GGAA-GAAAAAGUAA-AUA-UUAU-UGGUUUA-----GUA-GUUAGAGUCUAUUUU---- U-----
UAUUAAAAUUGGAAUUUUUAGGUGAAAUUUUAAUUUUUUAA------------UAAUUAUAUUAAGCGAAGCUAUG---AAA--UUUA-UCUUA----A-GGACGAGGAUUAGAUAC
CC-UUUUAUUGUAAAUGUAAAUUUU---GAAACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUA-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UA- CCGUGA-
UCGACAGU-CCA-CGAGAUA-UUGAACUUA--UUUUUGUU-U-UUCAGUUUGUAUACCUCCG-UC-AUAA-GAAGGU-CUU-UUUAGAG-AU-GGAAUUUUCUUAA-U
AUAAUAA--GUAUAGUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--UGG----G-GAUGGAUUUCAAUAAA----UUU---
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Megalogomphus_sp ---

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Onychogomphus_Onychogomphus_uncatusEU477671 ---GCGGUUAUACG-GAAA-GUAAAAGUGA-AUA-UUAU-UGGUUUA-----GUA-GUUAAUUUUAAUUAU-----
AUGUUUAUUAAAUUUUUAAUUUUUAGGUGAAAUUUUAAUUUUUUAA------------UAUUUAUCUUAAGUGAAGCUAUG---AAA--UUUA-UUUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUUUUAAAUGUAAAUAUUU--UAAACCA-GGGUAGUAAUU-GU-UAUGUU-CUUCAAACCCAAAGAAUUU-GGCGGUG-CUUUAG-U-C-CCUUCAGAGGAAU-CUG-UC-CCUUAA- UCGACAUU-
CCA-CGAUAUU-AAGUACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-GUAA-GAGAAU-CUU-UUCAGAG-UU--UAAUUUUCUUAA-UAUAUAAA--UUAU AUUAUGUCAGGUC-
AAGGUGCAAUUU-AUAGA-U-AAG--UGG----A-GAUGGAUUACAAUAAG----UUU-A--UUUA--AA-CGGAU--UAAAUUA--UUUA--AU---UUUU-UA-- UGAAGG-UGGA[-????]
Onychogomphus_Onychogomphus_forcipatus GCCGCGGUUAUACG-GAGA-GUAAAAGUGA-AUA-UUAU-UGGUUUA-----GUA-GUUAAUUUAAGUAUU----
UAUGUUUAUUAAAAUUUUAAUUUUUAGGUGAAAUUUUAAUUUUUUUU----------AUAAUUAUUCCAAAAUGAAGCUAUG---AAA--UUUA-UUUUA----C-AAACAAGGAUUAGAUAC CC-
UUUUAUUUUAAAUGUUAAAAUU--UUAAACCA-GGGUAGUAAUU-GU-UAUGUU-CUUCAAACCCAAAGAAUUU-GGCGGUG-CUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC- CCGUAA-
UCGACAUU-CCA-CGAUAUU-AAGUACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-GUAA-GAGAAU-CUU-UUUAGAG-UU--UAAUUUUCUUAA-U
AUAUUAA--AUAUAUUAUGUCAGGUC-AAGGUGCAAUUU-AUAAA-U-AAG--UGG----A-GAUGGAUUACAAUAAG----UUU-A--UUUA--AA-CGGAU--UAAAUUA--UUUA--AU-
--UUUU-UA--UGAAGG-UGGA[-????]
EU477672_Onychogomphus_sp ------------------A-GUAAAAGUGA-AUA-UUAU-UGGUUUA-----GUA-GUUAGUUUAAGUAUU----
UAUGUUUAUUAAAAUUUUAAUUUUUAGGUGAAAUUUUAAUUUUUUUA-----------UAAUUAUUCCAAAAUGAAGCUAUG---AAA--UUUA-UUUUA----C-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUUAAAAUU--UUAAACCA-GGGUAGUAAUU-GU-UAUGUU-CUUCAAACCCAAAGAAUUU-GGCGGUG-CUUUAGGU-C-CUUUCAGAGGAKU-CUG-UC- CCGUAA-
UCGACAUU-CCA-CGAUAUU-AAGUACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-GUAA-GAGAAU-CUU-UUUAGAG-UU---AAUUYUCUUAA-U
AUAUUAA--AUAUAUUAUGUCAGGUC-AAGGUGCAAUUU-AUAAA-U-AAG--UGG----A-GAUGGAUUNCAAUAAG----UUU-A--UUUA--AA-CGGAU--UAAAUUA--UUUA--AU-
--UUUU-UA--UGAAGG-UGGA[-????]

Ophiogomphus_Ophionurus_carolus_OOC GCCGCGGUUAUACG--AGA-GUAAAAGUGA-AUA-UUAU-UGGUUUA-----GUA-GUAACUUUAAUUGUA---- A--
GUUUAUUAAAUCUUUAAUUUUUAGGUGAAAUUUUAAUUUUUUAA------------UAUUUAUUCUUAGGGAAGCUAUG---AAA--UUUA-UUUUA----U-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUAAAUAU---AUUAACCA-GGGUAGUAAUC-GU-UAUGUU-CUUCAAACCCAAAGAAUUU-GGCGGUG-CUUUAG-U-C-CCUUCAGAGGAAU-CUG-UC- CCGUGA-
UCGACAUU-CCA-CGAUACG-AUGUACUUA--UCUUUGUU---UUCAGUUUGUAUACCUCCG-UC-GUAA-GAGAAU-CUU-UUUAGAG-UU--UAAUUUUCUUAA-U
AUAUUAA--AUAUAUUAUGUCAGGUC-AAGGUGCAAUUU-AUAGA-U-AAG--UGG----A-GAUGGAUUACAAUAAG----UUU-A--UUUA--AA-CGGAA--UAAAUUA--UUUA--AU-
--UUUU-UA--UGAAGG-UGGA[-????]
Ophiogomphus_severus_GOM ACCGCGGUUAUACG-GAGA-GUAAAAGUAA-AUA-UUAU-UGGUUUA-----GUA-GUUAACCUGAAAUUA----
UAAGUUUAUUAAAUCUUUAAUUUUUAGGUGAAAUUUUAAUUUUUUAA------------UAUUUAUUCUUAGUGAAGCUAUG---AAA--UUUA-UUUUA----U-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUAAAUAUU--AUUAACCA-GGGUAGUAAUU-GU-UAUGUU-CUUCAAACCCAAAGAAUUU-GGCGGUG-CUUUAG-U-C-CCUUCAGAGGAAU-CUG-UC- CCGUGA-
UCGACAUU-CCA-CGAUAUG-AUGUACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-GUAA-GAGAAU-CUU-UUUAGAG-UU--UAAUUUUCUUAA-U
AUAUUAA--AUAUAUUAUGUCAGGUC-AAGGUGCAAUUU-AUAAA-U-AAG--UGG----A-GAUGGAUUACAAUAAG----UUU-A--UUUA--AA-CGGAU--UAAAUUA--UUUA--AU-
--UUUU-UA--UGAAGG-UGGA[-????]
Ophiogomphus_caecilia ---

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Leptogomphus_elegans_GOM_OLEg gcCGCGGUuAUACG-AAaa-GGGAUAUUGa-AUA-UUUU-UGGUUUA---AU-GUA-GUUAACUUGUUUAUU-----
-UUAUUAUUAUUUAGAUUUAUUU-AGGUGAAAUUUUAAUUUUUGUG------------UAUUUAUUUAUUGUGAAGCUAUG---AAG--UUUA-AUUGA----A-AGACAAGGAUUAGAUACCC-
UUUUAUUUUAAAUGUGAAUAAA---UUUACCU-GGGUAGUAAUA-GU-UAUGUU-CUCUAAACCCAAAGAAUUU-GGCGGUG-UCUUAG-U-C-CUUUCAGAGGAAC-CUG-UC-CUGUAA- UCGACAAU-
CCA-CGAUGUU-GUUUACUUG--UUUUUGUU-U-AUCAGUUUGUAUACCUCCG-UC-AUAA-GAGAAU-CUU-UUUAGAG-GU--UAAUUCUCUUUA-UUUAGAAA--AUAA UUAAUGUCAGGUC-
AAGGUGCAAUUU-AUGAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----AUUUA--UUUA--UA-UGGAU--UAGGUUA--UUUA--AU---UUCU-UA-- UGAAGG-UGGA
EU477681_Leptogomphus_sauteri -----------------GG-GUAU-AUUGA-AUA-UUAUGUGGUUUA---AU-GUA-GUUAGCUUAUUUAUU---- U----
UAUUAUUAUUUAAGUUUUAUAGGUGAAAUUUUAAUUUUUAUG------------UAUUUAUUUAUUGUGAAGCUAUG---AAG--UUUA-UUUUA----A-AAACGAGGAUWAGAUAC
CC-UUUUAUUUUAAAUGUAAAUUA---AUUUGCCU-GGGUAGUAAUACGU-UAUGCU-CUCCAAACCCAAAGAAUUU-GGCGGUG-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-UC- CUGUAA-
UCGACAGC-CCA-CGAUGUU-GCUUACUUG--UUUUUGUU-U-AUCAGUUUGUAUACCUCCG-UC-AUAA-GAGAAU-CUU-UUUAGAG-GU--UAAUUCUCUUUA-U
UUAGAAA--AUAAAUAAUGUCAGGUC-AAGGUGCAAUUU-AUAAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUUUA--UUUA--UA-UGGAU--UAGAUUA--UUUA--AU-
--UUUC-UA--UGAAGG-UGGA[-????]
Epigomphus_compactus_AEC accgcgguuauacg-gaag-GAAAAGAUGA-AUG-UUAU-UGGUUAA-----GCA-GUUAAUAUUUAUUUA---- U----
UUAUUACAUUAUUAAUUUUUAGGUGAAAUUUUAAUUUUUUAU------------UAAUUAUUUUUUAUGAAGCUGUG---AAA--UUUA-UUUUA----U-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUAAAUUU---UUAAAUCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAC-CUG-UC- CCGUAA-
UCGACAAU-CCA-CGAGAUU-AUUUACUUA--UUUUUGUU-U--UCAGUUUGUAUACCUCCG-UC-AUCA-GAGAAU-CUU-AUUAGAG-UU--UAAUUUUCUUUA-A
AUUUAUA-UGAAUAAAAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--UGG----UGUAUGGGUUACAAUAAA----UUU-A--UUUA--AA-CGGAG--UGGAUUA--UUUG--AU-
--UUUU-CA--UGAAGG-UGGA
EU477678_Microgomphus_chelifer ------------------G-GGGAAAGUAA-AUA-UUAU-UGGUUA------GUA-GUUAAUUUUAUUUUU---- U-----
UUAUAAAAUUUGAGUUUUUAGGUGAAAUUUUAAUUUUUUAAU------------AUUUAUUUUAUGUGAAUCUAUG---AAA--UUUA-UUUGA----G-AAACAAGGAUUAGAUAC
CC-UUUUAUUAUGAAUGUAAAUUUU--U--UAUCA-GGGUAGUAAUA-GC-UAUGUC-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC- CCAUAA-
UCGACACC-CCA-CGAGAUA-AUUUACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GGGAAU-CUUUUUUAGAG-UA--AAAUUUUCUUAA-U
AUAUUAA--UUAUAUUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--UGG----A-GAUGGAUUACAAUAAA----UCU-A--UUUA--AA-UGGAU--UAUAUUA--UUUG--UA-
--UUUA-UA--UGAAGG-UGGA[-????]
EU477666_Heliogomphus_retroflexus --------------------GGGAAGUAA-GUA-UUAU-UGGCUG------AUA-GUUAAUAUUUUAUUU---- U-----
UAUUAAAAUUUGAAUUUUUGGGUGAAAUUUUAAUUUUUUAAU------------AUUUAUGUUUGAUGAAGCUAUG---AAA--UUUA-UGUGA----A-AGACAAGGAUUAGAUAC
CC-UUUUAUUAUAAAUGUAAAUUUU--U--GGUCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC- CCAUAA-
UCGACAUU-CCA-CGAGAUA-AUUUACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GGGAAU-CUU-UUUAGAG-UU--UAAUUUUCUUAA-U
AUAUAAA--GUAUAUUAUGUCAGGUC-AAGGUGCAAUUU-AUGGA-U-AAG--UGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-CGGAG--UAAAUUA--UUUA--UA-
--AUUUUUA--UAAAGG-UGGA[-????]
Macrogomphus_parallelogramma ---

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Ceratogomphus_pictus_OCH   ACCGCGGUUAGACG-GAGA-GAAAAGGUAA-AUA-UUAU-UGGUU-A------GCA-GUUAAUUUUAAUAAU---- A----
UUAUUAAAAUGUUAAUUUUUAGGUGAAAUUUUAAUUUUCUAAU-------------AUUUAUAAUAUGUGAAGCUGUA---AAA--UUUA-UGUUA----AAAAACAAGGAUUAGAUAC
CC-UUUUAUUAUAAAUGUAAAUGAU--AAUAACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UC- CCGUAA-
UCGACAGU-CCA-CGAGAGUUAUUUACUUA--UUUUUGUU--UAUCAGUUUGUAUACCUCCG-UC-AUAA-GAGAAU-CUU-UUUAGAG-UUA--AAUUUUCUUAA-U
AUAAAAA--AUAUAUUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--UGG----A-GAUGGAUUACAAUAAA----UAU-A--UUUA--AA-CGGAU--UAGAUUA--UUUA--AA-
--UAUC-UA--UGAAGG-UGGA[-????]
Lestinogomphus_angustus_GOM_ALA   accgcgguuagacg-gaaa-gagaaaAUGA-AUA-UUAU-UGGCU-A------GUA-GUUAAUUUUGAAAAG---- U----
UUAUGAAAAUGUUUAUUUUUAGGUGAAAUUUUAAUUUUCUGGU-------------AUUUAUAUUUUUUGAAGCUACG---AAA--UUUA-UAUUA----A-AGACAAGGAUUAGAUAC
CC-UUUUAUUAUAAAUGUAAACUU---GAUUGCUG-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACUCAAAGAAUUU-GGCGGUU-UUUUAG-U-C-CCUUCAGAGGAAC-CUG-UC- CCGUGA-
UCGAUAGU-CCA-CGAUAUA-AUGUACUUA--UUUUUGUU--AAUCAGUUUGUAUACCUCCG-UC-AUAA-GGGAUU-CUU-UUUAGAG-GU--UAAUUUUCUUUU-A
AUAUUAA--GUAUUUCAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--UGG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--GA-CGGAU--UAAAUUA--UUUA--GU-
--UUU--UA--UGAAGG-UGGA
Austrogomphus_guerini_AAG   aCCGCGGUUAUACG-GGAA-GAAAGAGUAA-AUA-UUAU-UGGUUUA------GUA-GUUAAUUUGAGGUGU-----
--UAUUAUUAAAGUGUUAAUUUUUAGGUGAAAUUUUAAUUUUCUAAU------------AUUUAUAUUUAUUUGAAGCUACG---AAA--UUUA-UAUUA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUGAAUAUU---UAAACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-UC-CCGUAA- UUGACAAU-
CCA-CGAUAUU-AUAUACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGAAU-CUU-UUUAGAG-UU-UGAAUUUUCUUAA-UAUAAUAA--AUAU AUUAUGUCAGGUC-
AAGGUGCAAUUU-AUAAA-U-AAG--UGG----A-GAUGGGUUACAAUAAA----AUU-A--UUUA--AA-CGGAU--UAAAUUA--AUUA--CA--AUUUUUUA-- UGAAGG-UGGA
EU054978_5074_Austrogomphus_amphiclitus   NNNNNNNNNNNNNN-NNNN---NNNNNNNN--NN-NNNN-NNNNNNN-----NNN-N------------------
--------------------NNNNNNNNNNNN---NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN---GUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-UC- CCGUAA-
UUGACAAU-CCA-CGAUAUU-AUUUACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UU-AUAA-GAGAAU-CUU-UUUAGAGUUAU-AAAUUUUCUUAA-U
AUAUUAA--GUAUAUUAUAUCAGGUC-AAGGUGCAAUUU-AUAAA-U-AAG--UGG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--AA-CGGAG--UAAAUUG--AUUA--AU-
--AUUUUUA--CGAAGG-UGGA[-????]
EU054972_5068_Antipodogomphus_acolythus   NNNNNNNNNNNNNN-NNNN---NNNNNNNN--NN-NNNN-NNNNNNN-----NNN-N------------------
--------------------NNNNNNNNNNNN---NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN---GUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAC-CUG-UC- CCGUAA-
UCGACAAU-CCA-CGAUAUA-AUUUACUUA-UUUUUGUU--UUUCAGUUUGUAUACCUCCG-UC-AUAA-GAGAAU-CUU-UUUAGAG-UAU-UAAUUUUCUUAU-U
AUAAUAA--AUAUAUUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--UGG----A-GAUGGGUUACAAUAAA----CUU-A--UUUA--UA-CGGAU--UAAAAUA--UUUA--GU-
--AGUUUUA--UGAAGG-AGGA[-????]

Unaligned_Petaluridae   ----------------999999999--
22222222222222222222222222222---
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Tanypteryx_hageni_OTH   accgcgguuauacg-aaAG-GGGAAAGUGA-AUA-UUAU-UGGUUUA------AUA-GUUAAAUGUUCUAUU-----
---UUAUUAAAAUGAUUUAUUUUUAGGUGAAAUUUAUAAUUUUUAU---------UUAAUUUUAUUUG-GUUGAAGCUAUG---AAA--UUCA-UAUUA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUUUGAAUGUAAAUGAU----AAACUU-GGGUAGUAAUA-GG-UAAGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC-CCAUAA- UCGACAGU-
CCA-CGAGUAA-AUUUACUUA--AUUUUGUA-UAAUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-AUA--AAUUUUCUUAA-UAUACUAA--AUAU AGAAUGUCAGGUC-
AAGGUGCAACUU-AUAAU-U-AAG--UGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAAAUUA--UUUA--AU---UUUU-UA-- UGAAGG-UGGA
Tanypteryx_sp   ---

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Tanypteryx_pryeri_PET ACCGCGGUUAUACG-AAAG-GAAAAAGUGA-AUA-UUAU-UGGUUUA------AUA-GUUAAAUGUUCCGUU-----
---UUAUUAAAAUGAUUUAUUUUUAGGUGAAAUUUAUAAUUUUUAU---------UUAAUUUUAUUUG-AUUGAAACUAUG---AAA--UUCA-UAUUA----A-AGACAAGGAUUAGAUACCC-
UAUUAUUUUGAAUGUAAAUGAU----UAACUU-GGGUAGUAAUA-GUGUAAGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC-CCAUAA- UCGACAGC-
CCA-CGAUUAG-AUUUACUUA--AUUUUGUA-UAACCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-AU--AAAUUUUCUUGA-UAUACUAA--AUAU AAAAUGUCAGGUC-
AAGGUGCAAUUU-AUGAU-U-AAG--UGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAGAUUG--UUUA--AU---UUUU-UA-- UGAAGG-UGGA[-????]
AF266081_Tachopteryx_thoreyi --------------AAAG-GGGAAAGUAA-AUG-UUAU-UGGUUUA------AUA-GUUAAAUGAUUUAUU-----
--UUUAUUAAGAUGA-UUAUUUUUAGGUGAAAUUUAUAAUUUUUAU---------UUAAUAAUUUUUG-GUUGAAACUAUG---AAA--CUCA-UAUUA----G-AAACGAGGAUUAGAUACCC-
UUUUAUUUUGAGUGUGAAGGAU----GAACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC-CCGUAA- UCGACAGC-
CCA-CGAAUAG-AUAUACUUG--AUUUUGUU-CAAUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UG--GAAUUUUCUUAA-UAUAAGGA--AUAU AAUAUGUCAGGUC-
AAGGUGCAACUU-AUAAU-U-AAG--UGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGGAA--UGGAUUA--UUUA--AA---AUUU-UA-- UGAAGG-UGGA[-????]
Phenes_raptor_PET ACCGCGGUUAUACG-AAAG-GAGGAAGUAA-AUA-UUAU-UGGUUUG------GUA-GUUAGAUGUAUUUUA-----
--UUUAUUAUAAU-AUUAAUUUUUAGGUGAAAUUUAUAAUUAUUAU---------UUAAUUUUAUUUAUAUUGAAGCUAUG---AAA--UUCA-UGUUA----A-AAACGAGGAUUAGAUACCC-
UUUUAUUGUGAAUAUAAA-AAU----UAACCU- GGGUAGUAAUA-GA-UAUAUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC-CCAUAA- UCGACAAU-
CCA-CGAAUAG-AUAUACUUA--AUUUUGUA-UAAUCAGUUUGUAUACCUCCG-UC-AUCA-GGGUAU-CUU-UUUAGAG-UU---AAUUUUCUUGA-AAUACUAA--AUAU UUUAUGUCAGGUC-
AAGGUGCAACUU-AUAAU-U-AAG--AGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAAAUUA--UUUA--AA---UUUU-UA-- UGAAGG-UGGA[-????]
Phenes_centralis_OPR ACCGCGGUUAUACG-AAGG-AGGAAAGUAA-AUA-UUAU-UGGUUUG------GUA-GUUAGAUGUAUUUUA-----
--UUUAUUAUAAU-AUUAAUUUUUAGGUGAAAUUUAUAAUUAUUAU---------UUAAUUUUAUUUAUAUUGAAGCUAUG---AAA--UUCA-UGUUA----A-AAACGAGGAUUAGAUACCC-
UUUUAUUGUGAAUAUAAA-AAU----UAACCU- GGGUAGUAAUA-GA-UAUAUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC-CCAUAA- UCGACAAU-
CCA-CGAAUAG-AUAUACUUA--AUUUUGUA-UAAUCAGUUUGUAUACCUCCG-UC-AUCA-GGGUAU-CUU-UUUAGAG-UU---AAUUUUCUUGA-AAUACUAA--AUAU UUUAUGUCAGGUC-
AAGGUGCAACUU-AUAAU-U-AAG--AGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAAAUUA--UUUA--AA---UUUU-UA-- UGAAGG-UGGA[-????]
EU477633_Uropetala_carovei -------------------GAGAAAGUGA-AUA-UUAU-UGGUU-A------GUA-GUUAAAUAUAAUGUA-----
--UUUAUUAAAAU-AGUAGUUUUUAGGUGAAAUUUAUAAUUAUUAU---------UUAAUUUUGUUGAAGUUGAAGCUAUG---AAA--UUCA-UGUUA----U-AAACGAGGAUUAGAUACCC-
UUUUAUUGUGAAUGUAAA-GAU----UAACCU-GGGUAGUAAUA-GU-UAUAUUCCUUGAAKCCCAAAGGAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UC-CUGUAA- UCGACAGU-
CCA-CGAGUAG-AUGUACUUA--AUUUNGNA-UAAUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-AU---AAUUUUCUUAA-UAUAAUUA--AUAU AGUAUGUCAGGUC-
AAGGUGCAACUU-AUAAU-U-AAG--UAG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAAAUUA--UUUA--AA---AUUU-UA-- UGAAGG-UGGA[-????]
Petalura_hesperia_PET_APH -----GGU-AUACG-AAGG--AGGAAGUGA-GUA-UUUU-UGGUUCU------GUA-GUUAAAUAUUAUUUG-----
--UUUAUUAAAAUGAUGAGUUUUUAGGUGAAAUUUAUAAUUAUUAU---------UUAAUUUUAUUCAAAUUGAAGCUAUG---AAA--UUUA-UACUA----A-AAACGAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAAA-AGU----GAACCA-GGGUAGUAAUA-GA-UACAUU-CUUGAAACCCAAAGAAUUU-GGCGGUG-UUUUAG-U-C-CUUCCAGAGGAAU-CUG-UC-CCGUAA- UCGACAAC-
CCA-CGAGUAG-ACUUACUUG--GUUUUGUU-UAAUCAGUUUGUAUACCUUCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-AU---AAUUUUCUUAA-UAUAUUUA--AUAU AAUAUGUCAGAUC-
AAGGUGCAAUUU-AUAAC-U-AAG--UGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAAUUUA--UUUA--AA---AUUU-UA-- UGAAGG-UGGA[-????]
EU054963_5061_Petalura_gigantea NNNNNNNNNNNNNN-NNNN---NNNNNNNN--NN-NNNN-NNNNNNN------NNN-N------------------
--------------------NNNNNNNNNNNN--NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNN-NNN--NNNNNNNN-NN---GUAAUA-GA-UACAUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUCCAGAGGAAU-CUG-UC- CCGUAA-
UCGACAGC-CCA-CGAAUAG-AGUUACUUA--GUUUUGUU-UAGUCAGUUUGUAUACCUUCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-AU---AAUUUUCUUAA-U
AUACUUG--UUAUAGUAUGUCAGAUC-AAGGUGCAAUUU-AUAAU-U-AAG--UGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAAUUUA--UUUA--AA-
--AUUU-UA--UGAAGG-UGGA[-????]
Petalura_litolae_PET_OPG2 accgcggu-auaCG-AAGG--AGGAAGUGA-AUG-UUUU-UGGUUCU------AUA-GUUAGAUAUGAUGUA-----
--UUUAUUAGAAUAGUAAGUUUUUAGGUGAAAUUUAUAAUUAUUAU---------UUAAUUUUAUUUAAAUUGAAGCUAUG---AAA--UUUA-UAUUA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUAUAAACGUGAA-AAU----GAACCU-GGGUAGUAAUA-GA-UACAUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUCCAGAGGAAU-CUG-UC-CCGUAA- UCGACAGC-
CCA-CGAAUAG-AGUUACUUA--GUUUUGUU-UAGUCAGUUUGUAUACCUUCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-AU---AAUUUUCUUAA-UAUACUUG--UUAU AGUAUGUCAGAUC-
AAGGUGCAAUUU-AUAAU-U-AAG--UGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAAUUUA--UUUA--AA---AUUU-UA-- UGAAGG-UGGA

Petalura_ingentissima_API ACCGCGGU-AUACG-AAGG--AGGAAGUAA-AUG-UUUU-UGGUUCU------AUA-GUGGAAUAUUUAAUA-----
--UUUAUUAAGAUAGU-AGGUUUUAGGUGAAAUUUAUAAUUGUUGU---------UUAAACUUAUUUGAAUUGAAGCUAUG---AAA--UUUA-UACCA----A-AAACGAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAAA-GAU----GAACCU- GGGUAGUAAUA-GA-UACAUU-CUUGAAACCCAAAGAAUUU-GGCGGUG-UUUUAG-U-C-CUUCCAGAGGAAU-CUG-UC-CCGUGA- UCGACAAC-
CCA-CGAAUAG-AUUUACUUA--AUUUUGUU-UAAUCAGUUUGUAUACCUUCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-GU---AAUUUUCUUAA-UAUAUUUG--AUAU AGUAUGUCAGAUC-
AAGGUGCAAUUU-AUAAU-U-AAG--UGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAAUUUA--UUUA--AA---GUUU-UA-- UGAAGG-UGGA[-????]

Zoraena_bilineata_OZB ---

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Taeniogaster_obliqua_OTO ACCGCGGUUAAACG-AGAG-GGAAGAGUGA-AUA-UUAU-UGGUUUA------AUA-GUUAAAUUUUUUAAA-----
--UAUUUAUAAAAUAAUAAUUUUUAGGUGAAAUUUAUAAUUAUUUA-----------UUAAAAAUUUUGUUGAAGCUAUG---AAA--UUUA-UAUUA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAAAUAUA-----AACCU-GGGUAGUACUA-GU-UAUGAU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAA-U-C-UAAUCAGAGGAAC-CUG-UC-CCAUUA- UCGAUAAU-
CCA-CGAUGGA-AUUUACUUG--AUUUAGU--AAAACAGUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UG---AAUAUUCUUUU-UAUUAAAA--AUAU GAAAUGUCAGGUC-
AAGGUGCAAUUC-AUAAU-C-AAG--AGG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAAAUUA--UUUA--AA---AAUU-UA-- UGAAAG-UGGA[-????]
Kaliptogaster_erronea_OKE ACCGCGGUUAAACG-AGGG-GGAAGAGUGA-AUA-UUAU-UGGUUUA------AUA-GUUAAAUUUUUAAAA-----
---GUUUAUAAAAUAAUAAUUUUUAGGUGAAAUUUAUAAUUAUUAA-----------UUAAAAAUUUAUAUUGAAGCUAUG---AAA--UUUA-UAUUA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAAAUAUA-----AACCU-GGGUAGUAUUA-GU-UAUGAU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAA-U-C-UAAUCAGAGGAAC-CUG-UC-CCAUUA- UCGAUAAU-
CCA-CGAUGGA-AUUUACUUG--AUUUAGU--AAAACAGUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UU---AAUAUUCUUUU-UAUUAAAA--AUAU AAAAUGUCAGGUC-
AAGGUGCAAUUU-AUAAU-C-AAG--AGG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAAAUUA--UUUA--AA---AAUU-UA-- UGAAAG-UGGA[-????]
Pangaeagaster_Cordulegaster_maculata --------------------GGAAAAGUGA-AUA-UUAU-UGGUUUA------AUA-GUUAAAUUUUUAAGG-----
---AUUUAUAUAAUAAUAAUUUUUAGGUGAAAUUUAUAAUUAUUUA-----------UUAAAAAUUUGUAUUGAAACUAUG---AAA--UUUA-UAUUA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAAAUAUA-----AACCU-GGGUAGUAAUA-GU-UAUGAU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAA-U-C-UAAUCAGAGGAAC-CUG-UC-CCAUUA- UCGAUAAU-
CCA-CGAUGGA-AUUUACUUG--AUUUAGU--AAAACAGUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUU-AAG-UU---AAUAUUCUACU-UAUUAAAA--AUAU AAAAUGUCAGGUC-
AAGGUGCAAUUC-AUAAU-C-AAG--AGG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGGAU---AAAUUA--UUUA--AA---AAUU-UA-- UGAAAG-UGGA[-????]
EU054988_5084_Lauragaster_dorsalis NNNNNNNNNNNNNN-NNNN---NNNNNNNNNNNNNNNN-NNNNNNNNN--NN--NN-N------------------
--------------------NNNNNNNNNNNN---NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN---GUAUUA-GU-UAUGAU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAA-U-C-UAAUCAGAGGAAC-CUG-UC- CCAUUA-
UCGAUAAU-CCA-CGAUGGA-AUUUACUUG--AUUUAGU--AAAACAGUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UU---AAUAUUCUUUU-U
AUUAAAA--AUAUGAAAUGUCAGGUC-AAGGUGCAAUUU-AUAAU-C-AAG--AGG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAAGUUA--UUUA--AA-
--AAUU-UA--UGAAAG-UGGA[-????]
EU477688_Cordulegaster_boltonii --------------------GGAGAAGUGA-AUA-UUAU-UGGUUUA------AUA-GUUAGAUUUUUUGAA-----
-AAAUUUAUAAAAUAAUAAUUUUUAGGUGAAAUUUAUAAUUAUUUAU-------------UAAAAUUACAUUGAAACUAUG---AAA--UUUA-UUUUA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUGAAUAUA-----AACCU-GGGUAGUACUA-GU-UAUGAU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAA-U-
C-UAAUCAGAGGAAC-CUG-UC-CCAUUA-UCGAUAAU-CCA-CGAUGGA-AUAUACUUG--AUUUAGU--AAAACAGUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG- AU---
AAUAUUCUUUU-UAUAAUAA--AUAUAAAAUGUCAGGUC-AAGGUGCAAUUU-AUAAU-C-AAG--AGG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-
UGGAU--UAAAUUA--UUUA--AA---AAUU-UA--UGAAAG-UGGA[-????]
EU477685_Cordulegaster_picta --------------------GGAAGAGUGA-AUA-UUAU-UGGUUUA------AUA-GUUAAUUUUUGGAAA-----
---AUUUAUAUAAUAAUAAUUUUUAGGUGAAAUUUAUAAUUAUUUA-----------UUAAAGAUUUAUAGUGAAACUAUG---AAA--UUUA-UUUAA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAAAUGUA-----AACCU-GGGUAGUACUA-GU-UAUGAU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAA-U-C-UAAUCAGAGGAAC-CUG-UC-CCAUUA- UCGAUAAU-
CCA-CGAUGGA-AUUUACUUG--AUUUAGU--AAAACAGUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UU---AAUAUUCUUUU-UAUUAUAA--AUAU AAAAUGUCAGGUC-
AAGGUGCAAUUC-AUAAU-C-AAG--AGG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAAGUUA--UUUA--AA---AAUU-UA-- UGAAAG-UGGA[-????]
EU477686_Anotogaster_sieboldii --------------------GGAGAAGUGA-AUA-UUAU-UGGUUUA------AUA-GUUAAUUUUUAAAAA-----
----UUUAUAAAAUAAUAAUUUUUAGGUGAAAUUUAUAAUUAUUAA-----------UUAAAAAUUUAUAUUGAAACUAUG---AAA--UUUA-UAUUA----A-AAACAAGGAUUAGAUACCC-

UUUUAUUAUAAAUGUAAAUAUG-----AACCU-GGGUAGUAUUA-GU-UAUGAU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAA-U-C-UAAUCAGAGGAAC-CUG-UC-CCGUUA- UCGACAAU-
CCA-CGAUGGA-AUUUACUUA--AUUUAGU--AAAACAGUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UU---AAUAUUCUCUU-UAUUAUAA--AUAU AAAAUGUCAGGUC-
AAGGUGCAAUUU-AUAAU-U-AAG--UGG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGAAU--UAAACUA--UUUA--AA---AGUU-UA-- UGAAAG-UGGA[-????]
AF266085_Neopetalia_punctata ACCGCGGUUAAACG-AGAG-GAAAAAGUGA-AUA-UUAU-UGGUUUA------AUA-GUUAAUUUUUUUCGU---- U------
UUUAAAGAAAUAAUUUUUAGGUGAAAUUUAUAAUUGUUUU-----------AUAAAAAUAUUAUAUGAAGCUAUG---AAA--UUUA-UUAAA----U-AAACAAGGAUUAGAUAC
CC-UUUUAUUAUAAAUGUUAAUAUA-----AACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-UUUUCAGAGGAAU-CUG-UC- CCAUUA-
UCGAUAAC-CCA-CGAGAGG-AUUUACUUG--UUUUUGUU-UAAUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-AA---AAUAUUCUUUU-U
AUAUAAA--AUAUAAUAUGUCAGGUC-AAGGUGCAACUA-AUAAA-U-AAG--AGG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--UA-UGAAU--UAAAAUA--UUUA--AA-
--GUUU-UA--UGAAGG-UGGA[-????]
Chloropetalia_soarer_OCSr GCCGCGGUUAUACG-AAGA-GAAGGAGUGA-AUA-UUAU-UGGUUAAA--UU-GCA-GUUAAUUGUUGAUAA---- U-----
UCUUAAUAAGAAUAUUUUUAGGUGAAAUUUAUAAUUUUUAU----------UUAAAGAUGAUUAGAUGAAGCUGUG---AAG--UCUU-UAACA----A-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAGAUGUAAAUAUU-----AACCU-GGGUAGUAUUA-GU-UAAGUU-CUUGAAACUCAGAGGAUUU-GGCGGUA-CUUUAG-U-C-UUUUCAGAGGAAC-CUG-UC- CCGUUA-
UCGAUAUU-CCA-CGAGGCGUAAUUACUUG--CUUUA------AUUAAUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CCU-UUUAGGG-GU-AUAAAUAUUCUUAUUU
UACUAAA--UUUAA-GAUGUCAGGUC-AAGGUGCAAUUU-AUAAG-U-AAG--AGG----A-GAUGGGUUACAAUAGA----AUU-A--UUUA--UA-UGAAU--UGAAAUA--UUUA--AU-
--UUUU-CA--UGAAGG-UGGA[-????]
Sinorogomphus_nasutus_OSN GCCGCGGUUAUACG-AAGA-GAAGAAGUGA-AUA-UUAU-UGGUUAAA--UU-GCA-GUUAUUUGUAUAUUU---- U------
CUUAAUAAGAAUAUUUUUAGGUGAAAUUUAUGAUAUUUAU----------UUAAAGAUAGUGAAAUGAAGCUGCG---AAG--UCUU-UAAUA----A-AAACAAGGAUUAGAUAC
CC-UUUUAUUUCUGAUGUAAAUAUU-----AACCU-GGGUAGUAUUA-GU-UAAGUU-CUUGAAACCCAGAGGAUUU-GGCGGUA-CCUUAG-U-C-UUUUCAGAGGAAC-CUG-UC- CCGUUA-
UCGAUAUU-CCA-CGAGGUUUAAUUACUUA--CUUUA------AUUAAUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CCU-UUUAGGG-GU-AUAAAUAUUCUUAUUU
UACCAAA--UUUAA-GAUGUCAGGUC-AAGGUGCAAUUU-AUAAG-U-AAG--AGG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UGGGAUA--UUUA--UU-
--GUUU-CA--UGAAGG-UGGA[-????]
EU477691_Chlorogomphus_brunneus --------------------GAAGGAGUGA-AUA-UUAU-UGGUUAAA--UU-GCA-GUUAAUUUUUAACUU---- U------
CUUAAUAAGAAAAUUUUUAGGUGAAAUUUAUAAUUUUUGUU---------UAAAGAUAAUAUAAGAUGAAGCUGUG---AAG--UCUU-UAAUA----A-AAACAAGGAUUAGAUAC
CC-UAUUAUUUUGGAUGUAAAUAUU-----AACCU-GGGUAGUAUUA-GU-UAGGUU-CUUGAAACCCAGAGGAUUU-GGCGGUA-CUUUAG-U-C-UUUUCAGAGGAAC-CUG-UU- CCGUUA-
UCGAUAUU-CCA-CGAGGUGUAAUUACUUG--CUUUU------AUUAAUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CCU-UUUAGGG-GU-UUAAUAUUCUUAUUU
UACUAAA--UUUAA-GAUGUCAGGUC-AAGGUGCAAUUU-AUAAG-U-AAG--AGG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGAAU--UGGGAUG--UUUA--AU-
--UUCU-CA---GAAG--GGGA[-????]
Chlorogomphus_sp ---

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Synthemis_eustalacta_OSE CGCGCGGUUAUACG-UGAA-GGGUAAAUGA-AUA-UUAU-UAGUUUA------GCA-GUUAUUUAUUUUAUU---- U-----
UUUUAAUUUUAUUGUUUUUGGGUGAAAUUUUAAUUUUAAUA----------GUAAGUCUUUUAUGAAGAAGCUGCG---AAA--UUUA-UAUUA----A-AAACAAGGAUUAGAUAC
CC-UUUUAUUAUAAAUGUUAAUAAG-----AACUA-GGGUAUUAAUA-GU-UAUGUU-CUUGAAACCCAGAGGAUUU-GGCGGUA-UUUCAU-U-C-UUUUUAGAGGAAC-CUG-UC- CCGUGA-
UCGAUAGU-CCA-CGAGGUU-AAUUACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUUA-GAGUAU-CUU-UUUAGAG-UA---AAUAUUCUUAA-U
AUAAUAA--AUAUAUUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--UGG----A-GAUGGGUUACAAUAAA----UAU-A--UUUA--UA-UGGAUUAUAAGUGC--UGUUA-UG-
--UUUA-UA--UGAAGG-UGGA[-????]
EU055067_Synthemis_marcrostigma ---
--------------------NNNNNNNNNNNN---NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN--N-NNNNNN-NN----NNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNNN-NNN-NN- NNNNNN-
NNNNNNNN-NNN-NNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNN-NNN-NNNNNNNNNNNNNNNN-N
NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNN--NNNNNNNN--NNN-N-NN-
--NNNNNNN--NNNNNN-NNNN[-????]
EF631516_Synthemis_leachii NNNNNNNNNNNNNN-NNNN---NNNNNNNN--NN-NNNN-NNNNNNN------NNN-N------------------
--------------------NNNNNNNNNNNN---NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN--N-NNNNNN-NN----NNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNNN-NNN-NN- NNNNNN-
NNNNNNNN-NNN-NNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNN-NNN-NNNNNNNNNNNNNNNN-N

NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNN--NNNNNNNN--NNN-N-NN-
--NNNNNNN--NNNNNN-NNNN[-????]
Eusynthemis_brevistyla_OEB GCCGCGGU-AUACG-UAGA---GAAAAUGA-GUA--UAU-UGGUUUA------GUA-GUUAAUUUUCUUUUU-----
---UCUUUAUUUUUAUAAAUUUUUAGGUGAAAUUUUAAUUUUAAUAA----------UAAAGGUUUAUUUAAUGAAGCUAUA---AAA--UUUA-UAUUA----A-AGACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAAAUAUA-----AACUA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CCGUGA- UCGACAGU-
CCA-CGAGGGU-AGUUACUUA--UUUUUGUU---UACAGUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UA---AAUACUCUUAU-UAUAGAAA--AUAU AUUAUGUCAGGUC-
AAGGUGCAAUUU-AUAAA-U-AAG--UGG----A-GAUGGGUUACAAUAGA----AUU-A--UUUA--UA-CGAAUUAUAAAGUU--UGU---AU---UUUA-UA-- UGAAGG-UGGA[-????]
EU477692_Eusynthemis_guttata ------------------G--GAAAAAUGA-GUA-AUAU-UGGUUUA------GUA-GUUAAUUUUCUUUUU-----
---UCUUUAUUUUUAUAAAUUUUUAGGUGAAAUUUUAAUUUUAAUAG----------UAAAGGUUUAUUUAAUGAAGCUAUA---AAA--UUUA-UAUUA----A-AGACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAAAUAGA-----AACUA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CCGUGA- UCGACAGU-
CCA-CGAGGUU-AGUUACUUA--UUUUUGUU---UACAGUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UA---AAUACUCUUAU-UAUAGAAA--AUAU AUUAUGUCAGGUC-
AAGGUGCAAUUU-AUGAA-U-AAG--UGG----A-GAUGGGUUACAAUAAA----AUU-A--UUUA--UA-UGGAUUAUAUUAUU--UAU---AU---UUUA-UA-- UGAAGG-UGGA[-????]
EU054973_5069_Eusynthemis_nigra NNNNNNNNNNNNNN-NNNN---NNNNNNNN--NN-NNNN-NNNNNNN------NNN-N------------------
-------------------NNNNNNNNNNNN---NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN--N-NNNNNN-NN---GUAAUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CCGUGA-
UCGAUAAU-CCA-CGAGUUU-AUUUACUUA--UUUUUGUU---UACAGUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UG---AAUACUCAUAC-U
AUAAGAA--AUAUAUUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--UGG----A-GGUGGGUUACAAUGAA----UAU-A--UUCA--UA-CGGAAUAUAGAAUU--UAU---AU-
--UUUA-UA--UGAAGG-UGGA[-????]
EU054974_5070_Choristhemis_flavoterminata NNNNNNNNNNNNNN-NNNN---NNNNNNNN--NN-NNNN-NNNNNNN------NNN-N------------------
-------------------NNNNNNNNNNNN---NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN--N-NNNNNN-NN---GUAAUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CCGUGA-
UCGAUAAU-CCA-CGAGUUU-AUUUACUUA--UUUUUGUU---UACAGUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UG---AAUACUCAUAC-U
AUAAGAA--AUAUAUUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--UGG----A-GGUGGGUUACAAUGAA----UAU-A--UUCA--UA-CGGAAUAUAGAAUU--UAU---AU-
--UUUA-UA--UGAAGG-UGGA[-????]
Synthemiopsis_gomphomacromioides_ASG ----------------------GAUAAUAG-C-A-AUAU-UAGUUUA------ACA-GUUAAUUUUUUUAUU-----
---UUCUUUAAUUUUCAAUUUAUUAGGUGAAAUUUUAAUUUUAAUA----------GUAAAAGUUUAUCAAAUGAAGCUGUG---AAA--UUUA-UAUUA----A-AAACGAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAAAUAUA-----AACUA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAGAGAAUUU-GGCGGUA-UUUCAU-U-C-UUUUUAGAGGAAC-CUG-UC-CCGUGA- UCGACAGU-
CCA-CGAUAUU-AUUUACUUA--CUUUUGUU-U-UACAGUUUGUAUACCUCCG-UC-AUCA-GAUUAU-CUU-UUUAGAG-UG---AAUAUUCUAUU-UAUAUAAA--AUUU AAUAUGUCAGGUC-
AAGGUGCAAUAU-AUAGG-U-AAG--UGG----A-GAUGGGUUACAAUAAA----AUU-A--UUUA--UA-CGGAUUAUAUAAUU--UAU----U---UAUA-UA-- UGAAGG-UGGA[-????]
Gomphomacromia_chilensis GC-GCGGUUAUACG-UAGG-GAAUGAAUAA-AUA-AUAU-UGGUUUA------AUA-GUUAAUUUUUUUAUU-----
---UCUUUAUUCAUAUAAUUUUUAGGGUGAAAUUUUAAUUGUUAUA-----------AUAAGAGUUUAUAGAUGAAGCUAUG---AAA--UUUA-UUUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAAAUAUA-----AACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUCAU-U-C-CUUUUAGAGGAAC-CUG-UC-CUGUAA- UCGAUAGU-
CCA-CGAGGAA-AUUUACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-AU---AAUACUCUUGA-UAUAUAAA--GUAU AUUAUGUCAGGUC-
AAGGUGCAAUUU-AUGAA-U-AAG--UAG----A-GAUGGGUUACAAUAAG----UUU-A--UUUA--AA-CGGAUUAUGAAAUU--UGAG--AA---UUUA-UA-- UGAAGG-UGGA[-????]
Gomphomacromia_paradoxa -------------G-UAGG-GAAUGAAUAA-AUA-AUAU-UGGUUUA------AUACGUUAAUUUUUUUUAU-----
---UUCUUUAUUCAUAUAAUUUUUAGGUGAAAUUUUAAUUGU-AUA-----------AUAAGAGUUUAUAGAUGAAGCUAUG---AAA--UUUA-UUUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUUAUAAAUGUAAAUAUA-----AACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGGAUUU-GGCGGUA-UUUCAN-N-N-NNNNNNNNNNNNN-NNN-NN-NNNNNN- NNNNNNNN-
NNN-NNNNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNNNNNNNN----NNNNNNNNNNNN-NNNNNNN--NNNN NNNNNNNNNNNNN-
NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNN---NNNN-N--NNNN-NNN-NNNNN--NNNNNNN----NNN----------------
---------[-????]
GQ329647_Syncordulia_serendipator ----------------------------NN--NN-NNNN-NNNNNNN------NNN-N------------------
-------------------NNNNNNNNNNNN---NNNNN---NNN--NNN-NNNNNN----N-NNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNNN-NNNNN-NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNNNNNNNNNNNNNNNNNNN NNNNNN-
NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNNNNN-NNNNNNNNNNNNNNNN-N
NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNNNNNNN----NNNNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNNN-NNNNNNNN--NNN-N-NN-
--NNNNNNN--NNNNNN-NNNN[-????]

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GQ329646_Syncordulia_venator                      ---------------------------NN--NN-NNNN-NNNNNNN-----NNN-N------------------
-------------------NNNNNNNNNNNN--------------------------------------------NNNNN---NNN--NNN-NNNNNN----N-NNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NNNNN-NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNNNNNNNNNNNNNNNNNN NNNNNN-
NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNNNNN-NNNNNNNNNNNNNNN-N
NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNNNNNNN----NNNNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNNN-NNNNNNNN--NNN-N-NN-
--NNNNNNN--NNNNNNNNNNN[-????]
EU054998_5094_Idionyx_imbricata                   NNNNNNNNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN-----NNN-N------------------
-------------------NNNNNNNNNNNN--------------------------------------------NNNNN---NNN--NNN-NNNNNN----N-NNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN---GUAAUA-GU-UAGGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UUGACAAU-ACA-CGAUUAAGAAUUACUUG-GUUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUCA-GAAUAU-CUU-UUUAGAG-UU--AAAUAUUCUUUU-U
AUAUAAA--UUAUAAAAUGUCAGGUC-AAGGUGCAAUUU-AUGAG-C-AAG--UAG----A-GAUGGGUUACAAUAAA----GUU-A--UUUA--UA-UGGAUUGGGAGUUU--UAUUA-AA-
--CUUU-CA--UGAAGG-UGGA[-????]
Idionyx                                           --------------------------------------------------------------------------
-----------------------------------------------------------------------------------------NNNN-NNNNN----N-NNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN----NNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNNN-NNN-NN- NNNNNN-
NNNNNNNN-NNN-NNNNNNNNNNNNNNNNN-NNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNN-NNN-NNNNNNNNNNNNNNNN-N
NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNN---NNNNNNN--NNNN--NN-
--NNNNNNN--NNNNNN-NNNN[-????]
Macromidia_rapida_OMR                             ACCGCGGUUAUACG-UAGG-GAAUAAAUAA-AUA-UUUU-UGGUUG------ACA-GUUAAAUGUUUAUGU-----
----UUUUAUAUUUAGAAUUUUUAAGGUGAAAUUUUAAUUUUAAUU----------GUAAUAAUGUUUUUUUGAGGCUGUG---AAA--UUUA-UAAUU----U-AAACAAGGAUUAGAUACCC-
UUUUAUAGUAAAUGUAAAUAA-----UAGCUU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGAUUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUGUAA- UCGAUAAU-
CCA-CGAGAAAGAGUUACUUA--UUUUUGAA---UUCAGUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UU---AAUAUUCUAUA-AAUAUUUA--AUAU UUUAUGUCAGGUC-
AAGGUGCAAUUU-AUGAA-U-AAG--AAG----A-GAUGGGUUACAAUAAA----AUU-A--UUUA--UA-UGGAU--UAGAUUU--AUUAA-AU-----AUUUA-- UGAAGG-UGGA[-????]
EU477701_Oxygastra_curtisii                       --------------------GAAAAAAUGG-AUA--UAU-UAGUUGU-----GUA-GUUAAAUUUAUUUUA-----
---AUUUUUAUAUAUUUAAUUUUUAGGUGAAAUUUUAAUUAUAUUA------------UAUAAAUUUAUUUUGA-GCUACG---AAA--UUUA-UUGGA----G-AAACAAGGAUUAGAUACCC-
UUCUUUUAUAAAUGUAAAAUUA----UGACUA-GGGUAGUAAUA-GU-UAAGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUCAGAGGAAC-CUG-UC-CUGUAA- UUGACAUU-
CCA-CGAGGA-GAGUUACUUA--UUUUUGUU-A-AUCAGUUUGUAUACCUCCG-UC-AUCA-GAGUGU-CUU-UUUAGAG-UG---AACAUUCUGUU-AAUAUUUAU-GUAU GUUAUGUCAGGUC-
AAGGUGCAAUUU-AUAAA-U-AAG--UAG----A-GAUGGGUUACAAUAUA----UUA-A--UAUA--UA-CGAAU--UAUAACA--AUUA--AU---GGUUAUA-- CGAAGG-UGGA[-????]
EU054955_5054_Cordulephya_pygmaea                 NNNNNNNNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN-----NNN-N------------------
-------------------NNNNNNNNNNNN--------------------------------------------NNNNN---NNN--NNN-NNNNNN----N-NNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN---GUAAUA-GU-UAUGUU-CUUGAAACCUAAAGAAUUU-GGCGGCA-UUUCAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UCGACACU-CCA-CGAUGAAUAAUUACUUG--UUUUUGU-----UUAGUUUGUAUACCUCCG-UC-AUAA-GGGUAU-CUU-UUUAGAG-GG---AAUGUCCUAUA-U
ACAUAAA--UUGUAGAAUGUCAGGUC-AAGGUGCAAUUU-AUGGA-C-AAG--UAG----A-GAUGGGUUACAAUAAA----AUU-A--UUUA--UA-CGGAU--UAGGAAU--GAUA--UU-
--CUCCCUA--UGAAGG-UGGA[-????]
EF631566_Pseudocordulia_circularis                NNNNNNNNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN-----NNN-N------------------
-------------------NNNNNNNNNNNN--------------------------------------------NNNNN---NNN--NNN-NNNNNN----N-NNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN---NNNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNNN-NNN-NN- NNNNNN-
NNNNNNNN-NNN-NNNNNNNNNNNNNNNNN-NNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNNNNNN-N-NNNNNNNNNNNNNN-N
NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNN----NNN-N--NNNN--NN-NNNNN--NNNNNNN--NNNN--NN-
--NNNNNNN--NNNNNN-NNNN[-????]
EU054968_5065_Hesperocordulia_berthoudi           --------------------------------------------------------------------------
------------------------------------------------------------------------------------------------------------------------
-----------------------------------GUAUUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUCCAU-U-C-UUUUUAGAGGAAC-CUG-UC-CCGUGA- UCGACAUU-
CCA-CGAUGG-GAUUUACUUG--CUUUUGUU-AAUUCAGUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UU--AAAUAUUCUAUU-UACACGGA--AUGU GUUAUGUCAGGUC-
AAGGUGCAAUUU-AUGAG-U-AAG--UGG----A-GAUGGGUUACAAUAAU----AUU-A--AUUA-AUA-UGGAUUAGACUAAU--UAA---CU---GG-UCUA-- UAAAGG-UGGA[-????]
EF631556_Lathrocordulia_metallica                 NNNNNNNNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN-----NNN-N------------------
-------------------NNNNNNNNNNNN--------------------------------------------NNNNN---NNN--NNN-NNNNNN----N-NNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN---NNNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNNN-NNN-NN-
```

NNNNNN-NNNNNNNN-NNN-NNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNNNNNN-N-NNNNNNNNNNNNN-N
NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNN----NNN-N--NNNN--NN-NNNNN--NNNNNNN--NNNN--NN-
--NNNNNNN--NNNNNN-NNNN[-????]
EU054959_55057_Micromidia_convergens NNNNNNNNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN-----NNN-N------------------
-------------------NNNNNNNNNNNN--NNNNN---NNN--NNN-NNNNNN----N-NNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN---GUAUUA-GU-UAUGUU-CUUGAAACCCAGAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UCGACAUU-CCA-CGAUGAGGAGUUACUUG--UUCUUGUU---CUCAGUUUGUAUACCUCCG-UC-AUCA-GAUUAU-CUU-UUUAGAG-UU---AAUAUUCUAUU-U
ACAUGGA--AUGUGUUAUGUCAGGUC-AAGGUGCAAUUU-AUGGG-C-AAG--UAG----A-GAUGGGUUACAAUAGA----AUU-A--UUUA--UA-CGGAUUGGGGUUGU--UAAU--CU-
--GGCUCCA--UGAAGG-UGGA[-????]
EF631557_Micromidia_atrifrons NNNNNNNNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN-----NNN-N------------------
-------------------NNNNNNNNNNNN--NNNNN---NNN--NNN-NNNNNN----N-NNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN----NNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNN-NNN-NN- NNNNNN-
NNNNNNNN-NNN-NNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNN-NNN-NNNNNNNNNNNNNNNN-N
NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNN---NNNNNNN--NNNN--NN-
--NNNNNNN--NNNNNN-NNNN[-????]
Austrophya_mystica ---

---------[-????]
EF631559_Austrocordulia_refracta ---
--NNNNN---NNN--NNN-NNNNNN----N-NNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN----NNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNN-NNN-NN- NNNNNN-
NNNNNNNN-NNN-NNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNN-NNN-NNNNNNNNNNNNNNNN-N
NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNN---NNNNNNN--NNNN--NN-
--NNNNNNN--NNNNNN-NNNN[-????]
EF631580_Archaeophya_magnifica NNNNNNNNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN-----NNN-N------------------
-------------------NNNNNNNNNNNN--NNNNN---NNN--NNN-NNNNNN----N-NNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN----NNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNN-NNN-NN- NNNNNN-
NNNNNNNN-NNN-NNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNN-NNN-NNNNNNNNNNNNNNNN-N
NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNN---NNNNNNN--NNNN--NN-
--NNNNNNN--NNNNNN-NNNN[-????]
EF032715_Epophthalmia_elegans NNNNNNNNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN-----NNN-N------------------
-------------------NNNNNNNNNNNN--NNNNN---NNN--NNN-NNNNNN----N-NNNNNNNNNNNNNNNN
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NNNNNNNN-NNN-NNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNN-NNN-NNNNNNNNNNNNNNNN-N
NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNN---NNNNNNN--NNNN--NN-
--NNNNNNN--NNNNNN-NNNN[-????]
Didymops_transversa_ODT ACCGCGGUUAUACG-UAGG-GGGAGUAUAA-UUA-UUUU-UGGUUU------GUA-GUCAAAUUUUCUUUC-----
---UCUUUUAUAUUUGGAAUUUUUAGGUGAAAUUUUAAUUUCAGA----------UUUUUGAGUUUUUAUUUGAAUCUAUG---AAA--CUUA-UUUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUUAUAAGUGUAAAAAUU----AAAUCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACUCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUGUAA- UCGACAUU-
CCA-CGAUGAUGAGUCACUUA--CCCUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UG---AAUAUUCUUAU-UUUAUAAA--AUAU UAGAUGUCAGGUC-
AAGGUGCAAUUU-AUGGG-U-AAG--AAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGAAU--UAGAAUA--AUUA--UU---UAUUUUA-- UGAAGG-UGGA[-????]
EU477697_Macromia_illinoiensis -------------------GGGAGUAUAA-UUA-UUUU-UGGUUU------GUA-GUCAAAUUUGUUUUU-----
----CUUUUAUAUUUAUAAUUUUUAGGUGAAAUUUUAAUUUUAGG----------UAUUUUAGUUUAAAUUUGAAUCUAUG---AAA--CUUA-UUAUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUUGUAAGUGUAAAUUGU----UAAUCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACUCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUGUGA- UCGACAUU-
CCA-CGAUGAUGAGUUACUUU--CCUUUGUU-U-UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UA---AAUAUUCCUAU-UAUAGAAA--AUAU UAAAUGUCAGGUC-
AAGGUGCAAUUU-AUAGG-U-UAG--AAG----A-GAUGGGUUACAAUGGA----AUU-A--UCUA--UA-UGGAU--UAAAAUA--AUUA--UU---UAUUUUA-- UGAAGG-UGGA[-????]

Macromia_amphigena_MAC ACCGCGGUUAUACG-UAGG-GAAAAUAUAA-UUA-UUUU-UGGUUU-------AUA-GUCAAAUUUUAUUUU---- U----
CUUUUAUAUUUAUGAUUUUUAGGUGAAAUUUUAAUUUUAAG----------UGUUUUAGUCUAAAUUUGAAUCUAUG---AAA--CUUA-UUAUU----U-AAACAAGGAUUAGAUAC
CC-UUUUAUUAUAAGUGUAAAUUUU----UAAUCU-GGGUAGUAAUA-GC-UAUGUU-CUUGAAACUCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUGA-
UCGACAUU-CCA-CGAUGAUGAGUUACUUU--CCUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UA---AAUAUUCCUAU-U
AUAGAAA--AUAUUAAAUGUCAGGUC-AAGGUGCAAUUU-AUAGG-U-UAG--UAG----A-GAUGGGUUACAAUGGA----AUU-A--UCUA--UA-UGAAU--UAGGAUA--AUUA--UU-
--UGUCUUA--UGAAGG-UGGA[-????]
EU055001_97_Macromia_eurynome ---
--NNN-NNNNNN----N-NNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN---GUAUUA-GU-UAUGUU-CUUGAAACUCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUUUAA-
UCGACAUU-CCA-CGAUGAUUAUUUACUCU--CUCUUGUA---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-GG---AAUAUUCUCUU-A
AUAUAAA--AUAUAAUAUGUCAGGUC-AAGGUGCAAUUU-AUGAG-U-UAG--UAG----A-GAUGGGUUACAAUAAA----CUU-A--UUUA--UA-UGGAU--UAUAGUA--CUUAU-UU-
--UACUAUA--UGAAGG-UGGA[-????]
EF640463_Macromia_magnifica ---

------------GAAAUCCCUA-----AAUCC- GGGUAGUAAUAGGU-AAUUUUCUUGGAAACUCAAAGGAUUUGGGCGGUA-UUUUAA-UUC-UUUUUAGAGGGACCCUG-UC-CUGUGG- UCGACCUU-
CCACCGAUGAUGAGUUACUAUC-CUUUUGUU-U-UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UA---AAUAUUCUUAU-UAUAGAAA--AUAU CAGAUGUCAGGUC-
AAGGUGCAAUUU-AUAGG-U-UAG--AAG----A-GAUGGGUUACAAUAGA----AAU-A--UCUA--UA-UGGAU--UAAAAUA--AUUA--UU---UAUUUUA-- UGAAGG-UGGA[-????]
EU477696_Macromia_splendens --------------------GAAAAUAUAA-UUA-UUUU-UGGUUC-------AUA-GUCAAAUUUUAUUUU---- U----
CUUUUAUAUUUAUAAUUUUUAGGUGAAAUUUUAAUUUUAAGU---------GUUUUAGAUUUGGAUUUGAAUCUAUG---AAA--CUUA-UUGUU----U-AAACAAGGAUUAGAUAC
CC-UUUUAUUGUAAGUGUAAAUAUU--U--GAUCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACUCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUGA-
UCGACAUU-CCA-CGAUGAUGAGUUACUUU--CCUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UG---AAUAUUCCCAU-U
AUAGAAA--AUAUUUAAUGUCAGGUC-AAGGUGCAAUUU-AUAGG-U-AAG--AAG----A-GAUGGGUUACAAUGAA----UUU-A--UUCA--UA-UGGAA--UAGAAUA--AUUA--UU-
--UAUUUUA--UGAAGG-UGGA[-????]
JF912413_Phyllomacromia_sp GCCGCGGUUAUACG-UAGG-GUAAAAAUAA-UUA-UUUU-UGAUUU-------GUA-GUAAAAAAAAUUAUUU--- U----
CUUUAUAUUUU-UUAUUUUUAGGUGAAAUUUUAAUGUUAAAU-----------AUAACAGUUGAUUUUGAUUCUAUG---AAA--CUUA-UAACU----A-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAGUGUAAAAUUU---UUAAUUA-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACUCAAAGAAUUU-GGCGGUA-UCCUAU-U-C-UUUUUAGAGGAAC-CUG--UU CUGUAA-
UUGACACU-CCA-CGAGGAUGAUUAACUAU--UUUUUGUU-U-AUCAGUUUGUAUACCUCCG-UC-AUAA-GAUUAU-CUU-AAUAGAG-UU---AAUGUUCUCAU-U
AUAUAGA-AAUAUAGGAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-A-UAG--UAG----A-AAUGGGUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAAAAUA--AUUA--UU-
--UAUUUUA--UGAAGG-UGGA[-????]
EU477694_Idomacromia_proavita --------------------AUAAAGAUAA-UUA-UUUU-UGGGUA-------AUA-GUUAACAUUAUUUUU---- A-
UUUUUUUAAUUUUUGUUAUUUUUAGGUGAAAUUUUAAUUUUGAUU-----------GAGAAAAUUUUAUGUGAAGCUAUG---AAA--UUUA-UUUUA----U-AGACAAGGAUUAGAUAC
CC-UUUUAUUAUAAAUGUGAAUUUG---A-ACUCU-GGGUAGUAUUA-GU-UAUGAU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UCGACAAU-CCA-CGAUAAAGAGUUACUUA--UUUUUGUA---AUCAGUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UU---AAUAUUCUUCU-U
AUAAGUU--UUAUGGUAUGUCAGGUC-AAGGUGCAGCUA-AUAAA-U-GAGUCUAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAGUAUU--UAUA--AA-
--UGUAUUA--UGAAGG-UGGA[-????]
EF631540_Aeschnosoma_forcipula ---
--NNNN-NNNNN----N-NNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN----NNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNNN-NNN-NN- NNNNNN-
NNNNNNNN-NNN-NNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNN-NNN-NNNNNNNNNNNNNNNN-N
NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNN---NNNNNNN--NNNN--NN-
--NNNNNNN--NNNNNN-NNNN[-????]
EF631528_Pentathemis_membranulata ---
--NNNN-NNNNN----N-NNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN----NNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNNN-NNN-NN- NNNNNN-
NNNNNNNN-NNN-NNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNN-NNN-NNNNNNNNNNNNNNNN-N
NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNN---NNNNNNN--NNNN--NN-
--NNNNNNN--NNNNNN-NNNN[-????]
EU477709_Tetragoneuria_cynosura --------------------GAAUAAGUAA-AUA-UUUU-UGGUUUA------GUA-GUUAAAUUAAUUAUA---- U----
UAUUUGUAUUUGAAAUUUUUAGGUGAAAUUUUAAUUUUGAUU-----------AUAUUUAUUUUAAUUGAGGCUAUG---AAA--UUUA-UAAUA----A-AAACGAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUUAAUAUU-----AACCA-GGGUAGUAAUA-GU-UAUGUC-CUUGAAACCCAGAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-

CUGUAA-UCGAUAUU-CCA-CGAGGAUUAUUCACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UG---AAUAUUCUAUU-A
AUAUAAA--AUAUGAAAUGUCAGGUC-AAGGUGCAACUU-AUAAA-U-AAG--GAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGAAU--UAUAAGA--GUUA--UU-
--CUUA-UA--UGAAGG-UGGA[-????]
EU477713_Epitheca_costalis --------------------GAAUGAGUAA-AUA-UUUU-UGGUUUA-----AUA-GUUAAAUUAAUUAUA---- U----
UAUUUGUAUUUAAGAUUUUUAGGUGAAAUUUUAAUUUUAAUU-----------GUAUUUAUUUUAAUUGAGGCUAUG---AAA--UUUA-UAAUA----A-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUUAAUAUU-----AACCA-GGGUAGUAAUA-GU-UAUGUC-CUUGAAACCCAGAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAN-
NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNN-NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNNNNN-NNNNNNNNNNNNNNNN-N
NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNNNNNNN----NNNNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNNN--NNNNNNN--NNNN--UG-
--AUCG-AA--UGAAGG-UGGA[-????]
EU477712_Epitheca_canis --------------------GAAUAAGUAA-AUA-UUUU-UGGUUUA-----GUA-GUUAAAUUAAUUAUA---- U----
UAUUUGUAUUUAAGAUUUUUAGGUGAAAUUUUAAUUUUGAUU-----------AUAUUUAUUUUAAUUGAGGCUAUG---AAA--UUUA-UAAUA----A-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUUAAUAUU-----AACCA-GGGUAGUAAUA-GU-UAUGUC-CUUGAAACCCAGAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAC-
NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNN-NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNNNNN-NNNNNNNNNNNNNNNN-N
NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNNNNNNN----NNNNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNNN--NNNNNNN--NNNN--NN-
--AUCU-AA--UGAAGG-UGGA[-????]
EU477710_Epitheca_princeps --------------------GAAUAAGUAA-AUA-UUUU-UGGUUUA-----AUA-GUUAAAUUAAUUUUA---- U----
UAUUUAUAUUCAAUAUUUUUAGGUGAAAUUUUAAUUUUGAUU-----------AUAUUUAUUUUAAUUGAAGCUAUG---AAA--UUUA-UAUUA----A-AAACAAGGAUUAGAUAC
CC-UUUU-UUUUAAAUGUUAAUAUU-----AACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UCGAUAUU-CCA-CGAGGAU-AUUUACUUG--UUUUUGCU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UA---AAUAUUCUAUU-A AUAUUAA--
AUAUAAAAUGUCAGGUC-AAGGUGCAACUA-A
UAAA-U-AAG--GAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UGUGAAA--UUUA--UU---CUCA-UA--UGAAGG-UGGA[-????]
EU477711_Epitheca_marginata --------------------GAAUAAGUAA-AUA-UUUU-UGGUUUG-----GUA-GUUAAAUUAUUUAUU---- U----
UAUUUAUAUUUAAAAUUUUUAGGUGAAAUUUUAAUUUUAAUU-----------AUUUUUAAUUUGAUUGAAGCUAUG---AAA--UUUA-UUUUA----U-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUUAAUAUU-----AACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAGAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAN-
NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNN-NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNNNNN-NNNNNNNNNNNNNNNN-N
NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNNNNNNN----NNNNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNNN--NNNNNNN--NNNN--NN-
--NNNC-GA--UGAAGG-UGGA[-????]
EU477708_Epitheca_bimaculata --------------------GAAUAAGUAA-AUA-UUUU-UGGUUUG-----GUA-GUUAAAUUAUUUAUA---- U----
UAUUUAUAUUUAAAAUUUUUAGGUGAAAUUUUAAUUUUAAUU-----------AUAUUAAAUUUGGUUGAAGCUAUG---AAA--UUUA-UAUUA----U-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUUAAUAUU-----AACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAGAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUAUAA-
UCGAUAUU-CCA-CGAGGAUUGUUUACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UG---AAUACUCUAUU-A
AUAUAAA--AUAUGAAAUGUCAGGUC-AAGGUGCAACUU-AUAAA-U-AAG--AAG----A-GGUGGGUUACAAUAAA----UAU-A--UUUA--UA-CGGAU--UAUAAAU--UUUA--UU-
--UUUA-UA--UGAAGG-CGGA[-????]
EF631590_Rialla_villosa ---
---NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN----NNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNNN-NNN-NN- NNNNNN-
NNNNNNNN-NNN-NNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNN-NNN-NNNNNNNNNNNNNNNN-N
NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNN----NNNNNNN--NNNN--NN-
--NNNN-NN--NNNNNN-NNNN[-????]
EU477707_Cordulia_aenea --------------------GGAUAAGUAA-AUA-UUUU-UGGUUUA-----AUA-GUUAGAUUUAGUAGU---- U-----
UUUUAUAGUUAAUAUUUUUAGGUGAAAUUUUAAUUUUGAUU-----------AUAAUUGAUAUAAUUGAAGCUAUG---AAA--UUUA-UUUUA----A-AGACAAGGAUUAGAUAC
CC-UUUUAUUUUAGAUGUUAAUAUU-----AACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UU- CUGUAA-
UCGAUAAU-CCA-CGAGGAUCAUUUACUUA--UUUUUGUU--UUUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UG---AAUAUUCUAUU-A
CUAUGAA--AUAUAAAAUGUCAGGUC-AAGGUGCAACUU-AUGAA-U-AAG--AAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAUAAUU--UUUA--UU-
--UUUA-UA--UGAAGG-UGGA[-????]
EU477705_Cordulia_shurtleffii --------------------GGGUAAGUAA-AUA-UUUU-UGGUUUA-----AUA-GUUAGAUUUAUUAGU---- U-----
UUUUAUAAUUAAUAUUUUUAGGUGAAAUUUUAAUUUUGAUU-----------AUAAUUGAUAUGAUUGAAGCUAUG---AAA--UUUA-UUUUA----A-AAACAAGGAUUAGAUAC
CC-UUUU-UUUUAGAUGUUAAUAUU-----AACCA-GGGUAGUAGUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UCGAUAAU-CCA-CGAGGGUCAUUUACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UG---AAUAUUCUAUU-G
UUAUAAA--GUAUAAAAUGUCAGGUC-AAGGUGCAACUU-AUGAA-U-AAG--AAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAUAAUU--UUUA--UU-
--UUUA-UA--UGAAGG-UGGA[-????]

EU477700_Somatochlora_alpestris --------------------GAAUUAGUAA-AUA-UUUU-UGGUUUA------AUA-GUUAGAUAUAAUAUA---- U-----
UUUUAUGUUUAAUAUUUUUAGGUGAAAUUUUAAUUUUAAUU-----------AUAAAUGAUUUGAUUGAAGCUAUG---AAA--UUUA-UAUUA----A-AAACAAGGAUUAGAUAC
CC-UUUU-UUUUAAAUGUUAAUAUU-----AACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAGAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UUGAUAGU-CCA-CGAGGUU-AUUCACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-AU---AAUAUUCUAUU-A
AUAUAAA--AUAUAUAAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAUAAUA--UUUA--UU-
--GUUA-UA--UGAAGG-UGGA[-????]
EU477704_Somatochlora_flavomaculata --------------------GAAUAAGUGA-AUA-UUUU-UGGUUUA------AUA-GUUAAAUAUACUGAA---- U-----
UUUUAUAUUUAAUAUUUUUAGGUGAAAUUUUAAUUUUAAUU-----------AUAAAUAAUUUAAUUGAAGCUAUG---AAA--UUUA-UAUUA----A-AAACAAGGAUUAGAUAC
CC-UUUU-UUUUAGAUGUUAAUAUU-----AACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAUAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UCGAUAGU-CCA-CGAGGUU-AUUUACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-AU---AAUAUUCUAUU-A
AUAUUAA--AUAUAAUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--GAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UGUAAUA--AUUA--UU-
--AUUA-UA--UGAAGG-UGGA[-????]
Somatochlora_metallica_CORD GCCGCGGUUAUACG-UAGG-GAAUAAGUAA-AUA-UUUU-UGGUUUA------AUA-GUUAUAUAUAAUGUA---- U-----
UUUUAUAUUUAAUAUUUUUAGGUGAAAUUUUAAUUUUAAUU-----------AUAAAUGAUUUAAUUGAAGCUAUG---AAA--UUUA-UAUUA----A-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAGAUGUUAAUAUU-----AACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAGAGAAUUU-GGCGGCA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UCGAUAGU-CCA-CGAGGUU-AUUUACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UU---AAUAUUCUAUU-A
AUAUUAA--AUAUAAUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--GAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAUAAUA--GUUA--UU-
--AUUA-UA--UGAAGG-UGGA[-????]
Somatochlora_tenebrosa_OSTn ACCGCGGUUAUACG-UAGG-GAAU-AAUAA-AUA-UUUU-UGGUUUA------GUA-GUUAUAUAUAUUUUA---- U-----
UUUUAUAUUUAAUAUUUUUAGGUGAAAUUUUAAUUUUAAUU-----------AUAAGUGAUUUUAUUGAAGCUAUG---AAA--UCUA-UAUUA----AGAAACAAGGAUUAGAUAC
CC-UUUUAUUUUAGAUGUUAAUAUU-----AACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAGAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UCGAUAGU-CCA-CGAGGUU-AUUUACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-GU---AAUAUUCUAUU-A
AUAUAAA--ACAUGAUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--GAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAUAAUA--AUUA--UU-
--AUUA-UA--UGAAGG-UGGA[-????]
EU477714_Hemicordulia_mindana_nipponica --------------------GGAAGAGUAA-AUA-UUUU-UGGUUAA------AUA-GUUAAGUUAUCAGUA---- U----
UUUUACAACUAAUAUUUAUUAGGUGAAAUUUUAAUUUUAGUU-----------AUAAUUAAAAGAGUUGAAGCUAUG---AAA--UUUA-AAUUA----A-AAACGAGGAUUAGAUAC
CC-UCUUAUUUUAAAUGUUAAUAUU-----AACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UU- CUAUAA-
UCGAUAAU-CCA-CGAGGAUAAUUUACUUG--CUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UU---AAUAUUCUAUU-A
AUAUCAA--UUAUAAAAUGUCAGGUC-AAGGUGCAACUU-AUAAG-C-AAG--UAG----A-AAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UAUAAAU--UUUA--UU-
--UUUA-UA--AGAAGG-UGGA[-????]
EU054977_5073_Hemicordulia_australiae NNNNNNNNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN------NNN-N------------------
--------------------NNNNNNNNNNNN---NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN--NNNNNNNN-NN---GUAAUA-GU-UAUGUU-CUUGAAACCCAGAGAAUUU-GGCGGUA-UUUUAC-U-C-UUUUUAGAGGAAC-CUG-UC- CUAUAA-
UCGAUAAU-CCA-CGAGGAUGAUUUACUUG--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UU---AAUAUUCUAUU-A
AUAUUGA--UUAUAAAAUGUCAGGUC-AAGGUGCAACUU-AUGGA-C-AAG--AAG----A-GAUGGGUUACAAUAAA----UCU-A--UUUA--UA-CGGAU--UAUAAAA--UUUA--UU-
--UUUA-UA--UGAAGG-UGGA[-????]
EU054965_5062_Procordulia_jacksoniensis NNNNNNNNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN------NNN-N------------------
--------------------NNNNNNNNNNNN---NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN--NNNNNNNN-NN---GUAAUA-GU-UAUGUU-CUUGAAACCCAGAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CCGUAA-
UCGAUAAU-CCA-CGAGGAUAAUUUACUUA--UUUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UU---AAUAUUCCAUU-A
AUAUUAA--GUAUAAAAUGUCAGGUC-AAGGUGCAACUU-AUAAA-U-AAG--AGG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAUAAAU--UUUA--UU-
--UUUA-UA--UGAAGG-UGGA[-????]
Unaligned_Libellulidae --
2222222222222222222222222222222-----------------------3333333333333333333333333333---
-----------------------------444444444---

--88
888888888888888888888888888-------------[-????]
DQ021431_Notiothemis_robertsi --------------------AUAAAAAUAA-AUA-UUAU-UGGUUAA------ACA-GUUAAUGAUUUUGUU---- U---
CUUUUAAUUUUAUCAUUUUUAAGGUGAAAUUUUAAUUUUAAUU------------AAAUAGAUUUUUAUGAAGCUGUG---AAA--UUUA-UUUUA----U-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUAAAUAU-----AAACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-

CUAUAA-UUGAUAGU-CCA-CGAUGAUAAUUUACUUA--UUUUUGUA---GUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UU---AAUAUUCUUAA-U
UUACAAA--AUAUAGUAUGUCAGGUC-AAGGUGCAAAUA-AUAAA-U-AAG--AAG----A-GAUGGGUUACAUUAAA----UUU-A--UUUA--UA-CGAAA--UAUUAUC--UUUA--UU-
--AUUAAUA--UGAAGG-UGGA[-????]
EU477726_Tetrathemis_irregularis --------------------AUAGAAAUAA--UA-UAAU-UGAUUAU------UCA-GUUAAAUGUAUUAUU---- U-----
CUUUAAAUUUAUUGUUUUAAGGUGAAAUUUUAAUUUUAAUUU-----------AAUUAGAAAUUUAUUGAAGCUGUG---AAA--UUUA-UAUUA----A-AGACAAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUAAUUGUU----AAAUCU-GGGUAGUAGUA-GU-UAUGUU-CUUGAAACUCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAU-CUG-UC- CUAUAA-
UUGAUAGC-CCA-CGAUGGAAAUUUACUCA--UUUUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAAUAU-CUU-UUUAGAG-UU---CAUAUUCUAAA-C
AUACAAA--AUUUAAUAUGUCAGGUC-AAGGUGCAGAUU-AUGGA-U-GAG--AAG----A-GAUGGAUUACAAUAAA----UUU-A--UUUA--UG-CGAAU--UUACACU--UUUA--UU-
--AGUUUAA--UGAAGA-UGGA[-????]
DQ021430_Tetrathemis_polleni --------------------AGAUAAAUAA-AUA-UUAU-UGGUUCG------UCA-GUUAAAUUUUUAAUU---- UU----
CUUUAAAUUUAAAAUUUUAAGGUGAAAUUUUAAUUUUAUUUA------------AUUAGUUUUUUAUUGAAUCUGUG---AAA--UUUA-UAUUA----A-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUAAUU-UG----GGGCCG- GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUAUAA-
UUGAUAGU-CCA-CGAUGGGAAAUUACUUA--UUCUUGCA---AUCAUUUUGUAUACCUCCG-UC-AUCA-GAAUAU-CUU-UUUAGAG-AG---CAUGUUCUUAA-U
AUACAAA--AUUUAAUAUGUCAGGUC-AAGGUGUAAAUU-AUGGA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UUAUAUA--UUUA--UU-
--UAUAUAU--UGAAGG-UGGA[-????]
EU477723_Urothemis_cf_signata --------------------AGAUAAAUAA-AUA-UUAU-UGGUUUA------GCA-GUUAAAUGUUUUCU---- UU-----
--UAAUGCUAAAAUUUUUAGGUGAAAUUUUAAUUUUAUUUU------------AAUGAGUUUAUUUUGAAGCUGUG---AAA--UUUA-UUUUA----A-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUUAAUAUU--A--AACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUCU-GGCGGUA-UUUUAU-A-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UUGACAGU-CCA-CGAUGGUGAAUUACUUA--CUUUUGUU-A-UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGCAU-CUU-UUUAGAG-GU---AAUGUUCUUCA-U
UUACAAA--AUAUUAUAUGUCAGGUC-AAGGUGCAAAUU-AUAGG-U-AAG--AAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAAAAUU--AUUAU-AU-
--UUUUUUA--UGAAGG-UGGA[-????]
EF640460_Urothemis_assignata --

---------------------------------------AUAAUA-GU-AAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-A-C-UUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAGU-
CCA-CGAUGUUGAAAUACUUA--CCUUUGUU-A-UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGCAU-CUU-UUUAGAG-AU---AAUGUUCUAGU-AGUACAAA--AUAA UAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGGG-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGAAU--UGAUAUU--UUUA--UU---AAUGUUA-- UGAAGG-UGGA[-????]
Macrodiplax_cora --------------------AAAGGAGUGA-AUA-UUAU-UGGUUAU------GUA-GUUAAAUGAUUUAUU---- UU----
CUUUAAUGAUAAUAUUUUUAGGUGAAAUUUUAAUUUUAUUUU-------------AAUAGAAUUGGUUGAAGCUAUG---AAA--UUUA-UUUUU----A-AA-CAAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUUAAUUU----AUAACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACUCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CCAUAA-
UUGAUAGU-CCA-CGAUGAAAAUGUACUUA--AUUUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GGAUAU-CUU-UUUAGAG-UA---AAUUUUCUUAA-U
CUAUAAA--AUAUAAUAUGUCAGGUC-AAGGUGCAAUUU-AUAGU-U-AAG--UGG----A-GAUGGGUUACAAUAGA----AUU-A--UUUA--UA-UGGAU--UAAUAUA----GUU-AU- UUAU-AUUA-
-UGAAGG-UGGA[-????]
EF640459_Macrodiplax_balteata --

---AUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-UUC-CUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGACAAU-
CCA-CGAUGAAAAUGUACUUA--UUUUUGUU-A-UUCAUUUUGUAUACCUCCG-UC-AUCA-GAAUAU-CUU-UUUAGGG-AA---AAUUUUCUUGA-UUUAUGAA--UUAA AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUAAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----AUU-A--AUUA--UA-CGGAU--UAAUAUA--UUUA--UU---UAUAUUA-- UGAAGG-UGGA[-????]
EF631568_Zyxomma_elgneri NNNNNNNNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN------NNN-N-------------------
--------------------NNNNNNNNNNNN---NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNN NNNNN
NNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN----NNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNNN-NNN-NN- NNNNNN-NNNNNNNN-NNN-
NNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNNNNNN-NNN-NNNNNNNNNNN-N NNNNNNNN-N--NNNNNNNNNNNNN-
NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNN----NNNNNNN--NNNN--NN-
--NNNN-NN--NNNNNN-NNNN[-????]
AB708296_Zyxomma_petiolatum --

---------[-????]

EU477724_Zygonyx_torrida --------------------AAAAAAUUAAUUA-CUUU-UGAUUUG-----ACA-GUUAUACUUAAUUAA-----
----CUUUUAAAAAUAGAAUUUUUAGGUGAAAUUUUAAUUUUAUUA-------------AAAUGAGAUAUAUUAUACUGUG---AAA--UUUA-UUUUA----A-AGACAAGGAUUAGAUACCC-
UUUUAUAUUAAAUGUAAAUUC-----AAAUUA-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAAU-
CCA-CGAUAGAGAAUUACUUA--UUUUUGUU---UACAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-AU---AAUGUUCUUAU-AAUAUAAA--GUAA GAUAUGUCAGGUC-
AAGGUGCAGAUU-AUGAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----AUU-A--UUUA--UA-UGGAU--UAUUAUU--AUUA--UU---AAUAAUA-- UGAAGG-UGGA[-????]
EU054944_5044_Nannophlebia_sp NNNNNNNNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN-----NNN-N-----------------
-------------------NNNNNNNNNNNN--NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN---GUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-CUUUAU-U-C-CUUUUAGAGGAAC-CUG-UC- CUGUAA-
UUGAUAAU-CCA-CGAUGGAUAAUUACUUA--UUUUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAUUAU-CUU-UUUAGAG-UA---AAUAUUCUUAA-U
UUACAAA--AUAUUAUAUGUCAGGUC-AAGGUGCAAAUU-AUGAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGAAU--UAAUAUU--AUUA--UG-
--AAUAUUA--UGAAGG-UGGA[-????]
DQ021432_Bironides_sp --------------------GUUAAAUUAAUUA-UUUU-UGGUUUA------UA-GUUGAAUAAAAAUUU-----
----CUAUUAAAUUUAUUAUUAUUAGGUGAAAUUUUAAUUUUAUUAG------------AACUAGAGUUAUUGAAGCUAUU---AAA--UUUU-UUAUU----A-AAACAAGGAUUAGAUACCC-
UUCUAUAUUAAAUGUAAAUUUU-----AACUA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-CUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAGU-
UCA-CGAUAAUAAAU-ACUUA--UUUUUGUA---U-CAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-GA---AAUUUUCUACU-CAUAUAAA--GUAA GAUAUGUCAGGUC-
AAGGUGCAGCUU-AUAAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UAUUACA--AGUA--UU---AGUUUUA-- UGAAGG-AGGA[-????]
DQ021429_Huonia_epinephela --------------------GAUAAAUUAAUUA-UUUU-UAGUUUA----U-GUA-GUUGAAAUUAAAUAU---- UU----
CUUUAAUUAUAAUAUUUUUAGGUGAAAUUUUAAUAUUAUUG-------------GAAAGAUUAUGUUGAAGCUAUU---AAA--UUUA-UUAUU----A-AAACAAGGAUUAGAUAC
CCCUUUUAUAUUAAAUGUAAAUAUU-----AACUA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUUUAA-
UUGAUAGU-UCA-CGAUAGAGAAUUACUUG--UUUUUGUA---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAUUAU-CUU-UUUAGAG-UU---AAUAUUCUAUU-A
AUAUGAA--GUAAGAAAUGUCAGGUC-AAGGUGCAACUU-AUAAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAA--UUAUAUU--AUUA--UU-
--AAUAUAA--UGAAGG-AGGA[-????]
EF631587_Huonia_oreophila NNNNNNNNNNNNNN-NNNNN--NNNNNNNN--NN-NNNN-NNNNNNN-----NNN-N-----------------
-------------------NNNNNNNNNNNN--NNNNN---NNN--NNN-NNNNNN----N-NNNNNNNNNNNNNNNN NNNNN
NNNNNNNNNNNNNNNNNNNN---NNNNNNN- NN----NNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNNN-NNN-NN- NNNNNN-NNNNNNNN-
NNN-NNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNNNNNN-NNN-NNNNNNNNNNN-NNNNNN-
-N-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNN---NNNNNNN--NNNN--NN--- NNNN-NN--
NNNNNN-NNNN[-????]
EF640408_Onychothemis_testacea --

--AAUA-GU-UAUUGCUCUUGAAACCCAAAGAAUUU-GGCGGUA-UUUCAU-U-C-UCUUUAGAGGAAC-CUG-UC-CCGUGA- UUGAUAUU-
CCA-CGAUGGGUAAUUACUUA--CUUUUGUU---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAAUAU-UUU-UUUAGAA-UU---AAUAUUCCUUU-AAUACAAA--AUAA GAUAUGUCAGGUC-
AAGGUGCAAUUU-AUAGG-U-AAG--UGG----A-GAUGGGUUACAAUAAA----AUU-A--UUUA--UA-CGGAU--UAUAUUU--AUUA--AU---AAUAAUA-- UGAAGG-UGGA[-????]
EF640451_Rhyothemis_variegata --

---AUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-UUC-UUUUUAGAGGAAC-CUG-UC-CUAUAA- UUGAUAAU-
CCA-CGAUAGGAAGUUACUUA--UUUUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-AU---AAUAUUCUUAA-UAUAAUAA--AUAU UAUAUGUCAGGUC-
AAGGUGCAAAUU-AUAAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--AA-CGGAA--UAUUAUU--AUUA--CU---AAUAAUA-- UGAAGG-UGGA[-????]
EU477719_Rhyothemis_fuliginosa ------------------AUG-AAAAUAA-AUA-UUUU-UGGUUUA-----GCA-GU-UAAAUGUAACAUCUCC-
-----UUUAAAUUUAAAAUUUUUAGGUGAAAUUUUAAUUUUAUAAAA------------ACAGGAUUUAAUUGAAACUGUG---AAA--UUUA-AUUUU----A-AAACAAGGAUUAGAUACCC-
UUUUAUUUUAAAUCUAAAUAUCA--UAAACCC-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUAUAA- UUGAUAAU-
CCA-CGAUAGGGAGUUACUUA--UUUUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-AU---AAUAUUCUUAA-UAUAAUAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUAAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--CA-CGGAU--UAUUAUU--AUUA--UU---AAUCAUA-- UGAAGG-UGGA[-????]
EF640449_Miathyria_marcella --

---U-GGCGGUA-UCCUAU---C-CUUUGAAAGGAAC-CUG-UC-CUGUAA-

UUGAUAAU-CCA-CGAUAAAGAAAUACUUA--UUAUUGUA---UACAUUGAGUAUACCUCCG-UC-AUCA-GAAUAU-ACU-UUGAGGUGUA---AAUAUUCUAUU-AAUAUUAA--AUAU
UUUAUGUCAGGUC-AAGGUGCAAAUU-AUGAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGAAU--UAAUUUU--AUUA--UU---AUAAUUA-- UGAAGG-
UGGA[-????]
Miathyria_simplex ??????????????-?????--????????????-????-???????------???-???????????????----
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???????????????-???-?????????????????--????????---???????????????????-??-????-??????-???-???????-??--?????????????-
???????--??????????????????-????????????-?????-?-???--???----?-????????????????----???-?--????--??-?????--???????--?????-??-
--???????--??????-????[-????]
DQ021423_Tholymis_citrina --------------------GUACAUGUAA-AUA-UUUU-CAGUAUA------GUA-GUUAAUUGAUUUGAC---- UU-----
-UUAUAAUUUUAAUUUUUAGGUGAAAUUUUAAUUUUUUUAU------------AACAAGUUUAUUUUGAAGCUACG---AAA--UUCA-GAACA----U-AAACGAGGAUUAGAUAC
CC-UUUUAUUUUGAAUGUUAAUUUA--AU-UACUU-GGGUAGUAACA-GC-UAUGUU-CUUGAAACCCAGAGGAUCU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UUGAUAGU-ACA-CGAUGGAGAAUUACUUA--CUUUUGUU---UACAAUUUGUAUACCUCCG-UC-AUAA-GAGCAU-CUU-UUUAGAG-UA---AAUGUUCAUUU-A
AUAUGAA--AUAUAAUAUGUCAGGUC-AAGGUGCAAUUU-AUGGG-U-AAG--AAG----A-GAUGGGUUACAAUAUA----UAU-A--CAUA--AAAUGGAU-UCCUGUUA--UUAU--UU-
--GACUGGA--UGAAGG-UGGA[-????]
EF640452_Tholymis_tillarga --

-------------------------------U-GGGUAAUACUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUU-AGAGGAAC-CUG-UC-CUGUAA- UUGAUAAU-
ACA-CGAUGAAGAAAUACUUG--UUCUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUAA-GAUUAU-CUU-UUUAGAG-UU---AAUAUUCUUAA-UAUAUUAA--UUAU AUAAUGUCAGGUC-
AAGGUGCAAUUU-AUGGA-C-AAG--AAG----A-GAUGGGUUACAAUAGA----AUU-A--UCUA--AA-CGGAU--UUUUAAU--AUUA--AU---AUUAAGA-- UGAAGG-UGGA[-????]
EF640450_Pantala_flavescens --

----------------------------ACUA-GGGUAGUAGUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-CUUUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAAU-
CCA-CGAUGGAGAUUUACUUA--CUCUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-AA---AAUAUUCUAUU-AAUACAAA--AUAA GAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGGG-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UAAAAUU--AUUA--UU---AAUUUUA-- UGAAGG-UGGA[-????]
AF266099_Tramea_lacerata ACCGCGGUUAUACG-UGAA-GAAAAAUUAA-AUA-UUAU-UGGUUUA------GCA-GUUAAAUUUAAGGAU-----
----CUUUUAAAAAUAAUAUUUUUAGGUGAAAUUUUAAUUUUAUUAAA-------------ACAAGAUAGGUUGAAGCUGUG---AAA--UUUA-UUUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUUUUAAAUGUAAAUUAU-----GAUUA-GGGUAAUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAAU-
CCA-CGAUAGAUAAGUACUUA--UUCUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAUUAU-AUU-UUCAGAU-UU---AAUAUUCUNAC-AUUACAAA--AUAU UUUAUGUCAGGUC-
AAGGUGCAUUUU-AUGGA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGAAU--UAAUAUG--AAUAA-AC---CAUAUUA-- UGAAGG-UGGA[-????]
Tramea_calverti --------------------GAAAAAUUAA-AUA-UUAU-UGGUUUA------ACA-GUUAGAUUUAAUUGU-----
----CUUUUAAAUUUAAUAUUUUUAGGUGAAAUUUUAAUUUUAUUAU-------------AAAAAGAAGUAUUGAAGCUGUG---AAA--UUUA-UUUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUUUUAAAUGUAAAUU-----AUAAUUA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAAU-
CCA-CGAUAGGUAAUUACUUA--CUCUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAUUAU-AUU-UUCAGAU-UU---AAUAUUCUUUU-AAUACAAA--AUAU UAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGAG-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UAAUUUU----AUU-AAUAAA--AUUA-- UGAAGG-UGGA[-????]
Sympetrum_Kalosympetrum_janeae_OSJ ACCGCGGUUAUACG-UGAGCGAAAAAGUGA-AUA-UUAU-UGGUUUA------GUA-GUUAAAUAUUUAUUU---- U-----
CUUUAAAUUUAGGGUUUUUAGGUGAAAUUUUAAUUUUAUUAU-----------AAAAGAUCUUUAUUGAAGCUAUG---AAA--UUUA-UUUUA----A-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUAAAUAU-----GAACCU-GGGUAUUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UUGAUAAU-CCA-CGAUAGA-AUUUACUUA--UUUUUGUU---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CCU-UUUAGGG-UU--AAAUAUUCUUAA-U
AUAUAAA--AUAUUGUAUGUCAGGUC-AAGGUGCAAUUA-AUAGA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--GA-CGGAU--UAUUAUU--UUUA--AU-
--GAUAGUA--UAAAGG-UGGA[-????]
EF640443_Sympetrum_Kalosympetrum_obtrusum --

------------------------------------AAUAAUA-GU-AAUGUU-CUUGAAACCCAAAGAAUU--GGCGGUA-UUUUAU-U-C-UUUUUAGGAGGACCCUG-UCCCUGUAA-
UUGAUAAUCCCA-CGAUAGGAAUUUACU-A--AUUUUGUU---UCCAUUUUGUAUACCUCCGGUCAAUCA-GAGUAU-CCU-UUUAGGG-UU--AAAUAUUCUUAA-UAUAUAAA--AUAU
UGUAUGUCAGGUCCAAGGUGCAAUUA-AUAGA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--GA-CGGAU--UAUUAUU--UUUA--AU---GAUAGUA-- UAAAGG-
UGGA[-????]

EU477739_Sympetrum_vulgatum --------------------GAGAAAGUGA-AUA-CUAU-UGGUUUA------GUA-GUUAAAUAUUUAUUU---- U-----
CUUUAAAUUUAAUAUUUUUAGGUGAAAUUUUAAUUUUAUUAU-----------AAAAGAAAUUAGUUGAAGCUAUG---AAA--UUUA-UUCUA----A-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUAACCAU-----GAACCU-GGGUAUUCAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UUGAUAAU-CCA-CGAUAGG-AGUUACUUG--UUUUUGUU---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CCU-UUUAGGG-GU--AAAUAUUCUUAA-U
AUAUAAA--AUAUUUUAUGUCAGGUC-AAGGUGCAUUUU-AUGAA-C-AUG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--AA-CGGAU--UAUUAUU--UUUA--AU-
--AAUAACA--UGAAGG-UGGA[-????]
EF640444_Sympetrum_Sympetrum_pedemontanum ---

--UU-GU-UAUGUU-CUUAAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-U-CUUUUAGAGGAAC-CUG-UC-CUAUAA- UUGAUAAU-
CCA-CGAAAGG-AUUUACUUA--UUCUUGUU---UUCAUUUGGUAUACCUCCG-UC-AUCA-GGGUAU-CCU-UUUAGGG-UU--UAAUAUUCUUAA-UAUAUAAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGAG-U-AAG--UAG----A-GAUGGGUUACAAUGAA----AUU-A--UUUA--GA-CGAAU--UAUUAUU--UUUA--AG---GAUAAUA-- UGAAGG-UGGA[-????]
EF640429_Sympetrum_Nesogonia_blackburni ---

----------------------UUUACUUA--UUUUUGUU---AACAUUUGGUAUACCCCCG-UC-AUCA-GAGUAU-CCU-UUUAGGG-U---AAAUAUUCUUAA-UGUAUAAA--AUAA
UAUAUGUCAGGUC-CAGGUGCAAUUU-AUAAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--GA-CGAAU--UAUUAUU--UUUA--AU---GAUAGUA-- UGAAGG-
UGGA[-????]
EU477743_Sympetrum_Sympetrum_sanguineum --------------------GA-AAAGUGA-AUA-CUAU-UGGUUUA------GUA-GUUAAAUAUUUAUAU---- U-----
CUUUAAACUUAAGAUUUUUAGGUGAAAUUUUAAUUUUAUUAU-----------AAAAGAAUUUUGUUGAGGCUGCG---AAA--UUUA-UUUUA----A-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUAACUAU-----GAACCC-GGGUAUUAGUA-GU-UAUUUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UUGAUAAU-CCA-CGAUAGG-AGUUACUUG--UUUUUGUU---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CCU-UUUAGGG-UU--AAAUAUUCUUAU-U
AUAUAAA--AUAUUUUAUGUCAGGUC-AAGGUGCAAUUU-AUAAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--AA-CGGAU--UAUUAUU--AUUA--AU-
--GAUAAUA--UGAAGG-UGGA[-????]
EF640439_Sympetrum_Tarnetrum_corruptum ---

----------------------------------GGUAUAAAUA-GU-UAUGAU-CUUAAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-UUC-UUUUGAGAGGAAC-CUG-UC-CUGUAA- UUGAUAAU-
CCA-CGAUAAA-AUUUACUUA--UUUUUGUU---UUCAUUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CCUUUUAUGGG-U---AAAUAUUCUUAA-UAUAAUAA--AUAU UAUAUGUCAGGUC-
AAGGUGCAAUUU-AUAAA-U-AAG--AAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--GA-CGGAU--UAAUAUU--UUUA--AU---GAUAUUA-- UGAAGG-UGGA[-????]
EF640440_Sympetrum_Tarnetrum_fonscolombii ---

---ACA-GU-AAUGUU-CUCAAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-CUUAUUUAGAGGAAC-CUG-UA-CUGUAA- UUGAUAAU-
CCA-CGAUAGA-AUUUACUUA--UACUUGUU---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-GA--UAAUAUUCUUAA-UAUAACAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGUA-U-AAG--UAG----A-UAUGGGUUACAAUAAA----GUU-A--UUUA--UA-CGGAU--UAUUAUU--UUUA--AU---GAUAAUA-- UGAAGG-AGGA[-????]
EF640441_Sympetrum_illotum ---

---CUAGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAGU-
CCA-CGAUAAA-AAUUACUUG--UUUUUGUU---CUCAUUUUGUAUACCUCCG-UC-AUCA-GAAUAU-CUU-UUUAGGG-AU--AAAUAUUCUUAA-UAUACAAA--UUAU GAAAUGUCAGGUC-
AAGGUGCAAUUU-AUAAG-C-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--GA-CGAAU--CAUUUAU--UUUA--AU---GUAAAUA-- UGAAGU-UGGA[-????]
EF640442_Sympetrum_infuscatum ---

????????-???-?????????????CUUA-UUUUUUGUU---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CCU-UUUAGGG-UU--UAAUACUCUUAA-UAUAUAAA--AUAU
UAUAUGUCAGGUC-AAGGUGCAAUUU-AUAGA-U-AAG--UAG----A-GAUGGGCUACAAUAAA----UUU-A--UUUA--GA-CGAAU--UAUUAUU--UUUA--AU---AUUAAUA-- UGAAGG-
UGGA[-????]
EU477740_Sympetrum_Sympetrum_danae --------------------G
AAAAAGUGA-AUA-UUAU-UGGCUUA------GUA-GUUAAAUAUUUUGUU----U---UUCUUUAAAUUUAGAAUUUUUAGGUGAAAUUUUAAUUUUAUUAU-----------
AAUAGAAUUUUAUUGAAGCUACG---AAA--UUUA-UGUUA----A-AAACAAGGAUUAGAUACCC-UUUUAUUUUAAAUGUUAAUAU-----AAGCCU-GGGUAUUAAUA-GU-UAUGUU-

CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUGUAA-UUGAUAAU-CCA-CGAUAGG-AGUUACUUA--UUUUUGCU---UUCAUU UUGUAUACCUCCG-
UC-AUCA-GAGUAU-CCU-UUUAGGG-AU--UAAUAUUCUUAA-UAUACAAA--AUAUUAUAUGUCAGGUC-AAGGUGCAAUUU-AUAAA-U-AAG--UAG---- A-GAUGGGUUACAAUAAA----UUU-
A--UUUA--AA-CGGAU--UAUUAAU--UUUA--AU---UUUAAUA--UGAAGG-UGGA[-????] EU477742_Sympetrum_Sympetrum_meridionale   --------------------
GAGAAAGUGA-AUA-CUAU-UGGUUUA------GUA-GUUAAAUAUUUAUUU---- U-----CUUUAAAUUUAGGAUUUUUAGGUGAAAUUUUAAUUUUAUUAU-----------
AAGGGGACUUUGUUGAAGCUAUG---AAA--UUUA-UUUUA----A-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUAACCAU-----GAACCU-GGGUAUUAAUA-GU-UAUUUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UUGAUAAU-CCA-CGAUAGG-AGUUACUUA--UUUUUGUU---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CCU-UUUAGGG-GU--AAAUAUUCUUAA-U
AUAUAAA--AUAUUUUAUGUCAGGUC-AAGGUGCAAUUU-AUAGA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--AA-UGGAU--UAUCAUU--AUUA--AU-
--GAUGGUA--UGAAGG-UGGA[-????]
EU477752_Leucorrhinia_pectoralis   --------------------AAAUUAGUGA-AUA-UUAU-UGGUUA-------GUA-GUUAAAUGGGUUUGU-----
---UUCCUUGAAUUUAAAGUUUUUAGGUGAAAUUUUAAUUUUAUUGUA-----------AGGAGGUUUUAUUGAAGCUAUG---AAA--UUUA-UUUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUUUUAAAUGUAAAUAU-----GAACCU-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACUCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAAU-
CCA-CGAUAGA-AGUYACUUA--UUUUUGUU---UUCAAUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CCU-UUUAGGG-GU-UAAAUAUUCUUAA-UAUAAAAA--AUAU UACAUGUCAGGUC-
AAGGUGCAAUUU-AUGAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--AA-CGGAU--UAUUAUU--UUUA--UG---GAUGAUA-- UGAAGG-UGGA[-????]
EF640394_Leucorrhinia_glacialis   --

---------------------------------GGGUAUAAUAA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAGU-
CCA-CGAUAGU-AGUCACUUA--UUUUUGUU---UUCAAUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CCU-UUUAGGG-UUAUAAAUAUUCUUAA-UAUAAAAA--AUAU UAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--GA-CGGAU--UAUUAUU--UUUA--UG---AAUAAUA-- UGAAGG-CGGA[-????]
DQ021425_Celithemis_elisa   --------------------GAGAUAGUAA-AUA-UUAU-UAGUUUA------UCA-GUUGAAUUUUUAAUU---- U----
CCUUUAAUAUUAUUAUUUUUAGGUGAAAUUUUAAUUUUAUAAUA-----------AAAGGAUUUAUUUGAAGCUGUG---AAA--UCUA-UAUAA----A-AAACGAGGAUUAGAUAC
CC-UUUUAUUUUAGAUGUAAACAU-----AAACUU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUCUUAGAGGAAC-CUG-UC- CUGUAA-
UUGAUAAU-CCA-CGAUAGA-AUUUACUUA--UUUUUGCU---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CCU-UUUAGGG-AUU-UAAUAUUCUAUG-U
AUACAGA--AUAUAAUAUGUCAGGUC-AAGGUGCAAUUU-AUAGA-U-AAG--AAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--AA-CGGAU--UAAUACU--UUUAA-CU-
--GGUAUUA--UUAAGG-UGGA[-????]
EF640393_Celithemis_eponina   --

--------------------------GGACCU- GGGUAAUAAUA-GU-UAUGUU-CUUGAAACUCAAAGAAUUU-GGCGGUA-UUUUAC-U-C-UGUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAAU-
CCA-CGAUAAG-AUUUACUUA--UUCUUGCU---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CCU-UUUAGGG-AUUAUAAUAUUCUGCU-CAUACAAA--AUAU AAAAUGUCAGGUC-
AAGGUGCAAUUU-AUGAA-U-AAG--AAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--AA-CGGAU--UAUUACU--UUUG--UU---GGUAAUA-- UGAAGG-UGGA[-????]
EF640392_Brachymesia_gravida   --

-------------UUAAAUAU------UACUA- GGGUAGGAAUA-GG-UAUGUU-CUUGAA-CCCAGAGAAUUN-GGCGGGA-UUUUAU-U-C-UUUUUAGAGGACC-CUG-UC-CUGUAA- UUGAUAAU-
CCA-CGAGGAGAAUUUACUUA--UUCUAGGA-A-UCCAGUUUGAAUACUCCNG-UC-AUCA-GAGC-U-CUU-UUUAGAG-UU---AAUGUUCUUAAUAAUAAUAA--AUAU AAAAUGUCAGGUC-AAGG-
GCAAUUU-AUGAA-U-AUG--UAG----A-GAUGGGUUACAAUAAA----UUA-A--UUUA--UA-CGGAU--AAUUAUC--AUUA--UU---GAUAGUU-- UGAAG--GGGA[-????]
Brachymesia_herbida   ??????????????-?????--????????????-????-???????------???-???????????????----
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??-????????????????????????----?????-???????????-??-??????-???????????????????-???????-??????-?-?-?????????????-???-??-
???????????????-???-?????????????????--????????---???????????????????-??-????-??????-???-???????-??--?????????????-
???????--?????????????????-????????????-?????-?-???--???----?-????????????????----???-?--????--??-?????--???????--?????-??-
--???????--??????-????[-????]
EF640412_Brachythemis_leucosticta   --

---------AAAUGUAAUUUUU--U--ACCCA-GGGUAGUAAAA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGACC-CUG-UC-CUGUAA- UUGAUAGU-
CCACCGAGA-G-AAUUACUUA--UUUUUGCU---UUCAGUUUGUAUACU-CCG-UC-AUAA-GAUUAU-CUUUUUCAGAG-AU---AAUAUUCUUUU-UAUACAAA--AUUU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----AUU-A--UUUA--AAUGGAAU--AUUAUUG--UUAU--UU---UUAA-UA-- UGAAGG-UGGA[-????]

EF640411_Brachythemis_contaminata --

----------N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNN--NNNN
NNNNNNNNNNNN-NNNNNNNNNNN-NNNNN-N-NNNNNNNN----NNNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNNN--NNNNNNN--NNNN--NN---NNNNNNN-- NNNNNN-
NNNN[-????]
EF640417_Deielia_phaon --

---GAAUUU-GGCGGUA-UUUUAU-U-C-UUUA-AGAGGAAU-CUG-UC-CUGUGA- UUGAUAAU-
CCA-CGAUGGUUAAUUACUCA--UUUUAGUA---UUCAAUUUGUAUACCUCCG-UC-AUAA-GAUUAU-CUU-UUUAGAG-UA---AAUAUUCUAAU-UAUACAAA--AUAU AAAAUGUCAGGUC-
AAGGUGCAGUUU-AUAAA-U-GAG--UAG----A-GAUGGAUUACAUUAAA----AUU-A--UUUA--AA-CGGAU--UGUUAAU--AUUA--UU---AUUAAUA-- UGAAGG-UGGA[-????]
EF640433_Pachydiplax_longipennis --

---------------------------------------AAUA-GU-AAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-U-CUUUUAGAGGAAC-CUG-UC-CCUUAA- UUGAUAAU-
CCA-CGAUGAAAAUUUACUUA--UUUUUGUA---UUCAGCUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUGAAAG-UU---AAUAUUCUAGU-AAUACAAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAGCUU-AUAAA-U-AAG--UGG----U-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UAAUAUU--AUUAA-UG---AAUAUUA-- UAAAGG-AGGA[-????]
AY282566_Erythemis_simplicicollis --

---------------AAUAU-----UAACCU- GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGGAUCU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAGU-CUG-UC-CCGUAA- UUGAUAAC-
CCA-CGAAGAG-AAAUACCUA--UCUUUGUA---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UG---AAUAUUCUAUU-AAUACAAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGGA-U-AGG--UGG----A-GAUGGACUACAAUAAA---GUAU-A--UUUA--UG-CGAAU--UAUUAUA---UUUA-UU----UUAAUA-- UGAAGA-UGGA[-????]
EU477753_Acisoma_panorpoides --------------------GAGAAAGUAA-AUA-UUUU-UGGUUA-------ACA-GUUAUAUUGUGAUUU---- U----
CUUUAAAAUUAAUUAUUAUUAGGUGAAAUUUUAAGGUUAUUAUA-----------AAGGAUAUACAUUGAAGCUGUG---AAA--UUUA-AUUUA----U-AAACAAGGAUUAGAUAC
CC-UUCUAUUUUAAAUGUAAAUAUU-----AACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-CUUUUAGAGGAAC-CUG-UC- CUGUAA-
UUGAUAGU-CCA-CGAGGUUGAAGUACUUA--UUUUUGUU---UCCAUUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UA---AAUAUUCUAUU-A
AUACAAA--AUAUAAUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----AUU-A--UUUA--UA-UGGAU--UAUUAUU--UUUAA-UU-
--GAUAUUA--UGAAGG-UGGA[-????]
EU054950_5050_Erythrodiplax_minuscula NNNNNNNNNNNNNN-NNNN---NNNNNNNN--NN-NNNN-NNNNNNN-----NNN-N------------------
--------------------NNNNNNNNNNNN--NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN--NNNNNNNN-NN---GUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UUGAUAAU-CCA-CGAUGAAGAGUUACUUA--UUUUUGUU---CUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUUUUUUAGAG-A---UAAUAUUCUAAG-C
AUAAUAA--AUAUAGUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----AUU-A--UUUA--UA-CGGAU--UAUUAUU--AUUA--UU-
--AAUAGUA--UGAAGG-UGGA[-????]
EF640423_Erythrodiplax_basalis --

------------------GCCU------GGGU-GAGUAAUAGUU-A--UGUGU--CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-CUUUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAAU-
CCA-CGAUGAAGAGUUACUUA--UUCUUGUG---AUCAUUUUGUAUACCUCCG-UC-AUCA-GGGUAU-CUU-UUUAGAG-GG---AAUAUUCUAAG-UAUACUAA--AUAU AACAUGUCAGGUC-
AAGGUGCAAUUU-AUGGA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----AUU-A--UUUA--UA-CGGAU--UUUUGUU--AUUA--UA---AACAAGA-- UAAAGG-UGGA[-????]
EF640416_Crocothemis_servilia --

------------------------------------AAUAGUA-U--UGUA---CUAGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-UUCUUUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAGU-
CCA-CGAUGGA-AAUUACUUG--UUUUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UU---AAUAUUCUAAA-UAUACAAA--AUAU AUUAUGUCAGGUC-
AAGGUGCAAUUU-AUGGA-C-AAG--UAG----A-GAUGGGUUACAAUAAA----AUU-A--UUUA--UA-CGGAU--UAUUAUU--AUUA--UA---GAUAAUA-- UGAAGG-UGGA[-????]
AF266100_Crocothemis_erythrea ACCGCGGUUAUACG-UUAG-GAGAAAGUGA-AUA-UUUU-UGGUUUU-----GCA-GUUAAAUUUAUUAUC-----
-----CUUUAAAUUUAAAUUUUUUAGGUGAAAUUUUAAUUUUAUUAUA------------AAAGGUAUUUUUGAAGCUGUU---AAA--UUUA-UUUUA----U-AAACUAGGAUUAGAUACCC-
UAUUAUUUUAAAUGUAAAUAUA-----AGCCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUGUAA-

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UUGAUAGU-CCA-CGAUGGA-AAUUACUUG--UUUUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UU---AAUAUUCUAAA-UAUACAAA--AUAU
AUUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-C-AAG--UAG----A-GAUGGGUUACAAUAAA----AUU-A--UUUA--UA-CGGAU--UAUUAUU--AUUA--UA---AAUAAUA-- UGAAGG-
UGGA[-????]
EU477744_Rhodothemis_rufa                        --------------------GAAAAAGUAA-AUA-UUAU-UGGUUAA----A-GUA-GUUAAAUAGAUAUUU---- U----
CUUUAAAUUUGAAUGUUAUUAGGUGAAAUUUUAAUUUUAUUGAA------------AUGGAUUUUUAUUGAAGCUGCG---AAA--UUUA-AUUUG----U-AGACGAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUAAAUAUU--U--AACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-CUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UUGAUAUU-CCA-CGAGGAUGAAUUACUUA--UUUUUGUU---UUCAUUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UU---AAUAUUCUAUA-A
AUACAUA--AUAUAAGAUGUCAGGUC-AAGGUGCAAUUU-AUAGA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGGAU--UAAUAUU--GUUA--AU-
--UAUAUUA--UGAAGG-UGGA[-????]
EF640430_Neurothemis_fulvia                      -----------------------------------------------------------------------------
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--UUUUUUUAAAGGUAAUAU-------UACCC- GGGUAAGAAGA-G--UAUGU--UUUGAA-CCCAAAGA-UUG-GCCGGUA-UUU-AU-U-C--UUUUAAAGGAAC-CUG-UC-CUGUAA- UUGAUAUU-
CCC-CGAAGAA-AAAUACCUA--UCCUUGGA---AUCCAUUGGAAUACCUCCG-UC-AUCA-GA-UAU-CUU-UUUAGAG-GU---AAUAUUCAAGA-UAUCCAUA--AUAU AAGAUGUCAGG-C-
AAGGUGCAAUUU-AUGGG-U-AAG--UAG----A-GAUGGGUU-CAAUAAU-----U--U--AUUU--AU-CCGGAUUUAUUUGU--UACUA-UU---AACAUAA-- UGAAGG-UGGA[-????]
Neurothemis_ramburi                              -----------------------------------------------------------------------------
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EF640419_Diplacodes_lefebvrei                    -----------------------------------------------------------------------------
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----------------------------------------AAUA-GU-AAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-CUUUUUUAGAGG-AC-CUG-UC-CUGUAA- UUGAUAGU-
CCA-CGAUGGGGAAUCACUUA--UUCUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UA---AAUAUUCUUAA-UAUACAAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGGA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----GUU-A--UUUA--UA-CGAAU--UAUUAUU--UUUA--UU---AAUAGUA-- UGAAGG-UGGA[-????]
EF64042_Diplacodes_trivialis                     -----------------------------------------------------------------------------
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-----------------------------------GUAGAAUUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUAUAA- UUGAUAAU-
CCA-CGAUGGUGAAUUACUUA--UUCUGGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UA---AAUAUUCUAAA-UAUACUAA-AUUAU AAUAUGUCAGGUC-
AAGGUGCAAAUU-AUGGG-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UAGUAUU--UUUA--UU---UGUAUUA-- UGAAGG-UGGA
EF640414_Bradinopyga_strachani                   -----------------------------------------------------------------------------
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-UUUAUUUUAAAUGUAAAAAA------AACCU-GGGUAAUAAUA-GG-UAAGUU-CUUGAAACCCAAAGAAUUN-GNCGG-A-UUUUAU-U-C-UUUUUAGAGNAAC-CUG-UC-CUGUAA- UUGAUAUU-
CCA-CGAUGGAUAACUACUUA-UUCCUGGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUUUUUUAGAG-UG---AAUAUUCUAUA-AAUACAAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGAA-U-AAG--AAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UAUCACU--AAUA--GA---GGUGUUA-- UGAAGG-AGGA[-????]
EU054976_5075_Brachydiplax_denticauda            NNNNNN----------------NNNNNNNNNNNNNNNN-NNNNNNNNN--NN-NNN-N------------------
--------------------NNNNNNNNNNNN---------------------------------------------NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN--NNNNNNNN-NN---GUAAUA-GU-UAAGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UCUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UUGAUAUU-CCA-CGAUGGUGAAUUACUUA--CUCUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UA---AAUAUUCUAUG-C
AUAUUAA--GUAUAUUAUGUCAGGUC-AAGGUGCAAUUU-AUGAG-U-AAG--UAG----A-GAUGGGUUACAAUAAU----AUU-A--CUUA--UA-CGAAU--UAGUAUU---UUA--UU-
--UGUACUA--UGAAGG-UGGA[-????]
EU477717_Brachydiplax_chalybea_flavovittata      --------------------GAAUAAUUAA-GUA-UUGU-UGGUUUA------GCA-GUUAAAUUUAUUUUA---- U----
CAUUUUAAUUUGAAAUUUUUAGGUGAAAUUUUAAUUUUGUUAAA-------------AGUUGAUUUUUUGAAGCUGUG---AAA--UUUA-UUUUU----A-AGACGAGGAUUAGAUAC
CC-UUUUAUGUUAAAUGUAAAUGAA---UUAACCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUCUAU-U-C-UUUUUAGAGGAGC-CUG-UC- CUGUAA-
UUGAUAGU-CCA-CGAUGGUGAGUUACUUA--UUCUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UG---AAUGUUCUAAA-U
AUAUUAA--AUAUAUUAUGUCAGGUC-AAGGUGCAAUUU-AUGGA-U-AAG--UAG----A-GAUGGGCUACAAUAAA----AUU-G--UUUA--UA-UGGAU--UAUUAAU--UUUA--UU-
--AUUAUUA--UGAAGG-UGGA[-????]
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EU477716_Chalcostephia_flavifrons   --------------------GAGAAAGUAA-GUA-AUAU-UGGUUUA------GCA-GUUAAAUUUAUUUGU---- U----
UAUUUAAAUCUGAAAUUUUUAGGUGAAAUUUUAAUUUUAUUGUA------A-------UUUGAUUUUUUGAAGCUGCG---AAA--UUUA-UUGUU----AAAGACAAGGAUUAGAUAC
CC-UUUUAUAUUAAAUGUAAAUAUA-----AGCCU-GGGUAGUAUUA-GC-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UUGAUAGU-CCA-CGAUGGGUAAUUACUUA--CUUUUGUG---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-CUCAGAG-UA---AAUAUUCUAUA-A
UUAUUAA--GUAUAAUAUGUCAGGUC-AAGGUGCAAUUU-AUGGG-U-AAG--UAG----A-GAUGGGUUACAUUAAG----CUU-A--UUUA--UA-CGGAU--UAUUGUU--GUUA--UU-
--UAUAGUA--UGAAGG-UGGA[-????]
EF631508_Micrathyria_aequalis   NNNNNN----------------NNNNNNNNNNNNNNNN-NNNNNNNNN--NN-NNN-N------------------
--------------------NNNNNNNNNNNN--NNNNN---NNN--NNNN--NNNN----NNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN--NNNNNNNN-NN----NNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNN-NNN-NN- NNNNNN-
NNNNNNNN-NNN-NNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNN-NNN-NNNNNNNNNNNNNNNN-N
NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNN----NNNNN--NNNNNNNNNNNN----NNNNNNN--NNNN--NN-
--NNNNNNN--NNNNNN-NNNN[-????]
EF640386_Micrathyria_atra   --

--AAUA-GU-UAUGUC-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CCUUAA- UUGAUAGU-
CCA-CGAUGGAGAUUUACUUGAUUCUUGGUA---AUCAAUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAAAG-UA---AAUAUUCUAAU-UAUACCAA--AUUU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGUU-C-AAG--UGG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UAAUAUU--AUUA--UU---AAUAUUA-- UGAAGG-AGGA[-????]
DQ021421_Micrathyria_didyma_G057   --------------------GGGAAAAUUA-AUA-UUAUU-AGUUUA----
--ACA-GUCAGAUUUUAUUGU---------UCUUUAAAUUUAAUAUUUUUAGGUGAAAUUUUAAUUUUAUUAGA------A------AAGACUUAUAUUGAUUCUGUG---AAA--UUUA-AUUUA-
---A-AAACAAGGAUUAGAUACCC-UUUUAUUUUAAAUGUUAAUAUC-----AACUA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUU UUAGAGGAAC-
CUG-UC-CCUUAA-UUGAUAAU-CCA-CGAUGGAGAUUUACUUG--UUUUUGUA---AUCAGUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAAAG-UA---A AUAUUCCAAA-UAUACAAG--
AUAUAAUAUGUCAGGUC-AAGGUGCAAUUU-AUGGA-U-AAG--UGG----A-GGUGGGUUACAAUAAA----UAU-A--UUUA--UA-UGGAU-- UAGUAUU--AGUA--UU---AAUAUUA--UAAAGG-
UGGA[-   ]
AY274509_Uracis_imbuta   --
---NNNNN---NNN--NNNN-NNNNN----NNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNNNNNNNNNNNNNN-NN- NNNNNN-
NNNNNNNN-NNNNNNNNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNNNNNN-NN---NNNNNNNNNNN-N
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--NNNN-NN--NNNNNNNNNNN[-????]
EF640391_Uracis_infumata   --

-----------------------------CCU-GGGUCGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUAUAA- UUGAUAAU-
CCA-CGAUAGAGAAACACUUA--CUUUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UU---AAUAUUCUAUU-AUUACAAA--AUAU AGUAUGUCAGGUC-
AAGGUGCAAUUU-AUGAG-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGAAU--UGUUAUU--UUUA--UU---AUUAGCA-- UGAAGG-UGGA[-????]
DQ021420_Nannophya_pygmaea   --------------------GAAGACAUAA-AUA-UUUU-UGGUU--------ACA-GUUAAAUUUUUAUUA-----
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UUUUAUUUUAAAUGUAAAUAUU-----AACCU-GGGUAGUAAUA-GU-UAUGUA-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAC-U-C-UUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAGU-
CCA-CGAUGAUAAAACACUUU--UUCUUGUA---AUCAUUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UU---AAUAUUCUUUA-UAUACAAA--AUAU AAAAUGUCAGGUC-
AAGGUGCAAUUU-AUGGG-A-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGAAU--UACUAUA--AUUA--UA---UUUAGUA-- UGAAGG-UGGA[-????]
EF640388_Nannothemis_bella   --

--UA-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAC-U-C-UUCUUAAAGGAAC-CUG-UU-CUGUAA- UUGAUAAU-
ACA-CGAUGAUGAAUUACUUA--UUUUUGUA---UGCAGUUUGUAUACCUCCG-UC-AUAA-GAAUAU-CUU-UUUAGAG-UA---AAUAUUCUUUU-CAUAAAAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGAA-U-AAG--UAG----A-AAUGGGUUACAAUAAA----AAU-A--UUUA--CA-CGAAU--UGUUGUU--UUUAU-AA---AAUUGCA-- UGAAGG-UGGA[-????]
EF640455_Paltothemis_lineatipes   --

--AAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UU-CCGUAA-

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AAGAUGUCAGGUC-AAGGUGCAAUUA-AUAGA-U-AAG--UGG----A-AAUGGGUUACAAUAUA----UUU-A--UAUA--UA-CGAAU--UAUUAUU--UUAU--AU---UUAA-UA-- UGAAGG-
UGGA[-????]
EF640453_Brechmorhoga_mendax                 -----------------------------------------------------------------------------
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------------------------------------------------UAUGUC-CU-GAA-CC-AAAGA-UU--GGCCGUA-UU-UAU---C-UUUUAAA---GAC-CUG-UC-C-GUA-- UUGA-AGU-
CC--CGAUGNA--AGUACUUA--UU-UUGUU---UCCAUUUGGAA-ACCUCCG--C-AUCA-GAG-AU-CUU-UUUAGAG-UU---AAUAUUUUAUC-AAUAA-----GUAU AUUAUGGCCAGGC-AAGG-
GCCAUUA-AUAAA-U-AAG--UGG----A-AAUGGGUUACAAUAUU----AUU-A--UGUA--CA-CGGAU--UAUUAA---UUUA--UU---AUUAGUA-- UGAAGG--GGA[-????]
Brechmorhoga_praedatrix                      ??????????????-?????--????????????-????-???????------???-???????????????----
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--???????--??????-????[-????]
EF640454_Dythemis_fugax                      -----------------------------------------------------------------------------
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-----------------------------UCU-GGGUAAUAAUA-GU-AAAGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAA-U-C-UUUUUAGAGGAAC-CUG-CC-CCUUAA- UUGAUAGU-
CCA-CGAUGGUGAAUUACCUA--UUUUUGUG---UUCAGUUUGUAUACCUCCG-UC-AUCA-GGGUAU-CUU-UUUAGAG-UU---AAUAUCCUUCU-AAUACAGA--UUAU UAUAUGUCAGGUC-
AAGGUGCAACUU-AUGAG-U-AGG--UGG----U-GGUGGGUUACAUUAUA----AAU-A--UAUG-----CGGAU--AAUUAUU--UUAU--UG---AUAA-UA-- UGAAGA-UGGA[-????]
EU477749_Trithemis_aurora                    --------------------AAAGAAUUAA-UUA-UUAU-UAGUUU-------AUA-GUUAAAUGAUUAUUU-----
---ACCUUUAAAAUUAAUAUUUUUAGGUGAAAUUUUAAUUUUAUAAUA-----------AUAGGUUUAUGUUGAAGCUAUG---AAA--UUUA-GAUAA----U-AAACAAGGAUUAGAUACCC-
UUUUAUUCUAAAUGUUAAUAUU-----AACUA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAAC-
CCA-CGAUGGAGAGUUACUUA--UUUUUGUU---UCCAUUUUGUAUACCUCCG-UC-AUCA-GAAUAU-CUU-UUUAGAG-AA---AAUAUUCUAAU-AACACUAA--AUGA GAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----AAU-A--UUUA--UA-CGGAU--UAUAAUU--AUUAU-CU---AUUUAUA-- UGAAGG-UGGA[-????]
Trithemis_africana                           -----------------------------------------------------------------------------
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                            EF640456_Trithemis_arteriosa                    ---------------------------------------------------
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----------------------------------------------------------------------------GCU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUU UUAGAGGAAC-
CUG-UC-CUGUAA-UUGAUAGU-CCA-CGAUGGAGAGUUACUUA--UUUUUGUU---UUCAUUCUGUAUACCUCCG-UC-AUCA-GAAUAU-CUU-UUUAGAG-AU---A AUAUUCUAUU-AACACUAA--
AUGAGAUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----AAU-A--UUUA--UA-CGAAU-- UAUAAUU--AUUA--AUU--AUUUAUA--UGAAGG-
UGGA[-                                         ]
EF640409_Perithemis_tenera                   -----------------------------------------------------------------------------
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-------------------------------------------------AUGUG-CUUGAAACCCAGAGAAUUU-GGCGGUA-UUUUAC-U-C-CAUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAAU-
CCA-CGAUGAUAAAAUACUUG--UUUUUGUU---AUCAGUUUGUAUACCUCCG-UC-AGAA-GAGUAU-CUU-UUUAGAG-AU--AAAUAUUCUAUU-AAUAUUAA--AUAU AAGAUGUCAGGUC-
AAGGUGCAAUUU-AUAGA-C-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGAAU-AUAAAUUU--UUAU--UA---UUU--AU-- UGAAGG-UGGA[-????]
EU054947_55047_Perithemis_intensa            NNNNNN---------------NNNNNNNNNNNNNNN-NNNNNNNNN--NN-NNN-N-----------------
--------------------NNNNNNNNNNNN--------------------------------------------NNNNN---NNN--NNN-NNNNNN----N-NNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN--NNNNNNNN-NN---GUAUUU-GU-UAUGUU-CUUGAAACCCAGAGAAUUU-GGCGGUA-UUUUAC-U-C-CAUUUAGAGGAAC-CUG-UC- CUGUAA-
UUGAUAAU-CCA-CGAUGAUAAAAUACUUG--UUUUUGUU---AUCAGUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-AU--AAAUAUUCUAUU-A
AUAUUAA--AUAUAAUAUGUCAGGUC-AAGGUGCAAUUU-AUAGA-C-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGAAU-AUAAAUUU--UUAU--UA-
--UUU--AU--UGAAGG-UGGA[-????]
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DQ021422_Perithemis_lais ---------------------GAGAUUAUA-AAU-AUUUUUGGUUU------AGUA-GUUAAAUUAUUAUUGAU---
--AACUUUUGAAUUUAAUAUUUUUAGGUGAAAUUUUAAUUUUAUUUCA-----------ACUGGUUUAUUUUGAAGCUAUG---AAA--UUUA-UUUUU----U-AAACAAGGAUUAGAUACCC-
UUUUAUUUUAAAUGUAAAUAUA-----AACUG-GGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-CUUUUAGAGGAAC-CUG-UU-CCGUGA- UUGAUAAU-
CCA-CGAUGGUAAAUUACUUA--UUUUUGUU---AUCAGUUUGUAUACCUCCG-UC-AUCA-GAAUAU-CUU-UUUAGAG-UU--UAAUAUUCUUAU-UAUAUCAA--UUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGGA-U-AAG--UGG----A-AAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGAAU--UUAGUUUA-UUAU--AA----AAUUAA-- UGAAGG-UGGA
EF631577_Palpopleura_lucia NNNNNN----------------NNNNNNNNNNNNNNNN-NNNNNNNNN--NN-NNN-N-------------------
--------------------NNNNNNNNNNNN---NNNNN---NNN--NNN-NNNNNN----N-NNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN--NNNNNNNN-NN----NNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNNN-NNN-NN- NNNNNN-
NNNNNNNN-NNN-NNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNN-NNN-NNNNNNNNNNNNNNNN-N
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--NNNN-NN--NNNNNN-NNNN[-????]
EU477757_Diastatops_pullata --------------------GGGAAAUUGA-AUA-UUAU-UGGUUAA------ACA-GUUAACUUUAAUUUU-----
-----CUUUGAUAUUAAAUUUUUUAGGUGAAAUUUUAAUUUUAUUUUA------A------UUGUAUUUUGUUGAAACUGUG---AAA--UUUA-UAUUA----A-AAACGAGGAUUAGAUACCC-
UUUUAUGUUAAAUGUGAAUAUA-----AACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UAUUUAGAGGAAC-CUG-UC-CCGUAA- UUGAUAAU-
CCA-CGAUAAUGAAUUACUUA--UCUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UG---AAUAUUCUAUU-AAUAUAAA--AUAA AUUAUGUCAGGUC-
AAGGUACAAUUU-AUGGG-U-AAG--GGG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--AC-AUGGA--GGAAUAU--UGUU--AC---UAUAUUU-- UGAAGG-UGGA[-????]
EF631596_Zenithoptera_fasciata ---
---NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN--NNNNNNNN-NN----NNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNNN-NNN-NN- NNNNNN-
NNNNNNNN-NNN-NNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNNNNNN-NNNNN-NNNNNNNNNN-N
NNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNN----NNN-N--NNNNN-NNNNNN----NNNNNNN--NNNN--NN-
--NNNNNNN--NNNNNN-NNNN[-????]
DQ021435_Neodythemis_afra --------------------GAGGAAGUAA-AUA-UUGUUAGGUU--------ACA-GUUAAAAAUUUUAAA-----
----UAAUUAAGGAUAAUAUUAUUAGGUGAAAUUUUAAUUUUAUUUUA------A-------UGGAGUUAUUUGAAGCUGUG---AAA--UUUA-UUUUA----A-AAACAAGGAUUAGAUACCC-
UUUUAUAUUAAAUGUGAAUAAU-----AACCU-
GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUGUAA-UUGAUAGU-CCA-CGAUAGAUAUAUACUUA-- UUUUUGUA-
--UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-UUU-UUUAGAA-UU---AAUAUUCAAGA-AAUUAUAA--AAGUAGAAUGUCAGGUC-AAGGUGCAAUUU-AU AGA-U-AAG--UAG----A-
GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGAAU--UAAUAUA--UUUAU-UA---AAUAUUA--UGAAGG-UGGA[-????]
Selysiothemis_nigra ---

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EF640448_Trithetrum_navasi ---

---AAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUCAU-U-C-UUU UUAGAGGAAC-
CUG-UC-CUAUAA-UUGAUAUU-CCA-CGA-GGUUAUUUACUUG--AUCUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UU---A AUGUUCUAUU--AUACUAA--
AUAUAUUAUGUCAGGUC-AAGGUGCAGAUU-AUGAU-C-AAG--UAG----A-GAUGGGUUACAAUAAA----ACU-A--UUUA--UA-CGGAU-- UAUUAUU--UUUG--AU---GAUAAAA--UGAAGG-
AGGA[-]
EF640389_Porpax_risi ---
---AAAAACCC-
UUUUUUUUUAAAUGUAAAUAUU-----ACCCA-GGGUAGUAAAA-GU--AAGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-CUUUAU-UCC-UUUC-AGAGGAAC-CUG-UC-CUGUA--
UUGAUAUUCCCA-CGAGGAUAAAUUACUUA--CUUUUGUA---UACAUUUUGUAUACCUCCG-UC-AUAA-GAGUAU-CUU-UUUAGAG-UU---AAUAUUCUAUU-AAUACGAA--AUAU
AAUAUGUCAGGUC-AAGGUGCAAUUU-AUGGG-U-AAG--UAG----A-GAUGGGUUACAAUAAA----AAU-A--UUUA--UA-CGGAU--AAAUGAU--GUUA--AU---UUCAUUU-- UGAAGG-
AGGA[-????]
DQ021436_Micromacromia_camerunica --------------------GGGAAAAUAA-AUA-UUAUUGGGUU--------ACA-GUUAAAUUAUAUUU------
---UAAAUUACAUAUAAAAUUUUUAGGUGAAAUUUUAAUUUUAUUUUA------A------UUUUAGUUGUUUGAGGCUGUG---AAA--UUUA-UUUUA----A-AGACAAGGAUUAGAUACCC-
UUUUAUAUUAAAUGUAAAUGUU-----AACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-CUUUUAGAGGAAC-CUG-UC-CUUUAA-

UUGAUAGU-CCA-CGAUAGGGAGUUACUUA--UUCUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGGG-UU---AAUAUUCUAAU-UAUUGUAA--AUAU
AAAAUGUCAGGUC-AAGGUGCAAUUU-AUGGG-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-UGAAUUAUA-UUAU--UUUAU-AA---AAUAUUA-- UGAAAG-
UGGA[-????]
DQ021434_Neodythemis_preussi   -------------------GAGAAAGUAA-AUA-UUAUUAGGUU-------AUA-GUUAAAUUUAUUUG------
---UUCAUUAAAUUUAAGAUUAUUAGGUGAAAUUUUAAUUUUAUUUUA------A-------UAUUUUUAUUUGAAGCUGUG---AAA--UUUA-UUUUA----A-AGACAAGGAUUAGAUACCC-
UUUUAUAUUAAAUGUAAAAAAU-----AAUCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACUCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAGU-
CCA-CGAUAGAUAAUUACUUA--UUUUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAAUAU-UUU-UUUAGAA-AU---AAUGUUCAGGA-AAUUCAAA--AUAU AAAAUGUCAGGUC-
AAGGUGCAAUUG-AUAAA-U-AAG--UAG----A-GAUGGGUUACAAUAGA----AUU-A--UUUA--UA-CGAAU--UGAUAAU--UUUAU-UA---AUUAUUA-- UGAAGG-UGGA[-????]
DQ021437_Neodythemis_klingi   -------------------GGGAAAGUAA-AUA-UUAUUAGAUU-------AUA-GUUAAAUUUAUUUA------
---UUCAUUAAAUUUAAAGUUGUUAGGUGAAAUUUUAAUUUUAUUUUA------A-------UAGUUUUGUUUGAAGCUGUG---AAA--UUUA-UUUUA----A-AAACAAGGAUUAGAUACCC-
UUUUAUGUUAAAUGUGAAAAAU-----AAUCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAGU-
CCA-CGAUAGAUAAUUACUUA--UUUUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAAUAU-UUU-UUUAGGAU-U---AAUAUUCGGGA-AAUAUAAA--GUAU AAUAUGUCAGGUC-
AAGGUGCAAUUA-AUAAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----AUU-A--UUUA--UA-CGAAU--UAAUGAU---GAUA-UG--AAUUAUUA-- UGAAGG-UGGA[-????]
DQ021440_Hadrothemis_infesta   -------------------GAAAAUUUAA-ACA-UAGUUGGGUUA------GCA-GUUAAACUUUAUUUU-----
-----CAUUACUUUUUAAGUUUUUAGGUGAAAUUUUAACUUAAUUUUA------A------UUGUUUUGAGUUGAAGCUGUG---AAA--UUUA-UUUAA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUUUAAAUGUAAAUAUU-----AACCU-GGGUAGUAAUA-GA-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUAUUAGAGGAAC-CUG-UC-CUGUGA- UUGAUAAU-
CCA-CGAUAGAGAGUUACUUA--UUUUUGUG---UUCAGUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-GU---AAUACUCAUUU-AAUACUAA--UUAU GUUAUGUCAGGUC-
AAGGUGCAAUUU-AUGAA-U-AAG--UAG----A-GAUGGGUUACAUUAAA----UUAUA--UUUA--AA-CGAAU--UUUUGUU--AUUA--AU---AACUUUA-- UGAAGG-UGGA[-????]
DQ021438_Thermorthemis_madagascariensis   -------------------GAGUAAAUGA-AUA-UUGUUGGGUUA------ACA-GUUAAAUUUAAUAUU-----
----UUUUAUAAUAUAAAAUUUUUAGGUGAAAUUUUAAUUUUAUUUAA------------UUAAUAAUUAUUGAAGCUGUA---AAA--UUUA-UUUUG----A-AAACAAGGAUUAGAUACCC-
UUUUAUUUUAAAUGUAAAUUUA------ACCUUGGGUAGUAUUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CYGUAA- UUGAUAAU-
CCA-CGAUAGGGAAUUACUUA--UUUUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAAUAU-CUU-UUUAGAG-UU---AAUAUUCUCAU-AUUACAAA--AUAU UAUAUGUCAGGUC-
AAGGUGCAAUUU-AUAAA-U-AAG--AGG----A-GAUGGGUUACAAUAAA----GUU-A--UUUA--AA-CGAAUUAAU-AGUA--UUAA--UA---AUUAUUA-- UGAAGG-UGGA[-????]
DQ021439_Agrionoptera_insignis   -------------------GGAAAAGUAA-AUA-UUGUUGGUUUA------ACA-GUUAAAUUUAUAUAU---- U----
CCAUUAAUUUUAAAAUUUUUAGGUGAAAUUUUAAUUUUAUUUUA------A-------GAGGUUUAUUUGAAACUGUG---AAA--UUUA-UUUUA----A-AAACAAGGAUUAGAUAC
CC-UUUUAUUUUAAAUGUAAAUAUU------AACCUGGGUAGUAAUA-GU-UAUGAU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UUGAUAAU-CCA-CGAUAGAUAUUUACUUG--UUCUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-AG---AAUAUUCAGUU-A
AUACAAA--AUAUUAUAUGUCAGGUC-AAGGUGCAAUUU-AUGGA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UAU-A--UUUA--UA-CGAAU--UAAUAUU--AAUA--UU-
--AAUAUUA--UGAAGG-UGGA[-????]
DQ021441_Cratilla_metallica   -------------------GGGGGAUUAA-AUA-UUUUUGGGUUA------ACA-GUUAAAAAAAUUUUG---- U----
CCAUUAAUUUUAAAGUUUUUAGGUGAAAUUUUAAUUUUAUGUUA------A------UAGGUUAUUUUUGAAUCUGUG---AAA--UUUA-UAUUA----A-AAACAAGGAUUAGAUCC
CC-UUUUAUUUUAAAUGUAAAUAUU------ACCCUGGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUU-AU-U-C-UUUUUAGAGGAAC-CUG-UC- CUGUAA-
UUGAUAGU-CCA-CGAUAGGCAUGUACUUA--CUCUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGCAU-CUU-UUUAGAG-AA---AAUGUUCAAUU-A
CUACAAA--AUAUUAUAUGUCAGGUC-AAGGUGCAAUUU-AUGGG-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGAAU--UAAUAGU--AUUA--AU-
--AUUAUUA--UGAAGG-UGGA[-????]
EF640435_Pseudoleon_superbus   ---
--UGUG---AAA--UUUU-UUUUG----U-AAACGGGGAUUAGAUACCC-
CCCUAUGAAAAAUGUAACUAUU-----AACCU- GGGUAGUACUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-CUAUUAGAGGAAC-CUG-UC-CUAUAA- UCGAUAUU-
CCA-CGAUGGUAAAUUACUUA--UUCUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAAUAU-CUU-UUUAGAG-UA---AAUAUUCUAAA-UCUAUUUA--GUAU AAUAUGUCAGGUC-
AAGGUGCAAAUU-AUGAA-U-AAG--CAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UAAUAGA--AGUA--UC---AAUAUUA-- UGAAGG-UGGA[-????]
DQ021444_Orthemis_cultriformis   -------------------GAGAAAGUAA-AUAAUUAUUGGGUUA------ACA-GUUAAUUUGAUUUUU-----
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UUUUAUUUUAAAUGUAAAUAUU--U--AACUC-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAGU-
CCA-CGAUAGAUAAUUACUUA--UUCUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAUUAU-CUU-UUUAGAG-AU---AAUAUUCAAGU-AAUACAAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGAAU--UUGUAUU--UUUAU-UA---UAUACAA-- UGAAGG-UGGA[-????]

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EF640402_Orthemis_ferruginea                     -----------------------------------------------------------------------------
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CCA-CGAUAGAUAAUUACUUA--UUCUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-AU---AAUAUUCAAAU-AAUACAAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--AA-CGGAA--UUAAAUU--CUUA--UG---AAUUUAA-- UGAAGG-UGGA[-????]
DQ021413_Orthetrum_albistylum                    --------------------AGGAAAGUGA-AUA-UUGU-GGGUUA-------GUA-GUUAAAUUAUUUAAU---- U-----
CUUUAAAUUUAAUAUUUUUAGGUGAAAUUUUAAUAUUAUUUUA------A-------UAGUUUUUAUUGAAGCUGCG---AAA--UUUA-UAAGA----A-AAACAAGGAUUAGAUAC
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UUGACAGU-CCA-CGAUAGGUAAUUACUUG--UUUUUGUU---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UA---AAUAUUCAAAU-A
AUACAAA--AUAUAAUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-C-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UG-CGAAU--UGGUAUU--GUUA--UA-
--UUUAUCA--UGAAGA-UGGA[-????]
EF640403_Orthetrum_pruinosum                     -----------------------------------------------------------------------------
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----------------------------UUUU-GGGUAGUAAUA-GU-UAUGUC-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAGC-CUG-UC-CUGUAA- UUGACAAU-
CCA-CGAUAGGUAAUUACUUG--UUUUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-AA---AAUAUUCAUGU-AAUAUAAA--AUAU UUUAUGUCAGGUC-
AAGGUGCAAUUU-AUAAA-C-AAG--UAG----A-GAUGGGCUACAAUAAA----UUU-A--UUUA--UA-CGGAU--UGAUAUU--GUUA--UU---UUUAUCA-- UGAAGG-UGGA[-????]
DQ021445_Orthetrum_coerulescens                  --------------------AGAAAAUUGA-AUA-UUUU-UGGUUUA------AUA-GUUAAAUAAUUUAUU-----
----UCCUUAAUUAUAAUAUUAUUAGGUGAAAUUUUAAUAUUAUUUUA------A------UGGUUAUAUAUUGAAGCUGUG---AAA--UUUA-UAUUA----U-AAACAAGGAUUAGAUACCC-
UUUUAUUUUAAAUGUAAAAAUU-----AACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAGC-CUG-UC-CUGUAA- UUGACAAU-
CCA-CGAUAGGUAAUUACUUG--UUUUUGUU---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-AA---AAUACUCAAAU-AAUACAAA--AUAU AGUAUGUCAGGUC-
AAGGUGCAAUUU-AUAAA-C-AAG--UAG----A-GAUGGGCUACAAUAAA----UUU-A--UUUA--UA-CGAAU--UGGUAUU--GUUA--UA---UUUAUCA-- UGAAGG-UGGA[-????]
DQ021442_Lyriothemis_elegantissima               --------------------GGAGAAGUGA-AUA-UUAUUGGGUUA-------GCA-GUUAAAUAUAUUAUU-----
-----CUUUAAAACUAAAAUUUUUGGGUGAAAUUUUAAUUUUAUUUUA------A-------CAGAAAGGAUUGAAGCUGUG---AAA--UUUA-UUUUA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUUUAAACGUAAAUGCA-----AACCU-GGGUAGUAAUA-GU-UAUGUA-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-CUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAGU-
CCA-CGAUAGAUAAAUACUUG--UUUUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-AU---AAUAUUCAAAU-AAUAUAAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGAA-C-AAG--GAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGGAU-UAAUAAGG--UUA-A-AA---AUUAUUA-- UGAAGG-AGGA[-????]
EU477728_Ladona_fulva                            --------------------GGGAAAGUGA-AUA-UUAUUGGGUUAA------AUA-GUUAAAUUUGUUAUU-----
----UCUUUAAAUUUGAAAUUUUUAGGUGAAAUUUUAAUUUUAUUUUA------A-------UAGAACUAAUUGAAACUAUG---AAA--UUUA-UUUUA----A-AAACAAGGAUUAGAUACCC-
UUUUAUUUUAAAUGUAAAUAUU-----AACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-CUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAAU-
CCA-CGAUAGAUAAUUACUUG--UUUUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAAUAU-CUU-UUUAGAG-AA---AAUGUUCAAAU-AAUACAAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUAAA-C-AAG--UAG----A-GAUGGGUUACAAUAAA----UGU-A--UUUA-AGA-CGAAU-UAAUACUU--AUA---UA---AGUAUUA-- UGAAGG-UGGA[-????]
Ladona_julia                                     -----------------------------------------------------------------------------
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EU477730_Ladona_Platetrum_depressa               --------------------GAGCAAGUGA-AUA-UUAUUGGGUUA-------ACA-GUUAAAAUUUUAUUU-----
----UCUUUAAAUGUGAAAUUUUUAGGUGAAAUUUUAAUUUUACUAUA------A-------UAGAUAUAAUUGAAACUGUG---AAA--UUUA-UUUUA----A-AGACAAGGAUUAGAUACCC-
UUUUAUUUUAAAUGUAAAUAUU-----AACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGACAAU-
CCA-CGAUAGAUAAUUACUUG--UUUUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-AU---AAUACUCAAAU-AAUACAAA--AUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUGAA-C-AAG--UAG----A-GAUGGGUUACAAUAAA----AAU-A--UUUA--UA-CGAAU-UAAUAUUU--AUA---UG---AAUAUUA-- UGAAGG-UGGA[-????]
EF640406_Plathemis_subornata                     -----------------------------------------------------------------------------
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-----------------------------CCU-GGGUAUAAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-CUUUUAGAGGAAC-CUG-UC-CUGUAA-
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UUGAUAAU-CCA-CGAUAGAUAAUUACUUG--UUUUUGUG---UUCAGUUUGUAUACCUCCG-UC-AUCA-GAAUAU-CUU-UUUAGAG-UU---AAUAUUCAAUU-AAUACAAA--AUAU AAUAUGUCAGGUC-AAGGUGCAGCUU-AUGGA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--CA-CGGAU-UAAUAUAU--UUA----A---AUUAUUA-- UGAAGG-AGGA[-????]
EF631552_Plathemis_lydia_OPLd NNNNNN-----------N---NNNNNNNNNNNN-NNNNNNNNNNN--NN-NNN-N------------------ -------------------NNNNNNNNNNNN---NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNN NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN----NNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNN-NNN-NN- NNNNNN-NNNNNNNN-NNN-NNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNNNNNN-NNNNNNNNNNNNNNNN-N NNNNNNN--N--NNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNN---NNNNNNN--NNNN--NN- --NNNNNNN--NNNNNN-NNNN[-????]
DQ021418_Libellula_quadrimaculata --------------------GGGGAAGUGA-AUA-UUAUUGGGUUA-------ACA-GUUAAAUUUAUUAUU----- ----CCUUUAAUUCUAAAAUUUUUAGGUGAAAUUUUAAUUUUAUUUUA-----A-------UAGGUAUAUAUGAAGCUGUG---AAA--UUUA-UUUUA----A-AAACAAGGAUUAGAUACCC-UUUUAUUUUAAAUGUAAAUAUU-----AACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAGU-CCA-CGAUAGAUAAUUACUUA--UUUUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GGAUAU-CUU-UUUAGAG-UU---AAUGUCCAGAU-AAUAUAAA--UUAU AAUAUGUCAGGUC-AAGGUGCAAUUU-AUAAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUU---AU-ACGGA-UUUAUAUU--AUUAU-UU---AAUAUAA-- UGAAGG-UGGA[-????]
Libellula_Syntetrum_angelina --- --- -- -- -- ---------[-????]
Libellula_Eolibellula_semifasciata --- --- -- -- -- ---------[-????]
EF640401_Libellula_Belonia_saturata --- --- --------------------------------GGGUAGUAAUA-AU-UAUGUA-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-CUUUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAGU-CCA-CGAUAGAUAAUUACUUA--UUCUUGUA---UUCAAUUUGUAUACCUCCG-UC-AUCA-GGAUAU-CUU-UUUAGAG-AU---AAUAUCCAAGU-AAUAUAAA--AUAU AAUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UU--U--AUUU--AU-ACGGA-UUUAUAUU--AAUAU-U----AGUGUAA-- UGAAGG-AGGA[-????]
AF195727_Libellula_Eotainia_composita --- ---NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNN NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN----NNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNN-NNN-NN- NNNNNN-NNNNNNNN-NNN-NNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNNNNNN-NNNNNNNNNNNNNNNN-NNNNNN---NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNN---NNNNNNN--NNNN--NN- --NNNNNNN--NNNNNN-NNNN[-????]
Libellula_Neotetrum_pulchella_OLP ACCGCGGUUAUACG-UGAG-GGGAAAGUGA-AUA-UUAUUGGGUUA-------ACA-GUUAAAUUUAAUUU------ ---UCUUUUAUUAUUAAAAUUUUUAGGUGAAAUUUUAAUUUUAUUCUA-----A-------UAAGACUGAUUGAAGCUGUG---AAA--UUUA-UUUUA----A-AAACAAGGAUUAGAUACCC-UUUUAUUUUAAAUGUAAAUAU-----UAACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAAU-CCA-CGAUAGGUAAUUACUUA--UUCUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GGGUAU-CUU-UUUAGAG-GU---AAUAUCCAAAU-AAUACAAA--UUAU AAUAUGUCAGGUC-AAGGUGCAAUUU-AUGAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--CA-CGGAU--UUAUACUA-UUA-U-UG---AGUAUAA-- UGAAGG-UGGA[-????]
AF037182_Libellula_Holotania_comanche --- ---NNNNN---NNN--NNN-NNNNNN----N-NNNNNNNNNNNNNNNN NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN----NNNNN-NN-NNNNNN-NNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNN-N-N-NNNNNNNNNNNN-NNN-NN- NNNNNN-NNNNNNNN-NNN-NNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNN-NN-NNNN-NNNNNN-NNN-NNN-NNN-NNNNNNNNNNNNNNNN-NNNNNN---NNNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNN-N-NNN--NNN----N-NNNNNNNNNNNNNNNN----NNN-N--NNNN--NNNNNNN---NNNNNNN--NNNN--NN- --NNNNNNN--NNNNNN-NNNN[-????]

Libellula_Holotania_auripennis   ---

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Libellula_Holotania_axilena   ---

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AY282563_Libellula_luctuosa   ---

----------------AAUAUUA-----ACCU-GGGUAGUAUAU-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUUUUAGAGGAAC-CUG-UC-CUGUAA- UUGAUAAU-
CCA-CGAUAGGUAAUUACUUA--UUUUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GGGUAU-CUU-UUUAGAG-GU---AAUAUCCGAGU-AAUACAAA--UUAU AAUAUGUCAGGUC-
AAGGUGCAAUUU-AUAAA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--C-ACGAAU--UUAUACU---GUUAUU---GAGUAUAA-- UGAAGG-UGGA[-????]
Aethriamanta_rezia_   ---

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Tetrathemis_corduliformis_   ---

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Diplacina_ismene_   --

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Erythemis_vesiculosa_   ---

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Nannophyopsis_clara_   ---

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Oligoclada_amphinome_   ---

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Idiataphe_sp_HOL_2010_ ---

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Atoconeura_sp_HOL_2010_ ---

--[-
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Elga_leptostyla_ ---

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Fylgia_amazonica_ ---

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Hemistigma_albipunctatum_ ---

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Porpacithemis_sp_ ---

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Thermochoria_equivocata_ ---

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DQ021433_Malgassophlebia_bispina_F110 -------------------AGGGAA--UUA-AUU-AUUAUUGAUUAA----
--AUA-GUUAAAUUGUUAUUA---------CUUUUAAACACGAAUUUUUUAGGUGAAAUUUUAAUUUUAUUGUA------A------UAAGUUUACGUUGAAGCUAUG---AAA--UUUA-UUUUA-
---A-AAACAAGGAUUAGAUACCC-UUUUAUAUUAAAUGUAAAUAU------AAUCA-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-UUU UUAGAGGAAC-
CUG-UC-CUGUAA-UUGAUAGU-CCA-CGAUGAGGAAUCACUUA--UUCUUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-AU---A AUACUCUUUU-AAUAUAAA--
AUAAGAUAUGUCAGGUC-AAGGUGCAAUUU-AUGGA-U-AAG--UAG----A-GAUGGGUUACAAUAAA----UAU-A--UUUA--UA-UGAAU-- UAUUAUU--AUUA--UU---AGUAAUA--UGAAGG--
GGA[-]

Micromacromia_zygoptera_ ---

---[-????]
Argyrothemis_argentea_ ---

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Pseudothemis_zonata_ ---

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EU477755_Oxythemis_phoenicosceles_2 ---

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Olpogastra_lugubris_ ---

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EU477748_Misagria_parana --------------------GGGAAAAUAA-AUA-AUUGUUGGUUUA----
--UCA-GUUAAAUUUAACUUUAUA-----UCUUUUAAUUUUAAAGUUUUUGGGUGAAAUUUUAAUUUUGAUUUA------A-------UAAGAUUAAUUGAGACUGUG---AAA--UUUA-UUUUA-
---A-AAACAAGGAUUAGAUACCC-UUUUAUUUUAAAUGUAAAUAUAU----AACCU-GGGUAGUAAUA-GU-UAUGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UUUUAU-U-C-CUU UUAGAGGAAC-
CUG-UCCCUGUAA-UUGAUAAU-CCA-CGAUAGGUAAUUACUUA--CUNNUGUA---UUCAUUUUGUAUACCUCCG-UC-AUCA-GAGUAU-CUU-UUUAGAG-UU---A AUGCUCAUAA-UAUACAAA--
AUAUAGAAUGUCAGGUC-AAGGUGCAAUUU-AUGGG-U-AAG--AAG----A-GAUGGGUUACAAUAAA----UUU-A--UUUA--UA-CGAAU-- UUGUAAU--GAUA--AU---UUUAUAA--UGAAGG-
UGGA[-]
Unaligned 8888888888------999999999999999999999999--- 1111111111----
2222222222222222222222222222222222222222------------333333333333333333333333333333333333333333333---4444444444----555555555555----
----------------------------------444444444--
---555555---7777777--------
---8888888888888------------88
888888888888888888888888888-------------[-????]
Ephemerella_sp_FJ443020 ---

---GGCGGUG-GUUUA?????????UCAGAGGAAU-UUG-CC-CUAUAA- UCGAUAAC-
CCC-CGAGGAU--UCUACUUA--GAU??????????????UUGUAUACCGCCG-UC-AUCA-GGAAAU-UUU-GGGAAAG--U----AUUUUCAGA???CUUA?????AGAG AAUAUGUCAGGUC-
AAGGUGCAGUUA-AUGUU-U-AAG--GAG----A-GGUGAAUUACAAUAAA----AGA-A--UUUA-------???CGGAAAGUUUUGUGUAAAAGGCUAGAAGG-- UGGAUU-----[-????]
Paraleptophlebia_vaciva_GQ118257 ---
--GAUACCC-
UCUUAUNCUAACANUA--CUUUUAU-U-ACUA-GAGUNGUAGUA-GA-UAUUUU-CUUGAAACUCAAAGAAUUU-GGCGGUG-UUUUA?????????CCAGAGGAAC-CUG-CCCCGAUAA-

UCSAUACC-UCCACGAUAAA-UUUUACUUA--CCU??????????????UUGUAUACCGCCG-UC-AACA-GGGUGU-CUC-UAGAGAG--A----ACUCCCAAG???CUUA?????AAGG
AUAAUGUCAGGUC-AAGGUGCAGUCA-AUGGC-U-AAG-GGUG----A-GGUGGGUUACAAUAAUUAA-AGG-----UUA-----------AAUGGAUUGGGGUCUGUAAAGACCCUA-- UGAAGG-
UGGA[-????]
AY749766_Anthopotamus_sp_EP022 --

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AY749763_AY749641_Caenis_sp --
--UAAACUACGAUUAGAUACCC-
UAUUAUAGGAGAGGUU--AAUUAAAUUCACUU-AAGUAGUAUUA-GU-UAAGUU-CUUGAAACUUAAAAAAUUU-GACGGUA-AUUUA?????????CCAGAGGAAC-UUG--UCCCGUAA- UCGAUAGC-
CCU-CGUUAUA-CUUUACUUA--AAU??????????????UUAUAUACCGCCG-UC-AUAA-AGUUAU-AUU-AAAAAAU--U----AUAAUUAAG???UUUU?????GUAA AGAAUGUCAGGUC-
AAGGUGUAGCUU-AUGUU-U-AAG--AGG----A-GAUGAGUUACAAUAAG----AUU-A--CUUA----------A-ACGGAU-UGCUUGCUGAAACACAAGCA-- UUAAGG-UGGA[-????]
Ephemera_orientalis_genome --
--CUAAG---AAA--AUUA-GUUAA-----UAAACUAGGAUUAGAUACCC-
UACUAUACUAAUUGUU--AUUUAAUAAGGCUU-GAGUAGUAAUA-GU-UAUGUU-CUUAAAACUCAAAGAAUUU-GGCGGUG-UUUUA?????????UCAGAGGAAU-UUG--CCCCGUAA- UCGAUAAU-
CCA-CGUUUUA-CUUUACUUA--AUU??????????????UUGUAUACCGCCG-UC-AUCA-GGGUAU-AUU-AGGAGAU--U----AUGCUCAAG???AUUA?????AUAA AAUAUGUCAGGUC-
AAGGUGCAGUUG-AUAAU-U-AAG--AGG----A-GGUGAAUUACAAUAUA------AACAUAUA----------UUAUGGAU-UUAAAAUUGAAAGAUUUUAA-- UAAAGG-AGGA[-????]
Callibaetis_sp_AY749764_GQ118253 --

---??????UUUUAACUCAAGGA-UUU-GGCGGCA-CCCUA?????????UUAGAGGAAC-CUG--CCACAUAA- UUGAUGGC-
CCA-CGAUUUA-ACCUACCCU--UCC??????????????UUGUAUACCGCCG-UC-AAGA-AUUUGUUAUGAAACUCGU-------UCUCUCAAG????????????????? UGAAAAUCAGGUC-
AAGGUGCAGCCU-AUGGA-G-GGG-UGUU----A-GGUGGGUUACAUUUCG----CAUGAAACGGA----------AAAUGGUUAGAAU-------AGCUAUUAA---- AAGU-UGGA[-????]
HM003975_Callibaetis_ferrugineus_hageni --

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Baetis_sp_PC2010_genome --
--CUGUG---AAA--------ACCUA-AUAGCGACUAGGAUUAGAUACCC-
UAUUAGU-AUGUCGUU-----AAACCCCACCCCGAGUAGUACAA-???????---CUCUAAACUCAAAGAAUUU-GGCGGCG-UCCUA?????????UUAGAGGAAC-CUG--CCCCGUAA- UCGAUGGU-
CCA-CGUUGUU-UUAUACCUC--CUU??????????????UUGUAUACCGCCG-UU-UAGG-GUAUGC-CAU------GA-G-----GCUUGCCCA???UUAA?????UCAA
???AAUUCAGGUC-AAGGUGCAGCCU-AUAAG-G-AGGG-GGG----U-GGUGGGUUACAGUUUUUCA---AUAAUUGGA-----------------CUCUCGCGUUAAAACCGAGACG----
AAAU-UGGA[-????]
Hexagenia_sp_GQ118286_GQ118255_ --
--AGAUACCC-
UAUUAUUCUAAUCGUU---AAAAAAUAAAAUCAGAGUAGUAAUA-?????????-CUUGAAACUCAAAGAAUUU-GGCGGUG-UUUUA?????????UCAGAGGAAC-UUG--CCCCGUAA- UCGAUAAU-
CCU-CGAUUUA-CUUUACUUA--AUU??????????????UUGUAUACCGCCG-UC-AACA-GGAUAU-UCU-AGAAAGA-A-----AUGUUCAAG???UUUA?????UAAA
???AUGUCAGGUC-AAGGUGCAGCUA-AUGGU-U-AAG--AGG----A-GGUGAGUUACAAUAUAU-------UAAUAUA------------CAUGGAUUUGGAAUUGAAAGAUUUUAA-- UGAAGG-
UGGA[-????]
Cloeon_dipterum_AJ971773_AJ969725 --

-----------------------------GCCCUGAGUAGUACCA-????????--CUUUWAACUCAAAGAAUUU-GGCGGCA-CCCUC?????????CUAGAGGAGC-CUG--CCCCAUAA- AUGAUGAC-
CCA-CGCUACG-AUAGUCCUA--GGU??????????????UUGUAUACCGCCG-UU-UAGG-GUGUAU-UAG--GAA----------GUACACUCG???UAGA?????AUUA
???AUAUCAGGUC-AAGGUGCAGCCU-AUGCA-U-AGG--AGG----U-GGUGGGCUACAUUGAAAAU-----AUUUACA---------------CGGAAUUUAAUUAUAAUAGUUAAA-- UAAAGG-
UGGA[-????]

Leucrocuta_maculipennis_AY749959 ---

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Centroptilum_luteolum_AY749649 ---
--AAACUACGAUUAGAUACCC-
UAUUAUAACGUCGUU------AAAUUAGCCUUGAGUAGUACCA-????????--CUUUAAACUCAAAGAAUUU-GGCGGCC-UUCUU?????????UUAGAGGAGC-CUG--CCCCGUAA- UCGACGGC-
CCA-CGAUUUA--AAAACCUA--AUU??????????????UUGUAUACCGCCG-UC-????-??????????????????-------????????????UAUA?????UAUA
???AAAUCAGGUC-AAGGUGCAGCUU-AUGAU-U-AGG--AGG----A-GGUGGGCUACAGUGGUCG---UAGCCUCUCA-----------GAU-----UAUAUUUUAAAAAUUAUA-- UGAAG-
GUGGA[-????]
Stenonema_sp_AY749769_Y749645 ---
---UAAACUACGAUUAGAUACCC-
UAUUAUUCCAGAUGUU----AAGUAGAAACCA-GAGUAGUAAUA-GU-UAUGUU-CUUGAAACUCAAAGAAUUU-GGCGGUG-UUUUA?????????UCAGAGGAAC-CUG--UCCCAUGA- UCGAUAAU-
CCA-CGUUAGA-CUUAACUUA--GGG??????????????UUGUAUACCGCCG-UC-????-??????????????????-------????????????CCUG?????AAGG
???AUGUCAGGUC-AAGGUGCAGCUG-AUCCU-U-AAG--GGG----A-GAUGGGUUACAAUAAGGGU-------ACUUA-----------AACGGAAGUUCGCAGGGAGAAGUGAACU-- AGAAG-
GUGGA[-????]
Trigoniopthalmus_altern ---

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Allomachilis_froggart_AF370870 ---

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EF199981_Machilis_hrabei ---

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AF370871_AF252403_Dilta_italica ---

---GGCAGAAUU-GGCGGUG-UUUAU?????????UUAGAGGAAU-CUG--UCCCAUAA- UCGACAAU-
CCA-CGUUGUA-CCUUUCUUA--GUU??????????????AUGUAUACCGUUG-UC-GUCA-GAAUGUUUUUUAAGAAAAUUA----AUUUUC???????????????????
???ACGUCAAAUC-AAGGUGCAGUUA-AUAAU-U-AAG--UGG----U-GAUGGAUUACAAUAAAUUU------UAUUUA------------UAUGAACUUUUAAAUUAUAAUUUAUUA-- UGA-GG-
UGGA[-????]
Ctenolepisma_longicaudata_CTXMTRRSSA ---

--AAGAAUUU-GCCGGUGCUUUAG?????????UUAGAGGAAC-CUG--CCCCGUGA-
UCGAUAAGUCCG-CGUUAUAAUCUUACUUG--UUA??????????????UUGUAUACCGCCG-UC-UUAG-GGAAAAUUUGAAGGUAGUUUUCA--UUUUCU???????????????????
???AUAUCAGGUC-AAGGUGCAGCUA-AUUAG-C-AAG--AGG----A-GGUGGGUUACAAUAAUAA-----GGUUAUUA------------UGAAUUCUUAUUU---GAAAUAUGUGU-- UGAAGG-
UGGA[-????]
Lepisma_sp_X93390 ---

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EU376048_Lepisma_saccharina                 -----------------------------------------------------------------------------
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Thermobia_domestica_genome                  -----------------------------------------------------------------------------
-----------------------------------------------------------------------------CUAUG---AAA--UUAUUU-------UUUAAACUAGGAUUAGAUACCC-
UAUUAUUUUUAAUGUA---AAAUGUGAUACCU-GGGUAAUAGUA-GU-UAUGUU-CUUGAAACUCAAAGGAUUU-GACGGUA-UUUUA?????????UCAGAGGAAU-CUG--UCCCGUAA- UCGACAAU-
CCA-CGAUAUA-UUUUACUUA--CUG??????????????UUGUAUACCGCCG-UAGUUGAAGGUAUUAGGG-AGAGGUCA-----AGGACCU??????CCUU?????GAGG AAGAGUUCAGGUC-
AAGGUGCAGCUU-AUCAG-U-AAG--AGG----A-GAUGGAUUACAAUAGAAUGUUU------AUA-----------CGGAUUUUAU-UAUGAAAUUAUUUAAA-- UGAAGG-UGGA[-????]
Tricholepidion_gertschi_genome              -----------------------------------------------------------------------------
-----------------------------------------------------------------------------CUGUG---AAA--UUAUAA-----UAUUAGACUGGGAUUAGAUACCC-
CAUUAUAAUUAAUGUU----AAAUUGUUUCUU-GGGUAUUAUUA-GU-UAGGUU-CUUGAAACCCAAAGAAUUU-GGCGGUA-UCUUA?????????UUAGAGGAAC-CUG--CUUCGUAA-    UCGAUAGU-
CCU-CGAUAAA-UCUUGCUUU--AUU??????????????UUGUAUAUCGCCG-UC-GUUA-GGAUUU-CUU-UUUAGAGAUU----AAUUUC???????????????????
???GCGUCAGGUC-AAGGUGCAGCUA-AUGGU-A-AAG--UGA----UUAGUGGGUUACAAUAAUUUUAUU----UAUUA-----------CGGAUGU---UUGUUGUAAGAUGAUAU-- UGAAGG-
UGGA[-????]
EF623126_EF623280_Gromphadorhina_portentosa -----------------------------------------------------------------------------
---------------------------------------------------------------------------------------------------------UAAACUACGAUUAGAUACCC-
UAUUAUUUUAAAUGUA--AAAUUGUAGAAUUA-GAGUAGUACUA-GC-UGUGGU-CUUGAAACUUAAAGAAUUU-GGCGGUA-UUUUA?????????UUAGAGGAAU-CUG--UCCCUUAA-    UCGAUAGU-
CCG-CGUUGAA-CCUUACUUA--AUU??????????????AUGUAUACCGCCG-UU-GUU--GAAAAU-CUU-UAUAGGGUAA----AUU-UC???????????????????
???AUUUCAGGUC-AAGGUGCAGCUU-AUAAU-U-AAG--UGG----A-GAUGGAUUACAAUAUUAU-------UAGAUA------------AACGAAUUUUUAUAUUAAAAUUGGAA-- UGAAGG-
UGGA[-????]
EF623206_EF623373_Isoperla_davisi           -----------------------------------------------------------------------------
---------------------------------------------------------------------------------------------------------UAAACUACGAUUAGAUACCC-
UAUUAUUUUGGAUGUA---AAGAUUGAUACUA-GAGUAGUAUAA-GU-UAUGAU-CUUGAAACUCAAAGAAUUU-GGCGGUG-UUUUA?????????UCAGAGGAAC-CUG--CCCCGUAA-    UCGAUAUU-
CCA-CGUUAGA-CCUUACUUA--AUU??????????????CUGUAUAUCGCCG-UC-GUCA-GAAUGU-CCU-AGAAGGGUUAGA--AUUUUC???????????????????
???AUGUCAGGUC-AAGGUGCAGUUU-AUAGU-U-AAG--UGG----A-GGUGGGUUACAAUAAAUUU----AUUUAUUA-----------CGGAUAAUUAUUUGAAAAUUAAUAAUU-- UGAAGG-
UGGA[-????]
EU414717_Isoperla_sp                        -----------------------------------------------------------------------------
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Gomphocerus_sibiricus_tibetanus_genome      -----------------------------------------------------------------------------
-----------------------------------------------------------------------------CUGUG---UAA--UUUAAAU------AAUAAACUAGGAUUAGAUACCC-
UAUUAUUUUAAGUGUUA--AUUUUGCUUACCU-GCGUAGUAUUA-GU-UAGGAU-CUUAAAACCCAAAGAAUUU-GGCGGUG-UCUCU?????????UUAGAGGAAC-CUA--CCCCGUAA-  UUGAUAAUAU-
ACGAUUAAC-UUU-ACUUC--AUU??????????????UUGUAUAUCUCCG-UU-AUCA-GAAAAU-CUU-UUUGGAGUU-----AUAAUU???????????????????
???AUUUCAGAUC-AAGGUGCAGCUU-AUAAU-U-AAG--AGG----A-AGUGGGUCCCAAUAAAUU-----UUAGUUUA---------UUACGUAUUUGAUAGUGACAUACUAUCAA-- UGAAGU-
UGGG[-????]

[
EU054943_5043_Hagenius_sp                   NNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-----NNNN-NNNNNNN------NNN-N------------------
--------------------NNNNNNNNNNNN---------------------------------------------NNNNN---NNN--NNNN-NNNNN----N-NNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNN-NN---GUAUUA-GU-UAUGUA-CUUUAAACCCAAAGAAUUU-GGCGGUA-UUUUAG-U-C-CUUUCAGAGGAAU-CUG-UC- CCGUAA-
UCGAUAAU-CCA-CGAGAUA-UAUUACUUG--UCUUUGUU---UUCAGUUUGUAUACCUCCG-UC-AUAA-GAGAAU-CUU-UUUAGAG-UU--AAAU-UUCUUAA-U
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ACAUUUG--GUGUAUCAUGUCAGGUC-AAGGUGCAAUUU-AUAGA-U-AAG--UGG----A-GAUGGGUUACAAUAAA----AUU-A--UUUA--AA-CGGAA--UGGAUUG--UUUA--CU-
--CUUUCUA--UGAAGG-UGGA[-????]
]

[BlaststoEnallangma
AF232897_Coenagrion_puella UUUGUAAGUAA-AGUU-AA-UU-A-AUUAAUUUUCUUGAUU-UU--AGCUC--UAAAAUAUGU------------------
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[33â€šÃ„Ã´ 48 32â€šÃ„Ã´
49 50 tRNA1 2 3 4
1â€šÃ„Ã´ 16S
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Unaligned ---
-------------000000000000---0000000000------------1111-------------------
----------22222222----------------------------1111111111111111111-----22222222222222222222222222222222222222222222222-------
------3333333-----444444444-----------55555555555555---------------------------------666666666-------
7777777777777777777777777777--88888888888888888888888888888[-????]
Unaligned_Coenagrionoids ---
-------------0000000---0000000000------------1111-------------------
----------22222222----------------------------1111111111111111111-----22222222222222222222222222222222222222222222222-------
------------------444444444-----------55555555555555---------------------------------666666666-------777-------
77777777777777777--88888888888888888888888888888[-????]
Protosticta_sp_A_ZPA UUUGUUAGUAA-AUUC-UA-CU-U--UUUGUAGUGUUGAUU-UU--AGCUC--UAAAAUAUGU-ACACAUCGCC------- CG-
UCGC-UCUCUCU---AAUAAUAUGAGAUAAGUCGUAACAUAG-UAGUUGUAUCGGAAG-AUGUAUCUAGUUAGU------AAUUCGAAUUGAAUCUUU---UAG-AAAGUC-UCU-UAUU- UACAUUAAGA-
U-UUAG-GCUGUGC-AAUUCA-GUCCGAUUUGAUA-AU----------AAUGGACUUAUUUUUUUU--------------UUUUUUUUUUCCUU-----------CCGAGAAA- UA UCUUUG--
UUUUUAGUAUUU---U--AUUGAAAUUGUUGU-----UUUA--AUAAUAGA-UUAUU-----UUACAGUAA-UGGUUAU----U--UGAAAUA-AUUUUAUUAUUUAUUUUUGU-
-----UGAAGUAUUU---UUUGUGAUGUACCUUUUGUAUCAGGG-UUGAUUUAUUUUU-AGU-AUUUA--UUUU--UGUUU[-????]
ZPCs_BPCp UUUGAUAGUAA-AUUG-AUUAA-U--UUAAUUGUUU-GAUG-UU--AGCUC--UAAAUUAUGC-ACACA?????-------
??-????-???????--??-???????AGAUA-GUCGUA-CAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGUAAGU---------UCAAAUUAUGGUUCUG--UGG-GGAACA-UUU-CAUU-
UACACUGAAG-A-AGAUUACUGUUC-GAUUCA-GUUUGAUUUGAUAA----------------UGGUUACUUGCUUUUUAU----------UUUAUUUAUUGUUAAAU--------UUGAGAAA- UA
UCUUUU--UU-UUAGUAUUU---U--AUAGAACGUUUAUA-------UUUAGCGAUAGU-UUAUUA----GUACUGUGU-AGGAAAG----U--UGAAAUA-UUUUGAAAUUCUUAUUUUUU-
---AUAAGCA-UAU--UUUAUUUUUAGUACCUUUUGUAUCAGGG-UUAAUCAAUUUUA-UUUAAUUUA--UUUU--UUUUU[-????]
Protosticta_sanguinostigma_BPS UUUGAUAGUAA-UUUC-UA-UU-C--UUAGUAGAUCUGGUU-UU--GGCUC--UAAAGUGUGC-ACACAUCGCC------- CG-
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UUUGAUAGUAA-AGAU-UU-UU-A--GUUAAAGAUUUUGAU-UU-ACGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCG?-???????---?????????AGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-GUGUACCUAGUUAGU--------UACAAAUUAUAGCUUUA--UAG-AAAGUU-UUU-CAUU- UACGCUGGAA-
A-GUUA-AUUGUGC-AAUUCA-GUUUAAUUUGAUG-AG----------UAUAUCUAUACUUUUAUU---------------UUUAAAUUUUAUUU----------UUUAGAAU- AA UCUUUU--
UUUUUAGUAUUU---U--AUUGAAUUAAUAUUU-----UUG--GUAAUAGU-UUAUUU----UUACUGUGA-AGGGUCG----U--UGAAAUA-UUUUGAAAUUUUGUUUUUGU-
----UUAAGUAUAC--UUUUUUUGUAGUACCUUUUGUAUCAGGG-UUGAUUUAUUUUU-UAAAAUUUA--UUUU--UUAAU[-????]
Palaemnema_paulicoba_ZPP UUUGAUAGUAA-AUUUUUA-UU-U--UUAAUAAGGUUGAUU-UU--GUCUC--UAAAAUAUGU-ACACAUCGCC------- CG-
UCGC-UCUCGUGU-UUAUUAGAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGUUAGGUUUAAGAUAUCAAUUUGGAGCUUGUUUUAGAAAAGCC-UCU-CAUU- UACACUGAGA-
U-GUAA-UCUGUGC-AAUUCA-GUUCAUUUUGAUU-AAU---------UAAAUCUUUACUAAUUUU----------------CUUUUAUUUUAAU----------GUUAGAAU-

UAUCUUUA--UUUUUAGUAUUG--UG--AGUGAAAUUUUUUUU----GUUA--GUAAUAGU-UUACUU----GUACUGCAU-UGGGUUG----U---GAAAUA- UUUUGGUGAAAUUUUCUUUUAU-
AGGAAGUCAUAU----UUUGAAUAGUACCUUUUGUAUCAGGG-CUGAUCGAUUU-U-UGUGAUUUA--UUUU--UGUUU[-????] Palaemnema_domina_ZPDm   UUUGAUAGUAA-AUUUUUA-UU-
U--UUUAUGAAGUUGAUU-UU--GUUUC--UAAAGUAUGU-ACACAUCGCC------- CG-UCGC-UCUCAU----AAUAAGGUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-
AUGUACCUAGUAAGU---------UCAAAUUAUGGUUCUGUGGGG-AACAUU-UCA-UUUA- CACUGAAGAA-G-AUU--ACUGUUC-GAUUCA-GUUUGAUUUGAUA-AUG--------------
GUUACUUGCUUUUUAUUU-------U-AUUUAUUGUUAAAU---------UUGAGAAA- UA UCUUUU--UU-UUAGUAUUUU-AU--AGAACGUUUAUAUUU-------A--GCGAUAGU-UUAUUA----
GUACUGUGU-AGGAAAG----U--UGAAAUA- UUUUGAAAUUCUUAUUUUUUAU----AAG-CAUAUUU--UAUUUUUAGUACCUUUUGUAUCAGGG-UUAAUCAAUUUUA-UUUAAUUUA--UUUU--
UUUUU[-????] Palaemnema_melanostigma_BPM   UUUGAUAGUAA-AUUUUUA-UU-U--UUUAUGAAGUUGAUU-UU--GUUUC--UAAAGUAUGU-ACAC??????-------
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UUUGUAAGUAA-AAUU-AU-UU-A--UUAAUUUUUUUGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-????-????????-????????????????????????????-???????????????-???????????????--------??????????????????????-??????-???-????-
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Rhadinosticta_simplex_ZRS   UUUGAAAGUAA-AAUU-AA-UG-A--UUAGUUUUUUUGAUU-UAU-AGCUC--UAAAAUAUGC-ACACAUCGCC-------
CGUUCGC-UCUCUC----AAUAAUAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGUAAGU--------AUCAAUUCAUAGUUCAU--UAG-AGAACA-UCU-CAUU-
UACACUGAGA-A-AGU--GUUGUGC-AAUUCA-GACUGAUUUGAUA-AAA--------UAUUUACU-UACUUAUUUU--------------UUUAUUUAAUUAAU----------AAGAGAAA- UA
UCUCUU--UUAUUUAGUAUGU--UA--UAGAAAGUAUUUAUU-----UUA--GUAAUAGU-UCAUAA----GUACCGUGG-GGGAAUUG---U--UGAAAAA-
UUAUGAAAUAAUUAUUUUAAG----UUAAGUAUAU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUGAUUAAUUUUA-UUUAAUUUA--UAUU--AAAUU[-????]
Amphisticta_silvarum_ISO_ZAS   UUUGAAAGUAA-AAUU-AU-UU-A--UUAAUUUUUUUGAUC-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAU----AAUAAUAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGUAAGU--------A-CGGAUUGUAGUUUA---UAG-AGAACA-UCC-CAUU- UACACUGGGG-
A-AGAA-ACUAUGC-AAUUUA-GUUUGGUCUGAUU-AA---------GUAUAGAUUUACUUUUAUU---------------AUUUACUGUUAAU----------AAGAGAAG- UA UCUUUU--
UUAUUAGUACAAUAUU--UGGGAAAUAUAGUUU-----UUU--GUAAUAGU-UUAUUA----GUACCGUGA-GGGAAUUUA--U--UGAAAAA-
UUAUGAAAUAAUUAUUUUUGG----AAAAGUAUGU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUGAUUAAUUUUG-UUUAAUUUA--UUUU--UAAUU[-????]
Labidosticta_vallisi_OLVa_BLVa   UUUGAAAGUAA-AAUU-AU-UU-A--UUAAUUUUUUUGAUC-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCUC----AAUAAUAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGUAAGU--------AUCAGAUUAUAGUUUAU--UAG-AGAACA-UUC-CAUU- UACACUGGAU-
A-GGUA-UUUGUGC-AAUUCA-AUUUAAUUUGAUU-AAA--------GUAUGAACUUACUUUUGUU---------------AUUUAUUUUUAAU----------AAGAGAAA- UA UCUUUU--
UUGUUAGUACAUUAUU--UGGGAAGUUCAUUUA----AUUU--GUAAUAGU-UUAUUA----GUACCGUGA-GGGAAUAUU--U--UGAAAUA-
UUUUGAAAUACUUAUUUUUGU----UUAAGUAUAU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUGAUUAAUUUUA-UUUAAUUUA--UAUU--AAAUU[-????]
Orosticta_filiciola_ISO_ZOF   UUUGAAAGUAA-AAUU-AU-UU-A--UUAAUUUUUUUGAUC-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCUC----AAUAAUAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGUAAGU--------AUCAAAUUAUAGUUUAU--UAG-AGAAUA-UUC-CAUU-
UACACUGGAU-A-GGUAUAUUGUGC-AAUUCA-AUUUAAUUUGAUU-AAAC--------UAUGAGCU
 UACUUUUGUU---------------AUUUAUUUUUAAU----------AAGAGAAA-UAUCUUUU--UUGUUAGUACGUUAUU--UGGGAAAUAUAUUUA----AUUU--GUAAUAGU-UUAUUA-
---GUACCGUGG-GGGAAUGG---U--UGAAAUAACUAUGAAAUAUUUACUUUUGU----UUAAGUAUAU--UUUGUUUAUAGUACCUUUUGUAUCAGGG-UUGAUUAAUUUUA- UUUAAUUUA-
-UUUU--UAAUU[-????]
Platycnemis_pennipes_OPPp   UUUGAUUGUAA-AUUU-AU-UU-C--UUAGGUUUAUUGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCAU----AAUAAGGUGAGAUAAGUCGUAACAAAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU-------AAACAAAUUAUAGUUCAUU-UAG-AGAACG-UUU-CACU-
UACACUGAAA-U-AGUA-ACUGUGC-AAUUCA-GUUUGAUUUGAUU-AAU---------AAUUUAAUUACUUUAUUU-------------UUUAAUUUGAUCUUU----------UUAAAAAA- UA
UUUUUG--UUUUUAGUAUUU-AGA--AUAAAAAUUAGGUUU-----UUA--GUGAUAUA-AUAUUU----GUACCGUGA-GGGUAUU----U--UGAAAUA-
UUUUGAAAUAGUUAUUUUUAU----AAAAGUAUAU--UUUAUUUGUAUUACCUUUUGUAUCAGGG-UUGAUCAACUUUA-CUUAAUUUA--UUUU--AAAUU[-????]
Copera_annulata_OCAn_ZCAn   UUUGAUUGUAA-AUUU-AU-UU-A--UUAAAUUUUUUGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- GG-
UCGC-UCUCAU----CUUAAAAUGAUAUAAGUCGUCACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU-------AACCGAAUUUUAGUUUAA--UAA-AGAACU-UCU-CAUU- UACACUGAGA-
U-GGUG-GCUGUGU-AAGUCG-GCUUGAUUUGAUU-AAA---------AAUUAAAUUACUUUAAUU-------------AUUAAAUUUUAAUGU----------UUAAAAAA- UA UUUUUG--
UUUUUAGUAAUG-AAU--AUAAAAAUUAAUUUU-----UUA--GUGAAAGU-GUAUAA----UUACCGUGA-GGUAAUU----U--UGAAAUA-
UUUUGAAAUAUAUAAUUUUAU----AAAAGUAUAC--UUUUUUUGUAAUACCUUUUGUAUCAGGG-UUAAUCAAUUUUAUUUUAAAUUA--UUUU--AUUUU[-????]
EU055007_Copera_vittata   UUUGAUUGUAA-AUUU-AU-UU-A--UUAAGUUUUUUGAUU-UAU-AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
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Copera_marsouipes_PLA_ZCM UUUGAUUGUAA-AUUU-AU-UU-A--UUAAGUUUUUUGAUU-UAU-AGCUC--UAAAAUAUGC-ACAUAUCGCC------- CG-
UCGC-UCUCAU----AUUAAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU-------AAACGAAUUAUAGUUUAUG-UUA-AGAACC-UCU-CAUU- UACACUGAGA-
A-AGUA-UCUGUUU-AAUUCA-GUUUAAUUUGAAA-UU---------UAUUAAUUUACUUUUUUU--------------GUUGUUUAAAGAUU---------AAAAAAAC- UA UUUUUA--
UUUUUAGUAUAA-AGA--AUAGAACUUAUAUUA-----UUA--GUGAUAGU-GAAUUU----GUACUGUAA-AGGAAUA----A--UGAAAUA-
UUUUGAAAGAUUUAUAUUAAU----AAAAGUAUAU--UUUGUUUAUAUUACCUUUUGUAUCAGGG-UUAAUCAAUUUUA-UUUAAUUUA--UUUU--UACUU[-????]
Coeliccia_albicauda_OCAL_BCC UUUGAUUGUAA-AAUU-UU-UU-G--UUAAAAUUUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
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EU054985_Coeliccia_cyanomelas UUUGAUUGUAA-AAUU-UU-UU-G--UUAAAAUUUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-????-???????----???????????????????????????-???????????????-????????????????----??????????????????????-???-??????-???-????-
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Calicnemia_miles_PCN_OCMi UUUGAUUGUAA-AUUA-GC-UU-A--UUAAGUUUUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCAU---AAUAAAAUUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUUCCUAGUAAGU------AUUUCAAGUUAUAGUUCAAU-UAG-UGAAUU-UUU-CAUU-
UACACUGAAA-U-AGUA-CUUGUGC-AAUUCA-AGUUAACUUGAUU-AAU---------GAUGUUUUUACUGAUUUU------------UUUUAUAUUUUAUUUU---------UUUGAAAA- UA
GUCUUU--UUUUUAGUAUUUAAAU--UGAAAUAAUUUGUUA-----UUA--GUGAUAAA-UAAUUA----GUACUGUGA-GGGGUUA----U--UGAAAUA-
UUUUGAAAUAUUUAUUUCAUA----AAAAGUAUAU----UUUUUGUAGUACCUUUUGUAUCAGGG-UUGAUUGAUUAAAUAAAAAUUUA--UUUU--UUAAU[-????]
Prodasineura_vitatta_OPV_PRN UUUGAUUGUAA-AUUU-AU-UU-A--UUAAGUUUUUUGAUU-AAU-GGCUC--UAAAAUAUGA-ACACAUCGCC------- CG-
UCGC-UCUCAU----AAUAAAGUGAGAUAAGUCGUAACAUAG-UAGAUGCACUGGAAA-GUGUAUCUAGAAAGA-------UACAAAACUAUAGUUCAUUUUAG-AGAACC-UCU-UACU- UACACUAGGA-
A-AGAU-UCUGUGC-AAUUCA-GUAUAAUUUGAUU-AG---------AAUUAAUUUACUGGUUCU---------------UUUUUUAUUUUUU---------UAGAAAAU- UA UUUUUU--
AUUUUAGUAUUAGAUU--UUGGAAAAAAUUAUU-----UAA--GUUAUAGU-AAAUAA----GUACAGUGA-UGGUAUG----U--UGAAAUA--AUUGAA-
UAUUUAUUUUUAA----AUAAGUAUAU--UUUGUUUAUAGUACCUUUUGUAUCAGGG-UUGAUUAAUUAUU-AA-AACUUA--UUUU--UAUU-[-????]
Chlorocnemis_abboti_PRO_ZCAb UUUGAUUGUAA-AUUU-AU-UU-A--UUAGGUUUUUUGAUU-AAUAGGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAU----AAUAAAGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUUGGAAA-AUGUAUCUAGAAAGA-------UA-CAAAUUAUAGUUCAUUUUAG-GGAACC-UCU-UACU- UACAUUAAGA-
A-AGAU-UCUGUGC-AAUUCA-GUUUAAUUUGAUU-AG---------GAUUAAUUUACUAACUCU--------------UUUUUUAUUGUUU---------UAGAAAA-- UA UUUUUU--
AUUUUAGUAUCAAAUU--UUAGAAAAAAUUAUU-----UAA--GUUAUAGU-UAAUAA----GUACAGUGA-UGGUAUA----U--UGAAAUA--UUUUAA-
UAUUUAUUUUCAA----UAAAGUAUAU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUGAUUAAUUAUU-AA-AAUUUA--UUUU--UGUU-[-????]
Nososticta_solida_ZNSo UUUGAUCGUAA-AUUU-AU-UU-UUGUUUAAUUUUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCUCU---AAUAAAGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGUAAAA----UUAACUUGAGUUAUAUUUUAU--GGA-AGAAUA-UUU-CAUU-
UACACUGAAA-U-GGAA-UUUGUGC-AAGUCA-AAUUAACUUAAAA-UAAUU-------AAUUUGUUUAUUAAUUUU-----------------UUUGUUAUAUU----------AUAAAAAU- UA
UUUUUU--UUCUUGGUAAAGGUAA--UUGAAUUGAUUUUUU-----UAA--C-UAUAGU-UUAUAA----GUACCGUGA-GGGAAUCAUUUAA-UGAAAUA-UUUUGAAAUAUU-
AUUUAUAG----AAAAGUAUAC--UUUUUUUGUAGUACCUUUUGUAUCAGGG-CUGAUCUAUUUAA-AAUAAUUUA--UUUU--AUUUU[-????]
Phylloneura_westermanni_BPW UUUAAUUGUAA-AUUU-AU-UU-U--UUAGGUUUUUUGAAA-AUUUAGCUC--UAAAAUAUGU-ACACAUCGCC-------
CG-????-???????--?????????????????????????????-???????????????-????????????????----???????????????????????????-??????-???-????-
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Onychargia_atrocyana_ZOA UUUGAAAGUAA-AUUG-GU-UU-A--UUAAAUUUUUUGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUG----GUAAAGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-GUGUAUCUAGUAAGU--------GUCAAAUUAAAGUUUUU--UAG-UGAAUA-UCU-CACU- UACAUUGAGA-
A-GGAG-ACUGUGC-GAAUCA-GUUUAAUUUGAUU-AAA---------AAUAAAUUUACUUUCUUU-------------UUUAUUCUUAGUUUU---------GUUAGAAA- UA ACUUUA--
UUAUUAGUAUUUGUUA--UUGAAAUAUAAUUGU-----UUG--GUAAUAGU-UUAUUA----GUACUGUGA-GGGAAUGGUUGA--AAUAAUU--- AUGAAAAUUUGUUAUUUUUUA--AUAAGUACAU--
CUUAUUUGUGGUACCUUUUGUAUCAGGG-CUGAUCAAUUUUU--UUGAAAAA--UCUU--UGUUU[-????] Argia_moesta_COE_OAM UUUGGUUGUAA-ACUU-AG-AA-A-
GAUAUCUUUUUUGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGCCUCUCUC------UUAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUACUGGAAA-
GUGUUUCUAGUAAGU------AAAACAAAUUAAAGUUCAA--UAG-GGAACA-UUU-CAUU- UACACUGAGA-U-AGAU-ACUGUGC-AAUUCA-GUUUGAUUUGAUU-AUG---------
AAUUGAUUUACUUCAAUU----UU-------UUUUUGGAAAAUUAUU---------AUAAAAAG-

UAUUUUUA--UAUUUAGUAUACAAAU--AAAGAAACAUUUAUU-----UUA--GUAAUAGU-UUAUUA----GUAUAGUGA-UAGAAUA----U--UGAAAUA-UUUUGAAAACUUUUAUUUUU-
----AAAAGUAUAU--UUUAUUUAUAUUACCUUUUGUAUCAGGG-GUGAUCAAAUAUA-UUUAAUUUA--UUUU--UAUGU[-????]
Argia_nahuana_BAN UUUGGUAGUAA-AAUU-AG-UU-A-AUUAACUUUUUUGAUU-UU--AGCUC--UAAAAUAUGC-AC????????-------
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UUUGAAAGUAA-AUUU-AU-CU-A-AAUAGCUAUUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCUCU---A???-???????????????------????????????????????????-??????-???-????-
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Mortonagrion_binocellata_BMB UUUGGAAGUAA-AGUU-AG-UU-A-AAUUUCUAAUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-????-???????---??-???????????????------????????????????????????-??????-???-????-
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Agriocnemis_pygmaea_OAP_BAP UUUGGAAGUAA-AAUU-AA-UU-A-AAUAUUUUUUUUGAUU-UU--AGCUC--UAAAAUAUGU-ACACAUCGCC-------
CG-UCGC-UCUCAU---AAUAAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUUGGAAA-AUGUAUCUAGUAAGU-------UAUCAAGUUAAAGUUCUAU-UAG-AGAACA-UUU-CAUU-
UACACUGAUA-A-GGU--GCUGUGC-AAUUCA-GUUUAAUUUGAUA-AA---------AAUUUAAUUACUAAUAUU----UU------UUGUUUAUAUUUAUUU---------AU-AGAAA- UA
UCUUUU--UAUUUAGUAUAU-UUU--AUAGAAAUUUUUCUU-----UUU--GUUAUAAU-UGAUUA---GUACUGUGA-AGGUAUG----U--UGUAAUA------UAUUUUUAUUUUUAU-
----AAAAGUAUAC--UUUUUUUGUAUUACCUUUUGUAUCAGGG-UUGAUUAAAAUUU-UAUAAAUUA--UUUU--AUUUU[-????]
Austroagrion_watsoni_ZAW UUUAAAAGUAA-AAUU-GA-UU-A-UUUAAUCUUUUUGAAU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAU----AAUAAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGUAAGU------ACUUCAAAUUAAAGUUCUAU-UAG-AGAACA-UUU-CAUU- UACACUGAUA-
A-GGUUUACUGUGC-AAUUCA-GUUUAAUUUGAAU-AGU---------GAACUAUUUACUUUAUUU------------AUUAAUUUUAAUUUUU---------AUGAAAAG- AA UUUUUU--
UGUUUAGUAUUU--UU--AAAGAAAAAUAAUUU-----UUU--GUAAUAGA-AAAUUA---GUACAUUGA-UGGAAUG----U--UGAAAUA-AUAUGAAAAUUUAAUUUUAU-
----UUAAGUAUAU--UUUAUUUUUAGUACCUUUUGUAUCAGGG-UUAAUCUAAUAUU-UUUAAUUUA--UUUU--AAAUU[-????]
Archibasis_viola_ZAV ---
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AF232897_Coenagrion_puella ---
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JQ966640_Coenagrion_resolutum UUUGGAAGUAA-AAUU-AA-UC-A-AUUAAUUUUUUUGAUU-UU--AGCUC--UAAAAUAUGU-ACACAUCGCC-------
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Pseudagrion_cingillum_COE_OAAL_BPA UUUAAAAGUAA-AUUU-AA-UU-A-AUUAAUUUUUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAU?---UAUAAAGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGUAAGU------UUACAAAUUAAAGUUCUUU-UAG-UGAACA-UAU-CAUU- UACACUGAUA-
AAGG---CCUGUGC-AAUUCA-GGUUGAUUUGAUU-ACGU-------UUAUAAUUUACUUUUUUA--------------AUUUAUUUUGUUUU---------UGGAGAAG- UA UCUUUU--
UUUUGAGUAUUA-UUU--AUAGAAAUAUUAUUU-----UUA--GUAAUAGU-GUAUUA----GUAUUGUGA-GAGAACA----U--UGAAAUA-UUUUGAAAAUAGUUGUUUGA-
----GAAAGUAUAC--UUUAUUUGUAUUACCUUUUGUAUCAGGG-UUGAUUUAUUUAU--UUAAUUUA--UAUU--AUUUU[-????]
Pseudagrion_aureofrons_BPA UUUAAAAGUAA-AUUU-AA-UU-A-AUUAAUUUUUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
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Pseudagrion_ignifer_COE_OPi   UUUAAAGGUAA-AUUU-AA-UU-A-AUUAAUUUUUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAU?---AAUAAAGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGUAAGU-------UUACAAAUUAAAGUUCUGC-UAG-UGAACA-UGU-CAUU- UACACUGAUA-
AAGG---CCUGUGC-AAUUCA-GGUUGAUUUGAUU-ACGU--------UUAUAAUUUACUUUUU-A---------------AUUUAUUUUGUUUU----------UGGAGAAG- UA UCUUUU--
UUUUGAGUAUUA-UUU--AUAGAAAUAUUAUUU-----UUA--GUAAUAGU-GUAUUA----GUAUUGUGA-GAGAACA----U--UGAAAUA-UUUUGAAAAUAAUUGUUUGA-
----GAAAGUAUAC--UUUAUUUGUAUUACCUUUUGUAUCAGGG-UUGAUUUAUUUAU--UUAAUUUA--UAUU--AUUUU[-????]
Erythromma_najas_EU055009   UUUGUAAGUAAAAUUU-AA-CU-A-AUUAGUUUUUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
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Cercion_plagiosum_AJ488552   --
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EU477628_Cercion_lindeni   UUUGGAAGUAAAAUUU-AA-CU-A-AUUAUUUUUUUUGAUU-UU--AGCUC--UAAAAUAUGU-ACACAUCGCC------- CG-
UCGC-UCUCAUAAUA----AGGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGUAAGU------UCAUCAAAUUAAAGUUCUAC-UAG-AGAACA-UUU-CAUU- UACACUGAAA-
AGG-GU-GCUGUGC-AAUUCA-GUUUAAUUUGAUUAUGU----------UAAAAUUUACUUGUUUU-UUUUA------AUUUAAUCUU-----------------UGGAGAAA- UA AAUUUU--
UGUUAAGUAAU-UUUU--UUUGAAAAAUAUUUU-----UUA--GUAAUAGU-UAAUUA----GUACUGUGA-AGGAACA----U-UUUAAAUA-UCUUGAAAAGUUGUUAUUUU-
---UAAAAGUAUAU--UUUAUUUAUAUUACCUUUUGUAUCAGGG-UUAAUUUAUUUUU-UAUAACUUA--UUUU--GUUUU[-????]
Paracercion_hieroglyphicum_AJ488551   --
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Acanthagrion_quadratum_COE_ZAQ   UUUGUAAGUAA-AAUU-AA-UU-A-AUUUAUUUAUUUGAUU-UA--AGCUC--UAAAAUAUGC-ACACAUCGCC------- GG-
UCGC-UCUCAU?---AAUAAAGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGUAAGU------UGAUCAAAUUAUGGUUUUA--UAGUCAAACA-UUU-CAUU- UACACUGAUA-
G-GGUA-ACUGUGC-AAAUCA-GCAUAAUUUGAAA-G-----------UUUUAACUUACUUUUUGU-------------UUAAAUUUUAUUUUUU----------AAGAGAAA- UA UCUUUA--
AUUUUAGUAUUU---U--CUAGAAAAAUUAAUU-----UUA--GUAAUAGU-UUAUUA----GUACUGUGA-AGGGAUG----U--UGAAAUA-UUUUGAUAAUAUAUUUAUUU-
----UUAAGUAUAU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUUAAUUUUU-UUUAAUUUA--UUUU--GUAUU[-????]
Leptobasis_vacillans_ZLV   UUUGUAAGUAA-AAUU-AA-UU-A-AUUAAUUUUUUUGAUA-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUC-UCU--A???-????????????????------??????????????????????????-??????-???-????-
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Amphiagrion_saucium_OAS   UUUGUAAGUAAAAUUU-AA-UU-A-AUUAAUUUUUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCAU?---AAUAAAGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGUAAGC-------AAACAAAUUAAAGUUUUGU-UAG-AAAACA-UUU-CAUU-
UACACUGAUA--AGAAU-ACCGUGC-AACUCG-GUUUAAUUUGAAA-A-----------AAUUGAUUUACUGUUUUU-------------GUUUAUUUUUUACUU----------UAGAGAAA- UA
UUUUUA--UUUUUAGUAUAA-UUU--UUAGAAAAAUUGUUU-----UUA--GUAAUAGU-UAAAUA----GUACUGUGA-GGGAAUA----U--UGAAAUA-AUUUGAAAACAAAUUUUUUA-
----UAAAGUAUAU--UUUAUUUAUAUUACCUUUUGUAUCAGGG-UUGAUCUAAUUUU-AUUAAUUUA--UUUU--AAUUU[-????]
Amphiagrion_abbreviatum_BAAb   UUUGUAAGUAA-AUUU-AA-UU-A-GUUAAUUUUUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
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Xiphiagrion_cyanomelas_ZXC   --
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Hesperagrion_heterodoxum_WHH                       UUUGUAAGUAA-AGUU-AA-UU-A-AUUAUCUUAUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACAC??????-------
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Ishnura_elegans_1239                               ------------------------------------------------------------------------------------
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EU054942_Ishnura_barberi                           UUUGUAAGUAA-AGUU-AA-UU-A-AUUAAUUUUCUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNNNN---------NNNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNN-
NNNNNNNNNN-NNN-NNNNNNNNNN-NNNNNN-NNNNNNNNNNNNNNN-----------NNNNNNNNNNNNNNNNNNNNNN-------------------------------------NNNNN- NN NNNNN-
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---NNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNN[-????]
                             HQ834798_Ischnura_graellsii_1a                UUUGUAAGUAA-AGUU-AA-UU-A-AUUAAUUUUCUUGAUU-UU--AGCUC--
UAAAAUAUGC-ACACAUCGC------------------????????---?????????-----------------------------------------------------------------
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Anomalagrion_hastatum_OAH                          UUUGUAAGUAA-AGUU-AA-UU-A-AUUAUCUUAUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAU----AAUAAAGUGAGAUAAGUCGUAACAUAG-UAGAUUUAUCGGAAG-AUGAAUCUAGAAAGU-------UAACAAACUGUAGUUCUAU-UAG-AGAACA-UUU-CAUU- UACACUGAUA--
AGGUA-ACUGUGC-AAUUCA-GUUUAGUUUGAAU-AAA---------AAUUCAUUUACUACUUUU--------------CUUUUUUAUUAUUU---------UAUAGAAA- UA UCUUUA--
UGUUUAGUAUUC--UU--AUAGAAAUAUAAAUG-----UUA--GUAAUAGU-UAAUCA----GUACUGUGA-AGGAAUA----U--UGAAAUA-UUUUGAAAAUAAAUUUUUAU-
----AAAAGUAUAU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUGAUUUAAUUUA-UUUAAUUUA--UUUU--AAUUU[-????]
Amphiallagma_parvum_AJ420939                       ------------------------------------------------------------------------------------
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Azuragrion_granti_AJ420937                         ------------------------------------------------------------------------------------
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Azuragrion_nigridorsum_AJ420938                    ----- -----------------------------------------------------------------------------
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Enallagma_cyathigerum_0110                         ------------------------------------------------------------------------------------
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EU054946_Enallagma_sp                              UUUGUAAGUAA-AGUU-AA-UU-A-AAUAAUUUUCUUGAUU-UU--AGCUC--UAAAAUAUGU-ACACAUCGCC------- CG-
NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNNNN---------NNNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNN-   NNNNNNNNNN-
NNN-NNNNNNNNNN-NNNNNN-NNNNNNNNNNNNNNN-----------NNNNNNNNNNNNNNNNNNNNNN-------------------------------------NNNNN-
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E_aspersum_DQ087506 --
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Aciagrion --
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Aciagrion_borneense_ZAB ???????????-????-??-??-?-????????????????-??--?????--??????????-??????????-------
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Protoneura_capillaris_cara_BPCp_ZPC UUUGAUAGUAA-AUUG-AU-UA-A-UUUAAUUGUU-UGAUG-UU--AGCUC--UAAAUUAUGC-ACACA?????-------
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Protoneura_caraZPC UUUGAAAGUAA-AUUA-AU-UU-A-UUUAAUUUUU-UGAUG-UU--AGCUC--UAAGUUAUGC-ACACAUCGCC------- CG-
ucgc-ucucAU----AAUAAAgUgAgAUAAgUCgUAACAUAg-UAgAUGUACCGGAAG-GUGUAUCUAGAGAGAU--------ACAGGUUAUAGUUUAU--UAG-AGAACA-UUU-CAUU- UACACUGAUA-
GGGG---GCUGUGC-AAUUCA-GCAUAAUUUGAUA-UU-------AUGGAUGUUCUUACUAUAUUUAUUUAUU-----------------------GUCUUUUUU-GAAAAA- UA UUUUUA--
UUUUUAGUAACAAGAU--AAAGAAAAGGAUUAUU---UUU---GUGAUAGU-UUAUUA----GUAUCGUGAGAGGUUGA-------UGAAAUA-UUUUGAAAAUUUUUGUUUUG-
----UAAAGUAUAU--AUUAUUUAUAGUACCUUUUGUAUCAGGG-UUGAUCUAUUUAA-UAAAAUUUA--UUUU--UUUUU[-????]
ZPRm_Psaironeura_remissa --
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Elattoneura_analis_glauca --
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Neoneura_aaroni_PRN_ONA UUUGAUAGUAA-AUUU-AU-UU-A-UUUAAUUUUU-UGAUA-UU--AGCUC--UAAGCUAUGU-ACACAUCGCC-------
CG-UCGC-UCUCAU?---AAUAAAGUGAGAUAAGUCGCUACUUAG-UAGAUGUACUGGAAA-GUGUAUCUAGUAAGU-------UGUCAAAUUAUAAUUCUAUUUAG-AGAAUA-UAU-CACU-
UACACUGAUA-AAGAA--GUUGUGC-AAUUCA-GCUUGAUUUGAUU-AU----------UUUAUACUUACUGAUUUAUUU----------UAUUUUGUUUUACUUU----------UAGAGAAA- UA
ACUUUU--UAUUUAGUAUGU-GGG--ACUGAA--CCAUUAUU---UUUA--GUGAUAGU-UUAUUU----GUAUUGUGA-AAGAAUG----U--UGAAAUAUUGUUGAAAAUUAUAAUUUUU-
----UUAAGUAUAA--UUAGUUUUUAUUACCUUUUGUAUCAGGG-UUAAUCAAUUUUA-UAAAAUUUA--UUUU--UUAUU[-????]
Neoneura_amelia_ZNA UUCGGAAGUAA-
AUUU-AU-UU-A-UUAAAUUUAU-UGACU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC-------CG-????-???????---???????????????????????????-
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EU054991_Neoneura_maria UUUGAUAGUAA-AAUG-AU-UU-A-UUUAAUUUU-UUGGUA-UU--AGCUC--UAAACUAUGC-ACACAUCGCC------- CG-
NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN---------NNNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-
NNN-NNNNNNNNNN-NNNNNN-NNNNNNNNNNNNNNN------------NNNNNNNNNNNNNNNNNNNNNN-------------------------------------NNNNN-

NNNNNNN--NNNNNNNNNNN---NNN--NNNNNNNNNNNNNN-----NNNN--NNNNNNNN--NNNNNN---NNNNNNNNN-NNNNN---------NNNNNNN-NNNNNNNNNNNNNNNNNNNN-
---NNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNN[-????]
Ceriagrion_aeruginosum_COE_ZCAe UUUGGGAGUAA-AAUUAAU-UU-A-UUUAAUUUUU-UGACU-UU--AGCUC--UAAAAUAUGU-ACACAUCGCC------- CG-
UCGC-UCUCAU?---AAUAAAGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAUAGC-------AAUCGAAUUAUAGUUCUAU-AAG-AGAAUU-UUC-CACU- UACACUGGAA-
A-GGGA-ACUGUGC-AAUUCA-GUUUGAUUUGAUU-AUUAUG------UAAAUAUUUACUAUUUUU----------------UUUUCUUUGUUUU----------AUGAAAAA- UA CUUUUU--
GUUUUAGUAUUUGAGC--UUAGAAAUAUAGAU-----UUUA--GUGUUAGU-UAACAA----GUACCGUAA-GGGAAUA----U--UGAAAUA-UAUUGAAAAUUCCUAUUUUA-
----UGAAGUAUAU--AUAAUUUAUAUUACCUUUUGUAUCAGGG-UUAAUCAAUUUUA-UUAAAUUUA--UUUU--UAUUU[-????]
Telebasis_salva_ZTS UUCGGAAGUAA-AUUU-AU-UU-A-UUAAAUUUAU-UGACU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
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Leptagrion_elongatum_ZLE ???????????-????-??-??-?-??????????-?????-??--?????--??????????-??????????-------
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Leptagrion_sp ----- --
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Metaleptobasis_manicaria_ZMMr UUUGGAAGUAA-AUUA-AU-UU-A-UUAAUUUUCU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAU----AAUAAGGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-UUGCAUCUAGUUAGU---AAUUUAUCAAAUUAAAGCCCUGU-UAG-GGAAUA-UUU-CAUU- UACACUGAUA-
A-GGAAAACUGUGC-AAUUCA-GUUUAAUUUGAUU-ACAAUUU-----AUCUUACUUAUUUUAUUU------------------UAGGUUUUAAU----------UUGAAAAG- UA UUUUUU--
GGUUUAGUAUUAAAUU--UAAGAAAUGUAAUU-----UUUA--GUAAUAGU-UUAAUA----GUAUUGCAA-AAGAAUG----U--UGAAAUA-UAUUGAAAAUAUUUGUUUGA-
----AAAAGUAUAU--UUUAUUUUUACUACCUUUUGUAUCAGGG-UUAAUUAAUUGUA-UUUAAAAUA--UUUU--AUUUU[-????]
Diceratobasis_sp_A_ZDA UUUGGAAGUAA-AAUU-AA-CU-GAUUAAUUUUUU-UGACU-UU--AGCUC--UAAA-UAUGU-ACACAUCGCC------- CG-
UCGC-UCUCAU?---AAUAAGGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-GUGUAUCUAGUUAGU---AAUUUAUCAAAUUAAAGUUCUAU-UAG-GGAAUA-UUU-CAUU- UACACUGAUA-
A-GGAAAGCUGUGC-AAUUCA-GUUUAAUUUGAUU-GCG---------AGGUAUCUUACUUUUUUU--------------UGUUAUUUUUUUUAU----------UUGAAAAG- UA CUUUUU--
AUUUUAGUAUUAAAUC--UAAGAAAUAUAAAU-----UUUA--GUAAUAGU-UUAAUA----GUAUUGUGA-AAGAAUG----U--UGAAAUA-CAUUGAAAAUUUUUGUUUAA-
----UAAAGUAUAU--UUUGUUUAUAUUACCUUUUGUAUCAGGG-UUAAUUAAUUAUA-UUUAAUUUA--UUUU--AUUUU[-????]
Pyrrhosoma_nymphula_1202 ---
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Chromagrion_conditum_OCCn UUUGGAAGUAA-AUU--AA-UU-UUUUAAAUUUUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCAU?---AAUAAAGUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGAUAGU---AA-UUAUCAAAUUGUAGCUUUAU-UAG-AGAGCA-UUU-CAUU-
UACACUGAUA-A-GGAU-ACUGUGC-AAUUCA-GUAUAAUUUGAUU-AUA---------AAUAGAUUUACUUUUUG--------------UUUUAUUAUUAUAUU---------AUAAAAAAU- AU
UUUUAU--UAUUUAGUAUAAAAUU--UAAGAAAUAUAAAU-----UUUA--GUAAUAGU-UUAUUA----GUAUUGUGA-AAGAAAA----U--UGAAAUA-UUUUGAAAAUUUUUGUUUGA-
----AAAAGUAUAU--UUUAUUUAUAUUACCUUUUGUAUCAGGG-UUGAUCAAUUAUA-UUUAAUUUA--UAUU--UAUUU[-????]
Teinobasis_alluaudi_ZTA2 UUUGAAAGUAA-AUUG-AU-UA-A-UUAAGUUUUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCUCU---A???????????????????????????-????????????????-????????????????---?????????????????????????????-??????-???-????-
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Nehalennia_gracilis_COE_ONG UUUGGUAGUAA-AUUG-AU-UU-A-UUUAGUUUAU-UGAUU-UU--GGCUC--UGAAAUAUGU-ACACAUCGCC------- CG-
UCGC-UCUCAU?---UAUAAAGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-ACGUAUCUAGAUAGU----AUAAAUCAAAUUAUGGUUUAUU-AUG-AGAACA-UUU-CAUU- UACACUGAUA-
A-GGG--GCUGUGC-AAUUCA-GUAUAAUUUGAUU-AUG---------AAUAAAUUUAUUUUUAUU-----U-------UUUUACAAAAUUAGGU---------UUAAAAAAU-

AUUUUUUU--CUUUUAGUAUAUAGUU--UAAGAAAUAAUGUU-----GUUA--GUAAUAGU-UUAUUA----GUACAGUGA-GGGGACA----U--UGAAAUA-UUUUGAAAAUUUUUAUUUAA-
----UAAAGUAUAU--UUUGUUUAUAAUACCUUUUGUAUCAGGG-UUGAUUUAUUAUA-UUUAAUUAA--UUUU--UAUUU[-????]
ZCG_Coryphagrion_grandis UUUGAAAGUAA-AUUU-AU-UU-A-UUUAAUUUUU-UGAUC-UU--GGCUC--UAAAAUAUGU-ACACAUCGCC------- CG-
UCGC-UCUCAU----AAUAAGGUGAGAUAAGUCGA???????-???????????????-???????????????----???????????????????????????-??????-???-????-
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UUUGGGAGUAA-AUUU-AU-UU-A-UUAAUUAUUU-UGAUU-UU--AGCUC--UAAAGUGUGC-ACACAUCGCCGUUCCGCCG-
UCGC-UCUCAU----AAUAAAGUGAGAUAAGUCGUAACAUAGC UAGAUGUAUCGGAAG-AUGUAUCUAGUUGAU-----UUGUCAAAUUAUAUUUUUAU-UAG-AGAAUA-UCU-UAUU-UACACUAAGG-
A-GGAA-UCUUGUGCGACUCA-GAUUAGUUUG AUU-UUU---------UUCUUCUUUACUAUUUAU-------------UUUUAAUUAAUAAUU----
------CUGAAAAG-UAUUUUUG--UUUUUAGUAUUUAAAU----UGAAACAUUAUU-----GUUA--GUGAUAGA-UUAUUA----UUUUUGUAA-AAUAAUG----U--UGAAAUA-
UUAUGAAAAAUAUUAUUUAU-----GAAAGUAUAU--UUUAUUUAUAUUACCUUUUGUAUCAGGG-UUAAUUAAAUUAA-UCAUAUUUA--UAUU--UGUUU[-????]
EU055022_Microstigma_anomalum UUUGGGAGUAA-AUUU-AU-UU-A-UUAAUUAUU-UUGAUU-UU--AGCUC--UAAAGUGUGC-ACACAUCGCC-------
CG-NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNNNN---------NNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNN-
NNNNNNNNNN-NNN-NNNNNNNNNN-NNNNNN-NNNNNNNNNNNNNNNN-----------NNNNNNNNNNNNNNNNNNNNNN-----------------------------------NNNNN- NN NNNNN-
-NNNNNNNNNNN---NNN--NNNNNNNNNNNNNN-----NNNN--NNNNNNNN--NNNNNN---NNNNNNNNN-NNNNN--------NNNNNNN-NNNNNNNNNNNNNNNNNNNN-
---NNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNN[-????]
Mecistogaster_ornata_ZMO UUUGUAAGUAA-AUAG-AU-UU-A-UUAAAUUUAU-UGACU-UU-UAGCUC--UAAA-UAUGC-ACAC-UCGCC-------
CG-CCGC-UCGCGU----AA-CCGCGGAGAUG-GUCGAAUCUU-GC???????????????-???????????????--????????????????????????????-??????-???-????-
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EU477624_Mecistogaster_linearis UUUGAGAGUAA-AUAA-AU-UU-A-UUAAAUUUAU-UGGUU-UU-UAGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAU----AAUAAAGUGAGAUAAGUCGUAACAUAG-UAGGCGUAUCGGAAG-AUGUGCCUAGAAAGU------AAAACAAAUUAUAGUUCUAU-UAG-AAGAAUUUUU-CAUU- UACCCUGAUA-
A-AGG-UACUGUGC-AAUUCA-GUU-AAUUUGAUUAUAU----------AUUAAUUUAUUUUUAUA-UUAUA-------UUUUAUAAU----------------AAGAAAAA- UA UUUUUU--
GUUUUAGUAUU-AAAU--AAAGAAUUUUAUUUU-----UUA--AUAAUAGU-UAAUUA----UUAUUGUAA-AAGMAC-G-----UUGWAAUA-MUUUGCAAGGUUYUAUUUUC-
---CUUAAGUAUAC-UUCUAUUUAUAUUACCUUGUGCAUCAGGG-UUGAUUAANNNNN-NNNNNNNNN--NNNN--NNNNN[-????]
Megaloprepus_caerulatus_PSE_ZMC UUUGGGAGUAA-AAAA-AU-UU-UUAUUAAUUUUU-UGAUU-UU--AGCUC--UAAAAUAUGU-ACACAUCGCCGUUC--- CG-
CCUC-UCUCAU?---??AUAUUUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAUUA-------AAUCUAAUUAUAGUUCUAU-UAG-AGAACA-UUU-CAUU- UACACUGAUA-
AAGUA--UCUGUGC-AAUUCA-GUUUAAUUUGAUU------------UUUUUUCUUACUGUUUUA------------UUUUACUGUUUUAUUU----------UUAAAAAG- UA UUUUUG--
UAUUUAGUAUUUAGAU----UGAAAUAUUAAU-----AUUA--GUAAUAGU-UUAUUU----UUAUUGUGA-GAGAAUG----U--UGAAAUA-UUAUGAAAGUUUAAAAUAU-
----AAAAGUAUAU--UUUAUUUAUAUUACCUUUUGUAUCAGGG-UUAAUCUAAUAUA-UCAUAUUUA--UAUU--UGUUU[-????]
Haplostigma_modesta_ZHM UUUGAUAGUAA-AUAG-AU-UU-A-UUAAAUUUAU-UGAUU-UA--AGCUC--UAAAAUAUGU-ACACAUCGCC-------
CG-UCGC-UCUCUCU---A???????????????????????????-???????????????-???????????????----???????????????????????????-??????-???-????-
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Pseudostigma_aberrans_OPA UUUGAUAGUAA-AUAG-UU-UU-A-UUAAAUUUAU-UGAUA-AA--AGCUC--UAAAAUAUGU-ACACCUCGCC-------
CG-CCGC-UCGCAU----AAUAAAAUGAGAUGAGUCGAAACAUAGCUAGAUGUAUCGGAAG-AUGUAUCUAGUAAGU----AAUUAUCAUCCUAUAGUUUUGAUUAG-GGAACA-UUU-CAUU-
UACACUGAGG-AGGGGG-CUUGUGC-CAAUCA-GUAAAGGGUGGGU-U-----------AAAAUAUUUACUGUUUUU-------------------UUAUAAUAG---------AUAGAAA-G- UA
UUUUUU--UAUUUAGUAUUUUAAU----AGAAAAUUGAGU-----UGUA--GUGAUAGG-UUAAUU----UUAUUGUGA-AAGGUUA----A--UGAAAUA-UCUU-AAUUGUUAUUAUUUU-
----AAAAGUAUAU--UUUGUUUAUAUUACCUUUUGUAUCAGGG-UUAAUCAACUUUA-UUAAAUUUA--UUUU--UAUUU[-????]
Rhinagrion_mima_ZRM UUUGGAAGUAA-AAUG-AU-UU-U-UUGAUUUUU--UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAU----GUUAAUGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-UUGUAUCUAGAUAGU---------CAAAUCAUAGUUCUUU-UAG-AGAAUA-UUU-CAUU- UACACUGAGA-
AGGGUU-ACUGUGC-AAUUCA-GUUUGAUUUGAUA-ACA----------AUUUUCUUACUUUUAUU--------------UUUAUUUAUGUUUGU--------UAGAGAAGU-- UA CUUU---
UUCUUUAGUAUUUAAA-----AGAAUUUGAUUU-----UUUA--GUAAUAGU-UUAUUA----GUACUGUGA-GGGAACUG---C--UGAAAUA-
UUAUGAAAAUUUUAUUUUUUU----AAAAGUAUAU--UUUAAUUAUAGUACCUUUUGUAUCAGGG-UUAAUUAAUUUUA-UUUAACUUAU-UUUU--AUUUU[-????]
Sciotropis_cyclanthorum_BSC UUUAAUAGUAA-AUUU-UU-UU-A-UUAAAUUUUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAU????-------
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Heteragrion_mitratum_ZHMt UUUGAUAGUAA-AGUU-AU-UU-AUUUGGUCUCU--UGAUU-U---AACUC--UAAAAUAUGCCACACAUCGCC------- CG-
UCGC-UCUCAU?---AUUAAUUUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGAUAGA----UUAUUUCGAAUCAUAGUUCAAU-UAG-UGAAUA-UUC-UACU- UACACUGGAA-
AGUUUU-ACUGUGC-AAUUCA-GUUUGAUUUGAUG-AUUUGAAUAAU-AAUGGUCUUACUUUUAUU-----------------UAUUUAUUUUU---------UUGAGAAG- UU CCUUU--
UAUUUUAGUAUUUAAAU----AGAAUGAAAAUU-----AUUA--GUAAUAGA-AUACUU----GUACCGUGA-GGGGUUG-UUUA--UGAAAUA-UUUUGAAAUUUCAUUUUUUU-
----UUAAGUACUU--UUUAUUUAUGGUACCUUUUGUAUCAGGG-CUGAUUAAUUUUA-AUUAAUUUA--UUUU--UUUUU[-????]
EU477623_Heteragrion_sp UUUGAUAGUAA-AGUU-AU-UU-AUUUGGUCUCU--UGAUU-U---AACUC--UAAAAUAUGCCACACAUCGCC------- CG-
UCGC-UCUCAU----AUUAAUUUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGAUA-----------CGAAUCAUAGUUCAAU-UAG-UGAAUA-UUC-UACU- UACACUGGAA-
AGUUUU-ACUGUGC-AAUUCA-GUUUGAUUUGAU---------------GAUUUGAAG---AGAAG- UU CCUUU--
UAUUUUAGUGUA---AU----AGAA----------------------------UACUU----GUACCGUGA-GGGGUU----UA--UGAAAUA-UUUUGAAAUUUCAUUUUUUU-
----UUAAGUACUU--UUUAUUUAUGGUACCUUUUGUAUCAGGG-CUGAUUAAUUUUA-AUUAAUUUN--NNNN--NNNNN[-????]
Oxystigma_cyanifrons_ZOC ???????????-????-??-??-??????????????????-??--?????--??????????-??????????-------
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ZDP_Dimeragrion_percubitale UUUGAUAGUAA-UUUG-GU-UU-A-AAUAAUCUAAUUGAUU-UU--AGCUC--UAAAAUAUGU-ACACAUCGCC-------
CG-UCGC-UCUCAU----AUUAAUUUGAGAUAAGUCGUAACAUAG-UA?????????????-???????????????----??????????????????????????-??????-???-????-
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Tatocnemis_malgassica_ZTMa UUUGAAUGUAA-AUUU-AU-UU-A-UUAAGUAAUU-UGACC-CU--GGCUC--UAAAGUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCUCU---A???????????????????????????-???????????????-???????????????----??????????????????????????-??????-???-????-
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Philogenia_cassandra_BPCs UUUGAAAGUAA-AAUUUAU-UU-U-UUAAGUUUUU-UGACU-UU--GGCUC--UAAAUUAUGC-ACACAUCGCC------- CG-
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Philogenia_terraba_ZPT_ ???????????-???????-??-???????????--?????-??--?????--??????????-??????????-------
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ZPBn_Philogenia_bernice ----- --
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Teinopodagrion_venale_ZMV_BTV UUUAAAAGUAA-AUUU-UU-CU-U-AUUGGAUUGU-UGAAA-UU--GGCUC--UAAAUUAUGC-ACACAUCG??-------
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Teinopodagrion_lepidum_ZTL UUUAAAAGUAA-AUUU-UU-CU-UUAUUGGAUUGU-UGAAA-UU--GGCUC--UAAAUUAUGU-ACACAUCGCC------- CG-
UCGC-UCUCAU-----UUAAGUUGAGAUAAGUCGUAACAUAG-UA?????????????-???????????????----??????????????????????????-??????-???-????-
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Amanipodagrion_gilliesi_ZAG UUUGAAAGUAA-AUUU-AU-UC-AUAUAAUUUUUU-UGAUU-UU--GGCUC--UAAA-UAUGC-ACACAUCG---------
CGGUCGC-UCUCAU?---AUUAAGGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-GUGUAUCUAGUAAGU---------UCAAAGGAUAGUUCAU--UAG-UGAACU-UUU-CAUU-
UACACUGAGA-G-AGGU-GCUGUGC-AAUUCA-GCGUUCUUUGAUU-GAGU--------GAUGAUUUUAUUAUUUUA---UUU-------UAGUCAUGUUUAGUCU---------UUGGGAAA- UU
ACCUUU-AAUUUUAGUAUUG-UUU--UUAGAAUAAAUGUU-----UUUA--AUUAUAGU-UUAUUA----GUACUGUGA-GGGGUUG----A--UGAAAAA- UCUAUGAAAUAUUUAUUUCUGU---
UAAAGUAUAU--AUUUUUAAUAUUACCUUUUGUAUCAGGG-UUGAUUUAAUUUU-UUAAAUUUA--UUUU--AAGCU[-????] Nesolestes_elizabethae_ZNE UUUGAUAGUAA-AUUU-AU-UU-
A-UUAGAUUUUU-UGAUU-AUU-GGCUC--UAAAGUAUGC-ACACAUCGCC------- CG-UCGC-UCUcau----auuauguugagauaaGUCGUA-CAUAG-UAGGCGUAUUGGAAA-
AUGUGCCUGGUAAGU------AUUCAAAUUAUAGUUUCGU-UAG-GAAAUA-UUU-CAUU- UACGCUGAAA-A-GGAAUACUGUGC-AAUUCG-GUUUAAUUUGAUU-AAUU---------
AUAAAUUUACUUAAUUUU-----------------UUGUUGUCUG--------UUUUAGAGAAG- AU UCUUU--AUUUUUAGUAUUU--UG--AUAAAAAUUUAUUU-----UUUA--GUAAUAGU-
GGAUUA----GUAUUGUAAGGGAACUG----U--UGAAAUA- AUUAUGAAAAUUUAAUUUUAUA----UAAGUAUAA--UUUGUUUAUAGUACCUUUUGUAUCAGGG-UUGAUUAAUUUUA-UUAAUGGUA--
UUUUU-UAUUU[-????] Protolestes_kerckhoffae_ZPKc ???????????-????-??-??-???????????-?????-??--?????--??????????-??????????-------
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Argiolestes_ochrostomas_ZAOc UUUGAAAGUAA-AUUU-GU-UU-A-AUUAAGUUUUUUGAGA-AU--GGCUC--UAAAGUAUGU-ACACAUCGCC-------
CG-UCGC-UCUCAU----AUUAAGGUGAGAUAAGUCGUAACAUAG-UAGCCGUACUGGAAA-GUGUGGCUAGAUAGU--------AUCAAAUUAUAGUUUU---UAG-AGAAUA-UCU-CAUU-
UACAUUGGGA-A-GGCUGAUUGUGC-AAUUCA-AUUUAAUUUGAUU-AAGU--------UAAGAGGUUACUUUUUUU---------------AUUUAUUUUUAUAU---------UAUAGAAG- UU UCUUU-
-GUUAUUAGUAUUG--GU--UUAGAAAUGUAUAG-----GUUA--GUGAUAGG-AAAUUA----GUACUGUAAAGGAAUUG-------UGAAAUA-UUUAUGAAAUUUUUG-- UCUAA---AUACAAGUAU--
AAUUAUUGUAGUACCUUUUGUAUCAGGG-UUAAUUAAUUUUA-UUUAACGUA-GGUUU--UAUUU[-????]
Argiolestes_sidonia_BAS UUUGAAAGUAA-AAUU-AU-UU-U-AUUGGUUUUU-UGAUUAUU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
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Caledopteryx_maculata_BCM UUUGAAAGUAA-ACUU-AU-UA-GCUUUAAUUUUU-UGAUU-UU--GGCUC--UAAAAUAUGC-AC????????-------
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Trineuragrion_percostale_BTP UUUGAAGGUAA-AAUU-AU-CU-A-UUAGAUUUUU-UGAUU-UU--GGCUC--UAGAAUAUGC-ACACAUCGCC-------
CG-????-???????---????????????????????????????-???????????????-???????????????-------???????????????????-???-??????-???-????-
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Caledargiolestes_uniseries_BCU UUUGAGGGUAA-GUUU-AU-UU-ACUUAGGUUUAU-UGAUU-AUUUGGCUC--UAAAGUAUGU-ACACAUCGCC-------
CG-????-???????---????????????????????????????-???????????????-???????????????-------???????????????????????-??????-???-????-
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Podopteryx_roseonotata_ZPR UUUGAGGGUAA-AUUU-GU-UU-AUUUAAGCUUGU-UGAUU-UU--GGCUC--UGUGAUAUGU-ACACAUCGCC------- CG-
UCGC-UCUCAU----AAUAAUUUGAGAUAAGUCGUAACAUAG-UAGACGUAUUGGAAC-UGUGUCAUAGAAAGU-------AUUCAAAUUGUAGUUUU---UAG-AGAGCG-UUU-CAUU- UACGUUGAAA-
AGA-UA-AUCGUGC-AAUUCG-GAUUAAUUUGAUU-AAA---------UAUAAAAUUACUUUAUUU---------------AUUGUUUUUGUG----------GGGGA
AUUAUUCUUG--UUUGUUAGGAUUU--UU--AACGAAAUCUUUUU-----UUUA--GUUAUAUGUUUAAUA----GUACUGAGA-AGGGUUG----U--UGAAAUA--UUUUUAAAUAUUUAU-
UAUUA---AUUGAAGUAUAUUUUAUUUAUAGUACCUUUUGUAUCAGGG-CUAAUCAAUUUUA-UUUUGAUUA--UUCU--UAUUU[-????] Austroargiolestes_icteromelas_OAIc
UUUGAAGGUAA-AUUU-AU-UG-AUUUAGGUUUAU-UGAUU-UU--GGCUC--UAGAAUAUGU-ACACAUCGCC------- CG-
UCGC-UCUCAU----AAUAAUUUGAGAUAAGUCGUAACAUAG-UAGGUGUAUUGGAAA-AUGUACCUAGAAAGU--------UUCAAAUUAUAGUUUU---UAG-GGAAUA-UCC-CAUU- UACACUGGGA-
AGG-UA-ACUAUGC-GAAUUA-GUUUAGUUUGAUU-AAA---------AAUAAAUUUACUUUCUU----------------UUUUAUUUUUGGU----------UGGAGAAG-

UUUCUUU--UAUGUUAGUAUCG--UU--AAUGAAAAUAUUAG-----UUAA--GUGAUAGA-UUAUUA----GUACUGUGU-AGGGAUG----U--UGAAAUA-- UUUUGAAAUAUUUAUUUUAAU---
AAAAGUAUAU--UUUAUUUGUAGUACCUUUUGUGUCAGGG-CUGAUCAAUUUUA-UUUUGAUUA--UUCU--UAUUU[-????] Griseargiolestes_albescens_eboracus_BGA_ZGE
UUUGAAGGUAA-AUUU-UU-UG-AUUUAAAUUUU--UGAUU-UU--GGCUC--UAGAAUAUGC-ACACAUCGCC------- CG-
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Grisagriolestes_eboracus_ZGE_BGA ---
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Miniargiolestes_minimus_ZMMn UUUGAAAGUAA-AUUU-AU-UU-AUUUAAGUAGAU-UGACU-UU--GGCUC--UAGAGUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCUC----UA??????????????????????????-???????????????-???????????????-------???????????????????????-??????-???-????-
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Lestomima_flavostigma_OPBc3 ???????????-????-??-??-???????????-?????-??--?????--??????????-??????????-------
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Rhipidolestes_hiraoi_ORH UUUGAAAGGAA-AAUU-AU-UU-A-UUAAUAAUUU-UGAUU-UU--AGCUC--UAAA-UAUGU-ACACAUCGCC------- CG-
UCGC-UCUCAU----AAUAAAGUGAGAUAAGUCGUAACAUAGCUAUAUGCAUCGGACU-ACGUAUGUAGAAAGU-------UUUCAAAUUAUUUUUCUGU-UAG-AGAAUG-CCC-UAUU- CACACUGGGG-
AGUGUA-GUUGUGC-AAUUCA-GCUUAAUUUGAUU-AAU---------UUUUAAUUUACUUAUUUU-------------UUUUAUAUAUAUAUGU---------UUGAGAAG- UU UCUUU--
UUUCUUAGUAAAU---A--GAUGAGAAUGGAUUGU---UUUA--GUAAUAGC-UUAUUA----GUACUGUGA-AGGGGGG----U--UGAAAUA-UAGUUGAAA-
UUAAUUAUUUA----UAAAGUAUAU--UUUGUUAAUAGUACCUUUUGUAUCAGGG-UUGAUUGAUUUUA-UUUAAUUUA--UUUU--AUUUU[-????]
Rhipidolestes_aculeata_BRA UUUGAAAGUAA-AUUU-AU-UU-A-UUAAUUAUUU-UGACU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
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Paraphlebia_zoe_OPZ UUUGAGAGUAA-AUUU-GU-UU-A-UUAAAUAGAU-UGACU-UU--GGCUC--UAAAGUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCAU----AAUAAAGUGAGAUAAGUCGUAACAUAGCUAGGUGUAUCGGAAG-AUGUUCCUAGAAAGU---------UCAAGUUUUAGUUUAA--UAU-AGAAUA-UUU-CAUU-
UACACUGAAG-GGGAUU-GCUGUGU-AAUUCA-GCCAAAUUUGAGU-GA----------AAAAUUCUUACUUAUUUU-------------AAUUAUUUUUCUUUUU----------UUGAGGAG- CU ACUUU-
UUUUUUGAGUAAAA---U--AUUGAAUUCUUUUU-----UUUA--GUGAUAGU-AAAUUU----GUACUGUGU-AGGGUAG----U--UGAAAUA--
UAUUGAAAAUUUAUUAUUUU----GAAAGUAUAC---UUUUUGGUAGUACCUUUUGUAUCAGGG-CUGAUCAAUUUUA-UUUAAAUUA--UUUU--AUUUU[-????]
Thaumatoneura_inopinata_THA_OTI UUUGAAUGUAA-AUUU-AU-UU-A-UUAAGUAAUU-UGAUU-UU--GGCUC--UAAAGUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCUCU---A???????????????????????????-???????????????-???????????????-------???????????????????????-??????-???-????-
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Hypolestes_clara_HYP_OHC UUUGAAAGUAA-UUUU-AU-UU-AUAUUGGUUUUU-UGGCU-UA--GGCUC--UAAAAUGUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUC---???????????????????????????-???????????????-???????????????-------AAUCUCGUCAUAGCUUAAC-UGU-AAAGCU-UUU-CANU- UACACUG???-
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Hypolestes_sp_BYB ---
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Agriomorpha_fusca_ZAF6   --
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Sinocnemis_yangbingi_ZSY   ???????????-????-??-??-????????????-?????-??--?????--??????????-??????????-------
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Miocora_peraltica_ZMP   UUUGAGAGUAA-AUUG-GU-AU-A-UUAUGUCUUU-UGACU-UU--AGCUC--UAAAAUAUGC-AC????????-------
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Cora_marina_POL_OCMr   UUUGAGAGUAA-AUUG-AU-AG-A-UUAUGUCUUU-UGACU-UU--GGCUC--UAAAAUAUGU-ACACAUCGCC-------
CG-UCGC-UCUCUC----UAUAAAGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGUAACC--------AACAACUAGUUCACCCAC-----GGUAGA-UUC-UAUU-
-AGCCUGGAA--GGGUG-GCCAUUU--A-UUG-GCUUGGUUUGACA-UAAA-------AUUUUAUUUACUUUUUUC-------------UUUAUUUAAAAUUAU---------UUGGGAAU-
GUACCUU--UAAUUUAGUAUCU---U--AAAGAAAAUUUUAU-----UUUA--GUAAUAGC-UUAUUA----GUACUGUGA-AGGAAUAUAUGU--UGAAACA-- UUUUGAAAUUUAAUUUUUGA----
CAAAGUAUUC---UUUUUUGGAGUACCUUUUGUAUCAGGG-UUAAUUAAUUUUG-UUUAAAAUA--UUUU--UAUUU[-????]
Cora_cyane_BCC   UUUGAGAGUAA-AUUG-GU-AU-A-UUAUGUCUUU-UGACU-UU--AGCUC--UAAAAUAUGC-AC????????-------
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Polythore_sp_Z_ZPZ   --
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CAUUU-ACGCUGGAA-AGGGAG-GCCAUUC-AAAAUU-GGUUUAGUUUGAUGUUUA---------UUUGUUUACUUUCUUU----------------AAUUUUUUUAUAUUU-------UGAGA AU-
GUGCUUU--UUACUUAGUAUUA--AU--AUGGAAGGUUUUAU-----UUUA--GUGGUAGU-UUAGUA----GUACCGUGA-GGGAAUUGCA-UU-UGAAAUA-- UCUUGAAAUGUUAUGUUUUG----
UAAAGUAUUU--UUUGUUUAAAGUACCUUUUGUAUCAGGG-UUGAUUGAUUUGU-UUUAAUUUA--UUUU--UUUUU
Polythore_boliviana_BPB   UUUGAAAGUAA-AGGA-AU-AA-A-UUUUAUGCUU-UGACU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
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Euthore_fasciata_ZEF3_BEFs   UUUGAAUGUAA-AAUA-AU-AC-A-UUUUAUGCUU-UGACU-UU--GGCUC--UAAAAUAUGC-ACA???????-------
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Rimanella_arcana_ORA   UUUGUAAGUAA-AUUU-AU-UU-A-UUAAAUAUUU-UGAUC-UU--AGCUC--UGGGGUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAU----AAUAAA-UGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUGCCUAGAUAUA--ACACUAACCAAAUUAUAGCUUUAA-UAAAAAGUAU-UUC-AUUU-
-ACACUGAGA-AGGGUUUGCUGUGC-AAUUCA-UCAUAAUUUGAUU-AUUUA---------UUUUCUUACAUAUAAU---------------UUUAUUUGUUUAU---------UUGGGAAG-
UUUCUUU--UUUUUAAGUAUUU--UU--UUUGAAAUAAAAUU-----UUUA--GUAAUAGU-UAAUUA----GUAAUGUAA-AUUAAU-G---U--UGAAAUAC-UAUU------ UUAUAUUUUU----
UAAAGUAUAU--UUCAUUUAUAGUACCUUUUGUAUCAGGG-UUGAUCAAUUUAA-CUCAAUUUU--UCUU--GUUUU[-????]
Pentaphlebia_stali_OPSt   UUUAAAAGUAA-AUUU-GU-UC-UUUUUGGGGUUU-UGAUU-AA--GGCUC--UAGGAUAUGU-ACAUAUCGCC------- CG-
UCGC-UCUCAU----???????????????????????????-???????????????-???????????????--------AUCAAAUUUUAGCUUAA--UAA-GUAGCU-???-????-
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Devadatta_podolestoides_BDP UUUAAGAGUAA-AGAU-UU-UU-A-UUAAUUAUCU-UGAAG-AC--UGCUC--UGAAAUAUGC-ACACAUCGCC------- CG-
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Amphipteryx_longicaudata_ZAL5 ???????????-????-??-??-?-??????????-????????--?????--??????????-??????????-------
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Pseudolestes_mirabilis_OPMb UUUGAUUGUAA-AUUU-AU-UU-AAAUAAGUUUUU-UGAUU-UU--AGCUC--UAAAAUAAGC-ACACAUCGCC-------
CG-UCGC-UCUCUC---UAAUAAGGUGAGAUAAGUCGUAACAUAG-UAGUUGUACCGGAAG-GUGUAUCUAGUAAGU--------GUCGAAUUGUAGCUUUU--GAG-AGAGCG-UUU-UAUU-
UACACUAAAA-AGGAUG-ACUGUGC-GAUUCA-GUUCAAUUUGAUU-GGAA--------CAUCUUCUUACUUUUGUU---------------UUUGUUAUUUGGUU----------UUGGGAAA- UU UCCUU-
-UUAUUUAGUAUUU--AA--AAAGAAUUUUUAUU-----UUUA--GUAAUAGC-AUACUA----GUACCGUGA-GGGAAUUG---U--UGAAAUA--UU- UGAAAUAUUUAUUUUAUU---UUAAGUAUAU--
UUUGUUGGUA-UACCUUUUGUAUCAGGG-UUGAUUAAAUUUG-UUUAAUUUA--UUUU--UAUUU[-????] Philoganga_vetusta_OPVt_BPVt UUUGGCAGUAA-AUUU-AA-UU-A-
UUAAUUUUUU-UGAUU-UU---GCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUCA----UAAUAAGGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-
AUGUAUCUAGAAAGU--------GUCAAAUUAUAGUUCUAU-UAG-AGAAUU-UAU-CGUU- UACACUGAUA-AGGUU--UCUGUGC-AAUUCA-GUUUAAUUUGAUUAAU----------
UAAAAAUUUACUUGUUUU-----------------UUUAAGAAUAUUUU--------A-AAGAAG- UU UCUUU--UUUAUUAGUAUUA-UGA--UUGAAAUUUAAUU------UUUA--GUAAUAGU-
UAAUUA----CUACCGUGA-GGGAAU-G---U--UGAAAUAA-UAUGAAAAUUUCUUUUUAU-
----UAAAGUAUAC--UUAACUUGUAUUACCUUUUGUAUCAGGG-UUGAUUAAAUUUA-CUUUAUUUA--UUUA--AAUAU[-????]
Philoganga_robusta_PGN_OPRb2 UUUGGAAGUAA-AAUU-AA-UU-A-AAUAUUUUUUUUGAUU-UU--AGCUC--UAAAAUAUGU-ACACAUCGCC------- CG-
UCGC-UCUCA----UAAUAAGGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU--------GUCAAAUUAUAGUUCUAU-UAG-AGAAUU-UAU-CGUU- UACACUGAUA-
AGGUU--UCUGUGC-AAUUCA-GUUUAAUUUGAUU-AAA----------UAAAAAUUUACUUGUUUU-----U-------UUUGUGAGGAUAUUUU----------A-AAGAAG- UU UCUUU--
UUUAUUAGUAUUA-UGA--UUAAAAUUUAAUU------UUUA--GUAAUAGU-UAAUUA----AUACCGUGA-GGGAAU-G---U--UGAAAUAA-UA-UGAAA- AUUUCUUUUUAU---UAAAGUAUAC--
UUAACUUGUAUUACCUUUUGUAUCAGGG-UUGAUUAAAUUUA-CUUUAUUUA--UUUA--AAUAU[-????]
Lestoidea_conjuncta_ZLC UUUGAAAGUAA-AAUU-AU-UU-A-UUAAGUUUUU-UGGAU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC-------
CGUUCGC-UCUCUC---UAUAUAGGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUGUCUAGUAAGU---------CCAAGUUGUAGUUCUAU-AAG-AGAAUU-UUU-CAUU-
UACGCUGAAA-AGGAUU-ACUGUGC-AAUUCA-GUUUAACUUGAUU-UAGU--------UAUUUUCUUACUUUGUUU-----U-------UUGUUUGUUUAAUUUU------------AAGAAA- UU UCUUU-
-GUUUUUAGUAUUC-AUU--UGAGAAUUUUGUUU-----AUUA--GUAAUAGU-UUAUUA----GUACCGUGA-GGGGAU-G---U-- UGAAAUAGCUGUUGAAAUAUUUAUUUUUGU---GAAAGUAUAC--
UUUUUUUGUAUUACCUUUUGUAUCAGGG-CUGAUUGAUUUUU--UUGAUCUA--UUUU--UGUUU[-????] Diphlebia_lestoides_ZDL UUUAAAAGUAA-AAUU-AU-CU-A-UUUGGUUUUU-
UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CGUCGCC-UCUCUC-CAUAU-UAGGUGAGAUAAGUCGUAACAUAG-UAGACGUACUGGAAG-GUGUGUCUAGUAAGU---------
ACAAAUUAUAGUUCUGU-UAG-GGAACA-AUU-CAUU- UACACUGAGG-AGGUAU-UCUGUGC-AAUUCA-GAUUAAUUUGAUA-AA----------GAUAGUUUUACUUUAAUU--------------
UAUUUUCUUUUUUAU----------AAGAGAAG- UU UCUUU--UUAUUUAGUAUUC-AUU--UGAGAAUUUUGGGUU----AAUA--GUAAUAGU-UUAUUA----GUACUGUGA-GGGAAU-A---U--
UGAAAUAA- UAUUGAAAUAUUUAUUUAGAA---AAAAGUAUAU--UUUGUUGAUAUUACCUUUUGUAUCAGGG-UUGAUUUAUUUUA-AUAAAUU-A--UUUU--UGAUU[-????]
Diphlebia_caerlesaens_ODC UUUAAAAGUAA-ACUU-AU-UA-A-UUUGGUUUUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAU-UAUAUAUAGGUGAGAUAAGUCGUAACAUAG-UAGACGUACUGGAAG-GUGUGUCUAGUAAGU---------ACAAAUUGUAGUUCCAU-UAG-GGAACA-UUU-CAUU- UACACUGAGA-
AGGGGU-UCUGUGC-AAUUCA-GAUUAAUUUGAUA-AU----------AAUUGUUUUACUUUAUU--------------UUUUAUUUGUUUUUU----------AAGAGAAG- GU UCUUU--
UUAUUUAGUAUUC-AUU--UGAGAAAUUUUUAGUU---UAUA--GUAAUAGU-UUAUUA----GUACUGUGA-AGGAAAUA---U--UGAAAUAA- UAUUGAAAUAUUUAUUUGGAA---AAAAGUAUAC--
CUUGUUUGUAUUACCUUUUGUAUCAGGG-UUGAUUUAAUUUA-AGGAAUUUA--UUUU--AAAAU[-????] Bayadera_melanopteryx_EUP_ZBM UUUGAAAGUAA-AUUU-AU-UU-A-
UUAAGUUUUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUCAU---UAUAUAGGUGAGAUAAGUCGUAACAUAGCUAGGCGUAUCGGAAG-
AUGUGCCUGGUAAGU---------UCAAAUUAUAGCUUUAU-UAG-AGAGCACUCC- CAUUCUACACUGGGA-AGGAUUAACUGUGC-AAUUCA-GUUUGAUUUGAUA-GG----------
UUUUUUCUUAUUAACAUUU---UU-------UAUUGCGUUGAUUUUU------------GAGA AG-UUUCUUU--CUAUUUAGUAUUU-AUU--UUAGAAUUUUGUUUA----UUUC--AUAAUAGU-
UUAUUA----GUACCGUGA-GGGAAAGA---U--UGAAAUA-- UUUUGAAAAAUAAUUGUUUAU--UUAAAGUAUAU--UUUAUUUGUAUUACCUUUUGUAUCAGGG-UUGAUUAAUUAUUUAAAAAUUUA--
UUUU--UUGUU[-????] EU054987_Bayadera_brevicauda UUUGAAAGUAA-AUUU-AU-UU-A-UUAAGUUUGU-UGAUUUUUU-GGCUC--UGAAAUAUGC-ACACAUCGCC------- CG-
NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN---------NNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-
NNN-NNNNNNNNNN-NNNNNN-NNNNNNNNNNNNNNN------------NNNNNNNNNNNNNNNNNNNNNN------------------------------------NNNNN-

NNNNNNN--NNNNNNNNNNN---NNN--NNNNNNNNNNNNNN-----NNNN--NNNNNNNN--NNNNNN---NNNNNNNNN-NNNNN---------NNNNNNN-NNNNNNNNNNNNNNNNNNNN-
---NNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNN[-????]
Dysphaea_gloriosa_ODG ???????????-????-??-??-?-??????????-????????--?????--??????????-??????????-------
??-????-??????--?-??????????????????????????-UAGGCGUAUCGGAAG-AUGUGCCUGGUAAGU--------UUCAAAUUAUAGCUCUAU-UAG-AGAGUU-UUU-AAUU-
UACACUGAGA--GGGUU-ACUGUGC-AAUUCA-GUUUAAUUUGAUGAU-----------UAAUGAUUUACUAUUUUU---------------AUUUUAUUUGGAUUUU----------GAGAAA- UU UCUUU-
-UUAUUUAGUAUAU-CUGUUAGAAACUUAAUU---------UUUAGUAAUAGU-UUAAUA----GUACCGUGA-GGGAAUGA---U--UGAAAUA-- UUUUGCAAUAUUUAUUCUUGA---UAAAGUAUAU--
UUUGUUUGUGUUACCUUUUGUAUCAGGG-UUGAUUAAUUUGA-AAAAAUUUA--UUUU--UUCUU[-????]
Euphaea_formosa UUUGAAAGUAA-AUUU-AU-UU-A-UUAGGUUUUU-UGAUU-UU--GGCUC--UGAAAUAUGC-ACACAUCGCC------- CG-
UYGC-UCUCAU----AAUAAGGUGAGAUAAGUCGUAACAUAG-UAGGCRUAUCGGAAG-AUGUGCCUGGUAAKC---------ACAAAUUAUAGUUCUAU-UAG-AGAAUA-UCU-CAUU- UACACUGAGA--
UGGUUUACUGUGC-AAUUCA-GUUUGAUUUGAUAAU-----------UAUCAUUUUACUUUUUUU---------AUUAUUUAUUU---------------AUUUGGAGAAG- UU UCUUU--
UUAUUUAGUAUAA-AUU--UUAGAAUUYUAAUUU-----UUA--GUAAUAGU-UUAUUA----GUACCGUGA-GGGAAUMK---W--UGAAAUA-- UUUUGAAAUAUUUAUUUUCUU---UAAAGUAUAU--
UUUAUUUWUAUUACCUUUUGUAUCAGGG-YUGAUUAAUUUUA-AAAAAUUUA--UUUU--UUUUU[-????] Anisophaea_decorata_ZAD_OED UUUGAAAGUAA-AUUU-AU-UU-A-
UUAGGUUUUU-UGAUU-AUU-GGCUC--UGAAAUAUGC-ACACAUCGCC------- CG-UCGCCUCUCUCUAA---AUAGGUGAGAUAAGUCGUAACAUAGCUAGGCGUAUCGGAAG-
AUGUGCCUGGUACGC---------UCAAAUUAUAGCUCUAU-UAG-AGAGCU-UCU-CAUU- UACACUGAGA--GGGGU-ACUGUGC-AAUUCA-GUUUGAUUUGAUA-UU----------
CAUUAUCUUACUUUUAUU----UA-------UUUAUUUAUUUAUUUU-----------GAGAAG- UU UCUUU--UUAUUUAGUAUAG-UUU--AUAGAAUUAUAAUUU-----UUA--GUAAUAGU-
UUAUUA----GUACCGUGG-GGGAAUUU---U--UGAAAUA-- UUUUGAAAUAUUUAUUUUUUA---UAAAGUAUAU--UUUGUUUAUAUUACCUUUUGUAUCAGGG-UUGAUUAAUUUUU-AAAAAUUUA--
UUUU--UUUUU[-????] Anisopleura_sp_A_EUP_ZAA UUUGGAAGUAA-AUUU-AU-CU-A-UUAGGUUUUU-UGAUU-UU--GGCUC--UGAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCUCUAA---AUAGGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUGUCUGGUAAGU---------GCAAAUUAUAGUUCUAC-AAG-AGAACA-UCU-CAUU- UACACUGGGU-
AGGAUU-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AAG---------GUUAAGUUUACUUUUUUU-----G-------UUUAAGGUUUAAUUUU----------UUGAGAAG- UU UCUUU--
UUAUUUAGUAUAA-AGAAGUGAAUUUUGUUUU-------UUA--GUUAUAGA-UUAUUA----GUACCGUGA-GGGAAUGUU--U-- UGAAAUAUUAGUUGAAAUAUUUAUUUUUGG---UAAAGUAUAC--
UUUAUUUGUAUUACCUUUUGUAUCAGGG-UUAAUUAAUUUUU-AAAAAUUUA--UUUU--UUCUU[-????] Disparocypha_biedermanni_ZDB UUUGAAAGUAA-AUUA-AU-UU-U-
UUAAGUUUUU-UGAUU-AU--AGCUC--UAAAAUAUGC-ACAUAUCGCC------- CG-UCGC-UCUCAUAA----UAAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-
AUGUAUCUUGAAAGU-------AGAUGAGCUAUAGUUAAA--UAG-UUAAUU-UUU-CAUU- UACACUGAGA-AGA-UU-UCUGUGC-AAUUCA-GAUUAGCUUAAUA-AA----------
UAUUUAAUUACUUUUUAU-----------------UUUAUUUUUA-U----------UUUAGAAA- UU ACUUU--UGGUUUAGUAUUUAAGA-UUGAAAAAUCGUUU-------UUA--GUAAUAGU-
UUAUAA----GUACUGUGA-AGGCAUAUU--U--UGAAAUAUUUUUUUAAUUUUUU-------
----UAAAGUAUUA-----UUUUUAUUUACCUUUUGUAUCAGGG-UUGAUUAAAUUUA-AAAAAAUUA--UUUU--UGUUU[-????]
Libellago_semiopaca_BLS UUUGAAAGUAA-AAUU-AU-UU-A-UUAGGUUUUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
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UUUGAAAGUAA-AUUA-AU-UU-A-UUAGGUUUUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-????-??????----????????????????????????????-???????????????-???????????????----??????????????????????-???-??????-???-????-
??????????-?-????-???????-??????-???????????????????------?????????????------??-----------????????????????-----?????????-
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UUUGAAAGUAA-AUUG-AU-UU-A-UUUGGUUUUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACAUAUCGCC-------
CG-UCGC-UCUCGUAU-----AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUUGAAAGU----GUUAUUUGAGUCAUGGUUUAAUUUAG-UAAACA-UUU-CAUU-
UACACUGAAA-AGAGUU-UCUGUGC-AAGUCA-GAUUGACUUAAUU-AUUAUU------UAUAAAAUUGCUUUUUCU-----------------UUUAUCUUUUU----------UUUGGAAG- UU GCCUU-
UAAUUUUAGUGAUU-UUUAUUGAAAAAUAUAUU-------UUA--GUAAUAGU-UAAUAA---UGUACUGUGA-AGGAAGU----U--UGAAAUA-UUUUAAUGUUAUUUAUUU---
----AAAAGUAGAA----AUUUUUAUUUACCUUUUGUAUCAGGG-UUGAUUAAUUUUU--AAAAUUUA--UUUU--UAUCU[-????]
ZCCt UUUGAAAGUAA-AUUA-AU-UU-A-UUAGGUUUUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
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Sundacypha_petiolata --
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Rhinocypha_fenestrella_ORF UUUGAAAGUAA-AUUG-AU-UU-A-UUGAGUUUAU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCCC-CCUCGUAU-----AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUGUCUUGAAUGU-----AUAUCGGGGCAUAGUUUU---UAG-UUAACA-UGC-
CAUUCUACACUGAAAAAGAGUU-UCUGUGC-AAUUCA-GAUUGGCUUGAUU-AAA---------AAUUAAACUACUUUUUUU------------------UUUGUUUUUA---------AAAAGA AG-
UUACUUC--UUCUUUAGUAUUA-AGU--AGGAUAGGAAGAUGUU-UU-AUA--GUAAUAGU-UUAUUUU--UGCACCGUGA-GGGAC------U--UGAAAUA--UAACGAAC--UCAC- UUUGAG---
AGAAGUAUUC--UAAUUUUAUUUCACUUGUGGUAUGAGGG-CUGAUUAAUUUUA--ACAAUUUA--UUUU--UAGUU[-????]
EU054949_Rhinocypha_tincta UUUGAAAGUAA-AUUA-AU-UU-A-UUUAAUUUUU-UGAAC-UU--AGCUC--UAAAGCAUGC-ACACAUCGCC------- CG-
NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNNN---------NNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-
NNN-NNNNNNNNNN-NNNNNN-NNNNNNNNNNNNNN-----------NNNNNNNNNNNNNNNNNNNNNN-----------------------------------NNNNN- NN NNNNN--
NNNNNNNNNNN---NNN--NNNNNNNNNNNNNN-----NNNN--NNNNNNNN--NNNNNN---NNNNNNNNN-NNNNN--------NNNNNNN-NNNNNNNNNNNNNNNNNNNN-
---NNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNN[-????]
EU477615_Heliocharis_amazona UUUGAAAGUAA-AUUU-AA-UU-A-AUAAUUUUUU-UGAUU-U---GGCUC--UAGGAUAUGC-RCACAUCGCC-------
CG-UCGC-UCUCAUGU-GUAUAUAGUGAGAUAAGUCGUAACAUAG-UAGACGUAUUGGAAA-AUGUGUCUGGUAAGU---------UCGAGUCAUAGCUU--AUUAG-AGAGC-UUUU-UGUU- UACAUU-
AAAUUGG-UG-CUUGUGC-GAUACA-AGCUGUCUCGAUU-GUG----------AUUUUUUUACUUAUGUU------------------------AUUAGUUUUUGUUUAUUAGAAG- UU UCUU--
UUUUUUUUAGUACUUUUAU-GGGAUUUUGUUUUAU---UGUGAUAGUUUAUUUU-UACUGUAGGGGAUUAGUAUGUGAAAUAUU--U--UGAAAGU-----UCUUAUUU---------
---GGGAAGUAUAU--UUUGUUUAUAGUACCUUUUGUAUCANGG-UUGAUUAAUUAUU-UUUAAUUUA--UUUU--UGUCU
Heterinia_americana_CAL_OHA2 UUUGAAAGUAA-AAUA-AU-UU-A-UUAAGUUUCU-UGACU-AUUGGGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCAUGA-----UAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUUGGAAA-AUGUAUCUAGAAAGU--------?????????????????????????????-???-????-
?????????-??????--???????-??????-?????????????-???---------???????UUACUGUUUUA---------------AUAAAAAUUUAUUU----------UAGAGAAU-
UAUCUUU--UACUUUAGUAUUU-UAC--UGAAAAAGUUGUUU-------UU--GUAAUAGU-UUACUA----GUACUGUGA-AGUAACG----U--UGAAAUA--AUCUGAAA- AUUUAUUUAGGA---
AAAAGCAUAC---CUUUUUGUAGUACCUUUUGUA-CAGGG-AUGAUUAAUUUUA-UUUAAUUUA--UAUU--GAGAU[-????]
Caliphaea_confusa_ZCC UUUGAAAGUAA-ACUU-AU-UU-A-UUCAGUUUUU-UGAUU-UA--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUGA-----UAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUUGGAAA-AUGUAUCUAGAAAGU----------CAAAUUAUGGCUCUGAUUAG-UGAGCA-UUU-CAUU- UACACUGGAA-
AGG-GA-AUUGUGC-AAUUCG-AUUUAAUUUGAUU-AAG---------GGUUAAUUUAUUGUUAAU----UU-------AGGUUUAUAUUAAUUU----------AGGUAAAG- UA AUUU---
UAUUUUAGUAUAU-UAU--UGAAAUAAGUUUAU-------AA--AUAAUAGU-GUAUUA----GUACAGUAA-UGGAACA----U--UGAAACA-- UUUUGAAAUAUUUACUUUAUU---UUAAGUAUAU--
UUUAUUUGUAGUACCUUUGGUAUCAGGG-UUAAUUUAUUUUA-UUUUAUAUA--UUUU--UUCUU[-????] Noguchiphaea_yoshikoae_AJ459228 -----------------------
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EU055012_Vestalis_beryllae UUUGAGAGUAA-AUUG-GU-UU-ACUUAAACUGUU-UGAAUUUU--GGCUC--UAGAAUAUGC-ACACAUCGCC-------
CG-NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNNN---------NNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNN-
NNNNNNNNNN-NNN-NNNNNNNNNN-NNNNNN-NNNNNNNNNNNNNN-----------NNNNNNNNNNNNNNNNNNNNNN-----------------------------------NNNNN- NN NNNNN-
-NNNNNNNNNNN---NNN--NNNNNNNNNNNNNN-----NNNN--NNNNNNNN--NNNNNN---NNNNNNNNN-NNNNN--------NNNNNNN-NNNNNNNNNNNNNNNNNNNN-
---NNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNN[-????]
Matrona_basilaris_BMB UUUGGAAGUAA-AGUU-AG-UU-A-AAUUUCUAAUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-????-???????-?--???-???????????????------????????????????????-???-??????-???-????-
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CAlopteryx_atrata_EF032699 ---
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EU055003_Echo_modesta UUUGAGAGUAA-AUCU-UU-UU-U-GUUAUGGUGGUUGAAC-UU--GCUUC--UAAAAUAUGC-ACACAUCGAC------- CG-
NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNNN---------NNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-
NNN-NNNNNNNNNN-NNNNNN-NNNNNNNNNNNNNN-----------NNNNNNNNNNNNNNNNNNNNNN-----------------------------------NNNNN-

NNNNNNN--NNNNNNNNNNN---NNN--NNNNNNNNNNNNNN-----NNNN--NNNNNNNN--NNNNNN---NNNNNNNNN-NNNNN--------NNNNNNN-NNNNNNNNNNNNNNNNNNNN-
---NNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNnnnnnNNNNNNNNNNNNNN[-????]
EU054952_Neurobasis_ianthinipennis UUUGAAAGUAA-AAUA-AA-UA-U-UU-AGUUUUUUUGAAC-UU--GGCUC--UAAAUUAUGC-ACACAUCGNN------- NN-
NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN---------NNNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-
NNN-NNNNNNNNNN-NNNNNN-NNNNNNNNNNNNNNN-----------NNNNNNNNNNNNNNNNNNNNNN-----------------------------------NNNNN- NN NNNNN--
NNNNNNNNNNN---NNN--NNNNNNNNNNNNNN-----NNNN--NNNNNNNN--NNNNNN---NNNNNNNNN-NNNNN--------NNNNNNN-NNNNNNNNNNNNNNNNNNNN-
---NNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNnnnnnNNNNNNNNNNNNNN[-????]
Sapho_orichalcea_OSO UUUGAUAGUAA-AUUU-AA-UU-U-UUUAUUCUUU-UGAAA-UU--AGCUC--UAAAAUGUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUAA-----UAAGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUUGGAAA-AUGUAUCUAGAUAGU---------CAAAUUAUAGCUUUU--UAG-AAAGUU-CUU-CAUU- UACACUGAAU-
GGA-AA-AUCGUGC-GAUUCG-GUUUAAUUUGAGA-AC---------UUAUUUCUUAUUAUUUUU-------------AUUUAUUUUAAAAUU---------AGGAGAAG- UA ACUU--
UUAUUUAAGUACCU-UAU--UGAAUAAAUAGAGC-------UU--AUUAUAUU-GUAUUA----GUACCGUGA-GGGAAUUG---A--UGAAAUA--UUUUGAAAU- UGUAUUUUUUC---AUAAGUAUGU--
UUUAUUUACAGUACCUUUUGUAUCAGGG-UUAAUUAAUUUUC--AAAAUUUA--UUUU--UUUUU[-????]
Calopteryx_amata_CAL_OCAm UUUGAAAGUAA-AUUG-GU-UU-A-UUUAGUUGUU-UGAAU-UU--GGCUC--UAUAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCUCUAU----AAAGAGAGAUAAGUCGUAACAUAG-UAAGUGUAUCGGAAG-AUGUACUUAGAAAGU-------AUCAAAGUAUAGCUUUAU-UAG-AAAGUA-UCU-CAUU-
UACACUGGGA-AGAUUG-GCUGUGC-AAUCCA-GCCUAUUUUGAUAUUUUGAUAAA---AAUAAUCUUACUUUUUUU----------AUUUUUGGGUUUU--------------UGGAGAAG- UA ACUU--
UAUUUUUAGUAAUG-UUU--UGAAAAAAAUUAUU-------UA--GUAAUAGU-UAAUUA----GUACCGUGA-GGUAAUUG-----GUGAAAUA-
UUUUGAAAUACUUAUUUUUGU----AAAAGUAUAU--UUUGUUAGUAGUACCUUUGGUAUCAGGG-UUGAUUUAUUUUG-UUUAAUUUA--UUUU--UAUUU[-????]
EU477613_Calopteryx_splendens UUUGAAAGUAA-AUUG-GU-UU-A-UUUAGUUGUU-UGAAU-UU--GGCUC--UAUAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCUCUAU----AAAGAGAGAUAAGUCGUAACAUAG-UAAGUGUAUCGGAAG-AUGUACUUAGAAAGU-------AUCAAAGUAUAGCUUUAU-UAG-AAAGUA-UCU-CAUU-
UACACUGGGA-AGAUUG-GCUGUGC-AAUCCA-GCCUAUUUUGAUAUUUUGAUAAA---AAUAAUCUUACUUUUUUU----------AUUUUUGGGUUUU--------------UGGAGAAG- UA ACUU--
UAUUUUUAGUAAUG-UUU--UGAAAAAAAUUAUU-------UA--GUAAUAGU-UAAUUA----GUACCGUGA-GGUAAUUG-----GUGAAAUA-UUUUGAAAUACUUAUUUUUG-
---UAAAAGUAUAU--UUUGUUAGUAGUACCUUUGGUAUCAGGG-UUGAUUUAUUUUG-UUUAAUUUA--UUUU--UAUUU[-????]
EU054934_Calopteryx_aequabilis UUUGAAAGUAA-AAUG-AU-UU-A-UUUGGUUGUU-UGGAU-UU--GGCUC--UAUAAUGUGC-ACACAUCGCC------- CG-
NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-
NNN-NNNNNNNNNN-NNNNNN-NNNNNNNNNNNNNNN-----------NNNNNNNNNNNNNNNNNNNNNN----------------------------------NNNNNN- NN NNNNN--
NNNNNNNNNNNN-NNNN--NNNNNNNNNNNNNN-----NNNN--NNNNNNNN--NNNNNN---NNNNNNNNN-NNNNN--------NNNNNNN-NNNNNNNNNNNNNNNNNNNN-
---NNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNNN[-????]
Iridictyon ---
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Iridictyon_trebbaui_ZIT UUUGAAAGUAA-AUUG-UU-U--UAUUACUGUUUU-UGAAA-UAU-GGCUC--UAAGAUGUGU-ACACAUCGCC-------
CG-UCGC-UCUCUCUA--????????????????????????????-???????????????-????????????????--------??????????????????????-??????-???-????-
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Unaligned_Lestoidea ----- --
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--111111111111111111--------22222222222222222222222222222222222222222222222-------
------------------444444444-----------55555555555555----------------------------------666666666----------------
777777777777777777--8888888888888888888888888-----[-????] Nubiolestes_diotima_PER_OND
UUUGACAGUAA-AAUU-GG-GA-U-CUACCCAUAU-UGAUA-UA--AGCUC--UAAAGUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUU-UU---AAAAUAAGAUAAGUCGUAACAUAG-UAGACGUACCGGAAG-AUGUGUCUAGUAAGA--AUUUAUUCA-AUUUAGAGCUUGAC-UAG-AAG???-???-????-
??????????-?-????-???????-??????-?????????????-??--------------?????????????????--------????????????????--???????????-------
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---AAAAGUAUAU--UUUACUUGUAGUACCUUUUGUAUCAGGG-ACAAUCUAUUAAAU-UUAAUUUA--UAUU--AUUUU[-????]
Perilestes_kahli_ZPK2_BPK UUUGGUGGUAA-AUUU-GU-UU-U-AUAAUCAUUU-UGAUA-CU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCACU-UU---AAAUUGAGAUAAGUCGUAACAUAG-UAGGCGUACCGGAGG--UGUGCCUAGGAAGA--UUAAUCAUCAAGUUAGAGCUUGG--UAG-GAAGCU-UUU-CAUU- UACACUG-GU-
AUU-AUUACUGUGC-AACUCA-GUUUAACUUGAUA-UU---------AAUAUAAUUACUUUUAUU------------AUUGUUUUUAAGUUUU---------UGGAGAAA-

UAUCUUU--UUUUAUAGUAUUU-UAU--UGAAAUAACUUUUU-------AU--GUAAUAGU-AUAUU-U--UUUACCGUGA-GGGGUCUU-UGAAAUAGAA---- UUUGAAAAUAUUUUAAUUUUU---
AAAAGUAUAUUUUGUUUAAUUAGUACCUUUUGUAUCAGGG-UUGGUUUAUUAUAUAUUAAUUUA--UUUU--AUUUU[-????] Perissolestes_remotus_BPR UUUGGUGGUAA-AUUU-GU-UU-
U-AUAAUCAUUU-UGAUA-CU--GGCUC--UAAAAUAUGC-ACACA?????-------
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Perissolestes_magdalenae_OPMg UUUGAUAGUAA-AUUA-AG-UU-A-UAUAGCUUAAUUGAGA-AU--GGCCC--UGAAAUAUGC-ACACAUCGCC------- CG-
ACGC-UCUCAUU-AU---AAGGUGAGAUAAGUCGUAACAUAG-UAGGCGUACCGGAGG--UGUGCCUAGGAAGA--??????????????AAUGCUUGGC-UAG-AAGGCA-UUU-CAUU- UACACUGAAA-
AUUU
AU-UCUGUGC-GAUUCA-GUUUAAUUUGAUA-AU----------UAUUUUCUUACUUUUAUU---------------UUUAAAAUUAUUUU----------UAGAGAAA-UAUCUUU-- GAUUUUAGUAUA--
-UA--AAAGAAUUUAUUUU-----UUUU--GUGAUAGU-UAAUUA----GUACUGGGA-AGGAACAAUUGA--UGAAAUA-UAUUGAAA--UUAUAUUUAUUU---UUAAGUA AUU--
UUUAUUUGGUGUACCUUUUGUAUCAGGG-UUAAUUAAAUAUAA-UUAAUUUA-UUAUU--AUUUU[-????]
Chlorolestes_umbrata_SLE_OCU ----- ---
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Euchlorolestes_SLE_OET UUUGAUAGUAA-AAUU-GA-UU---UUUUAUCCUUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCACU-UU---AAAGUGAGAUAAGUCGUAACAUAG-UAGGCGUAUCGGAAG-AUGUGCCUAGUAAGC--A-UUUAUUCAUCUUAGAGCUUGGU-GAG-AAAGCA-UUU-CAUU-
UACACUGAAA-AUU-UU-ACUGUGC-GACUCA-GUUUUAGGUGAUA-AAAU--------UUAAUGAUUACUAUUAUU----AU-------UUGAUU-AUAUUAUUU----------AUGAGAAA- UA
UCUUU--UUUUUGAGUAUUA--UU--AUAGAAAGAAUUUUU----UUAG--UUUAUAUA-UUAUUU----GUACCGUGAAGGAUUAAUU-----UGAAAUA-UUUUGAAAAAUUAUAUUAA--
----AUAAGUAUAC--UUUAUUUGUAGUACCUUUUGUAUCAGGG-UUGAUUUAUUUAUU-UUAAUUUA--UUUU--GUUUU[-????]
Phylolestes_ethelae_OPE UUUGAUAGUAA-GUUU-GG-UU---UAUUACCAUUCUGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCACU-UU---AAAGUGAGAUAAGUCGUAACAUAG-UAGGGGUAUCGGAAG-AUGUUCCUAGUAAGA------UACUCGAAUUAGAGCUUGUU-UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UU-ACUGUGC-CAAUCA-GUUUAAUUUGACC-AUC----------UAAAAAAUUACUAUUAUU----AU-------UUGUUU---UCGAUUU----------UAGGGAAA- GA
UCUUUUUUUUUUUUAGUAUG---AU--AUGGGAAAAAUU-UA----UUUG---UGAUAUU-UUAUAU----GCACCGUGAAGGGUCUUU------UGAAAUA-
UCUUGAAACAUUUAUUUUGUA----AAAAGUAUAU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUGGUCUAAUUUAU-AUAACCUA--UAUU--AUUUU[-????] Synlestes_weyersii_ZSW
UUUGAUUGUAA-GGUU-AA-UU---UUUUAUUAUCCUGAUU-UU--AGCUC--UGGGAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCACU-GU---AAAGUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGUAAGA-----UUAUUCAGGUUAGAGCUUGAU-UAG-AAAGCU-UUU-CAUU- UACACUGAAA--
UU-UU-ACUGUGC-AAUUCA-GUGUAAUCUGAUA-UA----------UUACUAAUUACUAAUUUU----AU-------UAGUUU-AUUUAAUUU----------U-GAGAAA- UA UCUUU--
UUUUUAAGUAAUU--UU--AUAGAAAUAAAAAUA----UUUG--GUUAUAUU--UAUUU----GUACUGUGA-GGGGUUUU------UGAAAUA-AUCUGAAAAAUCAUAUUUAU-
----AAAAGUAUUC--UUUAUUUGUAGUACCUUUGGUAUCAGGG-UUGAUCUAUUUUAU-GUAGUUUA-UUACU--AUUUU[-????]
Synlestes_tropicus_ZST UUUGAUUGUAA-GGUU-AA-UU---UUUUAUUAUCCUGAUU-UU--AGCUC--UGGAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCACU-UU---AAAGUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGUAAGA----UUUAUUCAGAUUAGAGCUUGAU-UAG-AAAGCU-UUU-CAUU- UACACUGAAA--
UU-UU-ACUGUGC-AAUUCA-GUAUAGUCUGAUA-UG----------UUACUAAUUACUAAUUUU----AU-------UAGUUU-AUUUAAUUU----------U-GAGAAA- UA UCUUU--
UUUUUAAGUAAUU--UU--AUAGAAAUAAAA-UA----UUUG--GUUAUAUU--UACUU----GUACUGUGA-GGGGUUUU------UGAAAUA-AUUUGAAAAAUUAAAUUUAU-
----AAAAGUAUUC--UUUAUUUGUAGUACCUUUUGUAUCAGGG-UUGAUUUACUUUAU-GUAUCCUA-UAGAU--GUUUU[-????]
Chorismagrion_risi_CHO_ZCRi UUUGAUAGUAA-GAUU-AG-UU-A-UUUAGCUUUUCUGGCU-UAU-AGCUC--UAAGAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCAUU-UU---AAAGUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUAUCUAGUAAGA--A-UUAAUUCAGAUUAGAGCUUGAU-UAG-AAAGCA-UUU-CAUU-
UACACUGAGA-AUU-UU-ACUGUGC-GAUUCA-GUUUACUCUGACA-AA----------UAUUUAAUUACUGUUUAU----UU-------AUGUU--AUUAUAUUU----------U-GAGAAA- UA
UCUUU--AUUUUUAGUAUU---UU--AUGGAAAGAAUAAU-----UUUA--GUAAUAGU-UUAUUU----GUACUGUGA-AGGGUUUU------UGAAAUA-
UUUUGAAAAUAUUAUUUUUUU----AAAAGUAUAU--AUCGUCUGUAGUACCUUUUGUAUCAGGG-CUGAUCUAUUUAAU-UUAAUAUA--UUUU--AUAUU[-????]
Episynlestes_cristatus_SYN_ZEC UUUGGUAGUAA-AACU-AC-CC-A-UUUUGUUGGUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUU-UU---AAAGUGAGAUAAGUCGUAACAUAG-UAGACGUAUCGGAAG-AUGUGUCUGGCAAGA--?????????????????????????-??-??????-???-????-
??????????-???-??-???????-??????-?????????????-??---------------???????UUACUGGGGCUU-------AUUUU--UUUUGUUUU----------UAGAAAAA-
UAUUUUU--GUUUUUAGUAUU---UU--AUAGAAAAGAUU-UA----AUUA--GUAAUAUU-UAAUUU----GUACUGUGA-GGGGUCUU------UGAAAUA-UUUUGAAAAUGUCCAUUAAU-
----UAAAGUAUAU---UUAAUAGUAGUACCUUUUGUAUCAGGG-UUGAUCUAUUUAAU-AUAAUUUA-AUUUU--AUUCU[-????]
Episynlestes_albicaudus_BEA UUUGGUAGUAA-GGCU-AC-CU-A-UUUUGUUGGUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
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UUUGAUAGUAA-AUUU-AA-UU-A-UUUUAUUAUUUUGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCACU-UU---AAAGUGAGAUAAGUCGUAACAUAG-UAGGCGUAUCGGAAG-AUGUGCCUAGAAAGA---UUUAUU-CUAUCUAGAGCUUGGU-UAG-AAAGCA-UUU-CAUU- UACACUGAGA-
AUU-UU-ACUGUGC-AACUCA-GUUUAGAUUGAUA-UU----------UUAUCAAUUACUAGUUUU----AU-------UUAAU----UUUAUUU---------AUGAGAAA- AA UCUUU--
GUUUUGAGUAUU---UU--AUAGAAAAAAUUUU-----UUUA--GUAAUAUU-UAAUUU----GUACUGUAA-AGGGUUUU------UGAAAUA-
UUUUGAAAUAUCUUUAUUUUU----AAAAGUAUAU--UUUAUUUUUAGUACCUUUUGUAUCAGGG-UUGAUCUAUUUUAU-UUAAUAUA--UAUU--AUUUU[-????]
Megalestes_kurahashii_______ ---
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Orolestes_octomaculatus_ZOO UUUGACAGUAA-AAUU-AU-UU---UUUUGUUAAUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCACU-UU---AAAGUGAGAUAAGUCGUAACAUAG-UAGGCGUAUCGGAAG-AUGUGCCUAGCAAGA--AUUUAUUACAAAUUACAGCUUGAU-UAG-AAAGCA-UUU-CAUU-
UACACUGAAA-AUU-UU-ACUGUGC-AAUUCA-GCUUAGUUUGAUG-AAU---------UUAAUAAUUACUUGGUUU----GU-------UUGUUUU-CUGCUUAU----------AUGAGAAG- UA
UCUUU--AAUUUUAGUAUCU--AU--ACAGAAAAAAAAUGA-----UUUA--GUAAUAUU--UACGU----GUACUGUGA-AGGGGCUU------UGAAAUA-UUUUGAAAAGUUUAUUUAUU-
----AAUAGUAUAU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUGAUCAAAUAUGU-UUAAUUUAUUUAUU--AUAUU[-????]
Austrolestes_annulosus_BAA UUUGAUAGUAA-GGUU-AC-UU-AUUUUUAUUAACCUGAUU-CU--GGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-????????-?---????????????????????????-???????????????-???????????????--????????????????????????-???-??????-???-????-
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Sympecma_paedisca_BSP UUUGAUAGUAA-GGCU-GG-UU-GGUUUUAUCGGCUUGAUU-CU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
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ZSF_Sympecma_fusca UUUGAUAGUAA-GGCU-GU-UU-UGUUUUAUCGGCUUGAUU-CU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCACU-UU---AAAGUGAGAUAAGUCGUAACAUAG-UAGGCGUAUCGGAAG-AUGCGCCUAGCAAGA--AUUUAUUACAAAUCAGAGCUUGGU-UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UU-ACUGUGC-GACUCA-GUAUGAUUUGAAU-AAU---------UCAAUAAUUACUUGAUUU----AU-------UUG---UAUUUAUUUU----------UGAGAAA- UA UCUUU--
GUUUUGAGUAUAU--CU--AUAGAAAUAAGUUU-----UUUA--GUAAUAUA--CACCU----GUACUGUUA-A????????------???????????????????????????-
----??????????--?????????????????????????????-???????????????????????-?????--?????[-????]
Austrolestes_analis_OAAn UUUGAUAGUAA-GAUU-AU-UU-GGUUUUAUUAAUCUGAUU-CU--GGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCACU-UU---AAAGUGAGAUAAGUCGUAACAUAG-UAGGCGUAUCGGAAG-AUGCGCCUAGUAAGA--AUUUGAUACAAACUAGAGCUUGGU-UAG-AAAGCA-UUU-CAUU-
UACACUGAAA-AUU-UU-ACUGUGC-GACUCA-GUAUAGGUUGAGU-AAA---------UUGAUAAUUACUUUAAUU----GU-------UUGUUAUAUUUAUUUU----------AUGAGAAA- UA UCUUU-
-UUUUUUAGUAUAU--AC--ACAGAAAAAAGAUU-----UUUA--GUAAUGUA--UCAUUU---GUACGGAGA-GGGGGGUG------UGAUUUA-UUUAGAAGAUUUACUUUACU-
----AAAAGUAUAU--UUUAUAUAUAGUUCCUUUUGUAUCAGGG-UUGAUCUACUAUAC-AUAAUUUAUUUAUU--GUCUU[-????]
Indolestes_pergrinus_LES_OIP UUUGAUAGUAA-GAUU-AC-UU-AUAUUUAUUAAUCUGAUU-CU--GGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCACU-UU---AAAGUGAGAUAAGUCGUAACAUAG-UAGGCGUAUCGGAAG-AUGUGCCUAGAAAGA--AUUUAAUACAAAUUAGAGCUUGGU-UAG-AAAGCA-UUU-CAUU-
UACACUGAAA-AUU-UU-ACUGUGC-GACUCA-GUAUAAUUUGAUU-GAG---------UAAUUAAUUACUAUAAUU----AU-------UUG---UAUUUAUUUU----------UGGAGAAA- UA UCUUU-
-GUUUUUAGUAUAC--AU--AUAGAAAAAAUUUU-----AUUA--GUAAUAUU--AAUCU----UUACUGUGA-AGGUUCUU------UGAAAUA-UUUUGAAAAUUUAUUUUAUU-
----AAAAGUAUAU--UUUAUUUGUAGUACCUUUUGUAUCAGGG-UUGAUCUAUUAAAG-AUAAUUUAUUUAUU--AUAUU[-????]
Indolestes_cyaneus ---
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Chalcolestes_viridis_LES_ZCV UUUGACAGUAA-GAUU-AU-AU-U-UUUUAUUGAUCUGAUU-UU--AGCUC--UAAAAUAUGCCACACAUCGCC------- CG-
UCGC-UCUCACU-UU---AAAGUGAGAUAAGUCGUAACAUAG-UAGGCGUAUCGGAAG-AUGUGCCUAGUAAGA--A-UUAUU-CAAACUAGAGCUUGAC-UAG-AAAGCA-UUU-CAUU- UACCCUGAAA-
AUU-UU-GCUGUGC-AAUUCA-GCGUAGUUUGAUAGUUUGAUAAG---UUAUCAAUUACUGGAAAA----UU-------UUG--UAUCAUAUAAU----------AUGAGAAA-

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UAUCUUU--CAAUUUAGUAAGU--UU--AUAGAAAUUUUUA------UUGA--GUAAUAUU--UAUUU----GUACUGUAA-AGGGGGU------UUGAAAUA-UUUUGAAAAUUUAUUUUAUU-
----AAAAGUAUAU--UUUGUUUAUAGUACCUUUUGUAUCAGGG-UUAAUCAAUUACUU-AUAAUUUAUUUAUU--AUAUU[-????]
Archilestes_grandis_OAG_BAG                       UUUGAUAGUAA-GAAC-AA-UA-G--UUAAUUGUACUGAUUUUU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCACU-UU---AAAGUGAGAUAAGUCGUAACAUAG-UAGACGUAUCGGAAG-AUGUGUCUAGUAAGA--AUUUA-UACAGAUUAGAGCUUGAU-UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UU-ACUGUGC-AAUUCA-GUAUAAUCUGAUUCACU---------UAAUCAAUUACUUGAACU----AU-------UUG--UUUUAUUUAUU---------UA-GAGAAG- UA UCUCU--
AUGUUUAGUAUAU--UU--AUAGAAAAAUUAUU-----AUUA--GUAAUAUU--GAUAU---GUACUGUAA-GGGGGUU------UUGAAAUA-UAUUGAAAAUGUUUUGUUUA-
----AAAAGUAUUC--UUUAUUUGUAGUACCUUUUGUAUCAGGG-UUAAUCAAUUAUAU-UCAAUUUA-UUGUU--GUUUU[-????]
Lestes_rectangularis_OLR                          UUUGAUAGUAA-GAUU-AA-UU-G--UUAAUUGAUCUGAUC-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCACU-UU---AAAGUGAGAUAAGUCGUAACAUAG-UAGACGUAUCGGAAG-AUGUGUCUAGUAAGA--AUUUAAUACAAAUUAGAGCUUGGU-UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UU-GUUGUGC-AAUUCA-AUAUAAGUCCGAU-CACA--------UCAAUAAUUACUAUAAAU---UUU-------UUGUUGCUGUUAAU-U----------AUGAGAAA- UA UCUUU--
AUUUUUAGUAUAU--CU--AUAGAAAGAACUUU-----UUUA--GUAAUAUU--UACAU----GUACUGGGA-AGGGUUUU------UGAAAUA-UUUUGAAAAGAUUUUGUUUU-
----AAAAGUAUAU--UUUAUUUGUAGUACCUUUUGUAUCAGGG-UUAAUUUAUUAAAA-UCAAUAUAAUUAUU--GUUUU[-????]
Lestes_eurinus_LES_OLE                            UUUGAUAGUAA-GAUU-AA-UU-G--UUAAUUUAUCUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCACU-UU---AAAGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGUAAGA--AUUUAUCACUCACUAGAGCUUGACUUAG-AAAGCG-UUU-CAUU-
UACACUGAAA-AUU-UU-ACUGUGC-AAUUCA-GUAUAGUGUGAUU-CAU---------UUUAUAAUUACUAUAAUU----UU-------UUGCUAUUAUUUAU------------CCGAGAAG- UA UCUUU-
-AUUUUUAGUAUAU--CU--ACAGAAAAAAGUUU-----AUUA--GUAAUAUU--CAUAU----UUACUGUGA- AGGGUAUU------UGAAAUA-UUUUGAAAAAUUUCUGCUUU-
----AAAAGUAUAC--UUUAUUUGUAUUACCUUUUGUAUCAGGG-UUAAUUUAUUAUUA-UCAAUUUAAUUAUU--GCUUU[-????]
Hemiphlebia_mirabilis_OHM                         ----- ---------------------------------------------------------------------------
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Unaligned                                         --------------------------------------------------------------------------------
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------3333333-----444444444-----------55555555555555----------------------------------666666666-------
777777777777777777777777777----------------------------------------------888888888888888888888888888888[-????]
Epiophlebia_superstes_OES                         UUUAAUGGUAA-UUUU-AA-UU-U-UUUAUUAAAU-UGACC-AG--AGCUC--UAAAAUAUGC--CACAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGUUGGA---------ACGAGUUAGAGCUUGA--UAG-GAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UU-AUUGUGC-AAUUCA-AUUUAACUUGAUA-ACUUGAUUUAAUAUGAAUCUUACUUUCAAUUUUUAA---------------------UUUUAGUU---UUGAGAAA- UA UCUUU--
AUUUUUAGUAUA---UU--AAAGAAAUAAUAA---GUUUU----GUAAUAGU-UUAUUA----GUACUGUGA-AGGAA--UA-UGA-UGAAAUAUUUAUGAAAA-UUUCGUUUUA-
---GAAAAGUAGAU--UUAAUUUAUUGUACCUUUUGUAUCAGGG-UUAAUCAAAUAUAU-CUAAU-AU-AUUUU--AGGUU[-????]
Epiophlebia_laidlawi                              --------------------------------------------------------------------------------
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Unaligned_Aeshnoid                                ----- ---------------------------------------------------------------------------
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7777777777-------------------------------------------------------------888888888------[-????]
Archipetalia_auriculata_AAAu                      UUUGAUAGUAA-UUAU-UU-UA-A-CUUAUCAUUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU-------AA-CAAAUUAGAGCUGGA--UAG-AAAGCU-UUU-CAUU-   UACACUGA??-
???-??-???????-??????-?????????????-????????????????????????????????????---------------------?????????--????????-
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Austropetalia_victoria_AAV                        UUUGAUAGUAA-UUAU-AU-UA-A-CUUAAUAUUU-UGACU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU-------AA-CAAAUUAGAGCUUGA--UAG-AAAGCU-UUU-CAUU-   UACACUGAAA-
AUU-UU-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AAUUG-----------UCCUUACUAUUUUGUUUUUU---------------------AUAAUU-----UAGAGAAA-
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UAUCUUU-AA-UUUUAGUAUA---CU--AAAGAAAUAAUAU---UAAUG----GUGAUAGU-UUAUUA----GUACUGUGA-AGGAA--UU-UGG- UGAAAUAAUAAUGAAAAUUUUUAUUUUGUG----
AAAGUAGAU--UUAAUUUAUUGUACCUUUUGUAUCAGGG-UUAAUCAAAUAUUA-UUAAU-UUAAUAUUU-AAUUU[-????] Hypopetalia_pestilens_OHPe UUUGAUAGUAA-UUAU-AU-UA-
G-CUUAUCAUUG-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-
AUGUAUCUAGAAAGU-------AU-CAAAUUAGAGCUUGA--UAG-AAAGCU-UUU-CAUU- UACACUGAAA-AUU-UU-ACUGUGC-AAUUCA-GUUUAGUUUGAUA-AAUUG----------
UCCUUACUAUUUUGUUUUAG---------------------GAAUAUU----UAGAGAAA- UA UCUUU-GA-UUUUAGUAUA---CU--AAAGAAAUAAUAU---UGAUA----GUGAUAGU-UUAUUA---
-GUACUGUGA-AGGAA--UU-UGG-UGAAAUA-UAAUGAAAA- UUUCGUUUUUUA----UAAGUAGAU--UUAAUUUAUUGUACCUUUUGUAUUAGGG-UUAAUCAAAUAUUA-UUAAU-UUAAUAUUU-
AAUUU[-????] Rheopetalia_Phyllopetalia_apicalis   UUUGAUAGUAA-UUAU-AU-UA-G-CUUAUCAUUGGUGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU-------AUCCAAAUUAGAGCUUGA--UAG-AAAGCU-UUU-CAUU- UACACUGAAA-
AUU-UU-ACUGUGC-AAUUCA-GUUUAGUUUGAUA-GUUUGA---UAAUUUUACCUUACUAUAUUAUUUUAU---------------------AAAGUUU----UAGAGAAA- UA UCUUU-AA-
UUUUAGUAUA---CU--AAAGAAAUAAUUU---UAAUA----GUGAUAGU-UUAUUA----GUACUGUGA-AGGAA--UU-UGG-UGAAAUA-UAAUGAAAA- UUUUAUUUUUUG----AAAGUAGAU--
UUAAUUUAUUGUACCUUUUGUAUUAGGG-UUAAUCAAAUAUUU-UUAAU-UUAAUAUUU-AAUUU[-????] EU055033_130_Rheopetalia_Phyllopetalia_apollo UUUGAUAGUAA-
UUUU-AU-UA-G-CUUAUCAUUA-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CN-NNNN-NN????????---?????????NNNNNNNNNNNNNN-NNNNNNNNNNNNNN-
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NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN---------------------NNNNNNNN---NNNNNNNN- NN NNNNN-NN-NNNNNNNNNN---NN--NNNNNNNNNNNNN---NNNNN----
NNNNNNNN-NNNNNN----NNNNNNNNN-NNNNN--NN-NNN-NNNNNNN-NNNNNNNNN- NNNNNNNNNNNNN---NNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] Eurypetalia_altarensis_OEA_AUS   UUUGAUAGUAA-UUGU-AU-UA-G-CU-UAUCAUUAUGAUU-UU--AGCUC--
UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU-------AU-CAAACUAGAGCUUGA--
UAG-AAAGCU-UUC-CAUU- UACACUGAA??-?????-???????-??????-?????????????--?????????????????????????????????------------------------------
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Ophiopetalia_diana_OOD   UUUGAUAGUAA-UUAU-AU-UA-G-CUUAUCAUUG-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU-------AU-CAAACUAGAGCUUGA--UAG-AAAGCU-UUU-CAUU- UACACUGAAA-
AUU-UU-ACUGUGC-AAUUCA-GUUUAGUUUGAUA-AGUUC-----------UCCUUACUAUUUUAUUUUUA---------------------AAAAGUUU---UAGAGAAA- UA UCUUU-AA-
UUUUAGUAUA---CU--AAAGAAAUAAUUU---UAAUA----GUGAUAGU-UUAUUA----GUACUGUGA-AGGAA--UU-UGG-UGAAAUA-UAAUGAAAA- UUUUAUUUUUUA----UAAGUAGAU--
UUAAUUUAUUGUACCUUUUGUAUUAGGG-UUAAUCAAAUAUAU-UUAAU-UUAAUAUUU-AAUUU[-????] Gomphaeschna_furcillata_OGF   UUUGACAGUAA-UUUU-AU-UG-U-
UUUGAUGAUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUCUUUAGU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-
AUGUAUCUAGAAAGU-------AAACAAAUUAGAGCUUGA--UAG-GAAGCA-UUU-CAUU- UACACUGAAA-AUU-UU-ACUGUGC-AAUUCA-GUUUAGUUUGAUU-AGAUAC--------
AAUUCUUACUUUUAUUAUUUAU---------------------UUUUAUU----GAGAGAAA- UA UCUUU-AAUUUUUAGUAUA---CU--AAAGAAAAAUUUU---UUGUU----GUGAUAGU-UUAUUA-
---GUACUGUGA-AGGAA--UU-GGA-UGAAAUA-UAUUGAAAA- UAUUUCUUUUUA----AAAGUAGAU--UUGGUUUAUUGUACCUUUUGUAUCAGGG-UUAAUUAAAUAUUA-UUAAU-UUAUUUAUU-
AAUUU[-????] AF266043_Oligoaeshna_pryeri   NNNNN??????-????-??-??-?-????????????????-??--?????--?????????????????????-------
??-????-??????????---?????????---CAAAUUAGAGCUUGA--UAG-GAAGCA-UUU-CACU-
UACACUGAAA-AUU-UU-ACUGUGC-AAUUCA-GUUUAGUUUGAUAGUUUGAUUGAGUUUUAAUUCUUACUUUUGUUGUUUAU---------------------UUUGUU-----UAGAGAAA- UA UCUUU-
GAUUUUUAGUAUA---CU--AAAGAAAAAAUUU---UUGUU----GUGAUAGU-UUAUUA----GUACUGUAA-AGGAA--UU-GGA-UGAAAUA-UAUUGAAAA- UAUUUCUUUUUA----AAAGUAAAU--
UUGGUUUAUUGUACCUUUUGUAUCAGGG-UUAAUUAAAUAUUA-UUAAU-UUAUUUAUU-AAUUU[-????] Austroaeschna_parvistigma_AAPs UUUGAUAGUAA-UGUU-AU-UA-U-
UUUAUUAAUU-UGGCU-UA--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUCUUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-
AUGUAUCUAGAAAGU------AAU-CAAAUUAGAGCUUGGU-GAG-AAAGCA-UUU-CAUU- UACACUGAAA-AUU-UU-ACUGUGC-AAUUCA-GUAUAAUUUGAUUAAGCUAA--------
UAUUCUUACUUUAAUUUUUAUU---------------------AUUAUU-----UAGAGAAA- UA UCUUU-GA-UUUUAGUAUA---CU--AAAGAAAAAAUUU----AUUU----GUGAUAGU-UUAUUA-
---GUACUGUAA-AGGAA--UU-AGA-UGAAAUAAUAUUGAAAG-UA- UUCUUUUUG----UAAGUAGAU--UUAAUUUAUUGUACCUUUUGUAUCAGGG-UUAAUUAAAUAUUA-UUAAU-UUAUU-AUU-
AUUUU[-????]
Telephlebia_tillyardi_ATT   ???????????-???????-??-??????????????????-??--?????--?????????????????????-------
??-????-???????????????????AGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU------AAU-CAAAUUAGAGCUUGA--UAG-UAAGCA-UUU-CAUU-
UACACUGAAA-AUA-UU-AUUGUGC-GAUUCA-AUAUGAUUUGAUU----AAGAUAUUA----UUCUUACUUUAAUUUAU-----------------------UUAUAUUAUU-UAAAGAAA- UA
UCUUU-GA-UUUUAGUAUA---CU--AAAGAAAAAAUUU----AUUU----GUGAUAGU-UUAUUA----GUACUGUGA-AGGAA--UU-AGA-UGAAAUAAUAUUGAAAA- AUUUUCUUUAUU----
UAAGUAGAU--UUAAUUUAUCGUACCUUUUGUAUCAGGG-UUAAUUAAAUAUUA-UUAAU-UUAUA-AUU-AUUUU[-????]
Boyeria_vinosa_OBV   UUUGAUAGUAA-UGUU-AU-UA-U-UUUAUUAAUU-UGAUU-UA--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCUUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU----AAAAA-CAAAUUAGAGCUUGAG-UAG-AAAGCA-UUU-CAUU-   UACACUGAAA-
UUU-UU-ACUGUGC-AAUUCA-GUUUAAUUUGAUUAGAUUA---------UAUUCUUACUUUAAUUUAUAUU---------------------UUUAUU-----UAGAGAAA-

UAUCUUU-GA-UUUUAGUAUA---CU--AAAGAAAAAAAUG----AUUU----GUGAUAGU-UUAUUA----GUACUGUGA-AGGAA--UU-UGA-UGAAAUAAUGUUGAAAA-
AUUUUCUUUAUAUA----AGUAAAU--UUAAUUUAUUGUACCUUUUGUAUCAGGG-UUAAUCAAAUAUAC-UUAAU-AUA-U-AUU-AUUUU
EU477640_Boyeria_irene UUUGAUAGUAA-UGUU-AU-UA-U-UUUAUUAAUU-UGAUU-UA--GGCUC--UAAAAUAUGC-ANNNNNNNNN------- NN-
NNNN-NN????????---?????????UAACUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU------AAU-CAAAUUAGAGCUUGAG-UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
GUU-UU-ACUGUGC-AAUUCA-GUAUAAUUUGAUUAAAGUUA--------AUUUCUUACUUUAAUUUAUAUU---------------------UUAUAUU----UAGAGAAA- UA UCUUC-AA-
UUUUAGUAUA---CU--AAAGAAAAAAUUA----AUUU----GUGAUAGU-UUAUUA----GUACUGUGA-AGGAA--UAUUGA-UGAAAUAAUAUUGAAAA- GAUUUCUUUAUAUA----AGUAAAU--
UUAAUUUAUUGUACCUUUUGUAUCAGGG-UUAAUUAAAUAUAU-UUAAU-AUA-U-AUU-AUUUU[-????]
Brachytron_pratense_AES UUUGAUAGUAA-UGUU-AU-UA-U-UUUAAUAAUU-UGGGU--A--GGCCC-------------------------------
??-????-??????????---?????????????????????????-???????????????-??????????????---------G-CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU-
UACACUGAAA-AUU-UU-ACUGUGC-GAUUCA-GUAUAAUUUGAUAAUUUGAUAAGA-UAAUAUUCUUACUUUUAUUUAUUUA---------------------AUUAUU-----UAGAGAAA- UA UCUUU-
AA-UUUUAGUAUA---CU--AAAGAAAAAAUUA----AUUU----GUGAUAGU-UUAUUA----GUACUGUGA-AGGAA--UU-UGA-UGAAAUAAUAUUGAAAA- AUUUUCUUUUUAUA----AGUAGAU--
UUAAUUUAUCGUACCUUUUGUAUCAGGG-UUAAUCAAAUAUUA-UUAAU-AUA-UUAUU-AUAUU[-????]
Epiaeschna_heros_OEH UUUGAUAGUAA-UAUU-AU-UA-U-UUUAUUAGUU-UGAUU-UA--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCUUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU------AAU-CAAAUUAGAGCUUGA--UAG-AAAGUA-UUU-CAUU- UACACUGAAA-
AUU-UU-ACUGUGC-GAUUCA-GUAUAAUUUGAUU-AAGAU--------AAAUUCUUACUUUUGUUUAUUUA---------------------AUUAUU-----UAGAGAAA- UA UCUUU-GA-
UUUUAGUAUA---CU--AAAGAAAAAAUUA----AUUU----GUGAUAGU-UUAUUA----GUACUGUGA-AGGAA--UUAUGA-UGAAAUAUUAUUGAAAA- AUUUUCUUUUUAUA----AGUAGAU--
UUAAUUUAUUGUACCUUUUGUAUCAGGG-UUAAUCAAAUAUUA-UUAAU-UUA-UUAUU-AUUUU[-????] EU477639_Caliaeschna_microstigma UUUGAUAGUAA-UGUU-AU-UA-
U-UUUAUUAAUU-UGAUU-UA--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUCUUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-
AUGUAUCUAGAAAGU-------AUACAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-AUU-UU-AUUGGGC-AAUUCA-AUAUAAUUUGAUA-AGAUA--------
AUAUUCUUACAUUAAUUUAUAUA---------------------UAUAAUUUU--UAGAGAAA- UA UCUUU-AU-UUUUAGUAUA---CU--AAAGAAAAAUUUU---GANUU----GUGAUAGA-
UUAUUA----GUACU GUGA-AGGAA--UU-AGA-UGAAAUAAUAUUGAAAA- AAUUUCUUUAUAUA----AGUAAAU--UUUGUUUAUUGGACCUUUUGUAUCAGGG-UUAAUUAAAUAUAA-UUAAU-
AUA-U-CUU-AUUUU[-????] EU477649_Anaciaeschna_isoceles UUUGAUAGUAA-UAUU-AU-UA-U-UUUAUUAAUU-UGAUU-UA--GGCUC--UAAAAUAUGC-ACACAUCGCC--
----- CG-UCGC-UCUCUUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU-------AAACAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU-
UACACUGAAA-AAU-UU-ACUGUGC-AAUUCA-GUAUAAUUUGAUUAAGAUA--------AUAUUCUUACUUUAAUUUAUUUA---------------------UUGUUAUU---UAGAGAAA- UA UCUUU-
AA-UUUUAGUAUA---CU--AAAGAAAAAAUUU----GUUU----GUGAUAGU-UUAUUA----GUACUGUGA-AGGAA--UU-UGA-UGAAAUAAUAUUGAAAA- AUUUUCUUUUUAUA----AGUAGAU--
UUAAUUUGUUGUACCUUUUGUAUCAGGG-UUGAUUUAAUAUUA-UUAAU-AUA-UUAUU-AUUUU[-????] GQ118252_82_Oplonaeschna_sp UUUGAUAGUAA-UGUU-AU-UA-U-
UUUAUUAAUU-UGAUU-GA--GGCUC--UAAAAUAUGC-ACACNNNNNN------- NN-NNNN-NN????????---?????????NNNNNNNNNNNNNN-NNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNN--------
NNNNNNNNNNNNNNNNNNNNNNN---------------------NNNNNNNNNNN------NN- NN NNNNN-NN-NNNNNNNNNN---NN--NNNNNNNNNNNNN---NNNNN----NNNNNNNN-NNNNN-
------------N-NNNNN-NNN-NNN-NNNNNNNNNNNNNNNNN- NNNNNNNNNNNN------------NN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
Aeschna_canadensis_OAC UUUGAUAGUAA-UGUU-AU-UA-U-UUUAUUAAUU-UGAUU-UA--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCUUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU------AAAACAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AAU-UU-ACUGUGC-AAUUCA-GUAUAAUUUGAUA-AGAUU--------AUAUUCUUACUUUAAUUUAUUUA---------------------UAAUUAUU---UAGAGAAA- UA UCUUU-AA-
UUUUAGUAUA---CU--AAAGAAAAAAUUG----AUUU----GUGAUAGU-UUAUUA----GUACUGUGA-AGGAA--UU-UGA-UGAAAUAAUAUUGAAAA- AUUUUCUUUUAACA----AGUAGAU--
UUUAUUUAUUGUACCUUUUGUAUCAGGG-UUGAUUAAAUAUUA-GUAAU-AUA-UUAUU-AUUUU[-????] EU054953_5053_Aeshna_Rhionaeschna_multicolor UUUGAUAGUAA-
UGUU-AU-UA-U-CUUAUUAAUU-UGAUU-UA--GGCUC--UAAAAUAUGC-ACACAUCNNN------- NN-NNNN-NN????????---?????????NNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNN--------
NNNNNNNNNNNNNNNNNNNNNNN---------------------NNNNNNNNNNNNNNNNNNNN- NN NNNNN-NN-NNNNNNNNNN---NN--NNNNNNNNNNNNN---NNNNN----NNNNNNNN-
NNNNNN----NNNNNNNNN-NNNNN-NNN-NNN-NNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNN---NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
AF268609_Aeshna_cyanea NNNNNNNNNNN-NNNN-NN-NN-N-NNNNNNNNNN-NNNNN-NN--NNNNN--NNNNNNNNNNNNNNNNNNNNN-------
NN-NNNN-NN????????---?????????NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN-
NNNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNN--------NNNNNNNNNNNNNNNNNNNNNNN---------------------NNNNNNNNNNNNNNNNNN- NN NNNNN-
NN-NNNNNNNNNN---NN--NNNNNNNNNNNNN---NNNNN----NNNNNNNN-NNNNNN----NNNNNNNNN-NNNNN-NNN-NNN-NNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNN---NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
EU477645_Aeshna_grandis UUUGAUAGUAA-UUUU-AU-UA-U-UUUAUUAAUU-UGAUU-UA--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCUUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUGUCUAGAAAGU-------AGACAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AAU-UU-ACUGUGC-AAUUCA-GUAUAAUUUGAUA-AGAUU--------AUAUUCUUACUCUAUUUUAUUUA---------------------UNUUUAUU---UAGAGAAA-

UAUCUUU-AA-UUUUAGUAUA---CU--AAAGAAAAAAUUG----AUUU----GUGAUAGU-UUAUUA----GUACUGUGA-AGGAA--UU-UGA-UGAAAUAUUAUUGAAAA- AUUUUCUUUNAAUA----
AGUAGAU--UUUAUUUAUUGUACCUUUUGUAUCAGGG-UUGAUUAAAUAUUA-GUAAU-AUA-UUAUU-AUUUU[-????] EU477643_Gynacantha_japonica UUUGAUAGUAA-UGUU-AU-UA-
U-UUUAUUAAUU-UGAUU-AA--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUCUUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-
AUGUAUCUAGAAAGU-------AAACAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-AUU-UU-AUUGUGC-AAUUCA-AUAUAAUUUGAAU-UAAGAUA------
AUAUUCUUACAUAAUUUAUUAUU---------------------GUUAAUUAUU-UAGAGAAA- UA UCUUU-AA-UUUUAGUAUA---CU--AAAGAAAAAAUUA----AUUU----GUGAUAGU-
UUAUUA----GUACUGUGA-AGGAA--UU-AGA-UGAAAUAAUAUUGAAAA- AUUUUCUUUAUUUA----AGUAAAU--UUAUUUUAUUGUACCUUUUGUAUCAGGG-UUGAUCAAAUAUAU-UUAAU-AUA-
UUAUU-AUUUU[-????] Austrogynacantha_heterogena_AAH UUUGAUAGUAA-UGUU-AU-UA-U-UUUAUUAAUU-UGAUU-UA--GGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCUUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU-------AAACAAAUUAGAGCUUGA--UAG--AAGC?-???-????-
??????-???-???-??-???????-----------?????????-???????????-????????????????????????--------------------??????????????????-
???????-??-??????????---??--?????????????---?????----????????-??????-----???????-?????-???-???-???-------??????-
???????????????---????????-?????????????????????????????-??????????????--??????????????-?????[-????] EU477650_Hemianax_ephippiger
UUUGAUAGUAA-UGUU-AU-UA-U-UUUAUUAAUU-UGAUU-UA--GGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCUUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU-------AUACRAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU-
UACACUGAAA-AUU-UU-ACUGUGCCGAUUCA-GUAUAAUUUGAAUAAGAUAA--------UAUUCUUACUUAAAUUUUAAUU---------------------UUAAUUUUU--UAGAGAAA- UA
UCUUU-AA-UUUUAGUAUA---CU--AAAGAAAAAA-UA----UUUA----GUGAUAGU-UUAUUA----GUACUGUGA-AGGAA--UU-UGA-UGAAAUAAAUGUGAAAA- AUUUUCUUUUUAUA----
AGUAAAU--UUUGUUUAUUGUACCUUUUGUAUCAGGG-UUAAUCAAAUAUAU-UUAAU-AUA-UACUC------[-????]
Anax_junius_OAJ
UUUGAUAGUAA-UGUU-AU-UA-U-UUUAUUAAUU-UGAUU-GA--GGCUC--UAAAAUAUGC-ACACAUCGCC-------CG-UCGC-UCUCUUUAUU---AAAAUGAGAUAAGU
CGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU-------AAACAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU-UACACUGAAA-AUU-UU-AUUGUGC-AAUUCA-AU A
UAAUUUGAUUAAGAUAA--------UAUUCUUACUUUAAUUUUAUUU---------------------AUUAAUUUU--UAGAGAAA-UAUCUUU-AA-UUUUAGUAUA---CU--
AAAGAAAAAAUUA----UAUU----GUGAUAAU-UUAUUA----GUACUGUGA-AGGAA--UU-UGA-UGAAAUAAUAUUGAAAA-AUUUUCUUUUUAUA----AGUAGAU--UUAGUUUAUUGUA
CCUUUUGUAUCAGGG-UUAAUUAAAUAUUU-UUAAU-GUA-UAUU--AUUUU[-????]
EU477652_Anax_imperator UUUGAUAGUAA-UGUU-AU-UA-U-UUUAUUAAUU-UGAUU-AA--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCUUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU--------A-CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UU-AUUGUGC-AAUUCA-AUAUAAUUUGAUU-AAGAUA-------AUAUUCUUACUUUAAUUUUAUUU---------------------AUUAAUUUU--UAGAGAAA- UA UCUUU-AA-
UUUUAGUAUA---CU--AAAGAAAAAAUUG----UUUU----GUGAUAGU-UUAUUA----GUACUGUGA-AGGAA--UU-UGA-UGAAAUAAUAUUGAAAA- AUUUUCUUUUUAUA----AGUANNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNN-NNNNNN-NN-NNN-------U[-????]
Unaligned_Gomphidae ---
---0000000000--------------11--------------------
---11111111111111111--------222222222222222222222222222222222222222222----------
------------------444444444----------55555555555555---------------------------------66666---------------------------
777777777777---88888888888888888888888888[-????]
Sinogomphidia_kruegeri_ASK UUUGAUAGUAA-UGUU-AA-UU-U-UUUAUUAAUG-UGAUUCCU--GGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGUUAGA--------AUCAAAUUAGAGCUUGA--UAG-UAAGCA-UUU-CAUU-
UACACUGAAA-ACUAUU-ACUGUGC-AAUUCA-GUUUAAUUUGAUU-AAUUUU---------UAUCUUACUUGUUUUAUUUGU---------------------UAUAUUUUUAUUAGAGAAA- UA UCUUU-
-AUUUUUAGUAUA---UU--AAAGAACAAAUAU---GUUUU----GUGAUAGU-UUAUUA----GUACUGUAU-AGGAA---U-UGA-UGAAAUAAC-UUGAAAA- UUAAAUUUUUAAUA----AGUAGUU--
UUUGUUUAAUGUACCUUUUGUAUCAGGG-UUAAUUAAAUAUAA-UUAAU--UUAUUUU--AUUUU[-????] EU054969_5066_Ictinogomphus_australis UUUGAUAGUAA-UAUU-AA-UU-
U-UUUAUUAAUA-UGAUUGUA--GGCUC--UAAAGUAUGC-ACACAUCGCC------- CG-NNNN-NN????????---?????????NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNN-----
NNNNNNNNNNNNNNNNNNN---------------------NNNNNNNNNNNNNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NN--NNNNNNNNNNNNN---NNNNN----NNNNNNNN-NNNNNN----
NNNNNNNNN-NNNNN-NNN-NNN-NNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNN---NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
Ictinogomphus_sp ---
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EU477674_Lindenia_tetraphylla UUUGAUAGUAA-UAUU-AA-UU-U-UUUAUUAAUA-UGAUUAUU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUACU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGUUAGA--------AUCAAAUUAGAGCUUGA--UAG-GAAGCA-UUU-CAUU- UACACUGAAA-
AGUAUU-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AU----------UUAUAUCUUACUUUAUUUAUUUUGA------------------UGUUAAUUGAAUUUAGAGAAA-

UAUCUUU--AUUUUUAGUAUA---CU--AAAGAACAAAAAAA--UUUUG----GUGAUAGU-UUAUUA----GUACUGUAU-AGGAA-----UGA-UGAAAUAUUU-UGAAAA- UUAAAUUUAUUUUA----
AGUAGUU--UUUGUUUAAUGUACCUUUUGUAUCAGGG-UUAAUCAAAUAUAAUUAAUU--UA---UUUUAUUUU[-????] Phyllogomphoides_stigmatus_GOM UUUGAUAGUAA-
UAUU-AA-UU-U-UUAAUUAUAA-UGAUUGUU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUCAUUAUU---AAAGUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-
AUGUACCUAGUCAGA---------UCAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-AUUUGU-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AAUAU---------
UUUCUUACUUUUAUUUUUUAAU-----------------------UUGUUAUUUAGAGAAA- UA UCUUU--AUUUUUAGUAUA---UA--AAAGAAUUUAGUUU--UUUU-----GUGAUAGU-UAAUUA--
--GUACCGUAG-GGGAA-UAAUUGA-UGAAAUAUAU-UGAAAU- UUUAUUUGUUUUUA----AGUAAUU--UUUAUUUGGUGUACCUUUUGUAUCAGGG-UUGAUUAAAUAUUAUUAAUU--UA--
UUAUUAUUUU
AF266080_Progomphus_obscurus UUUGAUAGUAA-UAUU-AA-UU-U-UUUGUUGAUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUUUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUGGUUAGA---------UCAAACUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUUAUU-ACUGUGC-AAUUCA-GUUUAGUUUGAUA-GUUUGAUG---AGGUUUUCUUACUUAUUUUGUUGGUG------------------GUUUUAUUAUU--AAGAGAAA- UA UCUUU--
UUGUUUAGUAAU---GAUGAAAGAAAUAUUUA---UUUUU----GUGAUAGU-UUAUUA----GUACUGUAU-AGGAA-----UGA-UGAAAUAUAA-UGAAA-- UUUAUUUUAUUAAA----AGUAGCU--
UUAUUUUGGUGUACCUUUUGUAUCAGGG-UUAAUUAAAUAUAAUGAAUU--UAUUUUGU---NGU[-????] EU054982_5078_Progomphus_borealis UUUGAUAGUAA-UGUU-AA-UU-
U-UUUGUUGACU-UGAUU-CU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-NNNN-NN????????---?????????NNNNNNNNNNNNNN-NNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNN------------------NNNNNNNNNNNN--NNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNN-
NNNNNN----NNNNNNN-NNNN-NN-NNN-NNN-NNNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNN---NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] EU477667_Hagenius_brevistylus UUUGAUAGUAA-UUUU-AA-UU-A-UUUGUUAAUA-UGAUU-UU--GGCUC--
UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUCAUUUUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAACGU-----AAAAUCAAAUUAGAGCUUGA--
UAG-AAAGCA-UUU-CAUU- UACACUGGAA-AUUAUU-AUUGUGC-AAUUCA-AUUUAAUUUGAUU-AUGAA---------UGAUCUUACUUGUUUUGUUUAUA------------------UUUAUUU---
---UAGAGAAA- UA UCUUU--UUUUUUAGUAUA---AUU-AAAGAACAAAGGAU--UAGAA----GUUAUAGU-UAAUUA----GUACUGUAA-AGGAA--UA-UGA-UGAAAUAUAU-
UGAAAAUUUUUAAUUUUUAUA----AGUAGAC--UUGAUUUGUUGUACCUUUUGUAUCAGGG-UUGAUUAAUUAUUUUUAAUU--UAUU-AAUUAUUUU[-????] Lanthus_vernalis_OLV
UUUGAUAGUAA-UUUU-GA-UU-A-UUUAUUAUUA-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-GUGUACCUAGUAAGU--------AUCAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGGAA-
UUUUUU-ACUGUGC-AAUUCA-GUUUAAUUUGAAC-UAUUUAA--------AAUCUUACUUAUUAGUUUUGUU------------------AAUUUAUU-----UUGAGAAA- UA UCUUU--
AUUUUUAGUAUA---UU--AAGGAACGAAAUUU--UUAUU----GUUAUAGA-UUAUUA----GUACUGUGA-AGGAA-UUU-UGA-UGAAAUAAAC-UGAAAA- UUAUAAUUUUUAUA----AGUAGAU--
UUUAUUUAUUGUACCUUUUGUAUCAGGG-UUAAUUAAUUAUUU-UUAAU--UUAUUUU--AUUUU[-????]
EU477668_Davidius_nanus UUUGAUAGUAA-UUUU-AA-UU-A-UUUAUUAUUG-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUUUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGUAAGU--------AUCAAAUUAGAGCUUGA--UAG-GAAGCG-UCU-CAUU- UACACUGAGG-
AUUAUU-ACUGUGC-AAUUCA-GUUUAAUUUGAUU-AUUU---------AUAACCUUACUUUUGUUAAUUUGA--------------UUGUUUUAAGGGUUUAUUGGAGAAA- UA UCUUU--
AUUUUUAGUAUA---UUU-AAAGAACAAAAUUU--UUAUU----GUUAUAGU-UUAUUA----GUACCGUGA-GGGAA---U-UGG-UGAAAUAUUU-UGAAAA- UAAUAAUUUUUAUA----AGUAAAU--
UUUAUUUGUUGUACCUUUUGUAUCAGGG-UUAAUCAAAUAUAUUUAAUC--UA---UUUUAUUAU[-????] EU477680_Neogomphus_edenticulatus UUUGAUAGUAA-UUUU-AA-UA-
U-UUUGUUAAUU-UGAUUUUU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-
GUGUACCUGGUUAGA---------UCAAAUUAGAGCUUGA--UAG-UAAGCA-UUU-CAUU- UACACUGAAA-AUUAAU-ACUGUGC-AAUUCA-GUUUAAUUUGAUU-AAAU--------
UUAUUUCUUACUUUUUAUUUUAAUUU-----------------------UAUAUAAUUAGAGAAA- UA UCUUU--AUUUUUAGUAUA---CU--AAAGAAUAAAAGUU---UUUU----GUGAUAGU-
UUAUUA----GUACUGUGU-AGGAA---C-UGA-UGAAAUAUAU-UGAAAA- UGUAAUUUUUUGAA----AGUAGUU--UUUGUUUGGUGUACCUUUUGUAUCAGGG-UUAAUUAAUUAGAAUUAAUA--UA-
--A-----UGU[-????]
Armagomphus_armiger_AAAr UUUGAUGGUAA-UUUC-AA-UU-A-UUUGUUGGAA-UGACUAUA--GGCUC--UAAAGUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCGUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-nnnnnnnnnnnnnnn-nnnnnnnnn???-???-????-
??????????-??????-???????-??????-?????????????-????------??-
???????--????????????---??????????????????--?????----????????-??????----?????????-?????????-???------------??????-
???????????????---????????-?????????????????????????????-????????????????????--??????????????[-????]
Hemigomphus_comitans_AHC UUUGAUAGUAA-UUUC-GA-UG-A-UUUGUUGGAA-UGAUUGGU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAAGUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUgccuaguuuga---------ucaa-uuagagcuuga--uag--aagcc- uuuucauu- uac???????-
??????-??????-??????-???-???????????-???------??-
???????--????????????---??????????????????--?????----????????-??????----?????????-?????????-???------------??????-
???????????????---????????-?????????????????????????????-????????????????????--??????????????[-????] EU477683_Hemigomphus_heteroclytus
UUUGAUAGUAA-UUUC-AA-UU-A-UUUAUUGGAA-UGAUUNNN--NNNNN--NNNNNNNNNNNNNUCAUCGCC------- CG-
-CGC-UCUCAUUCUU---AAAGUGAGAUAAGUCGUAACAUAG-UAGGCGUAUCGGAAG-AUGUGCCUAGUUUGA---------UCAAAUUAGAGCUUGA--UAG-UAAGCA-UUU-CAUU- UACACUGAAA-
AUUUUU-ACUGUGC-AAUUCA-GUUUAAUUUGAUU-UGAG--------UUAAUUCUUACUUUAAUUUGAUUUG---------------AAUAUAAUUUUAUU---AUGAGAAA-

UAUCUUU--AUUUUUAGUAUA---UU--AAAGAAUAAAUUUG---UUAA----GUGAUAGU-UUAUUA----GUACUGUGA-AGGAA-----UGA-UGAAAUAUUA-UGAAAA- UUUCUUCUUUUUUA----
AGUAGAU--UUUAUUUGUUGUACCUUUUGUAUCAGGG-UUGAUUAAAUAUUUUUAAUU--UA---UAUUAUUUU[-????] EU054939_5039_Hemigomphus_magela UUUGAUAGUAA-
UUUC-AG-UU-A-UUUAUUGAGA-UGAUUGUU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-NNNN-NN????????---?????????NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNN-----
NNNNNNNNNNNNNNNNNNNN--------------NNNNNNNNNNN-----NNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNN----
NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNN---NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
Trigomphus_sp ---
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EU477665_Stylogomphus_albistylus UUAGAUAGUAA-UUUU-AA-UU-A-UCUAGUAUUA-UGAUC-UG--GGCUC--UAAAAUAUGCCACACAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAGGUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUAUCUAGAAAGU--------UCAAAUUAGAGCUUGGG--AG-GAAGCG-CCU-CAUU- UACACUGGGG-
AGU-AUUAUCGUGC-GAUUCG-AUUUAAUUUGAUAUA-U---------AGAUUCUUACUUUUAUUAUUAUAU--------------UAUUUAU---------UUUAGAAA- UA UCUUU--
GCUUUUAGUAUA---UUA-AAGGACGAAAAUUCU--UAUU----GUUAUAGU-UUAUUA----GUACUGUGA-GGGAACUGU-UGA-UGAAAUAUUU- UGAAAAUUUUAAGUUCUUUUA----AGUAGAU--
UUUAUUUAUUGUACCUUUUGUAUCAGGG-UUAAUUAAAUAUUUUUAAUU--UA---UUUUAUUUU[-????] EU477679_Stylogomphus_shirizui UUUGAUAGUAA-UUUU-AA-UU-A-
UUUAUUAUUA-UGAUU-UG--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUCAUUAUU---AAGGUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-
AUGUAUCUAGUAAGU-------UUCAAGUUAGAGCUUGG--UAG-AAAGCG-CUU-CAUU- UACACUGGAG-AGGGUU-AUCGUGC-AAUUCG-AUU-AAUUUGAUG-CAUAU---------
UUUCUUGCUUUAUAUUAUUAUU--------------UAUUUGU---------UUUAGAAA- UA UCUUU--AUUUUUAGUAUA---UUA-AAGAACAAAGUUUU---UAUU----GUGAUAGC-UUAUUA--
--GUACCGUAG-GGGAACUAC-UGA-UGAAAUAUUU- UGAAAAUUUUAAAUUCUUUUA----AGUAGAU--UUUAUUUAUUGUACCUUUUGUAUCAGGG-UUGAUUAAAUAUAUUUUAAUU--UA---
UGUUCCGUU[-????] EU054997_5093_Davidioides_martini UUUGAUAGUAA-UUUU-GA-UU-A-UUUGUUAUUU-UGAUUGCU--GGCUC--UAGAAUAUGC-ACACAUCGCC-------
CG-NNNN-NN????????---?????????NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNN-NNN-NNNN-
NNNNNNNNNN-NNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--------------NNNNNNNNNNN-----NNNNNNNN- NN NNNNN-
-NNNNNNNNNNNN---NNN-NNNNNNNNNNNNNN-N-NNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNN---NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
Burmagomphus_collaris_ABC UUUGAUAGUAA-UUAU-AA-UU-A-UUUGUUAUUA-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCCUUUCU---AAAAGGAGAUAAGUCGUAACAUAG-UAGGCGUAUCGGAAG-AUGUGCCUAGUAAGU-------AUCAAACUAGAGCUUGGU-UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUAUUU-ACUGUGC-AAUCCA-GUUUAGUUUGAUA-UGUAA---------UAAUUUACUUUAUUUUUAUUUU--------------UUUCGAUU---------UUGAGAAA- UA UCUUU--
AAUUUUAGUAUA---AGU-AAGGAAUUAAGAUU--UUAUA----GUUAUAGG-UUAUUA----GUACUGUAA-AGGAA--CA-UAU-UGAAAUAUAU-UGAAAA- UUUAAAUUUUAAUA----AGUAUAU--
UUUAUUUAUUGUACCUUUUGUAUCAGGG-UUGAUUAAAUAUGU-UUAAU--UUAUAUU--AUUUU[-????] EU054996_5092_Cyclogomphus_heterostylus UUUGAUAGUAA-
UUUU-AA-UU-A-UUUAUUAUUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-NNNN-NN????????---?????????NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--------------NNNNNNNNNNN-----NNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NNN-NNNNNNNNNNNNNN--
NNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNN---NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
Anisogomphus_pinratanai ----- ---
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Dromogomphus_spinosus_GOM UUUGAUAGUAA-UUUU-AA-GU-A-UUUAUUAUUA-UGAUU-GU--GGCUC--UAAAAUAUGCCACACAUCGCC------- CG-
UCGC-UCUCAUUUCU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGUAAGU-------AUCAAAUUAGAGCUUGA--UAG-AAAGCG-UUU-CAUU- UACACUGGAA-
AUAUUU-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUUGAUACCUU--UAAUCUUACUUUUUUUAUUAUUA--------------UUCUAUUU---------AGGAGAAA- UA UCUUU--
GAUUUUAGUAUA---AAU-AAAGAACAAAAAUU-UUUA------GUUAUAGU-AAAUUA----GUACCGUAA-GGGAA-UGU-UGA-UGAAAUAUUU-UGAAAA- AAUAAGUUUUAAAA----AGUAUAU--
UUUAUUUAUUGUACCUUUUGUAUCAGGG-UUAAUUAAAUAUAA-UUAAU--UUAUUUU--AUAUU[-????]
Arigomphus_villosipes_OAV UUUGAUAGUAA-UUUU-AA-UU-A-UUUGUUAUUG-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUCUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGUAAGU--------AUCAAAUUAGAGCUUGA--UAG-AAAGCU-UUU-CAUU- UACACUGGAA-
AUAUUU-ACUGUGC-AAUUCA-GUUUAGUUUGAUU-AACCUU--------UCGUCUUACGUUUAUUUAUUAUU---------------UUCUUUUU---------AUGAGAAA-

UAUCUUU---UUUUUAGUAAA---AAU-UAAGGACCAAAUUU--UUAUU----GGUAUAGU-UUAAUU----AGAACGGUA-GGGGAACAU-UGA-UGAAAUAUU--UGAAAA-
AAUAAGUUUUGAGA----AGUAGAU--UUUAUUUAUUGUACCUUUUGUAUCACGGGUUAAUUAAAUAUAU-UUAAU--UUAUUUU--AUAUU[-????]
Arigomphus_cornutus UUUGAUAGUAA-UUUU-AA-UU-A-UUUGUUAUUA-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUCUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGUAAGU-------AUCAAAUUAGAGCUUGA--UAG-AAAGCU-UUU-CAUU- UACACUGGAA-
AUAUUU-ACUGUGC-AAUUCA-GUUUAGUUUGAUA-GUUUGAUUAAUCUUUCGUCUUACGUUUAUUUAU---U--------------UAUUUUCUUUUU-----AUGAGAAG- UA UCUUU--
UUUUUUAGUAUA---AAU-AAAGAACAAAAUUU--UUAUU----GUUAUAGU-UCAUUA----GUACUGUAA-AGGAA-UAU-UGA-UGAAAUAUUU-UGAAAA- UGUAAGUUUUGAAA----AGUAGAU--
UUUGUUUAUUGUACCUUUUGUAUCAGGG-UUAAUUAAAUAUAU-UUAAU-UUAUUUU---AUGUU[-????]
Stylurus_intricatus_GOM UUUGAUAGUAA-UUUU-AA-UU-G-UUUAUUAUUA-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUUCU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGUAAGU-------AUCAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUAUUU-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUUGAUAUUAA--UUAUCUUACUUUAAUUUUUAUAU--------------UUUAUU----------UGGAGAAA- UA UCUUU--
AAUUUUAGUAUA---AAU-AAAGAACAAAAAUU--UUAUU----AUUAUAGA-GUAUUA----GUACUGUAA-AGGAA---U-UGG-UGAAAUAUUU-UGAAAA- CUUAAAUUUUUAAA----AGUAGAU--
UUUAUUUGUUGUACCUUUUGUAUCAGGG-UUAAUUAAAUGUAU-UUAAU--UUAAUNNN-NNNNU[-????]
Stylurus_amnicola UUUGAUAGUAA-UUUU-AA-UU-G-UUUAUUAUUA-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCAUUUCU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGUAAGU-------AUCAAAUUAGAGCUUGA--UAG-GAAGCA-UUU-CAUU-
UACACUGAAA-AUAUUU-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUUGAUAUUA-U-AUAUUUUACUUUAAUUU-UUAUA--------------UU-UUUAUU-------UGGAGAAA- UA UCUUU-
-AAUUUUAGUAUA---AAU-AAAGAACAAAAAGU-UUUAUU----GUUAUAGU-AUAUUA----GUACUGUAA-AGGAA---U-UGA-UGAAAUAUUU-UGAAAA- UUUAAAUUUUCAAA----AGUAAAU--
UUUAUUUGUUGUACCUUUUGUAUCAGGG-UUAAUUAAAUAUAU-UUAAU-UUAUUUU---AUAUU[-????] EU477659_Stylurus_nagoyanus UUUGAUAGUAA-UUUU-AA-UU-A-
UUUAUUAUUA-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUCAUUUCU---AAAAUGAGAURAGUCGUAACAUAG-UAGGUGUAUCGGAAG-
AUGUACCUAGUAWGU-------AUCAARUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-AUAUUU-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-UUGUA---------
UAUUUUACUUUAAUUUUUUUUA--------------AUUUUAUU--------UGGAGAAA- UA UCUUU--AAUUUUAGUAUA---AGU-AAAGAACAAAAUUU--UAAUU----GGUAUAGA-GKAUUA--
--GUACUGGAA-AGGAA---U-UGR-UGAAAUAUAU-UGGAAA- UUUAAAUUUUAAAA----AGNAAAU--UUUAUUUAUUGGACCUUUUGGAUCAGGG-GUAAUUAAAUGGAUUUAAUU--UA---
UUUUAUAUU[-????]
Gomphurus_Gomphus_externus UUUGAUAGUAA-UUUU-AA-UU-A-UUUGGUAUUA-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUUCU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGUAAGU------AAACAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUAUUU-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUUGAUACCUU--UUAUCUUACUUUUUUUGUUAAUU--------------UUAUUGU---------AGGAGAAA- UA UCUUU--
UUUUUUAGUAUA---AGU-AAAGAACAAAGUUU--UUAUU----GUUAUAGU-GUAUUA----GUACUGUAA-AGGAA-UAU-UGG-UGAAAUAUUU-UGAAAA- UAUAAGUUUUAUAA----AGUAGAU--
UUUGUUUUUCGUACCUUUUGUAUCAGGG-UUAAUUAAAUAUAU-UUAAU--UUAUUUU--AUUUU[-????] EU477664_Asiagomphus_melaenops UUUGAUAGUAA-UUUU-AA-UU-A-
UUUGUUAUUA--MAUU-U---GGCUC--UAAAGUAUCCAACNNNNNNNN------- NN-NNNN-NN????????---?????????NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NNN-NNNNNNNNNNNNNN--
NNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNN---NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNU[-????] Gomphus_Phanogomphus_exilis UUUGAUAGUAA-GAUU-GA-UU-A-UUUGUUAUUA-UGAUU-GU--GGCUC--
UAAAAUAUGCUACACAUCGCC------- CG-UCGC-UCUCAUUUCU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGUAAGU------AGACAGAUUAGAGCUUGA--
UAG-AAAGCA-UUC-CAUU- UACACUGGGA-AUAUUU-ACUGUGC-GAUUCA-GUUUAAUUUGAUA-AUUUGAUAUUUU---UAUCUUACUUUAUUUGUUAAUA--------------UUGAUU-------
---AAGAGAAA- UA UCUUU--AAUUUUAGUAUA---AAU-AAAGAACAAAAUUU--UUAUU----GUUAUAGU-AAAUUA----GUACUGUAA-AGGAA-UGU-UGA-UGAAAUAUAU-UGAAAA-
UAUAAUUUUUGAAA----AGUAGAU--UUUAUUUAUUGUACCUUUUGUAUCAGGG-UUGAUUAAAUAUAU-UUAAU--UUAUUUU--AUGUU[-????] Gomphus_Gomphus_graslini
UUUGAUAGUAA-UUUU-AA-UU-A-UUUGUUAUUA-UGAUU-UU--GGCUC--UAAAAUAUGCCACACAUCGCC------- CG-
UCGC-UCUCAUUUCU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGCGUAUCGGAAG-AUGUGCCUAGAAAGU-------AUCAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGGAA-
AUAUUU-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUUGAUAUUCU--AUAUCUUACUUUAUUGUUUUAUU--------------AUUAAUU---------AGGAGAAA- UA UCUUU--
GAUUUUAGUAUA---AAU-AAAGAACAAAGUUU--UUAUU----GUUAUAGU-GUAUUA----GUACUGUAA-AGGAA-CGU-UGA-UGAAAUAUAG-UGAAAA- UAUAAUUUUUAAUA----AGUAGAU--
UUUAUUUAUUGUACCUUUUGUAUCAGGG-UUGAUUAAAUAUAU-UUAAU--AUAUUUU--AUAUU[-????] Gomphus_Hylogomphus_adelphus_OGA UUUGAUAGUAA-UUUU-GA-UU-
A-UUUAUUAUUA-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUCAUUUCU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-
AUGUACCUAGUAAGU-------AACAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGGAA-AUAUUU-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-UUUUAGG---------
UCUUGCUUUAUUUUUUUUAU--------------UUUUAAUU--------GGGAGAAA- UA UCUUU--GAUUUUAGUAUA---AAU-AAAGAACAAAAUUU--UUGUU----GGUAUAGU-GAAUUA----
GUACUGUAA-AGGAA-UAU-UGG-UGAAAUAUAA-UGGAAA- CAUAAAUUUUGAAA----AGUAGAU--UUUGUUUGGUGGACCCUUUGGAUCCGGG-GUAAUUAAAUAUAU-UUAAU--UUAUUUU--
AUAUU[-????] Gomphus_Gomphus_vulgatissimus --GU--CGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUUCU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGCGUAUCGGAAG-AUGUGCCUAGAAAGU-------AUCAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUAUUU-ACUGUGC-AAUUCA-GUUUAAUUUGAUAAUUUGAUAUU---CUAUAUCUUACUUUAUUAUUUUAUU--------------AUUAAUU---------AGGAGAAA-

UAUCUUU--GAUUUUAGUAUA---AAU-AAAGAACAAAAUUU--UUAUU----GUUAUAGU-GUAUUA----GUACUGUAA-AGGAA-UGU-UGA-UGAAAUAUAU-UGAAAA-
UAUAAUUUUUAAUA----AGUAGAU--UUUAUUUAUUGUACCUUUUGUAUCAGGG-UUGAUUAAAUAUGU-UUAAU--AUAUUUU--AUAUU[-????]
Megalogomphus_sp ---
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Onychogomphus_Onychogomphus_uncatus UUUGAUUGUAA-UUUU-AA-UA-G-UUUAUUAUUA-UGAUUAUU--GGCUC--UAAAGCAUGCCACACAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGAAAGU-----UUAACAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAGA-
AAUUUU-ACUGUGC-AAUUCA-GUUUAAUUUGAUA--AUUUGAUUAAUAAUUUUCUUACUAUAUUUUAUUUUU--------------UAUUUGAU---------UUGAGAAA- UA UCUUU--
AUUUUUAGUAUA---UU--AAAGAACAAAGUUU----AUU---AGUGAUAGU-UAAUUA----GUACCGUGG-GGGAA---U-UGU-UGAAAUAAUU-UGAAAA- UUUAUUUUCUUUAA----AGUAAAU--
UUAAUUUAUUGUACCUUUUGUAUCAGGG-UUAAUUAAUUAGUU-UUAAU-UUAUAUUU--AUUUU[-????] Onychogomphus_Onychogomphus_forcipatus UUUGAUUGUAA-UUUU-AA-UA-
G-UUUAUUAUUA-UGAUUAAU--GGCUC--UAAAGCAUGC-ACACAUCGCC------- CG-UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-
AUGUACCUAGAAAGU-----UAAAUCAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAGA-AUUUUU-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUUGAUU-
AAUAACUUUCUUACUAUAUUUAUUAUUU--------------UAUUUAU---------UUGAGAAA- UA UCUUU--UUUUCUAGUAUA---UU--AAAGAACAAAAAUU-UUUA------GUGAUAGU-
UAAUUA----GUACUGUAA-AGGAA---C-UGU-UGAAAUACUU-UGAAAA- UUUAUUUUCUUUAA----AGUAAAU--UUAAUUUAUUGUACCUUUUGUAUCAGGG-UUAGUUAAUUAAUU-UUAAU--
UUAUUUU--AUUUU[-????]
EU477672_Onychogomphus_sp UUUGAUUGUAA-UUUU-AA-UA-G-UUUAUUAUUA-UGAUUAAU--GGCUC--UAAAGCAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGAAAGU-----UAAAUCAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAGA-
AUUUUU-ACUGUGC-AAUUCA-GUUUAAUUUGAUU-AAUAACUU---------UCUUACUAUAUUUAUUAUUU--------------UAUUUAU---------UUGAGAAA- UA UCUUU--
UUUUCUAGUAUA---UU--AAAGAACAAAAAUU-UUUA------GUGAUAGU-UAAUUA----GUACUGUAA-AGGAA---C-UGU-UGAAAUACUU-UGAAAA- UUUAUUUUCUUUAA----AGUAAAU--
UUAAUUUAUUGUACCUUUUGUAUCAGGG-UUAAUUAAUUAAUUUUAAUU--UA---UUAUAUNNN[-????] Ophiogomphus_Ophionurus_carolus_OOC UUUGAUUGUAA-UUUU-AA-UA-
G-UUUGUUAUUA-UGAUUAUG--GGCUC--UAAAGUACGC-ACACAUCGCC------- CG-UCGC-UCUCAUUUUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCNNNNN-
NNGUACCUANNNNNN-N-NNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN------
-------NNN-NNN-NN-NNNNNNN-NNNNNN-NNNNNNNNNNNN-NNNNNNNNN---NNN-----NNNNNNNNNNNNNNNN--------------NNNNNNNNNNNNN---NNNNNNNAA-
UUUCUUU--AUUUUUAGUAUA---U---AAAGAACAAAUUAUUUUUA------GUGAUAGU-UAAUUA----GUAC- GUAG-GAGGA---A-UGU--GAAAUAUUU-UGAAAA- AUUAUUUUAUUUAA---
-AGUAGAU--UUAAUUUAUUGUACCUUUUGUAUCAGGG-UUAAUUAAUUAUUU-UUAAU--UUAUUUU--AUUUU[-????]
Ophiogomphus_severus_GOM UUUGAUUGUAA-UUUU-AA-UA-G-UUUAUUAUUA-UGAUUAUU--GGCUC--UAAAGUAUGUCACACAUCGCC------- CG-
UCGC-UCUUAUUUU----AAAAUAAGAUAAGUCGUAACAUAG-UAGGAGUACCGGAAG-GUGUUCCUAGGAAGG------UAAACAAAUUAGAGCUUGA--UAG-UAAGCA-UUU-CAUU- UACACUGAAA-
AAU-UA-GUUGUGC-AAUUCA-ACUUGAUUUGAUGAUUUGAUAAU---UAAAGUAUUACUAUAUUUUGUAAAA--------------AUUU------------UUGAGAAA- UA UCUUU--
AAUUUUAGUAUA---CU--AAAGAAUAAAUAAU----AUUU---GUUAUAGU-UUAAUA----GUACUGUGA-AGGAA---C-UAA-UGAAAUAAGU-UAAAA-- UUUAAUUUAAAUUA----AGUAUAC--
UUAAUUUGUAGUA CCUUUUGUAUCAGGG-UUGAUUAAAUAUUU--UAAU--UUAUAUU--UAGGU[-????]
Ophiogomphus_caecilia ---
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Leptogomphus_elegans_GOM_OLEg UUUGAUAGUAA-UUUU-AA-UU-A-UUAAUUAAUA-UGAUU-UU--GGCUC--UAAAACAUGC-ACACAUCGCC-------
CG-UCGC-UCUCGUUAAU--UAGGAUGAGAUaAGUCGUAACAUAG-UAAACGUAUCGGAAG-AUGUGUUUAGAAAGG--------AUCAAAUUAGAGCUUGA-UUAAUAAAGCA-UCU-CAUU-
UACACUGAGA-GGA-UA-ACUGUGU-AAUUCAUGUUUAGUUUGAUA-AUUUAAUG---------CCUUACUCUGUGUGUUUAAU------------------------------UUAUAGAAA- GA UCUUU-
-AUUUUUAGUAUA---GUU-AUAGAAGGAAAAAU--UUAU---UUGUUAUAGG-UAAUUA----GUACUGUAG-AGGAG---C--GU-UGAAAUAGU--AGAAAA- UAAAAAUUUUUUUA----AGUAGUC--
UUUAUUUGUUGUACCUUUUGUAUCAGGG-UUGAUCAAAUUGUUUUAAUA--UA---UAUUGUUUU
EU477681_Leptogomphus_sauteri UUUGAUAGUAA-UUUU-GA-UU-A-CUAAUUAAAA-UGAUU-UU--GGCUC--UAAUACAUGC-ACACAUCGCC------- CG-
UCGC-UCUCGUUAAU--UAGGAUGAGAUAAGUCGUAACAUAG-UAAACGUAUCGGAAG-AUGUGUUUAGAAAGG--------AUCAGAUUAGAGCUUGAU-UAAUAAAGCG-UUU-CAUU- UACACUGAGA-
AGA-UA-ACUGUGC-AAUUCAUGUUUAAUUUGAUA-AUUUGGUG---------GCUUACUUUUUGUGUUUAAU------------------------------UUUAGAAA- AA UCUUU--
AUUUUUAGUAUU---GUU-AUUGAAGGAAAAGU-UUUAU-----GUUAUAGG-UUAUUA----GUACUGUGA-AGGAG-----UGU-UGAAAUAU--UAGAAAA- UGAAAAUUUUUUUA----AGUAGAC--
UUUAUUUGUUGUACCUUUUGUAUCAGGG-UUGAUUAAAUUGUUUUAAUA--UA------UGUAGU[-????]
Epigomphus_compactus_AEC UUUGAUAGUAA-UUUU-GA-UU-A-UUUAUUAUUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU----UUAAGACAAGUUAGAGCUUGAU-UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
UUUUUU-ACUGUGC-AAUUCA-GUUUAAUUUGAUG-AUUAUUAU---------UCUUACUUAUUUUUUUUGUU--------------AUUUAUUU--------UUUGAGAAA-

UAUCUUU--AUUUUUAGUAUA---UU--AUGGAAUAAAAUUU-UUUUA-----GUUAUAGU-UAAUUA----GUACUGUGA-AGGAAUUAUUUGA-UGAAAUAU-UUUGAAAA-
AUAAAAAUUUUUUA----AGUAGAU--UUUAUUUGUUGUACCUUUUGUAUCAGGG-UUAAUUAAAUAUAUUUAAUA--UA--UUAUUAUUUU
EU477678_Microgomphus_chelifer UUUGGUAGUAA-UUUU-AA-UU-A-UUUGUUAUUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUUUU--UAAAAUGAGAUAAGUCGUAACAUAG-UAGGCGUAUCGGAAG-GUGUGCCUAGUAAGU--------AUCAAAUUAGAGCUUGA--UAG-GAAGCU-UUU-CACU- UACACUGAAA-
AAU-UU-ACUGUGC-AAUUCA-GUUUAAUUUGAUU-AUUGAUAU---------UCUUACUUUUAUAUUUGUAA---------------UUUAUUU----------GAGAGAAA- UA UCUUU--
GUUUUUAGUAUA---UU--AAAGAAUUAAGAUU-UUUA------GUUAUAGU-UUAUUA----GUACUGUGA-AGGAAUAUU-UGA-UGAAAUAUAU-UGAAAA--- UUUUUUUUUAAUA---AGUAGAU--
UUAGUUUAUUGUACCUUUUGUAUCAGGG-UUGAUUAAUUAUUAUUAAUU--UA---UUU------[-????] EU477666_Heliogomphus_retroflexus UUUGACAGUAA-UUUU-GA-UU-
A-UUUGUUAUUG-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUCAUUUUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-
AUGUGCCUAGUAAGU--------AUCAAAUUAGAGCUUGA--UAG-GAAGCA-UUU-CAUU- UACACUGAAA-AUU-UU-ACUGUGC-AAUUCA-GU-UAAUUUGAUU-AUUUAUAU---------
UCUUACUUUAUUUGUUUGUG---------------UCUAUUAUU--------AAGAGAAA- UA UCUUU--AUUUUUAGUAUA---UU--AAAGAACUAAGGAU--UAAUAUU--GUUAUAGU-UUAUUA----
GUACCGUAA-GGGAA---U-UGA-UGAAAUAUGU-UGAAAA-- UUGAAGUUUUAAUA---AGUAGAU--UUUAUUUAUUGUACCUUUUGUAUCAGGG-UUAAUUAAUUAUUUUUAAUC--UA---
UUUUAUUGU[-????] Macrogomphus_parallelogramma ---
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Ceratogomphus_pictus_OCH UUUGAUAGUAA-UUUU-AU-UU-A-UUUAUUACUA-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAGAGGCAUCGUAAAUUAA-----CAUUCACCUGUAGAGCU????????-??????-???-????-
??????????-???-??-???????-??????-?????????????-?????????---???--????????-
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???????????????--????????-?????????????????????????????-????????????????????--??????????????[-????]
Lestinogomphus_angustus_GOM_ALA UUUGAUUGUAA-UAAU-AA-UG-G-UUAAUUAUUA-UGAUU-UU--GGCUC--UAAAAUAUGC-ACAUAUCGCC------- CG-
UCAC-UCUCAUUUUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGAAAGU--------AUCAAAUUAGAGCUUGU--AAG-GAAGCA-UUU-CAUU- UACACUGAGA-
GGA-UU-GCUGUGC-AAUUCA-GCUUAGUUUGAUU-AUUUAA---------UCUUUUACUUUAAUUAUUUUGUU----------------------UUAUUUGUUUGAGAAA- UA UCUUU--
AUUCUUAGUAUA---UU--AAAGAAAAGAAUUU--UUUUU----GUUAU
AGU-GAAUUA----GUACCGUGA-GGGAA---U--UA-UGAAAUAUUU-UGAAAA--UUAUUAUUUUUUAA---AGUAAAC--UUAAUUUGUUGUACCUUUUGUAUCAGGG-UUAAUU
AAAUGGUU-UUAAU-UUA---UUUUAUUUU
Austrogomphus_guerini_AAG UUUGAUAGUAA-UUUU-AA-UU-A-UUAAUUAUUA-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGUaccu-----caauacaaauuagagcuuga--u??-??????-???-????-
??????????-???-??-???????-??????-?????????????-?????????---???--????????-
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???????????????--????????-?????????????????????????????-????????????????????--??????????????[-????]
EU054978_5074_Austrogomphus_amphiclitus UUUGAUAGUAA-UUUU-AA-UU-A-UUAAUUAUUA-UGAUU-UU--GGCUC--UAAAAUAUGU-ACACAUCGCC-------
CG-NNNN-NN????????---?????????NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNN-NNN-NNNN-
NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN-
-NNNNNNNNNNNN---NNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] EU054972_5068_Antipodogomphus_acolythus UUUGAUAGUAA-
UUUU-AA-UU-U-UUUAUUAAUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-NNNN-NN????????---?????????NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN--NNNNNNNNNNN---NNNNNNNNNNNNNNNNNN--
NNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]

Unaligned_Petaluridae ---

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7777777777777--8888888888888888[-????]
Tanypteryx_hageni_OTH UUUGAUAGUAA-AAUU-AA-UA-U-AUAAUUAUUU-UGAUU-UA--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUAUCUAGAAAGU------AAUACAAGUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU-

UACACUGAAA-AAU-UU-ACUGUGC-AAUUCA-GUUUAAUUUGAUUUAAUUU---------UGUUCUUACUU-UAUAUAUUU----------------AAAUUUAUUU-------UGGAGAAA-
UAUCUUU--AAUUUUAGUAUA---UU--AAAGAAUUAAUUUUGUUA-------GUGAUAGU-UUAUUA----GUACUGUGA-AGGAA-UAU-AGA-UGAAAAAU-CU-UGAAAA- UUUAAUUUAAUAUA---
AGUAUAC--UUUAUUUGUUGUACCUUUAGUAUCAGGG-UUAAUUAAAUAUUA-UUAAU-AUAUUUU--UAAUUU
Tanypteryx_sp ---
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Tanypteryx_pryeri_PET UUUGAUAGUAA-AAUU-AA-UA-U-AUAAUUAUUU-UGAUU-UA--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGA-------UAACAAAUUAGAGCUUGAG-UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AAU-UU-ACUGUGC-AAUUCA-GUUUAAUUUGAUAAUUUGAUUUAAUUUUUAUUCUUACUUUUAUAUAU-----------------GAAGAAUAUUU-------UAGAGAAA- UA UCUUU--
GAUUUUAGUAUA---UU--AAAGAAUUAAUUUA-AAUA------GUGAUAGU-UUAUUA----GUACUGUGA-AGGAA-UUU-AGA-UGAAAAAU-UU-UGAAAA- UUUAAUUUUUUUUA---AGUAAAC--
UUUACUUGUUGUACCUUUAGUAUCAGGG-UUAAUUAAAUAUUA-UUAAU-GUAUUUUUUUAAUUU[-????] AF266081_Tachopteryx_thoreyi UUUGAUAGUAA-AAUU-AA-UA-U-
AUUAUUAUUU-UGAUU-CU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-
AUGUAUCUAGGAAGU-------AAACGAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CACU- UACACUGAAA-GAU-UU-ACUGUGC-AAUUCA-GUUUAAUUUGAUAAUUUGAUAA-
AUGUUUAUUCUUACUAUCAGUUUGAAU-------------UAGUGUUAAUUU-------UAGAGAAA- UA UCUUU--AAUUUUAGUAUA---UU--AAGGAAAUAAUUUUG-UUU------GUGAUAGU-
UUAUUA----GUACUGUGA-AGGAA-UAAUUGA-UGAAAAAU-CU-UGAAAA- UUUUUAUUUAUAUA---AGUAGAU--UUUAUUUAUUGUACCUUUNGUAUCAGGG-UUGAUUAAAUUUUA-UUAAU-
ACUUUUU---GAUUU[-????]
Phenes_raptor_PET UUUGAUAGUAA-AAUU-GU-UA-U-AUUAUUAAUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-AUGUACCUAGUAAGU-------AAUCAAAUUAGAGCUUGA--UAG-GAAGCU-UUU-CAUU-
UACACUGAGA-GGA-UU-AUUGUGC-AAUUCA-AUUUAGUUUGAUU-AAAUUUU--------AUUCUUACUAUCUUUUUU------------------AAUUUAAUUU-------UAGAGAAG- UA UCUUU-
-AAUUAUAGUAUA---CU--AAAGAAAUAAUUUUAUUG-------GUUAUAGU-GAAAUA----GUACCGUAG-GGGAA-UUA-UGA-UGAAAAAU-UU-UUAAAA- AUUAGUUUUGUAUA---AGUAGAU--
UUUAUUUAUUGUACCUUUUGUAUCAGGG-UUGAUUAAAUAUUA-UUAAU-UUAUUGU--UAAGUU[-????]
Phenes_centralis_OPR UUUGAUAGUAA-AAUU-GU-UA-U-AUUAUUAAUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-AUGUACCUAGUAAGU-------AAACAAAUUAGAGCUUGA--UAG-G?????-???-????-
??????????-???-??-???????-??????-?????????????-?????????????????????????????????????-------------???????????????-?--????????-
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???????????????--????????-?????????????????????????????-????????????????????-???????????????[-????]
EU477633_Uropetala_carovei UUUGAAAGUAA-AAUU-AA-UA-U--UUAUUAAUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUACCGGAAG-AUGUAUCUAGAAAGU-------AAUCAAAUUAGAGCUUGA--UAG-AAAGCU-UUU-CAUU- UACACUGAUA-
GAU-UU-ACUGUGC-AAUUCA-GU-UAAUUUGAUU-AAAUUUG--------AUUCUUACUAUUAUUUUU------------------AAUUGGAUUU-------UGGAGAAA- UA UCUUU--
AAUUUAAGUAUA---UU--AAGGAAAUAAUUUUUUUA-------GUUAUAGU-UAAAUA----GUACCGUGA-GGGAA-UUA-UGA-UGAAAAAU-UU-UGAAAA- UUUAUUUUUAUAGA---AGUAUAU--
UUUGUUUGUUGUACCUUUUGUAUCAGGG-UUAAUUAAAUAUUA-UUAAU-UUAUUUUU--GGAUU[-????]
Petalura_hesperia_PET_APH UUUGGUAGUAA-UGUU-AU-AA-U-AUUAUUAAUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACAUAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-AUGUACCUAGAAAGU-------AAUCAAAUUAGAGCUUGA--UAG-AAAGCU-UUU-CACU- UACACUGAGG-
G??-??-???????-??????-?????????????-?????????????????????????????????????-------------????????????????--????????-
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???????????????--????????-?????????????????????????????-????????????????????-???????????????[-????] EU054963_5061_Petalura_gigantea
UUUGGUAGUAA-UGUU-AU-UA-U-AUUAUUAAUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCNNN-------
NN-NNNN-NN????????---?????????NNNNNNNNNNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN-
NNNNNNNNN-NNN-NN-NNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----N--------------NNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN-
-NNNNNNNNNNNN---NNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNN--NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
Petalura_litolae_PET_OPG2 UUUGGUAGUAA-UGUU-AU-UA-U-AUUAUUAAUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACAUAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-AUGUACCUAGUAAGU-------AAUCAAAUUAGAGCUUGA--UAG-AAAGCU-UUU-CAUU- UACACUGAGG-
GAU-UU-ACCGUGC-AAUUCG-GUUUAGUUUGAUU-AAUUUA---------AUUCUUACUAUUUUUAUUUAU------------------UAU-AUUU-------UAGAGAAA- UA UCUUU--
AUUUUUAGUAUA---CU--AAAGAAAUGAUUUUGUUU-------GUUAUAGU-UAAAUA----GUACUGUGA-AGGAA-UGU-UGA-UGAAAAAU-CU-UGAAAA- UAUAUAUUUAUUUA---AGUAUAU--
UUUAUUUAUUGUACCUUUUGUAUCAGGG-UUAAUUUAAUAGUA-UAAAU-UUAUUAUU-UAUUU-
Petalura_ingentissima_API UUUGGUAGUAA-UAUU-AU-UA-U-AUUAUUAAUU-UGAUU-UU--GGCUUGUACAAAUAUGC-ACAUAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UCGGUGUACCGGAAG-AUGUACCUAGUAAGU-------AAUCAAAUUAGAGCUUGA--UAG-UAAGCU-UUU-CAUU- UACACUGAGG-
GAU-UU-ACCGUGC-AAUUCG-GUUUAGUUUGAUU-AAAUUUA--------GUUCUUACUAUUUUUUUU------------------AUUAUUAUUU------AUCGGUAU-

UACCUAACCCUCUUAAGUAUA---UU--AAAGAAAUGAUUUUUUUU-------AUAAUAGU-UUUAUU----GUUCCGUGA-AGGAA-UUA-UGA-UGAAAAAU-UU-UGAAAA-
UAUUUAUUUAUUAA---AGUAUAU--UUUGUUUAUAGUACCUUUUGUAUCAGGG-UUAAUUAAAUAGAA-UAAAU-UUAUUAUU-UAUUU-[-????]

Zoraena_bilineata_OZB --
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Taeniogaster_obliqua_OTO UUUGACAGUAA-UUUU-AU-UU-A-CUAAAUAUUA-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA-----AGAGAGAUAAGUCGUAACAUAG-UAAGUGUAUCGGAAG-AUGUACUUAGAAAGU--------AACAAGUUAAAGCUUAA--UAG-AAAGCC-UUU-CAUU- UACACUGAAA-
AAA-UU-ACUGUGC-AAUUCA-GUGUAACUUGAAA-AUUAU----------AAUCUUACUAAGAUUUUAUUA---------------AAUUUAAAUG---------UUAGAAA- UA UCUUU--
UUAUUUAGUAUA---UU--AAAGAAAAAUAUAAAUAUU------GUGAUAGU-AAAUUA----GUACCGUGA-GGGAA--GG-GGA-UGAAAAA-AU--UGAAAU- UUAAUUUUUAUAAA---AGUAUAU--
UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUCAAAUAUAUUUAAAU--UAUUUU---AAUAU[-????]
Kaliptogaster_erronea_OKE UUUGACAGUAA-UUUU-AU-UU-A-CUAAAUAUUA-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUCUCUAUA----AAGAGAGAUAAGUCGUAACAUAG-UAAGUGUAUCGGA-G-A-G-ACUUAGAAAGU---------ACA-GUUA-AGCUUAA--UAG-A-AGCC--UU-CNNU-
UACANNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----N---------------NNNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN-
-NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNN----------- NNNNNNNNNNN------NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] Pangaeagaster_Cordulegaster_maculata UUUGACAGUAA-UUUU-AU-UU-
A-CUAAAUACUA-UGAUU-UU--GGCUC--U-AAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNN-
----------NNNNNNNNNNNNNNNNN--NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNN-------N-
--------------NNNNNNNNNNNNNNN---NNNNNNNN- NN NN--N--NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNNN-NNNNNN------NNNNNNN-
NNNNNNNNN-NNN-N-----------NNNNNN- NNNNNNNNNNNNNNN--NNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNNNNNNNNN-N-NNNNNNNNNNNNN[-????]
EU054988_5084_Lauragaster_dorsalis UUUGACAGUAA-UUUU-AU-UU-A-CUAAAUAAUA-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
NNNN-NN????????---?????????NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-
NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----N---------------NNNNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN--
NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] EU477688_Cordulegaster_boltonii UUUGGCAGUAA-UUUU-AU-UU-
A-CUAAAUAUUA-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUCUCUAUA----AAGAGAGAUAAGUCGUAACAUAG-UAAGUGUAUCGGAAG-
AUGUACUUAGAAAGU-------AA-CAAGUUAAAGCUUAA--UAG-AAAGCC-UUU-CAUU- UACACUGAAA-AAA-UU-ACUGUGC-AAUUCA-GUGUAACUUGAUU-AU------------
AAUCUUACUAAAUUUUAUUGA---------------AUAGAUUUA----------UUAGAAA- UA UCUUU--UUAUUUAGUAUA---UU--AAAGGAAAAUAUAAGUAUU------GUGAUAGU-GAAUUA--
--GUACCGUGA-GGGAA--GA-GGA-UGAAAAAA-U--UGAAAU- UUAAUUUUAAAAAA---AGUAUAU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUCAAAUAUAUAUAAAU--UA---
UUUUAAUAU[-????] EU477685_Cordulegaster_picta UUUGACAGUAA-UUUU-AU-UU-A-CUAAAUAUUA-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCUCUAUA----AAGAGAGAUAAGUCGUAACAUAG-UAAGUGUAUCGGAAG-AUGUACUUAGAAAGU-------AU-CAAGUUAAAGCUUAA--UAG-AAAGCC-UUU-CAUU- UACACUGAAA-
AAA-UU-ACUGUGC-AAUUCA-GUGUAACUUGAUU-AU-------------AAUCUUACUAAAAUUUUAUUA---------------AUUUAAAGU------A---UUAGAAA- UA UCUUU--
UUAUUUAGUAUA---CU--AAAGAAAAAUAUAAAUAUU------GUGAUAGU-GAAUUA----GUACCGUGA-GGGAA--AG-UGA-UGAAAAAA-U--UGAAAU- UUAAUUUUUGAAAA---AGUAUAU--
UUCAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUCAAAUAUAUCUAAAU--UA---UUUUAAUAU[-????] EU477686_Anotogaster_sieboldii UUUGACAGUAA-UUUU-AU-UU-A-
CUAAAUAUUA-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUCUCUAUA----AAGAGAGAUAAGUCGUAACAUAG-UAAGUGUAUCGGAAG-
AUGUACUUAGAAAGU-------AUCCAAGUUAAAGCUUAA--UAG-AAAGCC-UUU-CAUU- UACACUGAAA-AAA-UU-ACUGUGC-AACUCA-GUGUAGCUUGAUU-AU------------
ACUCUUACUGAAUUUAUUAAU---------------UUUUUUUAU---------UUUAGAAA- UA UCUUU--UUAUUUAGUAUA---CU--AAAGAAAUAUAAAUAAUAUU-----GUGAUAGU-AAAUUA--
--GUACCGUGA-GGGAA--AG-UGA-UGAAAAAA-U--UGAAAU- UUAAUUUUUAUAAA---AGUAUAU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUCAAAUAUAUAUAAAU--UA---
UUUUAAUAU[-????] AF266085_Neopetalia_punctata UUUGAUAGUAA-UAAU-UA-AU-A-UUUUAUUUAUUUGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUAUU--UAAAAUGAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU-------AUCCAGAUUAGAGCUUGA--UAG-AAAGCU-UUU-CAUU- UACACUGAAA-
AUU-UU-ACUGUGC-AAUUCA-GUUUAGUUUGAUA-GUUUGAUUAAUUUUUAAUCUUACUUAAUUUAUGUUUUUAAAU-------------------------UU-ACAGAAA- UA ACUUU--
GUAUAUAGUAUU---UU--AAAGAAAAAUUUUAUUUA-------GUGAUAGU-UUAUUA----GUACCGUGA-GGGAA-UAA-UGG-UGAAAUAU-UU-UGAAAAUAAUAAUUU- AAAUA---AGUAGAU--
UUAAUUUAUUGUACCUUUUGUAUCAGGG-UUAAUCAAAUAUUAUUAAUU--UAAUAAUU-AAAUU[-????]
Chloropetalia_soarer_OCSr UUUGAUAGUAA-UUUU-GA-UC-A-CUAGUCGAUU-UGAUU-UA--AGCUC--UAAAGUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUAUU---AAAAUGAGAUAAGUCGUAACAUAG-UAGACGUAUCGGAAG-GUGUGUCUAGUAAGU-------AACCAAAUUAGAGCUUGA--UAG-AAAGCG-UUU-CACU- UACACUG???-
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Sinorogomphus_nasutus_OSN UUUGAUAGUAA-UUUU-GA-UA-A-CUAGUCGAUU-UGAUU-UA--AGCUC--UAAGGUAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUUAGUUUAAAGUGAGAUAAGUCGUAACAUAG-UAGACGUAUCGGAAG-GUGUGUCUAGUAAGU-------AACCAAAUUAGAGCUUGA--UAG-AAAGCC-UUU-CACU- UACACUGAAA-
AUU-UU-ACUGUGC-AAUUCA-GUUUAGUUUGAUU-AA--------AUUUUACUCUUACUUCAAUUUUUUAU---------------------------------UUGAGAAA- UA UCUUU--
AAAUUUAGUAUA---UU--AUAGAAA-GGUUUGUAUUUA-----GUUAUAGU-UAAUUA----GUAUCGUGA-GAGAA--AA-UGA-UGAAAUAA-UAAUGAAAA- UUUAAUUUUUGGAA---AGUAAAU--
UUUAUUUAUUGUACCUUUUGUAUCAGGG-UUAAUUAAAAGAUU-UUGAU--UUAUUUU--AUUAU[-????] EU477691_Chlorogomphus_brunneus UUUGAUAGUAA-UUUU-GG-UA-
A-CUAAUUGAUU-UGAUU-UA--AGCUC--UAAAGUAUGC-ACACAUCGCC------- CG-UCGC-UCUCAUUAUU--UAAAAUGAGAUAAGUCGUAACAUAG-UAGACGUAUCGGAAG-
GUGUGUCUAGUAAGU-------AAUCAAAUUAGAGCUUGA--UAG-AAAGCU-UUU-CAUU- UACACUGAAA-AUU-AU-ACUGUGC-GAUUCA-GUUUAGUUUGAUU-AA--------AUUU-
AUUCUUACUUUAAAUUUGUAUU---------------------------------UUGAGAAA- UA UCUUU--AAAUUUAGUAUG---UU--AUAGAAA-AGUUAUGAUUU------GUUAUAGU-UAAUUA--
--GUAUCGUGA-GAGAA--AU-GGA-UGAAAUAA-UUAUGAAAA- UAUAAUUUAAAUAA---AGCAGAU--UUUAUUUAUUGUACCUUUUGUAUCAGGG-UUGAUUAAAAGAUUUAUAAU--
UAUAUUUAUAUAUU[-????]
Chlorogomphus_sp --
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Synthemis_eustalacta_OSE UUUAAAAGUAA-UUUU-GA-UU-U-CUUAUUAUUA-UGACU-UU--AGCUC--UGAAAUAUGU-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-AUGUACCUAGAAAGA---AUUUAUACAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAGG-
GAU-UU-AUUGUGC-AAUUCA-AUUUAAUUUGAUU-AA--------AUAAUACUCUUACUAUUAUUUUUUUUUU---------------GAA------UUUUA---UUAGAAA- UA UCUUU--
AAAUUUAGUAUA---UU--AAGGAAAUAUGGUUAGU--------UGUAUAGU-UUACUU----UUACUGUGA-AGGAC---C-UGA-UGAAAUAA-U--UGAAAA- UUGAAUUUGUUUUA---AGUAAAU--
UUUAUUUAUUGUACCUUUUGUAUCAGGG-UUGAUUAAAUAUUA-UUAAU--UUAUUUU--AAUUU[-????] EU055067_Synthemis_marcrostigma NNNNNNNNNNN-NNNN-NN-NN-
N-NNNNNNNNNN-NNNNN-NN--NNNNN--NNNNNNNNNN-NNNNNNNNNN------- NN-NNNN-NN????????---?????????NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNN---------------NNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NNNNNNNNNNNNNNNNNN--
NNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
EF631516_Synthemis_leachii NNNNNNNNNNN-NNNN-NN-NN-N-NNNNNNNNNN-NNNNN-NN--NNNNN--NNNNNNNNNN-NNNNNNNNNN------- NN-
NNNN-NN????????---?????????NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-
NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNN---------------NNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN--
NNNNNNNNNNNN---NNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
Eusynthemis_brevistyla_OEB UUUAAAAGUAA-AAUU-GA-UU-U-CUUAUUAAUU-UGAUUUUU--AGCUC--UGAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGU-----UAAUACAAAUUAGAGCUUGA--UAG-AAGC??-???-????-
??????????-???-??-???????-??????-?????????????-?????????????????????????????????-??????---------------??????????????--????????-
???????--????????????---???????????????????--???????--????????-??????------???????-?????????-???-??----------??????-
???????????????--????????-?????????????????????????????-??????????????-?????--??????????????[-????] EU477692_Eusynthemis_guttata
UUUAAAAGUAA-AAUU-GA-UU-U-CUUAUUAAUU-UGAUU-UU--AGCUC--UGAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAAGA-GUUA--AUACAAGUUAGAGCUUGA--UAG-AAAGCA-UUC-CAUU- UACACUGGGG-
GAU-UU-ACUGUGC-AAUUCA-GUUUAAUUUGAUU-GAAUAA--------UGUUCUUACUAUAUUUUUUUUUAA---------------UUUUU-----------AUUAGAAA- UA UCUUU--
GAAUUUAGUACA---UU--AAGGAAUAUAUUUGAUUUU------GUUAUAGU-UUAUUA----GUACCGUGA-GGGGU--UU-GGA-UGAAAUAG-U-- UGAAAAUUUAAAUUUAAUAUA---AGUAGAU--
UUUAUUUAUUGUACCUUUUGUAUCAGGG-UUGAUUAAGUAUUAUUAAUU--UAA--UUUUAUUUU[-????] EU054973_5069_Eusynthemis_nigra UUUAAAAGUAA-AAUU-AAUUU-
U-UCUAUUAAUU-UGAUU-UU--AGCUC--UGAAAUAUGC-ACACAUCGCC------- CG-NNNN-NN????????---?????????NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNN---------------NNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] EU054974_5070_Choristhemis_flavoterminata UUUAAAAGUAA-
AAUU-AAUUU-U-UCUAUUAAUU-UGAUU-UU--AGCUC--UGAAAUAUGC-ACACAUCGCC------- CG-NNNN-NN????????---?????????NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNN---------------NNNNNNNNNNNNNN--NNNNNNNN-

NNNNNNN--NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--
NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] Synthemiopsis_gomphomacromioides_ASG UUUAAAAGUAA-
AUUU-AAUUU-A-UUUAUUAAUU-UGACU-UU--GGCUC--UGAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-
AUGUAUCUAGAAAGA---AUUAAUACAAAUUAGAGCUUGA--UAG-GAAGCA-UUU-CAUU- UACACUGAGA-AGU-UU-ACUGUGC-GAUUCA-GUUUAAUUUGAUU-UGAAAUU------
AAGUACUUACUAUAUAUU--UUUAU--------------AUUAUUUU-------AUCAGAAA- UA UCUUU--AAAUUUAGUACA---CU--AAGGAAAUAUAUAAUAUU-------GUUAUAGA-
UUAUUA----UUACUGUGA-AGGAU---A-UGU-UGAAAUAG-A--UGAAAA- UUAAAUUUUAAAUA---AGUAGAU--UUAUUUUAUUGUACCUUUUGUAUCAGGG-UUGAUUAAAUUUUA-UUAAA--
UUAUUUU--AUUUU[-????]
Gomphomacromia_chilensis UUUAAAAGUAA-AUUU-GA-UU-U-CUUGUUAAUU-UGAUU-UU--GGCUC--UGAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGUAAGG-UGAAAAAAUCAAAUUAGAGCUUGA--UAG-AAAGUU-UUU-CAUU- UACACUGAGA-
AGU-UU-ACUGUGC-GAUUCA-GUAUAAUUUGAUA-AAUUAUAU---------UUUUACUAUAAUUGUUUU-----------------UGUUAUUUUU------UUUAGAAA- UA UCUUU--
UUAUUUAGUACA---UU--AAGGAAUUAUUAAUUGUUU------GUUAUAGA-UUAUUA----UUACCGUGA-GGGAA--AU-UAA-UGAAAUAA-U--UGAAAA- UUGAAUUUAAUAUA---AGU-AAUU-
UUAAUUUAUUGUACCUUUUGUAUCAGGG-UUGAUUAAAUUUAA-UUAAU--UUAUUAGUUGACUU[-????]
Gomphomacromia_paradoxa --
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GQ329647_Syncordulia_serendipator NNNNNNNNNNN-N-NN-NNNNNNN-NNNNNNNNNN-NNNNN-NN--NNNNN--NNNNNNNNNNNNNNNNNNNNN------- NN-
NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-
NNN-NN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNN--------------NNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN--
NNNNNNNNNNNN---NNNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNN------NNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] GQ329646_Syncordulia_venator NNNNNNNNNNN-N-NN-NNNNNNN-
NNNNNNNNNN-NNNNN-NN--NNNNN--NNNNNNNNNNNNNNNNNNNNN------- NN-NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNN-----
NNNNNNNNNNNNNNNNNNNNNN--------------NNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NNNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNNN-NNNNNN----
NNNNNNNNN-NNNNNNNNN-NNN-NNNNNN------NNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] EU054998_5094_Idionyx_imbricata UUUAAUAGUAA-GAUU-GU-AU-U-CUUUGCAAUU-UGAUU-UU--GGCAC--
UAAAAUAUGC-ACACAUCGCC------- CG-NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-
NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNN--------------
NNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NNNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-
NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
Idionyx NNNNNNNNN--------NNNNNN-NNNNNNNNNN-NNNNNNNN--NNNNN--NNNNNNNNNN-NNNNNNNNNN-------
NN-NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNN-NNN-NNNN-
NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNN- NN NNNNN-
-NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
Macromidia_rapida_OMR UUUAAAAGUAA-AAUU-AA-UU-U-UUUAUUAAUU-UGAUU-UU--AGCUC--UAUAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-AUGUAUCUAGAAARK-----U-WWYMAAWUWRRRSYUKRW--UWR-RAARSM-WUU-YNUU-
UACACUGAAA-AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAAU---UUAUUU---------UCUUACUUAUAAAAUUUUA------------------UUUUUGUUU-----UAUAGAAG- UA UCUUU-
-AAAUUUAGUAUA---UU--AAAGAAUUAUAUUGG------UUAAUGUAUAGU-UUAUUA----GUACUGUGA-AGGAAG-----GA-UGAAAUA--AU- CGAAAUUUUAAAAUAUUUA---AAAGUAUUA--
UUUAUAAUAAGUACCUUUUGUAUCAGGG-UUAAUUAAAUAUUU-UUAAU-GUAUAAU--UUAAUU[-????] EU477701_Oxygastra_curtisii UUUGAAAGUAA-AAUU-AA-UA-U-
CUUAUUAUUU-UGAUU-UU--AGCUC--UAGAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AGAUAAGAUAAGUCGUAACAAAG-UAGAUGUAUCGGAAG-
AUGUAUCUAGAAAGG-AAU-----ACAGAUUAGAGCUUGG--UAG-AAAGCU-UUU-UAUU- UACACUAAGA-UGA-UA--CUGUGC-AACUCA-GUUUAAUUUGAUA-AUUA----------
AUUUCUUAUAUAUAAUUAUUAUUA--------------UAUACUU---------AUUAGAAA- UA UCUUU--UUAUUUAGUAUA---UU--AAGGAAAAAUUUAUAUAAU------AUUAUAGU-UUAUUA-
---GUACUGUAA-AGGAA-----UGA-UGAAAUAU-U--UGAAA-- AUUAAUUUUUAUAUA--AGUAAAU--UUUAUUUAUUGUACCUUUUGUAUCAGGG-UUAAUUAAAUAUUUU-AAUA--UAU--
UUUUAU---[-????] EU054955_5054_Cordulephya_pygmaea UUUAAAAGUAA-AAUU-AA-UU-U-CUUGUUAUUU-UGAUU-UU--UGUUC--UGAAAUGUGC-ACACAUCGCC-------
CG-NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNN-NNN-NNNN-
NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNN----NNNNNNNNNNNNNNNNNN------------------NNNNNNNNNNNNNN--NNNNNNNN-

NNNNNNN--NNNNNNNNNNNN---NNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--
NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] EF631566_Pseudocordulia_circularis NNNNNNNNNN-
NNNN-NNNNNNN-NNNNNNNNNN-NNNNNNNN--NNNNN--NNNNNNNNNN-NNNNNNNNNN------- NN-NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNN-----
NNNNNNNNNNNNNNNNN------------------NNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNN----
NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] EU054968_5065_Hesperocordulia_berthoudi UUUAACAGUAA-AAUU-GA-UU-U-CUUAUCAUUU-UGAUU-UU-
-AGCUC--UGGGAUAUGC-ACACAUCGCC------- CG-NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNNN----NNNNNNNNNNNNNNNNN-----
-------------NNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NNNNNNNNNNNNNNNNNN--NN---
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EF631556_Lathrocordulia_metallica NNNNNNNNNNN-NNNN-NNNNNNN-NNNNNNNNNN-NNNNNNNN--NNNNN--NNNNNNNNNN-NNNNNNNNNN------- NN-
NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNN-NNN-NNNN- NNNNNNNNNN-
NNN-NN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNNN----NNNNNNNNNNNNNNNNN------------------NNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN--
NNNNNNNNNNNN---NNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] EU054959_55057_Micromidia_convergens UUUAAAAGUAA-AAUU-GA-UU-
U-CUUGUUAAUU-UGAUU-UU--AGCUC--UGAAAUAUGC-ACACAUCGCC------- CG-NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNN-----
NNNNNNNNNNNNNNNNN------------------NNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNN----
NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] EF631557_Micromidia_atrifrons NNNNNNNNNNN-NNNN-NNNNNNN-NNNNNNNNNN-NNNNNNNN--NNNNN--
NNNNNNNNNN-NNNNNNNNNN------- NN-NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNN-
NN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNN----NNNNNNNNNNNNNNNNN------------------NNNNNNNNNNNNNN-
-NNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN-
NNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
Austrophya_mystica --
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EF631559_Austrocordulia_refracta NNNNNNNNNNN-NNNN-NNNNNNN-NNNNNNNNNN-NNNNNNNN--NNNNN--NNNNNNNNNN-NNNNNNNNNN------- NN-
NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNN-NNN-NNNN- NNNNNNNNNN-
NNN-NN-NNNNNNNNNNNN
NN-NNNNNNNNNNNNN-NNNNNNNNNNNN----NNNNNNNNNNNNNNNNN------------------NNNNNNNNNNNNNN--NNNNNNNN-NNNNNNN--NNNNNNNNNNNN---
NNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN-NNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNN
NNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
EF631580_Archaeophya_magnifica NNNNNNNNNNN-NNNN-NNNNNNN-NNNNNNNNNN-NNNNNNNN--NNNNN--NNNNNNNNNN-NNNNNNNNNN-------
NN-NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNN-NNN-NNNN-
NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNN----NNNNNNNNNNNNNNNNN------------------NNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN-
-NNNNNNNNNNNN---NNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] EF032715_Epophthalmia_elegans NNNNNNNNNNN-NNNN-NNNNNNN-
NNNNNNNNNN-NNNNNNNN--NNNNN--NNNNNNNNNN-NNNNNNNNNN------- NN-NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNNN-----
NNNNNNNNNNNNNNNNN------------------NNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNN----
NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
Didymops_transversa_ODT UUUAAAGGUAA-AAUU-AA-UU-U-CUUAUUAUUU-UGACU-UU--AGCUC--UAGAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUCCUAAA---A????????????????????????-???????????????-???????????????--?????????????????????????????-??????-???-????-
??????????-???-??-???????-??????-?????????????-????????????-----?????????????????????--------------??????????????--????????-

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???????????????--????????-????????????????????????????-????????????????????-???????????????[-????] EU477697_Macromia_illinoiensis
UUUAAAAGUAA-AAUU-GA-GG-U-CUAAUUAAUU-UGACU-UU--AGCUC--UAGAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUAUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAUGUAUUGGAAA-AUGUAUCUAGAUAGU-A-------UCAAAUUAGAGCUUGG--UAG-AAAGCU-UUU-CAUU- UACACUGAGA-
AAU-UU-ACUGUGC-AAAUCA-GUUUAGUUUGAUG-AUUAUUC----------UCUUACU-UUUGU---UUUAA---------------UUU-------------UUCUGAAA- UA ACAUU--
UUAUUUAGUACA---UU--AAGGAAAUAUUAUAUUUA-------GUGAUAGU-UUAUUA----GUACUGUGA-AGGGC-----UGU-UGAAAUAA----GUGAAA- UUUAAUUUUUAUUA---AGUAGAU--
UUCUUUUAUUGUACCUUUUGUAUCAGGG-UUGNNNNNNNNNNNNNNNNN--NN-NNNNNNNNNNU[-????]
Macromia_amphigena_MAC UUUAAAAGUAA-AAUU-AA-GG-U-CUAAUUAGUU-UGAGU-UU--AGCCC--?????????????????????-------
??-????-??????????---?????????????????????????-???????????????-???????????????--?????????????????????????????-??????-???-????-
??????????-???-??-???????-??????-?????????????-??????????--????--????????????????????--------------??????????????--????????-
???????--????????????---??--????????????????????????--????????-??????------???????-?????????-???-??---------??????-
???????????????--????????-????????????????????????????-????????????????????-??????????????U[-????] EU055001_97_Macromia_eurynome
UUUAAAAGUAA-AAUU-GGUAUUU-CUUGUUAAUU-UGAUU-UU--AGCUC--UAGAAUAUGC-ACACAUNNNN-------
NN-NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN-
NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNN-------NNNNNNNNNNNNNNNNNNNN--------------NNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN-
-NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNN--NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
EF640463_Macromia_magnifica UUUAAAAGUAA-AAUU-AA-GG-U-UUAAUUAAUU-UGACU-UU--AGCUC--UAGAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUUAUUAUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAUGUAUUGGAAA-AUGUAUCUAGAUAGU-A-------UCAAAUUAGAGCUUGG--UAG-AAAGCU-UUU-CAUU-
UACACUGAAA-AAU-UU-ACUGUGC-AAAUCA-GUUUAGUUUGAUA-GUUAUUU----------UCUUACUGAUGGUUUUGU-----------------UUUAAUUU--------UUCUGAAA- UA ACAUU-
-UUAUUUAGUACA---UU--AAGGAAAUAUUAGAUUUA-------GUGAUAGU-UUAUUA----GUACUGUGA-AGGGC-----UGU-UGAAAUAG----AUGAAA- UUUUAAUUUUUGUGA--AGUAGAU--
UUUAUUUGUUGUACCUUUUGUAUCAGGG-UUGAUUAAAAUUUUUAAAUU--UAUUUUUU---UAU[-????]
EU477696_Macromia_splendens UUUAAAAGUAA-AAUU-AA-AA-U-CUUAUUAAUU-UGACU-UU--AGCUC--UAGAAUAUGC-ACACAUCGCC------- CG-
UCAC-UCUUAUUAUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAUGUAUUGGAAA-AUGUAUCUAGAUAGA-A-------ACAAAUUAGAGCUUGU--UAG-AAAGCU-UUU-CAUU- UACACUGAGA-
UAU-UU-GCUGUGC-AAAUCA-GUUUAGUUUGAUA-AUUUUUA----------UCUUACUGAUAUUUUUAU-----------------UAGAGUUU--------UUGUGAAG- UA ACAUU--
UUAUUUAGUACA---UU--AGGGAAAUUUAAUUUUUU-------GUGAUAGU-UGAUUA----GUACUGUAA-AGGAU-----UGU-UGAAAUAU----GUAAAA- UUAAAUUUUUAUUA---AGUAGAU--
UUUAUUUAUUGUACCUUUUGUAUCAGGG-UUAAUUAAAAUUUUUAAAAU--NNNNNNNN-----U[-????]
Phyllomacromia_sp_JF912413 UUUAAAAGUAA-AAUU-GA-UU-U-CUUAUUAUAU-UGAUC-AU--GGCUC---AGGAUAUGU-ACACAUCGCC-------CG-UCAC-
UCUUGUUAUA----AGAUAAGAUAAGUCGUAACAUAG-UAGAUGUAUUGGAAA-AUGUAUCUAGAUAGA-A------AACGAAUUAGAGCUUGUU--AG-AAAGCU-UUU-CAUU- UACAUUGAAA-AAU-
UU-ACUGUGC-AAAUCA-GUUUAGUUUGAUA-AUAAUAA----------AUUUACUUGCAUUUAUU--------------------GAGUUAUUUU----AUUUGAAA- UA UCAUU--UUACUUAGUAUA--
-UU--AAAGAAAAGUU-UUAUUGA------GUGAUAGU-UAAUUA----GUAUUGUAAAAGAA-----UGUG-UGAAAUAU---- AUUAAAUAUUUUGUUUAUUAAA--AGUAAUC--
UUAAUUUGUUGUACCUUUUGUAUCAGGG-UUGAUUUAAAUUAAGUAAAU--UAUUUUAU---UUU[-????] EU477694_Idomacromia_proavita UUUAAAAGUAU-AAUU-GG--
UUU-UUUGCUGAUU-UGA-U-UU--GGCUC--UGAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUU---AAAAUAAGAUAAGUCGUAACAUAG-UAGAUGUAUCGGAAG-
AUGUAUCUAGAAAGA-G--------CAAAUUAGAGCUUGA--UAG-GAAGCU-UUU-CAUU- UACACUGAAA-UUA-UA-ACUGUGC-AAUUCA-GUUUGGUUUGAUA-AUUAUUA----------
UCUUACUGUUUAUAAAAGUGU---------------UAUUUUU---------AAUAGAAA- UA UCUUG--GAUUUUAGUAUA---UU--AAAGAAUUAAUUUUAUUU-------GUUUUAGU-UGAUUA----
GUACUGUGA-AGGAA-----GGA-UGAAAUAA-U--GGAAUU- AUUUAUUUUAUUUAA--AGUAUAU--UUAAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUUAAAAUUAAU-AAAG--UAU--
UUUUAUAUU[-????] EF631540_Aeschnosoma_forcipula NNNNNNNNN---------NNNNNN-NNNNNNNNNN-NNNNNNNN--NNNNN--NNNNNNNNNN-NNNNNNNNNN-------
NN-NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN-
NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNN------------------NNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN-
-NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNN--NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] EF631528_Pentathemis_membranulata NNNNNNNNN------
---NNNNNN-NNNNNNNNNN-NNNNNNNN--NNNNN--NNNNNNNNNN-NNNNNNNNNN------- NN-NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNN-
NNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNN--
NNNNNNNNNNNNNNNNNNNNN------------------NNNNNNNNNNNNNN--NNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] EU477709_Tetragoneuria_cynosura UUUAAAAGUAA-AUUU-AA-UU-U-CUUAUUAAUU-UGAUU-UU-
-GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AGGUAAGAUAAGUCGUAACAUAG-UAGGGGUAUCGGAAG-AUGUUCCUAGAAAGU-UAAA----
UCAACCUAGAGCUUGA--UAG-AAAGCU-UUU-CAUU- UACACUGAAA-AAU-UA-AUUGUGC-AAUUCA-AUUUAGUUUGAUA-AUUAUAA----------AUUUACUAAUUUUUUUC-------------
-----CCGUAAUAU-------UACAGAAA-

UAUCUUU-AUAAUAUAGUAUA---UU--AAAGAAAAUUUAUUUUUU-------GUUAUAGU-UUAAUA----GUACCGUGA-GGGAA--UU-UAU-UGAAAUAU-U--UGAAAA-
UUUUAUUUUUGGUUA--AGUAUAC--UUAAUUUGUAGUACCUUUUGUAUCAGGG-UUAAUC-AAAUAUAUUA-----NN--NNNNN-NNNU[-????]
EU477713_Epitheca_costalis UUUAAAAGUAA-AUUU-AA-UU-U-CUUAUUAAUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AGGUAAGAUAAGUCGUAACAUAG-UAGGGGUAUCGGAAG-AUGUUCCUAGAAAGU-UAAA----UCAACCUAGAGCUUGA--UAG-AAAGCU-UUU-CAUU- UACACUGAAA-
AAU-UA-AUUGUGC-AAUUCA-AUUUAGUUUGAUA-AUUAUAA----------AUUUACUAAUUUUUUUUU------------------UUUAAUAU--------CACAGAAA- UA UCUUU-
AUAAUAUAGUAUA---CU--AAAGAAAAUUUAUUUUUU------GUUAUAGU-UUAAUA----GUACCGUGA-GGGWA--UU-UAU-UGAAAUAU-U--UGAAAA- UUUUAUUUUUGGUUA--AGUAUAC--
UUAAUUUGUAGUACCUUUUGUAUCAGGG-UUAAUCAAAUAUAUUAAA-AUNNNNNNNNNNNNNNU[-????]
EU477712_Epitheca_canis UUUAAAAGUAA-AUUU-AA-UU-U-CUUAUUAAUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AGGUAAGAUAAGUCGUAACAUAG-UAGGGGUAUCGGAAG-AUGUUCCUAGAAAGU-UAAA----UCAACCUAGAGCUUGA--UAG-AAAGCU-UUU-CAUU- UACACUGAAA-
AAU-UA-AUUGUGC-AAUUCA-AUUUAGUUUGAUA-AUUAUAA----------AUUUACUAAUUUUUUUUU------------------CUCUUAAUAU------UACAGAAA- UA UCUUU-
AUAAUAUAGUAUA---CU--AAAGAAAAUUUAUUUUUU------GUUAUAGU-UUAAUA----GUACCGUGA-GGGAA--UU-UAU-UGAAAUAU-U--UGAAAA- UUUUAUUUUUGGUUA--AGUAUAC--
UUAAUUUGUAGUACCUUUUGUAUCAGGG-UUAAUCAAAUAURUUAAA-A-----AUAUUNUUAUU[-????]
EU477710_Epitheca_princeps UUUAAAAGUAA-AUUU-AA-UU-U-CUUAUUAAUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUUAUUUUA----AGGUAAGAUAAGUCGUAACAUAG-UAGGGGUAUCGGAAG-AUGUCUCUAGAAAGU-UAAU---AUCAUCCUAGAGCUUGA--UAG-AAAGCU-UUU-CACU-
UACACUGAAA-AAU-UA-AUUGUGC-AAUUCA-AUUUAGGCUGAUA-AAUAUUA----------AUUUACUAAUCCUUUUUU------------------UUUACAUUAU------UACAGAAA- UA UCUUU-
AUAAUAUAGUAUA---UU--AAAGAAAUUUUAUUUUUU------GUUAUAGU-UUAAUA----GUACCGUGA-GGGAA---U-AUU-UGAAAUAA-U--UGAAAA- UUUUAUUUUUGGUAA--AGUAUAC--
UUAAUUUGUAGUACCUUUUGUAUCAGGG-UUACNNNNNNNNN-----NN--NN--NNNNN-NNNU[-????]
EU477711_Epitheca_marginata UUUAAAAGUAA-AAUU-AA-UU-U-CUUAUUAAUU-UGAUU-UA--GGCUC--UAAAAUAUGU-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGAGUAUCGGAAG-AUGUUCCUAGAAAGU-UAUA----UCAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUAUAG----------AUUUACUAGAUUUUUUUUUA-----------------------UUGGAU--UACAGAAA- UA UCUUU-
AUGAUGUAGUAUA---CU--AAAGAAGCCUUAAAAUUU-------GUUAUAGU-UUAAUA----GUACCGUGA-GGGAA---U-UGU-UGAAAUAA-U--UGAAAA- UUUUGAUUUUGGUUA--AGUAUAU--
UUAAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUCAAAUAUAUUUAAUAUAUGGUAUNNNNNNNNU[-????] EU477708_Epitheca_bimaculata UUUAAAAGUAA-AUUU-AA-UU-U-
CCUAUUAAUU-UGAUU-UU--GGCUC--UAAAAUAUGU-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AGAUAAGAUAAGUCGUAACAUAG-UWGGUGUAUCGGAAG-
AUGUUCCUAGAAAGU-UUA-----UCAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAGA-AUU-UA-AUUGUGC-AAUUCA-GUUUAGUUUGAUA-AUUAUAA----------
UCUUACUAGUUUUUG----------------------------UUUAAU--UACAGAAA- UA UCUUUUNUAUUAUAGUAUA---UU--AAAGAAAUUUUAGAUUUUU------GUUAUAGU-UUAAUA----
GUACCGUGA-GGGAA--UA-UAU-UGAAAUAA-U--UGAAAA- UUUUGAUUUUGAUUA--AGUAUAU--UUAAUUUAUAGUACCUUUUGUAUCAGGG-UUGAUCAAAUAUGUUUAAUA--UA--UUUUU-
AUCU[-????]
EF631590_Rialla_villosa NNNNNNNNN---------NNNNNN-NNNNNNNNNN-NNNNNNNN--NNNNN--NNNNNNNNNN-NNNNNNNNNN-------
NN-NNNN-NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN-
NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNN----NNN-NNNNNNNNNNNNNNNNNNNNNNNN--------------NNNNNNNNN------NNNNNNNN- NN NNNNN-
-NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNN--NN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
EU477707_Cordulia_aenea UUUAAAAGUAA-AAUU-AA-UU-U-CUUAUUAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGAGUAUCGGAAG-AUGUUCCUAGAAAGU-UUA----AUCAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AAU-UA-AUUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUAUUG----------GCUUACUAUUUUUAUUUUU-------------------------UUUAU--UACAGAAG- UA UCUUU-
GUUGUUUAGUAUA---UU--AAAGAAAAAUUAUUUUUA-------GUUAUAGU-UAAUUA----GUACCGUGA-GGGAA---U-UGU-UGAAAUAA-G--UGAAAA- UUUUAAUUUUAAUUA--AGUAUGU--
UUAAUUUACAGUACCUUUUGUAUCAGGG-UUUAUCAAAUAUAUUAAAUA--UA--UAUUU-AUUU[-????] EU477705_Cordulia_shurtleffii UUUAAAAGUAA-AAUU-AA-UA-U-
CUUAUUAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGAGUAUCGGAAG-
AUGUUCCUAGAAAGU-UUA----AUCAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-AAU-UA-AUUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUAUUG----------
GCUUACUAUUUUUUAUU-------------------------UUUUUAU--UACAGAAG- UA UCUUU-AUUAUUUAGUAUA---UU--AAGGAAAAAUUAUUUUUA-------GUUAUAGU-UUAUUA----
GUACCGUGA-GGGAA---U-UGC-UGAAAUAA-U--UGAAAA- UUUUAAUUUUAAUUA--AGUAUGU--UUAAUUUGCAGUACCUUUUGUAUCAGGG-UUUAUCAAAUAUAUUAAAUA--UA--UAUUN-
NNNU[-????] EU477700_Somatochlora_alpestris UUUAAAAGUAA-AAUU-AA-UU-U-CUUAUUAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGAGUAUCGGAAG-AUGCUCCUAGAAAGU-UUA----AUCAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUAUUU----------AUUUACUUAUUAUUUUUUA-------------------------UUUUAU--UACAGAAA- UA UCUUU-
GUUGUUUAGUAUA---UU--AAAGAAAAAUUAGUUUUU-------GUUAUAGU-UUAUUA----GUACCGUGA-GGGAA---U-UAU-UGAAAUAG-A--UGAAAA- AUUUAAUUUUAAUUA--AGUAUGU--
UUAAUUUACAGUACCUUUUGUAUCAGGG-UNNNNNNNNNNNNNNNNNN--NN--NNNNN-NNNU[-????] EU477704_Somatochlora_flavomaculata UUUAAAAGUAA-AAUU-AA-UU-
U-CUUAUUAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUYAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGAGUAUCGGAAG-
AUGCUCCUAGGAAGU-UUG----AUCCAAUUAGAGCU-GA--UAG-AAAGCC-UUU-CNUU- UACCCUGAAA-AUU-UA-AUUGUGC-CAUUCM-GKUUAAUUUGAUA-AUUAUUU----------
AWUUACYUGUCUUUUUCCC-------------------------UUUUAW--UACMGAAA-

UAUCUUU-GUUGKUUAGUAUA---UU--AAAGAAAAAUUAAUUUUU-------GUUAUAGU-UUAUUA----GUACUGUGA-AGGRA--UU-UAU-UGAAAUAA-A--UGAAAA-
AUUUAAUUUUAAUUA--AGUAUGU--UUAAUUUACAGUACCUUUUGUAUCAGGG-UUUANNNNNNNNNN--NNNN--NN--NNNNN-NNNU[-????]
Somatochlora_metallica_CORD UUUAAAAGUAA-AAUU-GA-UU-U-CUUAUUAAUU-UGAUU-UU--GGCCC--UAAAAUAUGC??????????-------
??-????-??????????----???????????????????????-?????GUAUCGGAAG-AUGCUCCUAGAAAGU-UUA-----ACAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-NAUU-
UACACUGAAA-AUU-UA-AUUGUGC-AAUUCA-GUUUAAUUUGAUAAUUUGAUAAUUA---UUUAUUUACUUGNUUUUUUCCA------------------------UUUUAU--UACAGAAA- UA UCUUU-
GUUGUUUAGUAUA---UU--AAAGAAAAAUUAAUUUUU------GUUAUAGU-UUAUUA----GUNCUGUGA-AGGAA---U-UAU-UGAAAUAA-A--UGAAAA- AUUUAAUUUUAACUA--AGUAUGUC-
UUAAUGUACAGUACCUUUUGUAUCAGGG-UU??????????????????-??????????????U[-????]
Somatochlora_tenebrosa_OSTn UUUAAAAGUAA-AAUU-AG-AU-G-CUUACUAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCCUAUUUUA-----AAU-AGAUAAGUCGUAACAUAG-UAGGAGUAUCGGAAG-AUGCUCCUAGAAAGU-------AAUCAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUAUUU----------AUUUACUUU-------UUUU--------------AUUUUUUGUUUUAU--UACAGAAG- UA UCUUU-
UUUGUUUAGUAUA---UU--AAAGAAAAAUUAAUUUUU------GUUAUAGU-UUAUUA----GUACUGUGA-AGGAA---U-CAU-UGAAAUAA-A--UGAAAA- AUUUAAUUUCAAUUA--AGUAUGU--
UUAAUUUACAGUACCUUUUGUAUCAGGG-UUUAUCAAAUAUA--UUAAA-UAUAUAUU--UAUUU[-????] EU477714_Hemicordulia_mindana_nipponica UUUAAAAGUAA-
AUUU-AA-UU-U-CUUAUUAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAAGUAUCGGAAG-
AUGUUUCUAGUAAGU-U------AUCAAAUUAGAGCUUGA--UAG-GAAGCU-UUC-CAUU- UACACUGGGG-AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA-GUUAUUA----------
ACUUACUUUAAUUAUUUAUUU--------------AAUUAU----------CUCAGAAA- UA UCUUU-AUUAUUUAGUAUA---UA--AAAGAAAAAUUAUUUUUA-------GUUAUAGA-UUAUUA----
GUACUGUGA-AGGAA-----UAU-UGAAAUAG-A--UUGAAA- AUUUAAUUUUAGUUA--AGUAUGU--UUAAUUUACAGUACCUUUUGUAUCAGGG-UUAAUUAAAUAUUUUAAAUA--UA--
UAUUUUAUUU[-????] EU054977_5073_Hemicordulia_australiae UUUAAAAGUAA-AAUU-AA-UU-U-CUUAUUAAUU-UGAUU-UU--AGCCC--UAAAAUAUGC-ACACAUCGCC--
----- CG-NNNN-NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN-
NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNN--------------NNNNNNNNNNN---NNNNNNNN- NN NNNNN-
NNNNNNNNNNNNN---NNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNN---NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] EU054965_5062_Procordulia_jacksoniensis UUUAAAAGUAA-
AAUU-AA-UU-U-CUUGUUAAUU-UGAUU-UU--AGCUC-UAAAAUAUGC-ACACAUCGNN------- NN-NNNN-NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNN--------------NNNNNNNNNNN---NNNNNNNN- NN NNNNN-NNNNNNNNNNNNN---NNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNN-
NNNNNN---NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
Unaligned_Libellulidae ---
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--11111111111111111111-----22222222222222222222222222222222222222222222----------
------3333333-----444444444----------55555555555555-----------------------------------666666666-------
7777777777777777777777777777--[-????]
DQ021431_Notiothemis_robertsi UUUAAAAGUAA-AAUU-AU-CU-U-CUUGUUAUUU-UGAUU-UU--AGCAC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCAC-UCUUAUUAUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAGGUACCGGAAG-GUGUCUCUAGUUAGU-UAUA-----CAAAUUAGAGCUUGA--UAG-AAAGCU-UUU-CAUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-AUUUGAUUUGAUA-AUUCUUA----------UCUUACUUAACUUUAUUUAAU----------------------UUAUUU--AUGAGAAA- UA UCUUU-
UUUAUUUAGUAUA---UA--AAAGAAAAAAAUUAAAUU-------GUUAUAGU-UUAAUA----GUACUGUGA-AGGAA--UU-UGA-UUAAAUAU----AUUAUC- UAUAGUUUUUUUUA---AGUAUGU--
UUAAUUUGCAGUACCUUUUGUAUCAGGG-UUGAUUUAAU-AAUUUAAUU--UAUUUUUA---CAU[-????] EU477726_Tetrathemis_irregularis UUUAAAAGUAA-AAUU-AU-CU-
C-CUUGUUAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-NNNNNNNNNN------- NN-NNNN-NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNN-NNGAGGUACCGGAAG-
GUGUCCCUAGUUAGU-UAAU-----CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-AUU-UA-UUUGUGC-AAUUCA-AUUUAAUUUGAUA-AUUAAAU----------
UCUUACUUUAUUUUUAU-----------------------AUAUUUGUU--AAGAGAAA- UA UCUUU--AUAUUUAGUAUA---UU--AAGGAAAAAUUUUUAUUU-------GUUAUAGU-AAAUUA----
GUACUGUGA-AGGAA---U-UGA-UUAAAUAA----UUUAAA- UUUCAUUUUUUAUA---AGUAUAA--UUUGUUUUUAGUACCUUUUGUAUCAGGG-UUAAUCUAAU-AGUUUAAUU--UAUUUUUU---
UAU[-????] DQ021430_Tetrathemis_polleni UUUAAAAGUAA-AAUU-UU-CU-C-CUUGUUAAUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUAUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAGGUACCGGAAG-GUGUCCCUAGUUAGU--AAU-----CGAGUUAGAGCUUGA--UAG-AAAGCA-UUC-CAUU- UACACUGGAA-
AGU-UA-UUUGUGC-AAUUCA-AUUUAAUUUGAUA-AUUAAAA----------UCUUACAUUUAUUUAUU-----------------------AUUGAUUUU--AUGAGAAG- UA UCUUU--
AUUUUUAGUAUA---CU--AAAGAAAAAUUUUUGAUU-------GUUAUAGU-UAAUUA----GUACUGUGA-AGGAA--UA-UGA-UUAAAUAU----UUUAAA- UUUCAUUUUUUAUA---AGUAUGA--
UUUAUUUUCAGUA CCUUUUGUAUCAGGG-UUAAUUUAAU-UGUUUAAUU--UAUUUUUA---GUU[-????] EU477723_Urothemis_cf_signata UUUAAAAGUAA-AAUU-AU-UU-A-
CUUGUUAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCAC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGGGUACCGGAAG-
GUGUUCCUAGUAGGA-ACAA----UCAAAUUAGAGCUUGG--UAG-AAAGCA-UUU-CAUU- UACAUUGAGA-AUU-UA-ACUGUGC-AACUCG-GUUUGAUUUGAUA-AUUUAUG----------
UCUUACUUAUUCUUUUUU------------------------UUAUUUU--GUGAGAAG-

UAUCUUU--UUGUUUAGUAUG---UU--AAUGAAUAAUUUUUUUU-------GUUAUAGU-GAAUUA----GUACUGUUA-AGGAA---U-UGA-UGAAAUAG-G--UUAAAA- AUUAUUUUUUUGUA---
AGUAUAU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUCAAAU-UUAUUAAUU--UAUAUUUA---AUU[-????] EF640460_Urothemis_assignata UUUAAAAGUAA-AUUU-AU-UU-
U-CUUAAUAGUU-UGAUA-GU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGAGUACCGGAAG-
GUGUUCCUAGCAUGA-UUAAA---UCAAAUUAGAGCUUGA--UAG-AAAGCU-UUU-CAUU- UACACUGAAA-AUU-UA-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUAAAA---------
UCUUACUUAUUUUAUUU-----------------------UUUUGUUUU--AGAAGAAA- UA UCUUU--UUAUUAAGUAUA---AU--UAAUGAACAAUUUUUUUU-------GUUAUAGU-GAAUUA----
GUACUGUGA-AGGAA---U-AGA-UGAAAUAA-A--UUAAAA-- UUUAUUUUUAAUA---AGUAUGU--UUAAUUUGCAGUACCUUUUGUAUCAGGG-UUAAUCAAUU-AUAUUAAUU--UAUUUUUA---
AUU[-????]
Macrodiplax_cora UUUAAAAGUAA-AAUU-AU-CUUU-CUUGUUAAUU-UGACU-UU--AGCUC--UAAAAUAUGC-ACAUAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGGGUACCGGAAG-GUGUCUCUAGAAUGGUUA-----AUCAAAUUAGAGCUUGA--UAG-UAAGCA-UUU-CAUU- UACACUGAAA-
AUA-UA-ACUGUGC-GAUUCA-GUUUGGUUUGAUA---AUUA--AAA-----UCUUACUUAAUUUUGUUUU----------------------GAUUUU----AUGAGAAA- UA UCUUU--
AAGUUUAGUAUA---UU--AAAGAAAAAUAUAUCUUU------GUUAUAGU-GAAUUA----GUAUUGUUA-AGGAA---U-UGA-UGAAAUAU---UUAAUAA-
UUAAUUUUUUU---U-UAAGUAUAU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUCAAAU-AAUUUAAUU---AUAUUUA---AUU[-????] EF640459_Macrodiplax_balteata
UUUAAAAGUAA-AGUU-AU-CAUU-CUUGUUAUCU-UGACU-UU--GGCUC--UAAAGUAUGC-ACACAUCGCC-------
CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGGGUACCGGAAG-GUGUUCCUAGGAAGG-A-A-C---ACGAGUUAGAGCUUGA--UAG-GAAGCA-UUU-CAUU-
UACACUGAAA-AUU-UA-AUUGUGC-AAUUCA-GUUUAACUUGAUA-AUUAGCA----------CCUUACUUAAAAU-UAUUU-----------------------UAUUUUU--AUGAGAAG- AA UCUUU-
-AAUUUUAGUAUU---UU--UAAGGAAAAAAAUUUUUUU-----GUUAUAGU-AGAUUA----GUACUGUCA-AGGAA---U-UGG-UGAAAUAU-A--UAAAAA- ACUAUUUUUUUUAA---AGUAUAU--
UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUGAUCAAAU-GAAUUAAUU--UAUAUUUA---ACU[-????]
EF631568_Zyxomma_elgneri NNNNNNNNN--------NNNNNN-NNNNNNNNNN-NNNNNNNN--NNNNN--NNNNNNNNNN-NNNNNNNNNN------- NN-
NNNN-NN????????----????????NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-
NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNNNNNNN---NNNNNNNNNNNNNNNNNNNN--------------NNNNNNNNNN----NNNNNNNN- NN NNNNN--
NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNN--NN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
AB708296_Zyxomma_petiolatum --
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EU477724_Zygonyx_torrida UUUAAAAGUAA-AUUU-AU-UU-C-UUUGGUAAAU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGAGUACCGGAAG-GUGUUCCUAGUU-GG-UAAU-----CAAAUUAGAACUUGA--UAG-AAAGUA-UUU-CAUU-
UACACUGAAA-UUU-UA-ACUGUGC-AAUUCA-GUUUAAUUUGAAA-AUUAUU----------UCUUACUUAUAAU-UUUU-----------------------UUUUUAAU--UGGAGAAR- AA UCUUU-
-UUAUUUAGUAUU---UU--AAUGAAAAAUGAAUUUUU------GUUAUAGU-UAAUUA----GUACUGUGA-GGGAA---U-UGA-UGAAAUAA-U--UGAAAA- AUUAUUUUUGGUUA---AGUAUAC--
UUGAUUUGUAGUACCUUUUGUAUCAGGG-UUAAUUAAAU-AAUAAAAUU--UAUUUUAA---UAU[-????] EU054944_5044_Nannophlebia_sp UUUAAUAGUAA-AUUU-AA-UA-C-
CUUAUUAUUU-UGAUU-UA--GGAUC--UAAAGUGUGC-ACACAUCGCC------- CG-NNNN-NN????????----????????NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNNNNNNN---
NNNNNNNNNNNNNNNNNNNN--------------NNNNNNNNNN----NNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN----
NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNNN-NNNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
DQ021432_Bironides_sp UUUAAAAGUAA--UUU--U-UU-U-UUUGUAAAUU-UGAUU-AU--GGCUC--UAAAGUAUGC-ACACAUCGCC------- CN-
NNNN-NNNNNNNNNN----NNNNNNGAUAAGUCGUAACAUAG-UAUGUGUACCGGAAG-GUGUCUCUAGAAUGA--CAAU----CAAAAUAGAACUUGA--AAG-AAAGCA-UUU-CGUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-AUUUAUUUUGAUA-AUUAU-U----------UUUUACUUAGAUU-UU----------------------UUAGGAUUAGU--UUGAGAAA- UA UCUUU--
AUAUAUAGUAUU-UAUU--AGGGAAUUAUUUAUUUUU-------GUGAUAGU-UUAUUA----GUACUGUGA-AGGAA---U-AA-AUGAAAUAU-U--UUGAAA- AUAAAAUUUUGGCUA--AGUAUAU--
UUAAUUUAUAGUACCUUUUGUAUCAGGG-UUUAUUAAAA-AAAUUAAUU-U-AUAUU-----UAU[-????]
DQ021429_Huonia_epinephela UUUAAAAGUAA-AAUU-UU-UCUU-UUUA--AGUU-UGAUU-UA--AGCUC--UAAAGUAUGC-ACACAUCGCC------- CG-
UCAC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAGGUACCGGAAG-GUGUCUCUAGAAAGU-A-------UCAAAUUAGAGCUAGA--UAG-AAAGCG-UUC-CACU- UACACUGGAG-
UUU-AA-AUUGUGC-AAAUCA-AUUUAAUUUGAUA-AUUAUAA----------UCUUACUAGCUUU-UUUU--------------------UUUUUUUUUNU--UAUAUAAK- GA UCUUC---
UUGUYAGUACU---UA--UUAAGGAAUUAAUUUAUUU------GNURUAGU-GAACUA----GYRCUGUAA-AGGAA-AAU-AGA-UGAAAUAU-UAUUGAAAA- AUUAUUUUUGUUA---AGUAUAU--
UUUAUUUAUAG-ACCUUUUGUAUCAGGG-UUUAUCUAAA-AUUGUAAUU--UAUAUUUA---UUU[-????]
EF631587_Huonia_oreophila NNNNNNNNN--------NNNNNN-NNNNNNNNNN-NNNNNNNN--NNNNN--NNNNNNNNNN-NNNNNNNNNN------- NN-
NNNN-NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-
NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNN--NNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN--------------NNNNNNNNNN----NNNNNNNN-

NNNNNNN--NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNN--
NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] EF640408_Onychothemis_testacea UUUAAAAGUAA-
AAUU-AU-UU-C-CUUAUUAAUU-UGAUU-UU--GGCUC--UGAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGGGUACCGGAAG-
GUGUCCCUAGAAAGG-AAAU-----CAAAUUAGAGCUUGA--UAG-UAAGCA-UUU-CAUU- UACACUGAAA-AUU-UA-UCUGUGC-AAUUCA-GUAUAAUUUGAUA-AUAAAUU---------
UCUUACUAUAUUU-UCUU----------------------UUAAAAUUU--AUGAGAAA- UA UCUUU--GUAUUUAGUAUA---UU--AAGGAAAAAUUUUUGGUU-------GUUAUAGU-AUAAUA----
UUACUGUUA-AGGAA-----UGA-UGAAAUAU-U--U---AA- AUUAUUUUUAUCA----AGUAUAU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUUAAAU-AAAUGAAUA--
UUUAUUAUAUCUAU[-????] EF640451_Rhyothemis_variegata UUUAAAAGUAA-AAUU-AU-UU-CCUUUAUUAAUU-UGAUU-UU--AGCUC--UAAAAUGUGC-ACACAUCGCC-------
CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-GUGUUCCUAGACUGG-UAUA-----CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU-
UACAUUGAAA-AUU-UA-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUAAUA---------UCUUACUUUAUAU-U-UUG---------------------UAUAUUAAU--AUGAGAAA- UA UCUUU-
-AUAUUUAGUAA---AUU--AAUGAAAAAUAAAUUUUU------GUUAUAGU-AAAUUA----GUACUGUCA-AGGAA---U-AGA-UGAAAUAA-UUUAAAAA--UG- AAUUUUUAAAA---AGUAUGU--
UUAAUUUUCAGUACCUUUUGUAUCAGGG-UUAAUCAAAUA-UAUUAAUU--UAUAUU---UAAAU[-????]
EU477719_Rhyothemis_fuliginosa UUUAAAAGUAA-AAUU-AU-UU-CCUUUAUUAAUU-UGAUU-UU--AGCUC--UAAAAUGUGC-ACACAUCGCC-------
CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-GUGUACCUAGAUUGG-AAUA-----CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU-
UACAUUGAAA-AUU-UA-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUAGUA---------UCUUACUAUAUAA-UUUGU---------------------UUAUUGUU--AUGAGAAA- UA UCUUC-
-UUAUUUAGUAAA---UU--AAUGAAUAAUAAAACAUU------GUUAUAGU-AAAUUA----GUACUGUCA-AGGAA---U-AGA-UGAAAUAA-U--UUAAAA- AUAAAUUUUGGAAA---AGUAUGU--
UUAAAUUUCAGUACCUUUUGUAUCAGGG-UUAAUCAAAU-AUAUUAAUU--UAUAUUUA---AAU[-????]
EF640449_Miathyria_marcella UUUAAAUGUAA-AAUU-AU-UA-AU-UAAGUAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-GUGUUCCUAGAAAGU-AAAA---AACAAAUUAGAGCUUGA--UAG-UAAGCG-UUC-CAUU-
UACACUGGUAUUAU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGACA-AUUAUAA---------UAUUACUACAAUU---GUU---------------------AUUUUUUU--UUUAGAAA- AA UCUUU-
-AUUUUUAGUAU---AUU--AACGAAAAAAAUUUUUUUA------GUGAUAGU-UUAAUA----GUACUGUGA-AGGAA---U-UUU-UGAAAUAA-CUUAAAAUU- UUGAAUUUUAAAAA---AGUAUAU--
UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUUAAUUA-AAAUAAUU--UAUUUU---UAUAU[-????]
Miathyria_simplex --
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DQ021423_Tholymis_citrina UUUAAAAGUAA-AAUU-AU-UA-A-CUAUUUAAUU-UGA-UUUU--AGCUC--UAGAAUAUGC-ACACAUCGCC-------
CG-UCAC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGGGUACUGGAAG-GUGUUCCUAGUAAGG-UUUA--U--CUGCUUGGAGCUUGU--UAG-AAAGCG-UUC-CAUU-
UACACUGGAU-UUG-UG-AUUGUGC-AAAUCA-AUCCUGGCUGAAC-UGAUUAUAA--------UAUUACUUAUUUU-UGAUUUAA-------------------UUGUU-----UUGAGAAG- AA UCUUU-
-AUAUUUAGUAUA---AU--AAGGAAAAAUUUAGUAUU------GUGAUAGU-GAAUUA----GUACUGUAG-AGGAA---U-UAA--GGGUUAU-----UU--U- UGUUAUUCUUUAAUA--AGUAUAC--
UUUAUUUGUAGUACCUUUUGUAUCAGGG-UUAAUUAAAA-UUUUUAAUU--UAUUUUAA---GUU[-????]
EF640452_Tholymis_tillarga UUUAAAAGUAA-AAUU-AU-UA-A-CUAUUUAAUU-UGACU-UU--AGCUC--UAGAAUAUGC-ACACAUCGCC-------
CG-UCAC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAGGUACCGGAAG-GUGUCUCUAGUCAGU-UA------UCUGCCUAGAGCUUGA--UAG-UAAGCA-UUC-CAUU-
UACACUGGAU-UUU-UA-AUUGUGC-AAUUCA-AUUUGGGCUGAUA-GAAUUUAA---------UCUUAUUUUAGUU-UUUA---------------------UUUUUAGUU--UUGAGAAG- UA UCUUU-
-AUAUUUAGUAUC---CU--AAAGAAAAAUUUUUUUC--------AUUAUAGU-UAAAUA----GUACUGUGA-AGGAA-UAU-UGA-UGAAUUAU----AUUAAC- UGUUAUUCUAAAAUA--AGUAUAC--
UUUAUUUGUAGUACCUUUUGUAUCAGGG-UUAAUUAAAU-UACUUAAUU--UAUUUUAA---UUU[-????]
EF640450_Pantala_flavescens UUUAAAAGUAA-AAUU-AUUUU-C-CUUAUUAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGAGUACCGGAAG-GUGUUCCUAGAA-AG-UAAA-----CAAAUUAGAGCUUGAU-UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UA-ACUGUGC-GAUUCA-GUUUAAUUUGAAA-UUAAAU----------UCUUACUUAAUUU-UUUUUU--------------------AAUUUAAUU--UAGAGAAA- UA UCUUU--
UUAUUUAGUAUA---CU--AAAGAAAAAUUUUUAUU--------GUUAUAGU-AAAAUA----GUACUGUGA-AGGAA---U-UGA-UGAAAUAA-A--UGAAAA- UGUAAUUUUUUAAA---AGUAUAC--
UUUAUUUGUAGUACCUUUUGUAUCAGGG-UUGAUCAAAU-AAAUUAAUU--UAUAUUUU---UAU[-????]
AF266099_Tramea_lacerata UUUAAAUGUA
A-AAUU-AU-UU-C-UUUAAUAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC-------CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-
UAGGAGUACCGGAAG-GUGUUCCUAGGAAGG-UAAA-----CAAAUUAGAGCUUGA--UAG-UAAGCA-UUU-CAUU-UACACUGAAA-AAU-UA-GUUGUGC-AAUUCA-ACUUGAUUUG AUG-
AUUUGAUAA--UUAAAGUAUUACUAUAUU-------UUG-------------------UAAAAAUUU--UUGAGAAA-UAUCUUU--AAUUUUAGUAUA---CU--
AAAGAAUAAAUAAUAUUU-------GUUAUAGU-UUAAUA----GUACUGUGA-AGGAA---C-UAA-UGAAAUAA-G--UUAAAA-UUUAAUUUAAAUUA---AGUAUAC--UUAAUUUGUAGUA
CCUUUUGUAUCAGGG-UUGAUUAAAU-AUUUUAAUU--UAUAUUUA---GGU[-????]
Tramea_calverti UUUAAAUGUAA-AAUU-AU-UC-C-UUUAAUAAUU-UGAUC-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGAGUACCGGAAG-GUGUUCCUAGGAAGGUA------AACAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU-
UACACUGAAA-AAU-UA-GUUGUGC-AAUUCA-ACUUGAUUUGAUU--AAUUA-A-AA------UAUUACUAUAUUUU---A---UU---------------UAA-----------UUGAGAAA-

UAUCUUU--AAUUUUAGUAUA---CU--AAAGAAUAAAAUAUUUUU-------GUUAUAGU-U----------UACU-- -----------NN-NNNNNNNNN- NNNNNNNNNNNNNNNNNNNNNN---
NNNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNN-NNNNN-NN-NNNN-NNN-NNN-NNNNNU[-????] Sympetrum_Kalosympetrum_janeae_OSJ
UUUAAAAGUAA-AAUU-AUUUU-A-UUUAUUGAUU-UGAUG-AC--AGCCC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-GUGUUCCUAGAAAGG-----GAAAACAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA-AUUUU-A----------UCUUACUUUUUAUU-------------------------UUUUUUAUUU--UUGAGAAA- UA UCUUC--
UUAUUUAGUAUA---UU--AAGGAAAAAUAUUUAUUU-------GUUAUAGU-UUAAUA----GUACUGUAA-AGGAA---U-UGG-UGAAUAAA----UUAAA-- UUUAAAUUUUUUGUA--AGUAUGC--
UUAAUUUGCAGUACCUUUUGUAUCAGGG-UUAAUUAAAU-AAUUUAAUU--UAUAUUUA---UAU[-????] EF640443_Sympetrum_Kalosympetrum_obtrusum UUUAAAAGUAA-
AAUU-AUUUU-A-UUUAUUGAUU-UGAUG-AC--AGCCC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-
GUGUUCCUAGAAAGG-GAAAA----CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA-AUUUU-A----------
UCUUACUUUUUAUU-UUU-----------------------UUUUAUUU--UUGAGAAA- UA UCUUC--UUAUUUAGUAUA---UU--AAGGAAAAAUAUUUAUUU-------GUUAUAGU-GUAAUA----
GUACUGUAA-AGGAA---U-UGG-UGAAAUAA-A--UUAAAU-- UUAAAUUUUUUGUA--AGUAUGC--UUAAUUUGCAGUACCUUUUGUAUCAGGG-UUAAUUAAAU-AAUUUAAUU--UAUAUUUA---
UAU[-????]
EU477739_Sympetrum_vulgatum UUUAAAAGUAA-AAUU-AUUGU-A-UUUAUUAGUU-UGACU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-GUGCUCCUAGAAAGU-AA-------CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA-AGUUUUA---------UCUUACUUUUUUUA-UUU------------------------UUUUUAUU--UUGAGAAA- UA UCUUU--
UUGUUUAGUAUA---UU--AAAGAAAAAUAUUUGUUU-------GUUAUAGU-AAAUUA----GUACUGUGA-AGGAA---U-UGA-UGAAAUAA-U--UUAAAA-- CUAAAUUUUUUAUA--AGUAUGC--
UUAAAUUGCAGUACCUUUUGUAUCAGGG-UUAAUUAAAU-AGUUUAAUU--UAUAUUUC---UUU[-????] EF640444_Sympetrum_Sympetrum_pedemontanum UUUAAAAGUAA-
AAUU-AUUUU-A-UUUAUUAUUU-UGACU-AU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-
GUGUUCCUAGAAAGU-AAAA-----CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAGA-AUU-UA-AUUGUGC-GAUCCA-AUUUAAUUUGAGA-AAUUUUA----------
UCUUACUCUUUAUA-AUU------------------------UUUUGUU--UUGAGAAA- UA UCUUU--UUGUUUAGUAUA---UU--AAAGAAAAAUUUAUAUUU-------GUUAUAGU-AAAUUA----
GUACUGUGA-AGGAA---U-UGA-UGAAAUAA-U--UUAAUA-- UUAAAUUUUUUAUA--AGUAUAC--UUAAUUUGUAGUACCUUUUGUAUCAGGG-UUAAUUAAAU-AUAUUAAUU--UAUAUUUA---
UAU[-????] EF640429_Sympetrum_Nesogonia_blackburni UUUAAAAGUAA-AAUU-AUUUU-A-UUUAUUUGUU-UGACU-AC--GGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUUAUUUUA----AGAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-GUGURCCUAGAAAGU-AAUAU---UCAAAUUAGAGCUUGA--UAG-AAAGCR-UUU-CAUU-
UACACUGAAA-AUU-UA-AUUGUGC-AAUUCA-AUUUGGUUUGAUA-AAUUUUA----------UCUUACUUUUUUUA-AAA----------------------AAUUCUGUU--UUGAGAAA- UA UCUUU-
-UUGGUUAGUAUA---UU--AAAGAAAAUUAUGUGUUU-------GUUAUAGU-GAAUUA----GUACUGUAA-AGGAA---U-UGA-UGAAAUAG-U--UUAAAA- CUAAUUUUUUUUGUA--AGUAUGU--
UUAAUUUACAGUACCUUUUGUAUCAGGG-UUAAUUAAAU-AGAUUAAUU--UAUAUUUA---UGU[-????] EU477743_Sympetrum_Sympetrum_sanguineum UUUAAAAGUAA-
UAUU-AUUUU-A-UUUAUUAAUU-UGAUU-AU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-
GUGCUCCUAGAAAGG-AAAA-----CAAAUUAGAGCUUGA--UAG-GAAGCA-UUU-CAUU- UACACUGAAA-AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA--AUUUUA----------
UCUUACUUUUCUAC-UUUUU-------------------------UUGUU--UUGAGAAA- UA UCUUC--UUUUUUAGUAUA---UA--AAAGAAAAAUAAUUAUUU-------GUUAUAGU-AAAUUA----
GUACUGUGA-AGGAA---C-UGA-UGAAAUAA-A--UUAAAA-- UUAAAUUUUUUAUA--AGUAUAC--UUAAUUUGUAGUACCUUUUGUAUCAGGG-UUAAUUAAAU-AGCUUAAUU--ACAUNNNNN--
NNU[-????] EF640439_Sympetrum_Tarnetrum_corruptum UUUAAAAGUAA-AAUU-AAUAU-A-UUUAUUAUUU-UGACU-AU--AGCUC--UAAA-UAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUAUCGGAAG-GUGUACCUAGAAAGU-AAAA-----CAAAUUAGAGCUUGA--UAG-AAAGCU-UUU-CAUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA--AUUUUA----------UCUUACUUUUCAUU-U----------------------UUAUUCUAUUU--AGGAGAAA- UA UCUUU--
AUAUUUAGUAUA---UA--AAAGAAAUUUAUUAAUAU-------GUUAUAGU-AUAUUA----GUACUGUAA-AGGAA---U-UGA-UGAAAUAA-A--UUAAAA- CUUAAUUUUUAAAA---AGUAUGU--
UUUAUUUACAGUACCUUUUGUAUCAGGG-UUAAUCAAAU-AUUAUAAUU--UAUAUUUU---UAU[-????] EF640440_Sympetrum_Tarnetrum_fonscolombii UUUAAAAGUAA-
AAUU-AUUUU-A-UUUAUUAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-
GUGUACCUAGUAAGU-AAA------CAAAUUAGAGCUUGA--UAG-AAAGUA-UUU-CAUU- UACACUGAAA-AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA--AUUUUA----------
UCUUACUUUUAUUU-UUU-----------------------UAUAAUUU--AUGAGAAA- UA UCUUU--GUAUUUAGUAUA---UU--AAAGAAAUAUAUAAUUAU-------GUUAUAGU-GAAUUA----
AUACUGUUA-AGGAA---U-UGA-UGAAAUAA-U--UUAAAA-- UUAAUUAAUUUUA---AGUAUAC--UUUUUUUGUAGUACCUUUUGUAUCAGGG-UUAAUCAAAU-AAAUUAAUU--UAUAUUUU---
UAU[-????]
Sympetrum_Tarnetrum_illotum UUUAAAAGUAA-AAUU-AUUUU-A-UUUAUUAAUU-UGACU-CU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-GUGUUCCUAGAAAGG-UAAA-----CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA--AAUUAU---------AUCUUACUUUUAAUU-UAU------------------------UAUUGUU--UUGAGAAA- UA UCUUU--
UUUUUUAGUAUA---CU--AAAGAACCAAUUAUUUAU-------GUUAUAGU-GCAUUA----GUACUGUCA-AGGAA---U-AGA-UGAAAUAA-U--UUAAAU-- UUAAUUUUUUUUU--AAGUAUAC--
UUUAUUUGUAGUACCUUUUGUAUCAGGG-UUAAUUAAAU-AAAUAAAUU--UAUUUUUU--UUAU[-????] Sympetrum_Tarnetrum_infuscatum UUUAAAAGUAA-AAUU-AUCUU-A-
UUUACUAAUU-UGACU-AU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-
GUGUUCCUAGAAAGG-UAA------CAAAUUAGAGCUUGA--CAG-GAAGCA-UCU-CAUU- UACACUGAGA-AUU-UA-AUUGUGC-GAUUCA-AUUUAAUUUGAUA--AUUAUU---------
AACUUACUUUUUAUU-UUU------------------------UCUUGCU--UUGAGAAA-

UAUCUUU--UUGUUUAGUAUA---UU--AAAGAAAAAUUUAUGUUG-------GUUAUAGU-AAAUUA----GUACUGUGA-AGGAA---U-UGC-UGAAAUAA-A--UUAAAU--
AUAAAUUUUUUGU--AAGUAUAC--UUAAUUUGUAGUACCUUUUGUAUCAGGG-UUAAUCAAAU-AAAUUAAUU--UAUAUUUA---UAU[-????]
Sympetrum_Sympetrum_danae UUUAAAAGUAA-AAUU-AUUUU-A-UUCAUUAAUU-UGAUU-AU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-GUGCUCCUAGAAAGG-AAA------CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAAA--AGUUUU---------AUCUUACUUUUCUAU-UUU----------------------UUUUUUGUU--UUGAGAAA- UA UCUUU--
UUGUUUAGUAUA---AU--AAGGAAAAAUAUUUAUUU-------GUGAUAGU-AUAAUA----GUACUGUGA-AGGAA---U-UGA-UGAAAUAA-U--UUAAAA- UUAAGUUUUUUAU---AAGUAUGU--
UUGAUUUACAGUACCUUUUGUAUCAGGG-UUAAUUAAAU-AAAUUAAUU--UAWUUUUA---UAU[-????]
Sympetrum_meridionale UUUAAAAGUAA-UAUU-AUUUU-A-UUUAUUAAUU-UGAUU-AU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-GUGCUCCUAGAAAGG-AAA------CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA--AAUUUU---------AUCUUACUUUUCUAC-UUU------------------------UUUUAUU--UUGAGAAA- UA UCUUU--
UUGUUUAGUAUA---UU--AGGGAAAAAUGCUUGUUU-------GUUAUAGU-GAAUUA----GUACUGUGA-AGGAA---U-UGA-UGAAAUAA-U--UUAAAA- UUAAAUUUUUUGU---AAGUAUAC--
UUAAUUUGUAGUACCUUUUGUAUCAGGG--UGAUUAAAUAAAUUUAAUU--UAUAUUUG---UAU[-????] EU477752_Leucorrhinia_pectoralis UUUAAAAGUAA-AAUU-NN-
NNNN-NNNNNNNNNN-NNNNN-NN--NNNNN--NNNNNNNNNN-NNN--CCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-
GUGUUCCUAGAAAGG-UAUA----UCAAAUUARAGCUUGU--UAR-AAAGCA-UUU-CAUU- UACACUGAAA-AUU-UA-AUUGUGC-AAUUCA-AUUUGAUUUGAUA-AUUUUG-----------
UCUUACUUUUAUU-UU------------------------UUUUAAUUUU--AUGAAAAG- UA UCUUU--GUWUUUAGUAUA---UU--AAGGAAAUAUUUAUUUUU-------GUUAUAGG-GUAUUA----
RUACUGUUA-AGGAA---U-UGA-UGAAAUAA-U--UUAAAA- UUAAAUUUUUUAUA---AGUAUGU--UUAACUUGCAGUACCUUUUGUAUCAGGG-UUAAUUAAAU-AAAUUAAUU--UAUAUUUA---
UAU[-????] EF640394_Leucorrhinia_glacialis UUUAAAAGUAA-AAUU-AUUUU-A-UUUGUUGAUU-UGACU-AU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-GUGUACCUAGUAAGG-UAU-----UCAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA-AUUUUG-----------UCUUACUUUAUUU-UUUU----------------------UCGCGUCUU--AUGAGAAA- UA UCUUU--
AUAUUUAGUAUG---UU--AAGGAAAUAUUUGUUUUU-------GUUAUAGU-AUAUUA----GUACUGUUA-AGGAA---U-UGA-UGAAAUAG-U--UUAAAU- UUGAAUUUUUCAUA---AGUAUGU--
UUAAUUUACAGUACCUUUUGUAUCAGGG-UUAAUUAAAU-AAAUUAAUU--UAUAUUUA---CAU[-????]
DQ021425_Celithemis_elisa UUUAAAAGUAA-AAUU-AAUUA-A-UUUAUUAAUU-UGACU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACACAG-UAGGUGUACCGGAAG-GUGUUCCUAGAAAGU-GAAA----ACAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU-
UACACUGAAA-AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA-AUUUUU-----------UCUUACUUCUAUU-UUUUG------------------------UUUAUU--ACGAGAAA- UA UCUUU-
-UUAUUUAGUAUU---AU--AUAGAAAUAUUUAUUUUU-------GUUAUAGU-AAAAUA----GUACUGUUA-AGGAA---U-AGA-UGAAAUAA-U--UUAAAA- UCAAAUUUUUAUUA---AGUAUAC--
UUAAUUUGUAGUACCUUUUGUAUCAGGG-UUAAUCAAAU-AUAUUAAAU--UAUGUUUA---UUU[-????]
EF640393_Celithemis_eponina UUUAAAAGUAA-AACU-AUUUA-A-UUUAAUAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGAGUACCGGAAG-GUGUUCCUAGGAAGU-UAAA----ACAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU-
UACACUGAAA-AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA-AUUAUA-----------UCUUACUUUUAUU-UU------------------------UUUAAUUAAU--AUGAGAAA- UA UCUUU-
-UUAUUUAGUAUU---UU--AUGGAAAUAUGUAUUUUU-------GUUAUAGU-AUAAUA----GUACUGUUA-AGGAA---G-AGA-UGAAAUAG-A--UUAAAA- UUAAAUUGUUAUUA---AGUAUAC--
UUAAUUUGUAGUACCUUUUGUAUCAGGG-UUAAUCAAAU-AUAUUAAAU--UAUGUUUA---UUU[-????] EF640392_Brachymesia_gravida UUUAAAGGUAA-AAUU-AA-UC-U-
CUUAUUAAUU-UGAUC-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUAUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAUG-ACCGGAAG-
GUGUAUCUAGAAAGU-U--------CAAAUUAGAGCUUGA--AAG-AAAGCA-UUU-CAUU- UACACUGAAC-CUU-UA-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUAUAA----------
UCUUACAUUUAUU-UU------------------------AGUUUUUGUU--AUGAGAAA- UA UCUUU-UUUUUUUAGUAUU---UU--AAUGAAAAAUGUUCUUUU-------GUUAUAGU-AUAAUA----
GUACUGUUA-AGGAA---U-UGA-UGAAAUAA-U--UUAAAA- UUAAAUUUUUAAAA---AGUAUAA--UUUAUUUUUAGUACCUUUUGUAUCAGGG-UUAAAUAAAU-AUAGUAAUU--UAUUUUAU---
AGU[-????]
Brachymesia_herbida ---
----------????????---?????????---
-------???-???-??-???????--

---[-????]
EF640412_Brachythemis_leucosticta UUUAAAAGUAA-AAUU-GU-UU-U-CUUAAUAACU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCAC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAGGUACCGGAAG-GUGUUUCUAGAAAGU-AAAUAAUAUCAAAUCAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAGA-
UUU-UA-AUUGUGC-AAUUCA-GUUUGAUUUGAUU-AAUUAUGU---------UCUUACUUGUAAU-U----------------------UUAUAAUUUAUU--UGGAGAAA- AA UCUUU--
AUAUUUAGUAUA---CU--AAAGAAAAAUUAUUUUUU-------GUUAUAGU-GAAUUA----GUACUGUGA-AGGAA---U-GAA-UUAAAUAU-U--AUAAUA- UAAAUUUAAUUUA----AGUAUAU--
UUUAUUUGUAGUACCUUUUGUAUCAGGG-UUGAUCAAAU-UAUUUAAUC--UAUAAUUA---AAU[-????] EF640411_Brachythemis_contaminata NNNNNNNNNNN-N-NN-
NNNNNNN-NNNNNNNNNN-NNNNN-NN--NNNNN--NNNNNNNNNNNNNNNNNNNNNN------ NN-NNNN-NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNNN-----
NNNNNNNNNNNNNNNNNNNN-----------------NNNNNNNNNNNN--NNNNNNNN-

NNNNNNN--NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNN--NNNNNNNN-NNNNNN----NNNNNNNNN-NNNNN--NN-NNN-NNNNNNNN-NNNNNNNNN-
NNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
EF640417_Deielia_phaon UUUAAAAGUAA-AAUU-AU-UU-C-CUUAUUAAUU-UGAUU-CU--AGCUC--UGAAAUAUGC-ACACAUCGCC------- CG-
UCAC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAGGUACCGGAAG-GUGUCUCUAGAAAGU---AU-----CAAAUUAGAGCUAGA--UAC-AAAGCG-UUC-CACU- UACACUGGAG-
UUU-AA-AUUGUGC-AAAUCA-AUUUAAUUUGAUA-AUUAUAA---------UCUUACUAGCUUU-UU----------------------UUUUUUUUUUU--UU-AGAAA- UA UCUUU--
UUAUUUAGUAUG---UU--AUUGAAUAAUAUUUUUUU-------GUUAUAGU-AUAUUA----GUACUGUGA-AGUAA---A-U-GUUGAAAUAA----AUUAAU-A- AUAAUUUUUUUUA--AGUAUAU--
AUUAUUUAUAGUACCUUUUGUAUCAGGG-UUGAUUAAAUUUUUU-AAUU--UAUUUUUA---AAU[-????] EF640433_Pachydiplax_longipennis UUUAAAAGUAA-AAUU-AC-UU-
U-CUUGGUAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-
GUGUACCUAGAAAGG-UAUA-----CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-AAU-UA-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUAUUA---------
UCUUACUUUAUUU-U----------------------AUAUUUAAAAUU--UUGAGAAA- UA UCUUU--GAUUUUUGUAAC---CU--AAAGAUAAAAGAAUUUUU-------GUUAUAGU-AAAUUA----
GUACUGUGA-AGGAA---U-AGA-UUAAAUAA-U--UAAAAU- UUAGUUUUUUAUA----AGUAUAC--UUUAUUUGUAGUACCUUUUGUAUCAGGG-UUAAUCAAAU-AUAUUAAUU--UAUAUUUU---
UAU[-????] EF640422_Erythemis_collocata UUUAAAAGUAA-AAAU-AU-UU-U-CUUAGUAUUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUCUA----AAGUAAGAUAAGUCGUAACAUAG-UAGGAGUACCGGAAG-GUGUUCCUAGCAAGU-CAAAA----CAAAUUGGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-AUUCUAUUUGAUA-AUUAGAU---------UCUUACU-GUCUU-UA----------------------UUAUU-CUUGU--UAGAGAAA- UA UCUUU--
AUUUUAAGUAUA---UU--AAAGAAUAAAAUAUUUUU-------GUUAUAGU-AAAUUA----GUACUGUGA-AGGAA---U-UAGAUGAAAUAUAA--UUAAAA- CUAAAUUUUUUGAA---AGUAUGU--
UUAAUUUGCAGUACCUUUUGUAUCAGGG-UUAAUUAAAA-AUUUUAAAU-UUAUUUUAU---UAU[-????] EU477753_Acisoma_panorpoides UUUAAAAGUAA-AAUU-AU-UU-U-
CUUAAUAAUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGAGUACCGGAAG-
GUGUUCCUAGAAAGU---AU-----CAAAUUGGAGCUUGA--UAG-AAAGCA-UUU-CACU- UACACUGAAA-AUU-UA-AUUGUGC-AAUUCA-AUUCGAUUUGAUA-AUUAUUU---------
UCUUACUUUAUUU-A----------------------UUAAUUAUUAUU--UUUAGAAG- UA UCUUU--AUUUUUAGUAUA---UU--AAAGAAAAAAAUAUAUU--------GUUAUAGU-AAAAUU----
GUACUGUGA-AGGAU-----UGA-UGAAAUAA-U--UAAAAA- UUUUAAUUUUUAUAA--AGUAUGU--UUAAAUUGCAGUACCUUUUGUAUCAGGG-UUGAUUUAAU-AUUAAAAUU--UAUUUUUC---
UGU[-????] EU054950_5050_Erythrodiplax_minuscula UUUAAAAGUAA-AAUU-AU-UU-U-CUUGAUAGUU-UGAUC-UU--GGCUC--UAAAAUAUGC-ACACAUCGCN------- NN-
NNNN-NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-
NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNN---NN-NNNNNNNNNNNNNNNNNNNNNNNNNNN--------------NNNNNNNN------NNNNNNNN- NN NNNNN--
NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNN--NN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] EF640423_Erythrodiplax_basalis UUUAAAAGUAA-AAUU-AU-UU-U-
CUUGGUAGUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGAGUACCGGAAG-GUGUCC-
UAGAAAGU-A-AA-----CAAAUUAUAGCUUGG--UAG-UAAGCU-UUU-CAUU- UACACUGAAA-AUU-UA-AUUGUGC-AACUCA-AUUUAAUUUGAUA-ACUUUUA---------UCUUACUUUAUUU-
UUU-----------------------UUUAUUUUU--AUGAGAAA- AA UCUUU--UUGUUUAGUAUA---UU--AAAGAAAUGCAUUUAUU--------GUUAUAGU-AAAUUA----GUACUGUGA-
AGGAA---U-UGG-UGAAAUAC-A--AUGAAA- AAUUAAUUUAUAGAA--AGUAUAU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUUAAAU-AAUUUAAUU--UAUCUUUA---UUU[-????]
EF640416_Crocothemis_servilia UUUAAAAGUAA-AAUU-AU-UU-A-CUUGAUAUUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGGGUACCGGAAG-GUGUCCCUAGUAAGU-A-AU-----CAAAUUAGAGCUUGG--UAG-UAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUG-AUUUGAC---------UCUUACUUUAAUU---------A--------------AUUAUUUUCAAU--AAGAGAAU- UA UCUUU--
UUGUUUAGUAUA---UU--AAAGAAAAAUAUUUUUG--------GUGAUAGU-AAAUUA----GUACUGUGA-AGGAA---U-UGA-UGAAAUAA-U--UUAAAC- ACAUAAUUUUACAUA--AGUAUAU--
UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUCAAAU-AUUUUAAUU--UAUAUUUA---UAU[-????] AF266100_Crocothemis_erythrea UUUAAAAGUAA-AAUU-AU-UU-A-
CUUAAUAUUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGGGUACCGGAAG-
GUGUCCCUAGUAAGU-AAA------CAAAUUAGAGCUUGG--UAG-UAAGCA-UUU-CAUU- UACACUGAAA-AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA-AUUUGAUAA--------
UUUAACUCUUACU-UUAUUUAAU--------------U--AUAUUUAUU--UUGAGAAU- UA UCUUU--UUGUCUAGUAUA---UU--AAAGAAAAAUAUUUUUG--------GUGAUAGU-AAAUUA----
GUACUGUGA-AGGAA---U-UGA-UGAAAUAA-U--UUAAAU- ACAUAAUUUUAUAUA--AGUAUAU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUCAAAU-AUUUUAAUU--UAUAUUUA---
UAU[-????]
EU477744_Rhodothemis_rufa UUUAAAAGUAA-AAUU-AA-UU-U-CUUAUUAAUU-UGAUU-UU--AGCUC--UAAAGUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGAGUACCGGAAG-GUGUUCCUAGUAAGU---AAA----CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAU-
UUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA-AUUGGUU---------UCUUACUUUAUAU-AUUUA-----------------------UAUUUAU--UUUAGAAG- UA UCUAU--
UUUUUUAGUAUA---CU--AAAGAAAAAUUUUUGUUU-------GUUAUAGU-AAAUUA----GUACUGUGA-AGGAU-----UGA-UGAAAUAA-U--UUAAAA- UUUAAUUUAUUUAA---AGUAUGU--
UUAAUUUGCAGUACCUUUUGUAUCAGGG-UUAAUUAAAU-AAAAAAAUU--UAUUUUUC---UAU[-????]
EF640430_Neurothemis_fulvia UUUAAAAGUAA-AAUU-AUUUU-C-UUAAAUAUUU-UGACUUUA--GCUCU--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAGG-ACCGGAAG-GUGUCUCUAGAAAGU-A-AAU----CAAAUUAGAGCUUGG--AAG-UAAGCU-UUU-CAUU- UACACUGAAG-
AUU-UA-AUCGUGC-AACUCG-GUUUGAUUUGAUA-ACUUUUA---------UCUUACUUUUUUU-A----------------------UUUAUUUUACUU--GUCAGAAA-

UAUCUUU--UCGUUUAGUAUA---UU--AAAGAAAAAUAAUUAUU-------GUUAUAGU-AAAUUA----GUACUGUGA-AGGAA---U-AGG-UGAAAUAU-A--CUGAAA-
AAUUAAUUUUGAAUA--AGUAUGC--UUUAAUUGCAGUACCUUUUGUAUCAGGG-UUAAUCAAAU-AUAUUAAUU--UAUUUUAU---UUU[-????]
Neurothemis_ramburi ---
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EF640419_Diplacodes_lefebvrei UUUAAAAGUAA-AAUU-AU-UU-C-CUUGAUAUUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGAGUACCGGAAG-GUGUUCCUAGAAAGU--AAA-----CAAAUUAGAGCUUGA--UAG-UAAGCA-UUU-CACU- UACACUGAAA-
AUU-UA-ACUGUGC-GAUUCA-GUUUAGUUUGAUA-AUUAUAU---------UCUUACUUUAUUU-AU---------------------UUAUUUUAUUA--UG-AGAAA- UA UCUUU--
AUAUUUAGUAUA---CU--AAAGAAAAAUGAA-UAUU-------GUUAUAGU-AUAAUA----GUACUGUGA-AGGAA---U-U-GAUGAAAUAA-U--UUAAAU- ACUUAAUUUUGAAUA--AGUAUGU--
UUUAAUUACAGUACCUUUUGUAUCAGGG-UUAAUCAAUU-AAAUUAAUU--UAUAUUUU---UUU[-????] EF64042_Diplacodes_trivialis UUUAAAAGUAA-AAUU-AU-UC-A-
CUUGAUAUUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACAUAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGGGUACCGGAAG-
GUGUUCCUAGUUAGU--AAA-----CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA-AUUUUA----------
UCUUACUUAUUUU-UA------------------------AUUUAUUUUAUG-AGAAA- UA UCUUU--UUAUUUAGUAUA---UU--AAAGAAACAUAUAUUAUA-------GUUAUAGU-AAACUA----
GUACUGUAA-AGGAA---U-U-GAUGAAAUAC-A--UUGAAA-- UUAUCUUUUUAAUA--AGUAUAC--UUAUUUUGUAGUACCUUUUGUAUCAGGG-UUAAUCUAUU-AAUCUAAAU--UAUUUUUA---
UAU
EF640414_Bradinopyga_strachani UUUAAUAGUAA-AAUU-AU-UC-C-CUAAAUAUUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUCA----AAAUAAGAUAAGUCGUAACAUAG-UAGGAGUACCGGAAG-GUGUUCCUAGUAAGU-A-AA-----CAAACUAGAGCUUGA--UAG-AAAGCU-UUU-CAUU- UACAUUGAGA-
AUU-UA-ACUGUGC-AAUUCA-GUUUAGUUUGAUA-AAUAUAU---------UCUUACUUUUUUA-AUUU----------------------AAAUAUUU--AAGAGAAA- UA UCUUU--
ACUUUUAGUAUA---UA--AAAGAAAAAAUUAUUGAG------GUUAUAGU-AAAUUA----GUACUGUGA-AGGAA--UU-UGA-UGAAAUAU-A--UU-AAA- AAUUAUUUAUUAAAA--AGUAUAC--
UUAAUUUGUAGUACCUUUUGCAUCAGGG-UUAAUCAAAU-UUAAUAAUU--UAUAUUUC---UAU[-????] EU054976_5075_Brachydiplax_denticauda UUUAAAAGUAA-AGUU-AA-
GUUC-CUUUUUAACU-UGAUU-UU--AGCUC--UAGGAUAUGC-ACACAUCGCC------- CG-NNNN-NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNNNNNNNN-NNNN---
NNNNNNNNNNNNNNNNNNNN--------------NNNNNNN-----NNNNNNN- NN NNNNN--NNNNNNNNNNN---NNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNN-NNNNNN----
NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] EU477717_Brachydiplax_chalybea_flavovittata UUUAAAAGUAA-AUUC-AU-GUUC-CUUCUUGAUU-UGAUU-UU-
-AGCUC--UAGAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGAGUACCGGAAG-GUGUUCCUAGGAAGG-UAAAU----
CAAAUUAGAGCUUGA--UAG-UAAGCA-UUU-CAUU- UACACUGAGA-AUU-UA-AUCGUGC-AAUUCG-AUAUAAUUUGAUA-AUAUUA----------UCUUACUUUAUUU-AUUU-------------
---------UUUGUUUAU--UUUAGAAG- UA UCUAU--UUUUUUAGUAUU---UU--AUAGAACAAAUUAAUUCU------GUUAUAGA-GUAUUA----GUACUGUGG-AGGAA-----AGA-
UGAAAUAG------UAAU- UUUUAUUUUUGGGA---AGUAUAU--UUUAAUUAUAGUACCUUUUGUAUCAGGG-UUAAUUAAAUAUUUUAAUU--UAUUUUUA---UUU[-????]
EU477716_Chalcostephia_flavifrons UUUAAAAGUAA-AGUU-AUUGAUC-CUUCAAUUCU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-GUGUUCCUAGAAAGG-UAAAA----CAAAUUAGAGCUUGA--UAG-UAAGCU-UUU-CAUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA-AUUUUA----------UCUUACUUUAUUU-UA-----------------------UUGUUUUUU--UUGAGAAA- UA UCUUU--
UAUUUUAGUAUA---UU--AUAGAACAAUUUUCUUUUU-----GUUAUAGU-GAAUUA----GUACUGUUA-AGGAA---U-UGA-UGAAAUA-------UAUA- AUUUAUUUAUUAUA---AGUAUAU--
UUUAUUUGUAGUACCUUUUGUAUCAGGG-UUAAUCAAAAUUAUAUAAUU--UAUUUUUU---UAU[-????] EF631508_Micrathyria_aequalis NNNNNNNNN--------NNNNNN-
NNNNNNNNNN-NNNNNNNN--NNNNN--NNNNNNNNNN-NNNNNNNNNN------ NN-NNNN-NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN-NNNNNNNNNNN-NNNN---
NNNNNNNNNNNNNNNNNNNN--------------NNNNNNN-----NNNNNNN- NN NNNNN--NNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN----
NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
EF640386_Micrathyria_atra UUUAAAAGUAA-UAUU-AU-UU-C-CUUAAUAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-GUGUACCUAGUAAGG-UAAA-----CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA-AUUAUUC---------CCUUACUUUAUAU-UUU-----------------------UUAUUUUUU--UUGAGAAA- AA UCUUU---
AAUUUAGUAUU---UU--AAUGAUAAAAUUAUUUUU-------GUUAUAGU-CUAUUA----GUACUGUGA-AGGAA--UA-UGG-UGAAAUAA-U--UGAUAU- AUUAAUUUAUCAUA---AGUAUAU--
UUUGUUUAUAGUACCUUUUGUAUCAGGG-UUGAUCAAAU-AAUUUAAUU--UAUAUUUA---UAU[-????]
DQ021421_Micrathyria_didyma_G057 UUUAAAAGUAA-UUUU-AU-UU-C-CUUAAUAAUU-UGACU-UU--AGCUC--
UAAAAUAUGC-ACACAUCGCC-------CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-GUGUACCUAGUAAGU-UAAU-----CAAAUUAGA GCUUGA--
UAG-AAAGCA-UUU-CAUU-UACACUGAAA-AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA-ACUUUAU---------UCUUACUUUAUUU-UAU----------------

-------GAUUUUAUU--UUGAGAAA-UAUCUUU--GAUUUUAGUAUA---UU--AUUGAUAAAAUUAUUUUU------GUUAUAGU-AAAUUA----GUACUGUGA-AGGAA---U-UGU- UGAAAUAA-
A--UUACA--UUUAAUUUUAUAUA---AGUAUAU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUGAUCAAUU-AAUUCAAUU--UAUNGUUU---ANU[-]
AY274509_Uracis_imbuta NNNNNNNNNNN-NNNN-NNNNNNN-NNNNNNNNNN-NNNNN-NN--NNNNN--NNNNNNNNNN-NNNNNNNNNN------- NN-
NNNN-NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNN----NNNN-NNNNNNNNNNNNNNN-N--------NNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-
NNN-NN-NNNNNNNNNNNNNNN-NNNNNNNNNNUAA-UUUGAUUAUAA------UCUUACUUAAUAU-AAUUU---------------------UUUUUGUAU-----AGAAA- UA UCUUU--
GCUUUUAGUAUA---UU--AAAGAAAAAUAUUUGUU--------GUUAUAGU-UUAUUA----UUACUGUGA-AGGAA---U-GGA-UGAAAUAG-AA- UUUAAAAUUAAAUCUUUAAUA---AGUAUGU--
UUAUUUUGCAGUACCUUUUGUAUCAGGG-UUAAUCA-AU-UAUAGAAUU--UAUUAAUGUGUAUU[-????] EF640391_Uracis_infumata UUUAAAAGUAA-
AUUU-AU-UU-A-UUUAAUAUAU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGACGUACCGGAAG-
GUGUGCCUAGUAAGG-A-AUC---ACAAAUUAGAGCUUGU--UAG-AAAGCU-UUU-CAUU- UACACUGAGA-AUU-UA-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUAAAA---------
UCUUACUUAGUAU-AU----------------------AUUUUGAUUUU--UUGAGAAG- CA UCUUU--AUUUUUAGUAUA---CU--AAAGAAAAAUUUUUAUU--------GUUAUAGU-UUAUUA----
UUACUGUGA-AGGAA---U-AGA-UGAAAUAA-A--UUAAAA- CUUAAUUUUUUACA---AGUAUGU--UUAUUUUGCAGUACCUUUUGUAUCAGGG-UUGAUUAAAU-AUAUGAAAU--UAUUAUUUUA-
UGU[-????]
DQ021420_Nannophya_pygmaea UUUAAAAGUAA-UAUU-AU-UU-U-CUUAAUAAUC-UGAUU-CU--AGCUK--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAUGUACCGGAAG-GUGUAUCUAGUAAGU----AU----CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU-
UACACUGAAA-AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA-ACUAUAU----------UCUUACUUAAAAU-CUUU-----------------------UGUUUUGU--AUGAGAAG- CA UCUUU-
-UAUUUUAGUAUA---UU--AGAGAAAAAUUUUUGUUU-------GUUAUAGA-UAAAUA----GUACCGUGA-GGGAA---U-AGA-UGAAAUAA-C--UUUAAA- AUUUAAUUAUUAAAA--AGUAUGU--
UUAAUUUGCAAUACCUUUUGUAUCAGGG-UUAAUCAAAU-AUUAUAAAUU-UAAUNNNNNN-NNU[-????]
EF640388_Nannothemis_bella UUUAAUAGUAA-AAUU-GU-UU-U-CUUAUCAAUU-UGACA-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-GUGUACCUAGAAAGU-C--AU----CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-AUUUGAUUUGAUA-AUUAAUA----------UCUUACUUAAAUU-UA------------------------UGUUAAUUU--UCGAGAAA- UA UCUUU--
UUAUUUAGUAUC---UU--AAGGAAAAAUUUUUUUUU-------GUUAUAGU-UUAUUA----GUACUGUGA-GGGAA---U-AGA-UGAAAUAA-U--UGAAAU- AUUUAAUUUUUUUUA--AGUAUGU--
UUAAUUUACAGUACCUUUUGUAUCAGGG-UUGAUUAAAU-AUUUUAAUA--UAUAUUAU---UAU[-????] EF640455_Paltothemis_lineatipes UUUAAAAGUAA-AAUU-AUUUU-
C-CUUUUUAAUU-UGAUU-AU--AGCUC--UAUAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUAUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAUGUACCGGAAG-
GUGUAUCUAGUAAGU-UAA-----UCAUUCUAGAGCUUGAU-UAG-AAAGCA-UUU-CAUU- UACAUUGAAA-AUU-UA-AUUGUGC-AAUUCA-AUUUAGAUUGAUA-AUUACAA----------
UCUUAUUUAUUAU-U--------------------UAUUUUUUUUUGUU--UUGAGAAA- UA UCUUU--UUAUUUAGUAUA---UU--AUAGAAAAAUUGUUUAC--------AUUAUAGU-UUAAUA----
GUACUGUGA-AGGAA---U-GGA-UGAAAUAU----UUAAAA- AUUUAUUUUAGUAAA--AGAAUAC--UUUACUUGUAGUACCUUUUGUAUCAGGG-UUAAUUUAUUAAUUUGAAUU--UAUAUUUU---
UUU[-????] EF640453_Brechmorhoga_mendax UUUACCAGUAA-AAUU-AU-UA-UCCUUUUUAAUU-UGAUC-UU--AGCUC--UAUAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUAUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-GUGAUCCUAGUAAGU-A-----UUACGGAUUAGAGCUUGU--UAG-UAAGUU-UUU-CAUU- UACAUUGAAA-
AUU-UA-AUUGUGC-AAUUCA-AUUUAAUCUGAAA-GCUAUUU----------UCUUAUUUUAAUU-UA----------------------AUUUUGUGAUU--UUGAGAAG- UA UCUUU--
UUAUUAAGUAUU---UU--AUAGAAAAAUUAAUUUUU-------GUUAUAUA-UUAAUA----GUACUGUGA-AGGAA---A-UGU-UGAAAUAA-U--UAAAAA- UUUAAUUUUAGAUA---AGAAUUC--
UUGAUUUGUAGUACCUUUUGUAUCAGGG-UUGAUUAAAUAUAUAUAAUG--UAUAUUUU---UUU[-????]
Brechmorhoga_praedatrix ----- --
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EF640454_Dythemis_fugax UUUAAAAGUAA-AUAU-AA-AU-C-CUUGUUAUAU-UGACU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUAUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAGGUACCGGAAG-GUGUUUCUAGAAAGU-AAAA----UCAAAUUAGAGCUUGA--UAG-GAAGCA-UUU-CAUU- UACAUUGAGA-
UUU-UA-AUUGUGC-GAUUCA-AUUUAAUUUGAUUAAUGAUUU----------UCUUACUUUAAUU-UU---------------------UAAUAAUUAUUU--UUGAGAAA- UA UCUUU--
UUAUUUAGUAUA---UU--AAAGAAAAAUUUUUGUUU-------GUUAUAGU-GGAUUA----GUACUGUGA-AGGAA---U-UGA-UGAAAUAU--------AA- AUUUUCUUUUGAAAA--AGUAGGC--
UUAUGUUGCUGUACCUUUUGUAUCAGGG-UUAAUCAAUUAAUUA-AAUC--UAUUUUUU---UUU[-????]
EU477749_Trithemis_aurora UUUAAAAGUAA-AAUU-GU-UU-A-CUUAUCAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAUGUACCGGAAG-GUGUAUCUAGUAAGU-CAAA-----CAAAUUAGAGCUUGA--UAG-AAAGCU-UUU-CAUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA-AUCAUAA----------UCUUACUUUUAAU------------------------AGAUUAAUAUUU--AUGAGAAA- UA UCUUU--
UUAUUUAGUAUA---CU--AAAGAAAAAUAUUUAUA--------GUUAUAGU-AAAUUA----GUACUGUCA-AGGAA-----UGA-UGAAAUAA-U--UUAAAA- UUUAAUUUUAAUAA---AGUAUAU--
UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUCUAAU-AUAUUAAUA--UAUUUUUU---ACU[-????]
Trithemis_africana --
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EF640456_Trithemis_arteriosa UUUAAAAGUAA-AAUU-GU-UC-A-CUUCUCAAUU-UGAUU-UU--AGCUC--
UAAAAUAUGC-ACACAUCGCC-------CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAUGUACCGGAAG-GUGUAUCUAGUAAGU--AAA-----CAAAUUAGA GCUUGA--
UAG-AAAGCA-UU--CAUU-UACACUGAGA-AUU-UA-AUUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUUUUA---------UCUUACUUUAAAU-AA-----------------
-----UUUAAUUUUUA--UUGAGAAA-AAUCUUU--UUAUUUAGUAUA---UU--AAAGAAAAAUAUUUAUA-------GUUAUAGU-AAAUUA----GUACUGUUA-AGGAA-----UGA- UGAAAUAA-
U--UUAAAA-UUUAAUUUUAAUUA---AGUAUAU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUCUAAU-AUAUUAACA--UAUUUUUU---GUU[-]
EF640409_Perithemis_tenera UUUAAAAGUAA-AAUU-AA-AA-U-CUUAUUAUUU-UGAUU-AU--GGCUC--UAAAAUAUGU-ACACAUCGCC------- CG-
UCGC-UCUUAUUAUA----AGAUAAGAUAAGUCGUAACAUAG-UAGAUGUACCGGAAG-GUGUAUCUAGAAAGU-U--------CAAGUUAGAACUUGA--UAG-AAAGUA-UUU-CAUU- UACACUGAAA-
UUU-UA-AUUGUGC-AAAUCA-AUUUAACUUGAUU-AACUUUA---------UCUUACUUGUAUU-U-----------------------AUUUGUUUAU--AUGAGAAA- UA UCUUU-
UAUUAUUAGUAUA---UU--AUAGAAAAAUAUUUUUUAU-----GUUAUAGU-UGAUUA----GUACUGUGA-AGGAA--UU-AGA-UGAAAUAG----UAUAUU- UAUUUUUUUUAAAA---AGUAUAU--
UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUCUAAU-AUAAUAAUU--UAUAUUUU---CAU[-????] EU054947_55047_Perithemis_intensa UUUAAAAGUAA-
AAUU-AA-AA-U-CUUAUUAUUU-UGAUU-AU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-NNNN-NNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNN-----
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN------NNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
DQ021422_Perithemis_lais UUUAAUAGUAA-AAUU-AA-UG-U-CUUUUUAUUU-UGAUU-UU--GGCUC--UAAUAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGAGUACCGGAAG-GUGUUCCUAGAAAGU-AA-------CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACKCUGAAA-
AUU-UA-ACUGUGC-AAUUCA-GUUUAAUUUGAAA-UUAAAU----------UCUUKCUUAAUUU-U--------------------UUUUUAAUUUAAUU--UAGAGAAA- UA UCUUU--
UUAUCUAGMAUA---CU--AAAGAAAAAUCCUUUAM-------UGYUAUAGU-AAAUUA----GUACUGUGA-AGGAA---U-UGA- NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNUUUAAGUAUGA--
UUUAUUUUCAGUACCUUUUGUAUCAGGG-UUAAUCUAAU-AUAUAUAUU--UAUUUUUG---UUU EF631577_Palpopleura_lucia NNNNNNNNN---------NNNNNN-NNNNNNNNNN-
NNNNNNNN--NNNNN--NNNNNNNNNN-NNNNNNNNNN------- NN-NNNN-NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNN-----
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN------NNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
EU477757_Diastatops_pullata UUUAAAAGUAA-AAUU-AU-UU-A-UUUAAUAUUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUAUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAUGUACCGGAAG-GUGUAUCUAGAACGU-U--------CAAAUUAGAGCUUGA--UAG-AAAGCC-UUU-CAUU- UACACUGAAA-
AAU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA-AUUAAUA---------AUUUACUUUUUUU-AA-----------------------UAUAUUUUU--AUGAGAAG- UA UCUUU--
UUAUUUAGUAGU---UA--AAGAAUAAUAUUUUAAU-------GUGAUAGU-UAAUUA----GUACUGUGA-AGGAA---U-UGU-UGAAAUAA----UAUAAA- UAUAAUUAUUUAAA---AGUAUAA--
UUAAUUUUUUGUACCUUUUGUAUCAGGG-UUAAUUAAAG-UUAUUAAUU--UAUGUAUUNN-NNU[-????] EF631596_Zenithoptera_fasciata NNNNNNNN---------NNNNNN-
NNNNNNNNNN-NNNNNNNN--NNNNN--NNNNNNNNNN-NNNNNNNNNN------- NN-NNNN-NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNN-----
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN------NNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNN----NNNNNNNNN-NNNNNNNNN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] DQ021435_Neodythemis_afra UUUAAAAGUAA-AAUG-UG-GU-C-UUUACUAAUU-UGAUU-UU--AGCUC--
UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACUGGAAA-GUGUACCUAGUAAGG-UAAAA----CGAAUUAGAACUUGA--
UAG-AAAGUA-UUU-CAUU- UACACUGAAA-AUU-UA-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-UUUUAAU---------UCUUACUUAUUUU-AA-----------------------
UUAAAUAAUU--UUGAGAAA- UA UCUUU--UUAUUUAGUAUA---UU--AAAGAAUUUUUUUAUU-------GUUAUAGU-AUAUUA----GUACUGUUA-AGGAA---U-UGA-UGAAAUAU-A--
UUAAAU- AAUUUAUUUAUAGA---AGUAUAU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUCAAUU-AAUUUAAUU--UAUAUUUA---GAU[-????]
Selysiothemis_nigra ---
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EF640448_Trithetrum_navasi UUUAAAAGUAA-AUUU-AU-UU-U-CUUGAUAUUU-UGAUG-AU--GGCUC--UGAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGAGGUACCGGAAG-GUGUUUCUAGAAAGG-CAAA-----CGAACUAGAGCUUGA--UAG-AAAGCG-UUU-CAUU- UACACUGAUA-
UUU-UA-AUUGUGC-AAUUCA-AUUUGGUUUGAUA-AGUUGGA---------CCUUACUUGAUUU-AA----------------------UUAUUACAUUU--AUGAGAAA-

UAUCUUU--UUUUUUAGUAUA---CU--AAAGAAAAAUUUUGUUUU-------GUUAUAGC-AUAUUA----GUACUGUUA-AGGAA---A------GGAGAAG----AUAAAU-A-
UUUGUUUAUAAUA--AGUAUAU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUCAAAUUAUUUUAAUU--UAUUUUGA---UUU[-????]
EF640389_Porpax_risi   UUUGAAAGUAA-AAUU-AU-UU-U-CUUGAUAUUU-UGAUU-UU--GGCUC--UAAAGUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGAGUACCGGAAG-GUGUUCCUAGUAAGU--AAAA----CAAAUUGGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAGA-
AUU-UA-AUUGUGC-AAUUCA-AUUCGAUUUGAUA-AAUUGAU---------UCUUACUUAUCUA-AU----------------------UUAUUGUUUAU--UUUAGAAA- UA UCUAU--
UAUUUUAGUAUA---CA--AAAGAAAAAAAUUUUUUU-------GUUAUAGU-AUAAUU----GUACUGUGA-AGGAA---U-AUGAUGAAAGAU-G---UUAAA- GUUUAAUUUUUUGAA--AGUAUGU--
UUAGUUUACAGUACCUUUUGUAUCAGGG-UUAAUCAAAUAUAAAAAAUU---AUUUUUA---UAU[-????] DQ021436_Micromacromia_camerunica   UUUAAAAGUAA-AAUU-AU-UC-
C-UUUACUAGUU-UGAUU-UU--GGUUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUAUA----AGAUAAGAUAAGUCGUAACAUAG-UAGGUGUACCGGAAG-
GUGUACCUAGAAAGA-UACA-----CAAAUUAGAACUUGA--UAG-AAAGUA-UUU-CAUU- UACACUGAAA-AUU-UA-AUUGUGC-AAUUCA-AUUUAGUUUGAUG-UUUAUAA---------
UCUUACUUAUAUU-AU----------------------UUUUAUGUUAU--AUGAGAAG- UA UCUUU--UUGUUUAGUAUA---GG--AAAAGAAAAAUUUUUGUU-------GUUAUAGU-AAAUUA----
GUACUGUUA-AGGAA--UU-AGA-UGAAAUAA-A--UAUGAA- AAUUGUACUAUUAAA--AGUAUGU--UUUUUUUGCAGUACCUUUUGUAUCAGGG-UUAAUUAAUU-AAUUUAAUU--UAUAUUUU---
CAU[-????] DQ021434_Neodythemis_preussi   UUUAAAAGUAA-AAUU-AU-UU-C-UUUACUAAUU-UGAUU-UU--AGUUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCAC-UCUUAUUUUA----AUAUAAGAUAAGUCGUAACAUAG-UAGGUGUACUGGAAA-GUGUACCUAGAAAGG-UAUA-----CAAAUUAGAGCUUGA--UAG-AAAGUG-UUC-CAUU- UACACUGGAA-
UUA-UA-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-UUUAAAU---------UCUUACUUUUAUU-AU----------------------AAUAGGUGUUU--AUAAGAAA- UA UCUCU--
UUAUUUAGUAUA---UA--AAAGAACUCUUUUUAUUU-------GUUAUAGU-UGAUUA----GUACUGUUA-AGGAA---U-UGA-UGAAAUAA-U--UUAAAU- AUAAUAUAUUUAUA---AGUAUAC--
UUACUUUGUAGUACCUUUUGUAUCAGGG-UUAAUCAAUU-AUAUUAAAA--UAUAUUUA---AAU[-????] DQ021437_Neodythemis_klingi   UUUAAAAGUAA-AAUU-AU-UU-C-
UUUACUAAUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCAC-UCUUAUUUUA----AUAUAAGAUAAGUCGUAACAUAG-UAGGUGUACUGGAAA-
GUGUACCUAGAAAGG-UAAU-----CAAAUUAGAACU-UGA-UAG-UAAGUG-UUC-CAUU- UACACUGGAU-AUA-GA-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-UUUUAAU---------
UCUUACUUUUAUU-AU----------------------AAUAUUUUUAU--UUGAGAAA- UA UCUUU--UUAUUUAGUAUA---UA--AAAGAACUUUUUUGUUU--------GUGAUAGU-UAAUUA----
GUACUGUUA-AGGAA---U-UGG-UGAAAUAA-U--UUAAAU- AGAAUAUAAUUGUA---AGUAUAC--UUAUUUUGUAGUACCUUUUGUAUCAGGG-UUAAUCAAUU-AGAUUAAUA--UAUAUUUG---
AGU[-????] DQ021440_Hadrothemis_infesta   UUUAAAAGUAA-AAUU-AA-UU-C-UUUAUUAGUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGACGUAAUGGAAA-UUGUGUCUAGAUAGU-AAAA----UCAAGUUAGAGCUUGC--GAG-AAAGCA-CUU-CAUU- UACACUGAGG-
U-A-UG-ACUGUGC-AAUUCA-GUAUAACUUGAUG-AUUUUCA---------UCUUACUUUAUUU-AUGGAC----------------------UAACCUUU--AUGAGAAA- UA UCUUA-
UUUAUUUAGUAUG---UU--AUGGAAUAAUUUUUGGUU-------GUUAUAGU-AAAUUA----GUACUGUUA-AGGAA---U-GAU-UGAAAUA-----UUAUU-- UUUAUUUUGAUAA----AGUAUGU--
UUAUUUUACAGUANNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNN[-????] DQ021438_Thermorthemis_madagascariensis   UUUAAAAGUAA-
AUAU-AA-CU-C-UUUAUUAUAU-UGAUU-UU--AGCUC--UGAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AGAUAAGAUAAGUCGUAACAUAG-UAGGUGUACUGGAAG-
GUGUACCUAGAAAGU-AAUAU----CAAAUUAGAACUUGG--UAG-GAAGUA-UUU-CAUU- UACAUUGAAA-AUU-UA-AUUGUGC-AACUCA-AUUUAAUUUGAUA-AUUAUAA---------
UCUUACUAAUUUU-AAGUU----------------------UAUUGUUU--AUGAGAAA- UA UCUUU--UCAUUUAGUAUA---UU--AAAGAAUAGUAUUUGUU--------GUUAUAGU-GUACUA----
GUACUGUUA-AGGAA--GA-UGA-UGAAAUAA-A--UUAAAA- AUUAUUUUUAUAAA---AGUAUAU--UUUAUUUAUAGUACCUUUUGUAUCAGGG-UUAAUUAAUU-AAUAUAAUU--UAUAUUUU---
AUU[-????] DQ021439_Agrionoptera_insignis   UUUAAAAGUAA-AAUU-AU-UU-C-UUUGAUAUUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCAC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACUGGAAG-GUGUACCUAGAAAGG-UAUAA----CAAAUUAGAACUUGG--UAG-GAAGUA-UUU-CAUU- UACACUGAAA-
AUU-UA-ACUGUGC-AACUCA-GUUUAAUUUGAUA-AUUAUAA---------UCUUACUUUUAUU-UAAAA----------------------UUUAAAAU--GUGAGAAA- UA UCUUU--
UUAUUUAGUAUA---UU--AAAGAAUUAUUGUUUUUU-------GUUAUAGU-UUAUUA----GUACUGUGA-AGGAA---U-UGA-UGAAAUA----UUUUAUA- AUUAUUUUUUUAUA---AGUAUGU--
UUAAUUUGCAGUACCUUUUGUAUCAGGG-UUGAUUAAUU-AAAUUAAAU--UAUUUUUA---UAU[-????]
DQ021441_Cratilla_metallica   UUUAAAAGUAA-AAUU-AA-UU-C-UUUAUUAUUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACUGGAAG-GUGUACCUAGAAAGA-UA-AU----CAAAUUAGAGCUUGA--UAG-AAAGCU-UUU-CAUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA-AUUAAAG---------UCUUACUUAAUUU-AU------------------------UUAGUUAUUU--AUGAGAAA- UA UCUUA--
UUAUUUAGUAUA---UA--UAAGGAAAAAUUUUUGUU-------GUUAUAGU-UUAUUA----GUACU GUCA-AGGAA---U-UGA-UGAAAUAU----UAAAAA- AUUGUUUUAAUAAA---AGUAUGU--
UUAUUUUACAGUACCUUUUGUAUCAGGG-UUAAUCAAUU-UAUUUAAUU--UAUAUUUA---CAU[-????] EF640435_Pseudoleon_superbus   UUUAACAGUAA-AAUU-AA-UU-A-
CUAGUUAUUU-UGACU-AU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGGGUACCGGAAG-
GUGUCCCUAGAAAGU-CAAA-----CAAAUUAGAGCUUGG--GAG-UAAGCA-UUU-CAUU- UACACUGAAA-UUU-UA-AUUGUGC-AACUCA-AUUUAAUUUGAUA-AUUUUAU---------
UCUUACUUGUUCU-UA----------------------UUAUUUAUUUU--UACAGAAA- AA UCUUU--UUAUUUAGUAUA---UU--AAAGAAUAAUGAA-UAUU-------GUUAUAGU-AAAUUA----
GUACCGUGA-GGGAA---U-UUGAUGAAAUAU-U-- AUUAAAAUUUAAUUUUUUUUA---AGUAUGU--UUAUUUUACAGUACCUUUUGUAUCAGGG-UUGGUCAAAUUUAUU-AAUU--UAUAUUUU---
UUU[-????] DQ021444_Orthemis_cultriformis   UUUAAAAGUAA-AUUU-AA-UU-C-UUUAUUGAUU-UGAUU-UU--AGCUC--UAARAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACUGGAAG-GUGUACCUAGUAAGG-UA-AA----CAAAUUAGAGCUUGA--CAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AUU-UA-AUUGUGC-AAUUCA-GUUUAAUUUGAUA-ACAAUUU---------UCUUACUUAUUUU-AU------------------------UUUUUUUGUU--AAGAGAAU-

UAUCUUU--UUAUUUAGUAUA---CU--AAAGAAAAAUUUUUGUU-------GUUAUAGU-AUAAUA----GUACUGUUA-AGGAA---U-UGU-UGAAAUAA-U--UUAAAU- AUUAUUUUAUUUAA---
AGUAUAC--UUUAAUUGUAGUACCUUUUGUAUCAGGG-UUGAUCAAUU-UAUUUAAUU--UAUAUUUA---UAU[-????] EF640402_Orthemis_ferruginea UUUAAAAGUAA-AAUU-AA-UU-
C-UUUAUCAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACUGGAAG-
GUGUACCUAGAAAGG-UA-AA----CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-AUU-UA-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-GUAAUAU---------
UCUUACUUAUCUU-AUUUA---------------------UUAUUUAAU--CUGAGAAU- CA UCUUU--UUAUUUAGUAUA---UU--AAAGAAAAAUUUUUGUU-------GUUAUAGU-AUAAUA----
GUACUGUUA-AGGAA---U-UGA-UGAAAUAA-U--UUAAAU- UUUAUCUUAUUAAA---AGUAUAC--UUUAAUUGUAGUACCUUUUGUAUCAGGG-UUGAUCAAUU-UAAUUAAUU--UAUAUUUA---
UAU[-????] DQ021413_Orthetrum_albistylum UUUAAAAGUAA-AAUU-AA-UC-C-UUUAUUAAUU-NGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGGGUACCGGAAG-GUGUCCCUAGAAAGU--AAA-----CAAAUUAGAACUUGA--UAG-AAAGCA-UUU-CACU- UACACUGAAA-
AUU-UA-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUAAAC---------UCUUACUUAAUUU-AAUU---------------------AAAUUUAUU--GUGAGAAA- AA UCUUU--
UUGUCUAGUAUA---UA--UAAGGAAAAUCUUUUAGG------GGUAUAGU-AAAUUA----GUCCUGUAA-AGGAA--UA-GGA-UGAAAUAG----UUAAAA- CUUAUUUUUUAAUA---AGUAUAC--
UUAAUUUGUAGUACCUUUUGUAUCAGGG-UUAAUCAAAU-AUAUUAAUG--UAUCUUUA---UAU[-????] EF640403_Orthetrum_pruinosum UUUAAAAGUAA-AAUU-AA-UU-C-
UUUAUUAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AGAUAAGAUAAGUCGUAACAUAG-UAGGUGUACUGGAAG-
GUGUACCUAGAAAGU--AAA-----CAAAUUAGAACUUGA--UAG-AAAGUA-UUU-CAUU- UACACUGAAA-AUU-UA-GUUGUGC-AAUUCA-GCUUAAUUUGAUA-AUUAAAG---------
UCUUACUUAUUUU-GGUU---------------------UAUUUUUAU--UUGAGAAA- AA UCUUU--AUGUUUAGUAUA---AU--UAAAGAAAAACUUUUAUU------GUUAUAGU-AAAAUA----
GUACUGUGA-AGGAA---U-UGA-UGAAAUAA-U--UUAAAA- UUCAUUUUUAUAUA---AGUAUGU--UUAAUUUACAGUACCUUUUGUAUCAGGG-UUGAUCAAUU-AAUUUAAGA--UAUAUUGU---
UAU[-????] DQ021445_Orthetrum_coerulescens UUUAAAAGUAA-AAUU-AA-UC-C-UUUACUAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACUGGAAG-GUGUACCUAGGAAGU--AAU-----CAAAUUGGAACUUGA--UAG-AAAGUA-UUU-CAUU- UACACUGAAA-
AGU-UA-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AUAAAAA---------UCUUACUUGAUUU-AAUU--------------------AUUUUUAUUU--UUGAGAAA- AA UCUUU--
GUGUUUAGUAUA--GUU--AAAGGAAAACUUUUUUUU------GUUAUAGU-AAAUUA----GUACUGUGA-AGGAA---UAGGA-UGAAAUAA-U--UUAAAA- UUUAUUUUUGUGUA---AGUAUGU--
UUUAUUUGCAGUACCUUUUGUAUCAGGG-UUGAUUAAUA-AAUUCAAUU--UAUUUUUU---UAU[-????] DQ021442_Lyriothemis_elegantissima UUUAAAAGUAA-AAUU-AA-UA-
C-UUUAUUAUUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AGAUAAGAUAAGUCGUAACAUAG-UAGGUGUACUGGAAA-
GUGUACCUAGGAAGU--AAU-----CAGUAUGGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAG-UUU-UA-UUUGUGC-AAUCCA-AAUUAUACUGAUA-AAUAUAC---------
UCUUACUCGACUU-AUUCU----------------------AUUUUUU--AUGAGAAG- UA UCUUU--UUAGUUAGUAUA---UA--UAAAGAAUCCUUUAUUUU-------GUUAUAGU-UAAUUA----
GUACUGUUA-AGGAA-----AGA-UGAAAUAU-U--UUAAAC- AUUAUUUUAGGGAA---AGUAUAC--UUUAUUUGUAGUACCUUUUGUAUCAGGG-UUUAUUAAUU-AAUAUAAAA--UAUAUUUA---
UAU[-????]
EU477728_Ladona_fulva UUUAAAAGUAA-AAUU-AA-UU-C-UUUCUUAUUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC-------
CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACUGGAAG-GUGUACCUAGAAAGU--AAAA----CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU-
UACACUGAGA-AUU-UA-ACUGUGC-AAUUCG-GUUUAAUUUGAUA-AUUAAAC---------UCUUACUUGUUUU-UAUUU---------------------AAAUAUUU--AUGAGAAG- UA UCUUU-
-AUAGUUAGUAUA---AA--UAAGGAAAUCUUUUUUUUU-----GUUAUAGU-AAAAUA----GUACUGUUA-AGGAA---U-UGA-UGAAAUAA-A--UUAAAU- AUUAUUUUUAUAUA---AGUAUGU--
UUAUUUUACAGUACCUUUUGUAUCAGGG-UUAAUUAAAU-AAAUUAAAU--UAUUGUUA---UAU[-????]
Ladona_julia ----- ---
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EU477730_Ladona_Platetrum_depressa UUUAAAAGUAA-AACU-AA-UU-C-UUUAUUAAUU-UGAUU-UU--AGCUC--UAAAAUAUGC-ACACAUCNNN------- NN-
NNNN-NN????????----????????UAAGUCGUCACAUAG-UAGGUGUACUGGAAG-GUGUACCUAGAAAGU--AAA-----CAAAUUAGAGCUUGA--UAG-UAAGCA-UUU-CAUU- UACACUGAAA-
ACU-UA-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUAAAG---------UCUUACUUAUCUU-UUUUU-----------------UUUUAAAUUAUAU--GGGAGAAA- AA UCUUU--
AUGUUUAGUAUA---CU--AAAGAAAAACUUUUAUUU------GUUAUAGU-AAAUUA----GUACUGUUA-AGGNA--AU-GGA-UGAAAUAA-U--UAAAAA- UUUAUUUUUAUAUA---AGUAUGU--
UUAUUUUACAGUACCUUUUGUAUCAGGG-UUAAUCAAUU-AUAUUAAUU--UAUUUUAA---AAU[-????] EF640406_Plathemis_subornata UUUAAAAGUAA-AAUU-AA-AU-C-
UUUAUUAAUU-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUAUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACUGGAAA-
GUGUACCUAGAAAGU--GAU-----CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAGA-UUU-UA--CUGUGC-AAUUCA-GUUUAGUUUGAUA-AUUAAUA---------
UCUUACUUAUUUU-A----------------------UUAAAAAUUUU--AUGAGAAA- UA UCUUU--GUUCUUAGUAUA---AA--UAAGGAAAAGGGUUUAUUU------GUUAUAGU-AAAUUA----
GUACUGUUA-AGGAA---U-AGA-UGAAAUAA-U-- UAAAAUAUUUAUUUUUAUAUA---AGUAUAC--UUAAUUUGUAGUACCUUUUGUAUCAGGG-UUGAUUAAAU-AGUUUAAUU--UAUUUUUA---
UGU[-????] EF631552_Plathemis_lydia_OPLd NNNNNNNNN--------NNNNNN-NNNNNNNNNN-NNNNNNNN--NNNNN--NNNNNNNNNN-NNNNNNNNNN------- NN-
NNNN-NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-
NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNN-----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-----NNNNNNNN-

NNNNNNN--NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNN--NN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNN--
NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] DQ021418_Libellula_quadrimaculata UUUAAAAGUAA-
AAUU-AA-UU-C-UUUAUUAAUU-UGACU-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACUGGAAG-
GUGUACCUAGAAAGG-UA-AA----CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAGA-UUU-UA-UCUGUGC-GAUUCA-GAUUAAUUUGAUA-AUUUUUA---------
UCUUACUUAUUUA-A---------------------UUUAUUUAUAUUU--AUGAGAAU- AA UCUUU--AUAUUUAGUAUA---UU--AAGGAAAAAUACUUUUUU------GUUAUAGU-AUAUUA----
GUACUGUUA-AGGAA---U-UGA-UGAAAUAA-C--UUAAAA- UUUAAUUUUAAAUA---AGUAUGC--UUAUUUUGCAGUACCUUUUGUAUCAGGG-UUAAUCAAUU-AAUUUAAUU--UAUAUUUA---
UAU[-????] Libellula_Syntetrum_angelina ---
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Libellula_Eolibellula_semifasciata ---
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EF640401_Libellula_Belonia_saturata UUUAAAAGUAA-AAUU-AA-UU-C-UUUAUUAAUU-UGACC-UU--AGCUC--UAAAAUAUGC-ACACAUCGCC------- CG-
UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACUGGAAA-GUGUACCUAGAAAGG-UA-AU----CAAAUUAGAGCUUGA--UAG-AAAGCA-UUU-CAUU- UACACUGAAA-
AAU-UA-AUUGUGC-AAUUCA-AUUUAAUUUGAUA-AUAAAGA----------UCUUACUUAUCUU-A----------------------AUUAUUUUUUUU--GUGAGAAA- AA UCUUU--
UUAUUUGGUAUA---AU--UAAAGAAAAAUUUCUUUUU------GUUAUAGU-AUAUUA----GUACUGUCA-AGGAA---U-UGA-UGAAAUAA-A--UUAAAU- AUUAAUUUUAAAUA---AGUAUGC--
UUGUUUUGCAGUACCUUUUGUAUCAGGG-UUGAUCAAUU-AAUCUAAUU--UAUAUUUA---UAU[-????] AF195727_Libellula_Eotainia_composita NNNNNNNNN---------
NNNNNN-NNNNNNNNNN-NNNNNNNN--NNNNN--NNNNNNNNNN-NNNNNNNNNN------- NN-NNNN-NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNN-----N--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNN--NNNNNNNN- NN NNNNN--NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN--
--NNNNNNNNN-NNNNN--NN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] Libellula_Neotetrum_pulchella_OLP UUUAAAAGUAA-AAUU-AA-UC-C-UUUAUUAAUU-UGACU-UU--AGCUC--
UAAAAUAUGC-ACACAUCGCC------- CG-UCAC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACUGGAAG-GUGUACCUAGAAAGG-----UAAUACAAAUUAGAGCUUGA--
UAG-AAAGCA-UUU-CAUU- UACACUGAAA-AUU-UA-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUAAAA----------UCUUACUUAUUUUA-----------------------
AUUACAUUAUUU--AUGAGAAG- AA UCUUU--AUAUUUAGUAUG---AU--UAAAGAAAAAUUUUUUUU-------GUUAUAGU-AUAUUA----GUACUGUUA-AGGAA---U-UGA-UGAAAUAG-A--
UUAAAA- UUUAUUUUUUAAUA---AGUAUGU--UUAUUUUACAGUACCUUUUGUAUCAGGG-UUGAUCAAUU-AAUUUAAUU--UAUAUUUA---UAU[-????]
AF037182_Libellula_Holotania_comanche NNNNNNNNN---------NNNNNN-NNNNNNNNNN-NNNNNNNN--NNNNN--NNNNNNNNNN-NNNNNNNNNN------- NN-
NNNN-NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-NNNN- NNNNNNNNNN-
NNN-NN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNN-----N--NNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNN--NNNNNNNN- NN NNNNN--
NNNNNNNNNNNN---NN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNN-NNNNN--NN-NNN-NNNNNNNN-NNNNNNNNN- NNNNNNNNNNNNNNN--NNNNNNNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????] Libellula_Holotania_auripennis ----- ------------------------
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Libellula_Holotania_axilena ---
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AY282563_Libellula_luctuosa UUUAAAAGUAA-AAUU-AA-UC-C-UUUAUUAGUU-UGACU-NN--NNNNN--NNNNNNNNNNNNNNNNNNNNN------- NN-
NNNN-NNNNNNNNNN---NNNNNN-----NNNNNNNNNNNNN-NNNNNNNNNNNNNNN-N--N- NNNNNNNNNN-
NNN-NNNNNNNNNN-NNNNNN-NNNNNNNNNNNNNNN------------NNNNNNNNNNNNNNNNNNNNNN------------------------------------NNNNNN-

NNNNNNNN--NNNNNNNNNNN-NNNN--NNNNNNNNNNNNNN----NNNN--NNNNNNNN-NNNNNN----NNNNNNNN-NNNNNN--------NNNNNNNN-NNNNNNNNN-
NNNNNNNNNNNNNN---NNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNN--NNNN--NNNNN[-????]
Aethriamanta_rezia_ ---
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Tetrathemis_corduliformis_ ---
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Diplacina_ismene_ --
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Erythemis_vesiculosa_ ---
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Nannophyopsis_clara_ ---
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Oligoclada_amphinome_ ---
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Idiataphe_sp_HOL_2010_ ---
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Atoconeura_sp_HOL_2010_ ---
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Elga_leptostyla_ ---
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Fylgia_amazonica_ ---
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Hemistigma_albipunctatum_ --
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Porpacithemis_sp_ --
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Thermochoria_equivocata_ --
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DQ021433_Malgassophlebia_bispina_F110 UUUAAAAGUAA-AAUU-AU-UU-U-CUUAAUAAUU-UGAUU-UU--GGCUC--
UAAAAUAUGC-ACACAUCGCC-------CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGAGUACCGGAAG-GUGUUCCUAGGAAGU-AAAN-----CAAGUUAGA GCUUGA--
UAG-AAAGCA-UUU-CAUU-UACACUGAAA-AUU-UU-AUUGUGC-AAUUCA-AUAUAAUUUGAUA-AAUUUUU----------UCUUACUUU-UUU---U-----------------
----AUUUAAUUUUUU--AUGAGAAU-UAUCUUU--UUGUUUAGUAUA---UU--AAAGAAAAAA-UUUUUUU-------GUUAUAGU-AGAUUA----GUACUGUGA-AGGAA---U-AGA- UGAAAUAA-
U--UUAAAU-UU-AUUUUAUUUUA---AGUAUAU--UUUAUUUGUAGUACCUUUUGUAUCAGGG-UUGAUUAAUU-AU-CAAAUU--UAUAUUUU---UAU[-]
Micromacromia_zygoptera_ --
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Argyrothemis_argentea_ --
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Pseudothemis_zonata_ --
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EU477755_Oxythemis_phoenicosceles_2 UUUAAAAGUAA-AAUU-AA-UU-C-UUUAUUAUUU-UGAUU-UU--AGCUC--
UAAAAUAUGC-ACACAUCGCC-------CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACUGGAAA-GUGUACCUAGUAAGU-GAAA-----CAAAUUAGA GCUUGA--
UAG-AAAGCA-GUU-CAUU-UACACUGAAU-UUU-UA-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AUUAGAA----------UCUUACUUAUUUU--------------------
----UAUUU-UGUUUU--AUGAGAAA-AAUCUUU--GUGUUUAGUAUAA--AU--AAAGAAAAACUGUUGUUU-------GUUAAAGU-GAAUUA----GUACUGUGG-AGGAA---U-UGA- UGAAAUAA-
AAAUUAAUU-UAAUUNNNNNNGUA---AGUAUGU--UUAUUUUGCAGU- CCUUUUGUAUCAGGG-U-GAUCAAAU-AGAUUAAUU--UAUUUUUA---UAU[-]
Olpogastra_lugubris_ --
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EU477748_Misagria_parana UUUAAAAGUAA-AAUU-AA-CC-C-UUAAUUAAUU-UGAUU-UU--GGUUC--
UAAAAUAUGC-ACACAUCGCC-------CG-UCGC-UCUUAUUUUA----AAAUAAGAUAAGUCGUAACAUAG-UAGGUGUACUGGAAG-GUGUACCUAGAAAGG-UAAA-----CGAAUUAGA ACUUGA--
UAG-AAAGUA-UUU-CAUU-UACACUGAAA-AGU-UA-ACUGUGC-AAUUCA-GUUUAAUUUGAUA-AUAAUUA----------UCUUACUUGAAUAAAAU-----------------

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----AAUUGAUUAUUU--AUGAGAAU-UAUCUUU--UUAUUUAGUAUA---UU--AAAGAAUUAUAUUUUUUU------GUUAUAGU-UUAAUA----GUACUGUGA-AGGAA---U-UGA- UGAAAUAC-
A--UUAAAG-AAUUAUUUUAUUAAA--AGUAUGU--UUUAUU-GCAGUACCUUUUGUAUCAGGG-UUAAUCAAUU-CAAUUAAUG--CAUAUUUA---UAU[-                   ]
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GQ118257_Paraleptophlebia_vaciva              UUUGGAGGUAA???????????????????????????????????AGCUC--UAAAACAUGC-ACACAUCGCC-------
CG-UC-----????????---?????????----------------------------------------------------------------------------------------------
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Anthopotamus_sp                                  ----- ------???????????????????????????????????-----------------------------------
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AY749763_AY749641_Caenis_sp                      UUUGGUAGUAA???????????????????????????????????AGCUC--UAAAUUAUGU-ACAC-------------
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Ephemera_orientalis_genome                         UUUGGGUGUAA???????????????????????????????????AGCUC--UAAAACAUGC-ACACAUCGCC------- CG-
UCGC-UCUCAUUUUA----AGGUGAGAUAAGUCGUAACAUAG-UAGAUGUACCGGAAG-GUGUAUCUAGAAAG---------UUCAAAGUAGAGCUUGA--GAGUUAAGCA-UUU-CAUU-   UACAUUGAAA-
GGA-UG-UCGUGC---GAUAC-GAUUGUUUUGAAAAGUUUUUGUUUAAUUUAGUUA------UUUAUAUUUAAUUUAUAAAUUAA------------------------------
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-------------------------GUACCUUUUGUAUCAGGG-UUUAUUAAAUUUAUUUAAUUAAUUUAUUUU------[-????]
AY749764_GQ118253_Callibaetis_sp                 UUUAAUCGUAA???????????????????????????????????AGCUC--UAGGGUGUGC-ACA-------------
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Callibaetis_ferrugineus_AY859557                 ----- ------???????????????????????????????????-----------------------------------
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Baetis_sp_PC2010_genome                            UUUAAAAGUAA???????????????????????????????????AGCAC--UAGGGCGUGC-ACACAUCGCC------- CG-
UCAC-UCUCUUCCUA----ACAAGAGAUAAGUCGUAACAAAG-UAGGCGUACUGGAAA-GUGUGCCUAGCAUG-----------CGAGAUAAAGCUUUA-----UAAAGCACCCC-ACU--        UACAA-
UGGGAAGA-UA-CCAUU------UUA-GGUUGUUUCGAAGUAUUGAUUUCAUUAGUUGAAC------AA-----------------------------------------------
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-------------------------GUACCUUUUGUAUCAGGG-UCUAUCUAAUUAUUAAUAGUAGUAUUGAAU------[-????]
GQ118286_GQ118255_Hexagenia_sp                     UUUGGGUGUAA???????????????????????????????????AGCUC--UAAAACAUGC-ACACAUCGCC------- CG-
UCG----????????---?????????-------------------------------------------------------------------------------------------
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AJ971773_AJ969725_Cloeon_dipterum UUUAUAAGUAA???????????????????????????????????-----------------------------------
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Leucrocuta_maculipennis_AY749959 -----------???????????????????????????????????-----------------------------------
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AY749649_Centroptilum_luteolum_12S UUUAAAUGUAA???????????????????????????????????GGGUC-AUGGAAAGUGC-ACACAU-----------
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AY749769_Y749645_Stenonema_sp UUUGAAUGUAA???????????????????????????????????GGCUC--UAAAACAAGC-AC---------------
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Trigoniopthalmus_altern -----------???????????????????????????????????-----------------------------------
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Allomachilis_froggart -----------???????????????????????????????????-----------------------------------
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EF199981_Machilis_hrabei -----------???????????????????????????????????-----------------------------------
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AF370871_AF252403_Dilta_italica UUUAAUUGUAA???????????????????????????????????GGCUC--UAAAA-----------------------
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CTXMTRRSSA_Ctenolepisma_longicaudata UUUAAAGUAAU???????????????????????????????????GGCUC--UAGAGU----------------------
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Lepisma_sp_X93390 -----------???????????????????????????????????-----------------------------------
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EU376048_Lepisma_saccharina   -----------???????????????????????????????????-----------------------------------
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Thermobia_domestica_genome   UUUGAAUGUAA???????????????????????????????????GGCUC--UAAAAUAUGU-ACACAUCGCC------- CG-
UCGC-UCUCAUUUGU--CUAGGUGAGAUAAGUCGUAACAUAG-UGGGUGUACCGGAAG-GUGCACCUAGAUUGAAU--UAAUAGCAAAAUAGAGCUUGU--UAGUUGAGCUAUUC-GUU--   UACAU-CGAG-
GAGGUU-UCUGUGC-AAUUCA-GAUUAUUUUGAUUGAAGGAGACACUUAUUAUAUA------UGCAUAUUUUUAUUAAGAUUA--------------------------------
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-------------------------GUACCUUUUGUAUCAGGG-GACACUGAAUAAUAUUAUUAUAUAAUUAUUU-----[-????]
Tricholepidion_gertschi_genome   UUUAAUAGUAA???????????????????????????????????AGCUC--UAAGGUGUGU-ACACAUCGCC------- CG-
UCGC-UCUCGUUUAU--UUAGGCGAGAUAAGUCGUAACAUAG-UAGGUGUACUGGAAA-GUGUACCUAGAAUGAAA----AAUCAAGGUGUAGCUUAUAUUAGUAAAGCA-UUU-CAUU-   UACACUGAAU-
UAA-UG-UUUGUGC-AAAUCA-GAUUAUCUUGAUUAAUUGUUGUAUUAUUUGAUUU------UUUUGUGAAUUAAGUUGGUUA--------------------------------
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-------------------------GUACCUUUUGUAUCAGGG-AUAUUCUAAUUUAUUAAUAUAUAU-UAAUAU-----[-????] EF623126_EF623280_Gromphadorhina_portentosa
                                                  UUUAAUCGUAA???????????????????????????????????GGCUC--UAAAAUGUGC-ACACAUCGCC-------
CG-UCGC-UCUUA?????---?????????--
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EF623206_EF623373_Isoperla_davisi   UUUGAAUGUAA???????????????????????????????????GGCUC--UAAAACAUGC-ACACAUCGCC-------
CG-UCGC-UCUUA?????---?????????--
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EU414717_Isoperla_sp   -----------???????????????????????????????????-----------------------------------
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Gomphocerus_sibiricus_tibetanus_genome   UUUAAUAGUAA???????????????????????????????????GGCUC--UGGGGUGUGG-ACACAUCCCC------- CG-
UCAC-UCUCAnnnnnnnnnAGAUGAGAUAAGUCGUAACAUAG-UAGAUGUACUGGAAA-GUGUAUCUAGAAAGGU------UAUCGAGAUAUAGCUUAU--UAGUGAAGUA-UUU-CAUU-
UACACUGAAAAUUUU---UCUGUGC-GAUUCA-GGAUAUCUUGAGAUUUAUUAUAUUAUUUUUUAUU------UUUGUUUAUUUUAUUAUU----------------------------------
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-------------------------GUACCUUUUGUAUCAGGG-UUUAUCAAUAUUUUAGUAUAUAUAUACUACU-----[-????]

[EU054943_5043_Hagenius_sp   UUUGAUAGUAA-UUUU-AA-UU-A-UUUGUUAAUA-UGAUU-UU--GGCUC--UAAAAUAUGC-ACACAUCGCC------
-CG-NNNN-NN????????---?????????NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN-NNN-NNNNNN-NNN-
NNNN-NNNNNNNNNN-NNNNNN-NNNNNNNNNNNNNN-NNNNNNNNNNNNN-NNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNN------------------NNNNNNNNNN--NNNNNN NN-
NNNNNNN--NNNNNNNNNNNN---NNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNN-NNN----NNNNNNNNNN-NNNNNNN-NNN-NNN-NNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNN---
NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN[-????]
 contaminant?
Hemiphlebia_mirabilis_OHM   ???????????-???????-??-?-????????????????-??--?????--??????????-??????????-------
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UACACUGAGU-AUU-UU-ACUGUGC-AAUUCA-GUAUAAUUUGAUA-AU-----------UUUUACUUACUAUUUUU-------------UUUGUAAUUUAUAUU---------UAGAAAAA- UA UUUUU-
-AGGUUGAGUAUA--UAA--AAAGAAAAUAUUUA-----UUUU--GUGAUAGU-UAAUUA----GUACCGUGA-GGGAC-----UGU-UGAAAUA-UUAUGAAAAUUAUUUUUAGU-
----AUAAGUAGUU--UUUGUUUAAUGUACCUUUUGUAUCAGGG-UUAAUCAAAUUUAU-UUAAUUUA--UUUU--AUUUU[-????]
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[                                                31a    32                                 33                                     35a
32â€šÃ„Ã´       31a      36              37                                      38                                     39
43                                                                             36â€šÃ„Ã´                46
26â€šÃ„Ã´                                                                                          65       ]
Unaligned                                         ----------------------99999999999999999999999999999999999999999999999999999------
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Protosticta_sp_A_ZPA                              CCCGAUCUCGUUUGAGCUAAUUUAUU------AUUAUGGUUGUUGUUU-UAU--AAACAUCU--UUAAUU---UUUUUUAG
G-GGAGA-UAUUUU-AUUCGUUUUCGAUGG-UAUCUGGUU-UCCUUAGAUU-UGAA-UUUAAUUCAUU-GCUCUUA-UU--UGGUUUAAUUAUUUUUUAUUAUU---UCUUUUUUUGAGU UAA--
AAAUUUAUAGGGGAUAAGCUCUAUUUUU---UCUCAUAAUUAUUAUAUGUUGUUAGU-----U-UUCGUAGGGUUGAAAUCUUCCUUCGUUU--UGAUUACGUUAUAGUACAUUUU--
ACUUAUUUUUAGAUUUGUGUUAUUUAUUU-GGGUUUAUUUAUAAGGAAUUCUAAG-UUAA-UU-UGUUUUUUUGA-GUUAUAAUGAUUAAAU-UAGUAUAAUUUUUCUUGUUUUUAAAAAAUU----
UAUGUGGGAUUUUUUUUUAAGGAACUCGGCAAU-UUUAAU----------UCUCGCCUGUUUAUCAAAAAC-A[-????]
ZPCs_BPCp                                         CU--------------------------------------------------------------------------------
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Protosticta_sanguinostigma_BPS                    ???????????????????????????------????????????????-???-?????????--??????---????????
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Sinosticta_ogatai_ZSOg                            CUCGAUUUCGUAAUAGUUAAGGGGUC------UUUGUUUUUAUUGUUU-UAU-GAAUAUUAU--AAAAGU---CCUUUUUG
G-GGAGA-UAUUCU-AUCCGUUUUCGAGGG-UAUCUAGUU-UUUUUAGAAU-CAAA-UUUAAUUUGGG-UUUUUGAUUU--AUUAGGAAUUUAAUUUAUUAAU----UUCUUUUUAUUAU
UUACUUAAAUAGUAGGGGAUAAGCUCUGCUUUU--UUCUUAUAAUUUUAUCUUUUUUACAAU-----U-UUUGUAGGGUUGAAAUCAUUCUUCAUUU--AUAUUACGUUACAGUUUAUUUU--
GUUUUGUUUUUGAUUUUCU---UUUAUUUAAGGUUUU--UAUUUAAAA-AUUUUA-AUUA-AC-UUUUUUUAAGA-GUUAUAAUGGUUUAAU-UAGUAUGGA-UUUCUUGUUUUAUUAAUUGU-----
UAUUUUUAACUUUUUUUAAGGAACUCGGCAAA-UAAAU-----------UCCCGCCUGUUUAUCAAAAAC-A[-????]
Palaemnema_paulicoba_ZPP                          CCCGAUUUCGUUGGAGCCAAUUUUUA-----AUUUUUAUUUAUUGGUU-CAU--AAAUAUGA--UUAAUU--UUAUUUUAG
G-GGAGA-UAUUCU-AUUCGUUUACGAAGGAUAUCUGGUU-UUUUAAGAUU-CAAA-CUUAAUUUGAU-ACUUGAUUAU--UGGUU-AAUUGAUUUGUUAAUU-----UUCUUUUAUUAA
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???????????????????---???????-????????UUAUUAAAAAUUUUUUA-AUUA-CC-UUUUGUUUGGA-GUAAUAAUGAUGGAAU-UAGUAUAA--UUUAAUGUUUAAAAUUUGUU----
UAAUUGGGAAUUUUAUCUAAGGAACUCGGCAAA-UAAAU-----------GCCCGCCUGUAUAUCAAAAAC-U[-????]
Palaemnema_domina_ZPDm                            CUCGAUUUUGUAAGAGCUAAUAAAAU------AUUUUGUUUGUUGUGU-UAA--AACUUUCA--UUAAUA--UUUAUUUGU
G-GG-GA-UAUCCU-AUUCGUUUAUAAAGG-UAUCUGGUU-UUCUAAGAGA-UUAA-UUUAAUUGUUU-CCU-GAGUUU--UAUA-AUUUACUUGUCUAAUUU----UUUAUUUUUUGC GAC--
UAAAAUAUAGGGGA??????????????---???????????????????????????-----?????????????????????????????????--??????????????????????--
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Palaemnema_melanostigma_BPM                       ???????????????????????????------????????????????-???-?????????--?????????????????
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Isosticta_robustior_BIR   ??????????????????????????------????????????????-???-?????????--?????????????????
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Rhadinosticta_simplex_ZRS   CCCGAUUUUAUAAGAGCUAUUAAUAU------CUAAUGUUCACUGUGG-UAA--AAUUGUCA--UUAAUAUUUUUUAGUAG
G-AGAGA-AAUUCU-UGUCGUUUAUGAAGG-UAUCUGGUU-UUCUAAUAAA-UAAA-UUUAAUUUGAC-UUAGUAAUUU--UUCUUGUUUAUUUAUUAACUGG-----CUAUUUUAUUAA UUG--
AAAAUAAUAGGGGAUAAGCUCUAUUUUC---UUCUAUAAU-GAUUUAU-UACUUAAA-----U-UCAGUAGGGUUAGAAUCAUCCAUCUUUU---UAGCACGUUGUAGUUAAUUUU-
AGUAAGAAGUAUGAUUUAAU---UUGAUUU-AGAAUUU--UAUUGGAAUGGAGCAU-GCAA-UU-UUAUUUUGGUU-GUAAUAAUGAUUAAAU-UAGUAUAC--UUUAUUGUUUAAAUGAGAAU----
-GUGAGUUAAUUAGAAGUAAGGAACUCGGCAAA--UUAA----------UGCUCGCCUGUUUAUCAAAAAC-A[-????]
Amphisticta_silvarum_ISO_ZAS   CCCGAUUUUAUAAGAGCUAGUAACAU------AUUAUGUUUAUUGUGG-CAA--AACUUUCA--UUAAUU---GUUGCUGG
U-AGAGA-AAUUCU-AUUCGUUUGUAAAGG-UAUCUGGUU-UUUUAAUAAA-CAAA-UUUAAUUUGAU-UUUAUAAGUC--UUUGGGUUUAUUUUUGAACUUA-----UCGUUUUGUAAA UUA--
AAAAUAAUAGGGGAUAAGCUCUAUUUUC---UCCUAAAAUUGUGGAGU-UUCGUAAA-----UCUCAGUAGGGUUAGAAUCAUCCGUCUUUU----AUUACGUUGUAGUAUAUUUU--
AUUGUUAGUUUGAUUUAAU---UUUAUUU-AGGAAUU--UAUUAAAAUAUUUUAU-GUAU-CU-AUUUUUUUAUG-GUAAUUAUGAUUAAAU-UAGUAUAU--UUUAUUGUUUAAACGUUAGA-----
GCUUGUUUAUUAAAUAUAAGGAACUCGGCAAA-UAUAA----------UGCUCGCCUGUUUAUCAAAAAC-A[-????]
Labidosticta_vallisi_OLVa_BLVa   CCCGAUUUUAUAAGAGCUAUUAAUAU------CUAAUGUUCACUGUGG-UAA--AAUUGUCA--UUAAUA---UUUUUUAG
U-AGAGA-GAUUCU-AUUCGUUUAUAAAGG-UAUCUGGUU-UUUUAAUAAA-CAAA-UUUAAUUUGAU-UUUAUAAUUC--CAUUGGUUUAUUCAUUAACUUU-----UUGUCUUAUAAA UUA--
AAAAUAAUAGGGGAUAAUCUCUGUUUUUU--UUCUAAAAUAGAUUUUU-AAA-UAAA-----UUU-AGUAGGGUUAUAAUCAUCCGUCUUUU---AAUUACGUUGUAGUGUGUUUU--
GUUUUUAUUUUGAUUUAAA---UUUAUUU-AGGAUUU--UAUUAAAAUUUUUAAU-UUAA-UU-UUAAUUUUAUU-GUAAUUAUGAUUAAAU-UAGUAUAU--UUUUAUGUCUAAAUGUAAAG-----
UGUUGUAUAUUAAUAAUAAGGAAUUCGGCAAA-CGUAG----------UACUCGCCUGUUUAUCAAAAAC-A[-????]
Orosticta_filiciola_ISO_ZOF   CCCGAUUUUAUAAGAGUUAUUAAUAU------AUAAUGUUCAUUGUGG-UAA--AACUGUCA--UUAAUA---UUUAUUAG
U-AGAGA-AAUUCU-AUUCGUUUAUAAAGG-UAUCUGGUU-UUUUAAUAAA-CAAA-UUUAAUUUGAU-UUUAUGAUUC--CAUUAGUUUAUUUAUUAACUUU-----UCGUAUUGUAAA UUA--AA
AAUAAUAGGGGAUAAGCUCUGUUUUU---UUCUAAAAUUGCUUUU--AUGAUAAA-----UUU-AGUAGGGUUAGAAUCAUCCAUCUUU----AAUUACGUUGUAGUAUAUUUU--
AUUAGUACUUUGAUUUAAU---UUUAUUU-AGAGAUGU-UAUUAAAAUUUUUAAU-UUAA-CU-UUAAUUUUAUU-GUAAUUAUGAUUAAAU-UAGUAUAU--UUUUCUGUUUAAAUGUGAAU-----
UAUUUUAUAUUAAAAAUAAGGAAUUCGGCAAA-UCUAA----------UGCUCGCCUGUUUAUCAAAAAC-A[-????]
Platycnemis_pennipes_OPPp   CUCGAUUUCAGAAGAGCUAAUAAUUU------AAUUUAUUUAGUGUUA-CAU--AACUAUUA--AAAAUA---UUUAUUAG
G-AGAGA-AAUUCU-AUUCGUUUAUAAUGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAC-UUUAAUUUUU--CUUUUUCUUCUUUAUUAGACUU-----AGAUUAAUUAAA UUA--
AAAUUAAUAGGGGAUAAGCUCUAUUUAU---UUUUAUAAUAUUAAUU--GUUUUGUU-----UAU-AGUAGGAUUAUAAUCUUCCAUCUUUU---UAUUACGUUAUAGUGUAUUUC--
AAUUUAUUUUUGAUUUUAU---UUUAUUU-AAUUAAA--UAUUAAAAUUUUCUAA-UUAA-UU-UAGGAUUAGAA-GUAAUAAUGAUUAAAU-UAGUAUAUUAUUUUUUGUUUGG-UGUUUAUUU---
UAUGUGUU-UUAUCAAUAAGGAACUCGGCAAA-UUUUG----------UGUUCGCCUGUUUAUCAAAAAC-A[-????]
Copera_annulata_OCAn_ZCAn   CUCGAUUUUAUAAGAGCUAAUAACCU------AUUUUAGUUAGUGUUU-CAU--AACUAUUA--AUAAUA---UUUAUUAG
A-UAAGAAAUUUUA--UUCGUUUAUAAUGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAC-UUUAAUUUUU--CUUUAUUUUAUUUAUAAAAUUU-----AGAUUAAUUAAU UUA--
UAACUAAUAGGGGAUAAGCUCUAUUUGUA--UUUUAUAAUUUGAUUU--ACAAUAUU-----UAU-AGUAGGAUUAUAAUCUUCCAUCUUUU--UUAUUACGUUAUAGUAUAUAUU--
AUGUAGUUUUUAAUUUUAU---UUUAUUU-AAAUAUU--UAUUAAAAUUUUCUAA-UUAA-UU-AUUAAUUAGUA-GUAAUAAUGAUUAAAU-UAGUAUAU-AAAUUUUGUAUGU-UAUUGAAUA---
CUUGUAUAUUUAUUUAUAAGGAACUCGGCAAA-UUUUG----------UGUUCGCCUGUUUAUCAAAAAC-A[-????]
EU055103_Copera_vittata_16S   ???????????????????????????------????????????????-???-?????????--??????---????????
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Copera_marsouipes_PLA_ZCM   CUCGAUUUUAUAAGAGCUAAUAAAUU------AAUUUAGUUAAUGUGU-CAU--AAUUAUUA--AUAAUA---UUUAUUAG
A-AAAGA-AAUUUU-AUUCGUUUAUAAUGG-UAUCUGGUU-UUUUAAGAAAUUAA--UUUAAUUUAGU-UUUAAUUUUU--CUGUUCUUUUAUUAAGAGUA-------UGAUUAAUUAAA AUA--
AAGUUAGAAGGGGAUAAGCUCUUUUAAUA--UUUUAUAAUAAAUUUU--UAUUUAAU-----UAU-AGUAGGAUUAUAAUCUUCCAUCUUGU---UAUUACGUUAUAGUAUAUUUU--
UAUUUGUUUU-GAUUUAUU---UUUAUUU-AAUUAUC--UAUUAAAAUUUUUUAA-UUAA-UU-UUGAAUUUAAA-GUAAUAAUGAUUAAAU-UAGUAUAU-UUAUUUUGUAUAU-CAUUAAUUC---
CUUGUUUAUUUAUUUAUAAGGAACUCGGCAAA-UUUUA----------UGUUCGCCUGUUUAUCAAAAAC-A[-????]
Coeliccia_albicauda_OCAL_BCC   ???????????????????????????------????????????????-???-?????????--??????---????????
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Coeliccia_cyanomelas ???????????????????????????------????????????????-???-?????????--??????---????????
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Calicnemia_miles_PCN_OCMi CUCGAUUUUAUAAGAGCUAAUUAUUU------AUUUUAUUUAAUGUAA-UAA--AAUUAUUA--AAAAUA---UUUUUUAG
U-GGAGA-AAUUCU-AUUCGGUUAUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUAAAUUUAUC-UCAAAAAAUU--UACUUUUCUUAUUAUUAAGAUU---AAUUAUUUUUUUGA AUA--
AAUAAAAUAGGGGAUAAGCUCUAUUUUU---UUCUAUAAUUUAUAUU--GUUUUAUU-----UGU-AGUAGGAUUAUAAUCUUUCAUCCUUU---UAUUACGUUGUAGUAUAAAAU---
AUUUUUUAUUAAUUUAUA---UUUAUUU-AGUGUUU--UAUUAAAAUUUUUUAA-UUAA-UU-AUUAAUUUAGA-UUAAUUAUGAUUAAAU-UAGUAUAUAUUUACUGUUUAUUUAUUUAUAGU----
--UAUGACUUAUAAAUAAGGAACUCGGCAAA-CUUUAU-------UGUGUUCGCCUGUUUACCAAAAAC-A[-????]
Prodasineura_vitatta_OPV_PRN CUCGAUAUUGUAAGAGCUAAUAUAUA------AAUUUAUUUGUUGUUG-AAU--AACCAUUA--AUAAUU---AUUAUUAG
A-GGAGA-AAUUCU-AUUCGUUUAUGAUGA-UAUCUAGUU-UUUCAAGAAU-CAAA-UUUAAUUUGGU-UUUUAAAAUU--ACCUUUUUUAUUUUU-AGAAUU-----GUAUUUUUAAGA UGU--
AAAAUGAUAUGGGAUAAGCUUUAUCUUUU--UUCUAUAAUUUCUAUUUGGAUAUUAA-----CUUUAGUAGGAUUAUAAUCUUCCUUCUUAA---GAUUACGUUAUAGUAUAAGUU---
GUUAUUUGUUGAUUUUUU---AUUAUUU-AGUAGUU--UAUUGAUAUUUUUUUA-UUAA-CU-UUUUAUAAAAA-UUAAUAAUGAUUAAAU-UAGUAUAUUUUUUUUUGUUUUU-UAUUUAUAA----
UAUUUUAUUCUUAAUUAAGGAACUCGGCAAA-CUUAG----------UAUUCGCCUGUUUAUCAAAAAC-A[-????]
Chlorocnemis_abboti_PRO_ZCAb CUCGAUAUUAUAAGAGCUAAUAUUUU------AAUUUAUUUAUUGUUG-AAU--AACUAUUA--AUAAUU---UAUGUUAG
A-GGGGA-AAUUCU-AUUCGUUUAUAAUGA-UAUCUAGUU-UUUCAAGAAU-CAAA-UUUAAUUUGCU-UUUUAAAAUU--ACUUUUUUUAUUUUU-AAAAUU-----UUAUUUUUAAAA UGU--
AAAAUGAUAUGGGAUAAGCUUUAUCUUUU--UUCUAUAAUUUUUAUUAAGAUA-UUA-----UUUUAGUAGGAUUAUAAUCUUUCUUCUUUA---AAUCACGUUAUAGUUUAUUUU--
AUUAUUUUAUUGAUUUUUU---CUUAUUU-AGUAAUU--UAUUGAAGUUUUUUUA-UUAA-UU-UUUAAUAAGAA-UUAAUAAUGAUUAAAU-UAGUAUAU--UUUUUUGUUUGU-UAUUUAUAA---
-UAUUUUAUUUUUAAAUAAGGAACUCGGCAAA-UUUAG----------UAUUCGCCUGUUUAUCAAAAAC-A[-????]
Nososticta_solida_ZNSo CUCGAUUUUGUAAGAGCUAAUUAAUU------AAUUUAUUUAAUGUUU-UAU--AAUUUUUA--AUAAUA---UUUAUUAG
U-GAAGA-UAUUUU-AUUCGUUUAUAAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAAU-UUUAAAAUUU--AUUUUUUUUCUUUUU-AAAAAA----GAUCUCUUUUAAA UUA--
AAAGUAAUUGGGGAUAAGCUCAAUUAUUU--GUUUAUAAUUUUG-UAAAGAUU-AAA-----CUUUAGUAGGAUUAUAAUCUUCCAUCUAAU--UUAUUACGUUAUAGUAUAAGUU-
UAAUUAUUAA-UGAUUUACU---UUUAUUU-AAUUAUU--UAUUAAAAUGUUUUAA-CAAA-UU-UUUUAUUAUAA-UUAAUAAUGAUUAAAU-UAGUAUAU--AUUAUUGUUUGU-UAUUUAUUU--
--UUUGUUAUUUAAAGAUAAGGAAUUCGGCAAA-UAAAA----------UGAUCGCCUGUUUAUCAAAAAC-A[-????]
Phylloneura_westermanni_BPW ???????????????????????????-----????????????????-???-?????????--??????---????????
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Onychargia_atrocyana_ZOA CUCGAUUUUAUAAGAGCUAAUAAGUU------AAUGUAUUUGAUGUUA-UAU--AAUCAUUA--AUAAUA---AUUAUUUG
C-AGGGA-UAUUCU-AUUCGUUUAUAAAGG-UAUCUAGUU-UUCUAAUAAA-UAAA-UUUAAUUUAUC-UUUAGAAUUU--ACUUUUCUUUUUUGAGG?????----?????????????
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-?????????????????????????????AA-UCAUU----------AGAUCGCCUGUUUAUCAAAAAC-A[-????]
Argia_moesta_COE_OAM CUCGAUUUCAUAAGAGCUAAAUUUUU------AAUUUAUUUAUUGUAA-UAU--AAAUAUUA--AUAAUA---AAUUUUGG
U-AGAGA-AAUUCU-AUUCGUUUAUGAAGG-UAUCUAGUU-UCCUAAGAAU-UAAA-UUUAAUUUAGG-CCUGUAAAUU--ACUUUUUUAUUAUUU-AAUUUU-----UUAUUUUUUAGG UCA--
AAAAUAAUGAGGGAUAAGCUCUUUAUGU----UCUAAAAA-GGGCUGGUUUUU-AAA-----UUU-AGUAGGAUUAAAAUCUUCCAUCUUUU---AAUAACGUUAUAGUAUAUUUU---
AAUUUUAUCUAAUUUUCU---UUCUUUU-AGUUUUA--UAUUAGGAUAUAUUAA-UUAA-UU-UUAUUUUAGUA-GUAAUAAUGAUUAUAU-UAGUAUAU-AUCUUUUGUUUUU-UAUUUAUUU----
UUUGUAAAUUAUGAAUGAGGAACUCGGCAAA-UUUAA----------UGUUCGCCUGUUUAUCAAAAAC-A[-????]
Argia_nahuana_BAN ???????????????????????????------????????????????-???-?????????--??????---????????
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Argiocnemis_rubescens_ZAR ???????????????????????????------????????????????-???-?????????--??????---????????
?-?????-??????-?????????????GG-UAUCUAGUU-UUUUAAGAAA-CAAA-UUUAAUUUGCC-UUUAAAAUUU--AAUUUUUUCUUUUA--AAUAAA-----UUAUUUUUUAAA UUA--
AAAAUUUUGGGGGAUAAGCUUCAAUUUU----UGUUAUAAAGGAUUUUUUCUAAAAA-----UAU-AGUAGGAUUAAAAUCAAUCAUCUUUA--AUAGUUCGUUAUAGAAUAUUUU---

AUUUUUUAAAAAUUUUCU---UUUUUUU-UACUUUU--UAUUAAAAUUAUUUAU-UUAA-UU-UUUUUUUAAUU-GUAUUAAUAAUUAAAU-UAGUAUAA--AUAUUUGUAUUGUUAUAUUUU-----
AAUGUUACUUUUAAGUAAGAAAUUCGGCAAU-UAUAA----------UUUUCGCCUGUUUAUCAAAAAC-A[-????]
Mortonagrion_binocellata_BMB ???????????????????????????------????????????????-???-?????????--??????---????????
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Agriocnemis_pygmaea_OAP_BAP CUCGAUAUUACAAGAGCUAAUAUUUU------AUUUUUUUUAUUGUAU-CAU--UAAUAUUU--AAAAUA---CUUAUUAG
A-GGAGA-AAUUCU-AUUCGUUUGUAAAGG-UAUCUGGUU-UUUUAAGAAU-UAAA-UUUAAUUUAUC-UCUAAAAUUU--AUUUUUUUCUUUUU--AAUAAAA-----UAUUUUUUAGA AUA--
AAAUUAGUAGGGGAUAAGCUCUUCUUUUU---ACUAUAAUUUUUAUGUUU--AUAAA-----UAU-AAUAGGACUAAAAUCAACCAUUUUAA---AAAUUCGUUAUAGAAUAUUUU--
AUUUUUUUCUUGAUUUUCA---AUUUUUU-UGUUAUU--UAUUAAAAUUAAUUAU-UUUA-CU-UUAUUUUAAUU-GUAAUUAUGAUUAAAU-UAGUAUAA--AAUUUUGUUUUUAUUUUCUUU----
-UAUUUAAAUUUUGAUUAAGGAACUCGGCAAA-UAUAA----------UUUUCGCCUGUUUAUCAAAAAC-A[-????]
Austroagrion_watsoni_ZAW CUCGAUUUUAUAAGAGUUAAUUAAUUU-----AAUUUGGUUAGUGUUA-CAU--AACUAUCA--AUAAUA--UUUAAUUAG
G-AAAGA-AAUUUU-AUUCGUUUAUAAAGG-UAUCUAGUU-UUUUAAGAAA-AAAA-UUUAAUUUAUU-UCUAAAAUUU--ACUUUUUUAUUUUUU-AAUUUU------UAUUUUUUAGA UCA--
AAAUUAAUAGGGGAUAAGCUCUAUUUUAUU--UUUAUAAAUUUUUAUUUU--UUAAU-----UUU-AGUAGGCAUGGAAUCAACCAUCUUUA--GAAUUACGUUAUAGUGUAUUUU--
AUUAAUAAUUUGAUUUUCU---UUAUUUU-AGUUAUA--UAUUAAAAUUAUUUAU-UUAA-UU-UUAUCAUAAUU-GUAAUAAUGAUUAAAU-UAGUAUAAU-UAUUUUGUUUAUAAUAAAUUA----
-UUCUUAAUUUUUAAUUAAGGAAUUCGGCAAA-UAAAA----------UUUUCGCCUGUUUAUCAAAAAC-A[-????]
Archibasis_viola_ZAV ---

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Coenagrion_puella_AJ488546 ---

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JQ966640_Coenagrion_resolutum ---

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Pseudagrion_cingillum_COE_OAAL_BPA CUCGAUUUUAUAAGAGCUAAUGAUUU------AUUUUAUUUUAUGUGG-CAA--AAUGAUUA--AUAAUA---UUUAUUAG
A-GGAGA-AAUUUC-AGUCGUUUAUAAGGG-UAUCUAGUU-UUUUAAGAUU-UAAG-UUUAAUUUAUU-CCUGAAACUU--ACUUUUUUCUUUUU-GAAAAGUU-----UAUUUUUCAGG UUA--
AAAAUAAUAGGGGAUAAGCUCUAUUUUUU---GCUAAAAACACUUUUUUU--UCAAA-----UUUUAGUAGGCUUAAAAUUAGCCAUCUUAU---UAUUACGUUAUAGUUUA-UUU--
UUGUUUUACUUGAUUUUCU---UUUUUUU-AGGUUUU--UAUUAAAAUUAUUUAU-UUAA-UU-UUUUAUUAAUU-GUUAAAAUGAUCAAAU-UAGUAUAUA---CAUGCGUUUGAUUUUUUUAA---
UUACUUUAAUUAUAGUUAAGGAACUCGGCAAU-CUUAA----------UUUUCGCCUGUUUAUCAAAAAC-A[-????]
Pseudagrion_aureofrons_BPA ---

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Pseudagrion_ignifer_COE_OPi CUCGAUUUUAUAAGAGCUAAUGACUU------AUUUUAUUUUAUGUGG-CAA--AAUGAUUA--AUAAUA---UUUAUUAG
A-GGAGA-AAUUCC-AGUCGUUUAUAAGGG-UAUCUAGUU-UUUUAAGAUU-UAAG-UUUAAUUUAUU-CCUGAAACUU--ACUUUUUUCUUUUU-GAAUUUU-----UUAUUUUUCGGG UUA--
AAAAUAAUAGGGGAUAAGCUCUAUUUUUUUU--GCUAAAAACACUUUUUU---UCAAA-----UUUUAGUAGGCUUAAAAUUAGCCAUCUUAU---UAUUACGUUAUAGUUUA-UUU--
UUGUUUUAUUUGAUUUUCU---UUUUUUU-AGGUUUU--UAUUAAAAUUAUUUAU-UUAA-UG-UUUUAUUAAUU-GUUAAAAUGAUCAAAU-UAGUAUAUA---CAUGCGUUUGAUUUUUU-AA---
UUAUUUUAAUUAUAAUUAAGGAACUCGGCAAU-CUUAA----------UUUUCGCCUGUUUAUCAAAAAC-A[-????]
Erythromma_najas_EU055009 ---

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Cercion_plagiosum_AJ488552 ---

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EU477628_Cercion_lindeni CUCGAUUUCAGAAGAGCUCUAAUAAU----UUAUUUUGUUUUAUGUGU-UAA--AAUAAUUA--AUAAUA---UUUAUUAG
A-UGGGA-AAUCCU-AUUCGUUUAUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAU-CCUAAAAUUU--ACUUUUUUCUUUUU-GAUUUAU----UUAUUUUUUAGG
UUA--AAUCUAAUAGGGGAUAAGCUCUAUUUUUU---ACUAAAAAAUUUUCUUUUUAUUAAU-----UUU-AGUAGGACUAAAAUCAACCUUCU-UU-AAAAUUACGUUAUAGUUUAUUUUGUUUUAAU-
-U-UAAUUUUCUUUUU---UUU-AGUU-UUC-UAUUAAAAUGAUUUAU-UUAA-CU-UUAUUUUAAUU-GUAAUAAUAAUUAAAU-UAGUAUAUA-AUAU-UGUUUGUUAUUUAUUU---
AAGUUUUUAAUGUAA-UUAAGGAACUCGGCAA--AUCUAR---------UUUUCGCCUGUUUAUCAAAAAC-A[-????]
Paracercion_hieroglyphicum_AJ488551 ---

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Acanthagrion_quadratum_COE_ZAQ CCCGAUUUUAUAAGAGUUAAAGGCUU------AAUUUGAUUGUUGUGG-UAA--AAUCAUCU--UUAAUA---UUCUUUAG
U-GGAGA-AAUUCU-AUUCGUUUAUAAAGG-UAUCUGGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAU-CUCAAAAUUU--ACUUUUUUCUUU----AAUAAAA---UUUAUUUUUUGAG GGU--
UAAUUAGUAGGGGAUAAGCUCUAUUUUUU---GCUAGAAAUAAUUUUU-AUAAUAAA-----UUU-AGUAGGAUUAAAAUCAAUCAUCUUAA--AAAUUACGUUAUAGUAAGUUUU--
AUUUAUAAAUUGAUUUUCU--UUUUUUUU-AGUACUUC-UAUUAAAAUUACUUAU-UUAA-CU-UAAUUUUAAUU-UUAAUUAUGAUUAAAU-UAGUAUAAU-UUAUUUUGUUUGUUGAUUAUU---
UUUUUUAUAAUUAUGAUUAAGGAAUUCGGCCAA-AAUAA----------UUUUCGCCCGUGAGUCAAAAAC-A[-????]
Leptobasis_vacillans_ZLV ---

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Amphiagrion_saucium_OAS CUCGAUUUUAUAAGAGCUAAAACUUU------AAUCUGUUUAUUGUUA-CAU--AAAUAUCU--GAAAUA---UUUUUUAG
U-GGAGA-AAUUCU-AUUCGUUUAUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGU-CCUAAAAUUU--ACUUUUUUCUUUUU--GAUAAU-----UUAUAUUUUGGG AUA--
UAUUUAAUAGGGGAUAAGCUCUAUUUUUU---ACUAUAAGAUUAAUUUUAUAAUAAG-----UUU-AGUAGGACUAAAAUCAACCAUCUUUA--AAAUUACGUUAUAGUGUA-AUU--
UAUAAAAAUUUAAUUUUCU---AUUCUUU-AGUUAUU--UAUUAAAAUA AUUUAU-UUAA-UU-UUAUUUUAAUU-AUAAUAAUGAUUAAAU-UAGUAUAAC--UUUGUUGUUUGUUUUAAAUU---
UUAAAUUUACUUGUAUUUAAGGAACUCGGCAAA-UAUAA----------UUUCCGCCUGUUUAUCAAAAAC-A[-????]
Amphiagrion_abbreviatum_BAAb ---

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Xiphiagrion_cyanomelas_ZXC ---

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Hesperagrion_heterodoxum_WHH ??????????????????????????------????????????????-???-?????????--??????---????????
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Ishnura_elegans_1239 ---

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Ishnura_barberi_BIB   ---

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Ischnura_graellsi_AJ488545   ---

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Anomalagrion_hastatum_OAH   CUCGAUUUUAUAAGAGCUAAAAGUUU------AAUAUGGUUACUGUAA-UAU--AAUUAUCU--UUAAUA---UUUUUUAG
U-GGAGA-AAUUCC-AGUCGUUUAUAAUGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUAAAUUUAAU-CCCAAAAUUU--ACUUUUUUCUUUUU--GAUAAU-----UUAUUUUUUGGG UUA--
AAAUUGAUAGGGGAUAAGCUCUAUUUCUC---ACUAUAAUUUUUAUAUAAUUAUAAA-----UUU-AGUAGGACUAAAAUCAACCAUCUUUG--GAAUUACGUUAUAGUAUAAUUU---
AUUUUUAUUAAAUUUUUU---AAUUUUU-AGUUAUU--UAUUAAAAUUAUUUAU-UUAA-CU-AUAUUUUAUUU-UAAAUAAUGAUUAUAU-UAGAAUAAU--UUUGUUGUUUUAUUUUUAAU---
UGAAUUAAAAUUGUAAUUAAGGAACUCGGCAAA-UUUAA----------UUUCCGCCUGUUUAUCAAAAAC-A[-????]
Amphiallagma_parvum_AJ420939   ---

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Azuragrion_granti_AJ420937   ---

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Azuragrion_nigridorsum_AJ420938   ---

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Enallagma_cyathigerum_0110   ---

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Enallagma_sp_BES   ---

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E_aspersum_DQ087506   ---

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Aciagrion   ??????????????????????????------????????????????-???-?????????--??????---????????
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Aciagrion_borneense_ZAB ??????????????????????????------????????????????-???-?????????--??????---????????
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Protoneura_capillaris_cara_BPCp_ZPC ???????????????????????????------????????????????-???-?????????--??????---????????
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Protoneura_caraZPC CUCGAUUUUAUAAGAGCUAAUAAUUU------AAUUUAAUUACUGUGA-UAU--AAUUAUUU--AUAAUA---UUUAUUAG
U-AAAGA-UAUUUU-AUUCGUUUAUAAAGG-UAUCUGGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGC-UCAAGAACUU--ACUUUUUUCUUUUUU-AAUUUU----UUAUUUUUCUUGA UUA--
AAGUGAAUAAGGGAUAAGCUUUAUUUUUU---UCUAUAAGGUU--AUUUUAUU-UAA-----UUUUAGUGGGAUUAAAAUUUUCCAUCUUUA---GAUAAUGUUAUAAUAUAUUUU---
AUAUAUAUUUGAUUUUCU--UUUUCUUU-AGUUAUU--UAUUAAAAUUUAUUAA-UUAA-UU-UUAUAUUAAUG-GUAAUAAUGAUUAAAU-UAGUAAAG--UUUUAUUGUUUGUUUAUAAUU----
AAUGAUUAUUUAUGACUAAGGAAUUCGGCAAA-UAUUA----------UGUUCGCCUGUUUAUCAAAAAC-A[-????]
ZPRm_Psaironeura_remissa ---

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Elattoneura_analis_glauca ---

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Neoneura_aaroni_PRN_ONA CUCGAUUUUAUUGGAGUUAAUAAUUU------AAUUUAUAUAUUGUUA-UAU--AAAUAUUA--AUAAUA---AUUAUUAG
G-GAAGA-AAUUUC-AUUAGUCUAUAAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAAC-UUAAUAAUUU--ACUUUUUUUAUUAAUUAAUAA-----UUUAUUUUUUUAA GUA--
AAAAUAAUAAGGGAUAAGCUUUAUUUUUA---UCUAUAAAUUU--GUUUUAUUCCAA-----UUUUAAUAGGAUUAAAAUUGUCCUUUUUGG---GAUAAUGUUAUAAUUUAUAUU---
GGGUGUUUUAAAUUUUAA--UUCGUUUU-AGAUUAA--UAUUAAAAUUUAUUAA-UUAA-UU-UUAUUUUAGUA-GUAAUAAUGAUUAAAU-UAGUAUAU---AAUAUUGUUUGAUUUUCAUU--
UUUUUUUAAAAUUAUUAAUCAGGAACUCGGCAAA--AUUA----------UGUUCGCCUGUUUACCAAAAAC-A[-????]
Neoneura_amelia_ZNA ??????????????????????????------????????????????-???-?????????--??????--?????????
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Neoneura_maria_BYB ---

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Ceriagrion_aeruginosum_COE_ZCAe CUCGAUUUUAUAAGAGCUAAUAAUUU------AAUUUAUUAAGUGUUG-CAU--AACUUUUA--AUAAUA--UUUUAUUAG
A-GGAGA-AAUUCU-AUUCGUUUAUAAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGU-CUUGACAUUU--ACUUUUUUCUUUUUU-AAUAUA-----UUAUUUGUUAAG UUA--
AAAAUAAUAAGGGAUAAGCUUUAUUUUUU---UCUAUAAUUUUUAUAUUUUUCGAAU-----AC--AGUAGGAAUAAAAUCACCCAUCUUUA---UAUUACGUUAUAGUAUAAUUC---
GUUUAUAUUUGAUUUUCU---UUAAUUU-AGAUUUA--UAUUAAAAUUUAUUAA-UUAA-UU-UUGUGUUAAUA-UUAAUUAUGAUUAAAU-UAGUAUAUA---AUUGUGUUUAUAGUUUAUU--
UUAUUUUUUAAGUAUAAUUAAGGAACUCGGCAAA-UAUUA----------UGUUCGCCUGUUUAUCAAAAAC-A[-????]
Telebasis_salva_ZTS ??????????????????????????------????????????????-???-?????????--??????--?????????
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Leptagrion_elongatum_ZLE                          ??????????????????????????------????????????????-???-?????????--??????---????????
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Leptagrion_sp                                     ??--------------------------------------------------------------------------------
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Metaleptobasis_manicaria_ZMMr                     CUCGAUUUUAUAAGAGCUAAUAAAUU------AAUUUAUUUAGUGUAA-UAU--AAUUAUUA--AUAAUA---UUUAUUAG
U-AGAGA-AAUUCU-AAUCGUUUAUAAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGU-CUUAAUAUUU--AAUUUUUUCUUAUUU-AAUUUA-----UUAUUUAUUAAG UUU--
AAAAUGUUAGGGGAUAAGCUUUAACUUUU---UCUAUAAUAUUAUUUUAUUU--AAA-----UUU-AGUAGGAAUAAAAUCAUCCAUCUUUU-UAGAUUACGUUAUAGUACACUUU--
AAUUGUUAUUUGAUUUUCU---UUUAUUU-AGAGAUU--UAUUGAAAUAUAUUAA-UUAA-UU-UUAUUUUAGUA-AUAAUAAUGAUUAAAU-UAGUAUUA--UUUAUUUGUUUAUCUAAUCA---
AUUUUUGUUAAUUGUAUUUAAGGAACUUGGCAAA-UAUUA---------UGUUCGCCUGUUUAUCAAAAAC-A[-????]
Diceratobasis_sp_A_ZDA                            CUCGAUUUUAUAAGAGCUAAUAAUUU------AAUUUAUUUAGUGUGG-UAU--AACUAUUA--AUAAUA---UUUAUUAG
G-AGAGA-AAUUCU-AAUCGUUUAUAAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGU-CUUAACAUUU--AAUUUUUUCUUAUUU-AAUAUA-----UUAUCUGUUAAG UUU--
AAGAUGCUAAGGGAUAAGCUUUGGUUUUU---UCUAUAA-UUUUAUUUUAUU-CAGA-----UUU-AGUAGGAAUAAAAUCAUCCAUCUUUU--AGAUUACGUUAUAGUAUACUUU-
GAUUUGUUAAUUGAUUUUCU---UUUAUUU-AGUUUUAU-UAUUGAAAUAUAUUAA-CUAACUU-UGUUUUUAAUA-GUAAUAAUGAUUAAAU-UAGUAUAA--UGUAUUUGUUUUUCUAAUUA----
AUCUUAAAAAUUAUAUUUAAGGAACUUGGCAAA-CAUUA---------UGUUCGCCUGUUUAUCAAAAAC-A[-????]
Pyrrhosoma_nymphula_1202                          ---------------------------------------------------------------------------------
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Chromagrion_conditum_OCCn                         CUCGAUUUUGUAAGAGCUAAUAAAUU------AAUUUAUUUAUUGUUA-UAU--AUUUAUUA--AUAAUA---UUUAUUAG
G-AGAGA-AAUUCU-AUUCGUUUACAAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUCAAUUUAAU-CCUAAAAUUU--ACUUUUUUCUUUUUU-AAUAAA-----UUAUUUUUUAGG UUA--
AAAAUGAUAAGGGAUAAGCUUUAUCUUUUU--UCUAUAAAUUUUUAGUUAUU--AAA-----UUU-AGUAGGAAUAAAAUCACCCAUCUUUU-UAGAUUACGUUAUAGUACACUUU---
AUUUAUAAUUGAUUUUAU---UAUUUUU-AGUGAUU--UAUUAAAAUGUAUUAA-UUAA-UU-UUUAUUUAAUA-GUAAUUAUGAUUAUAU-UAGUAUAUA--UUUAUUGUUUAAUAUUUAUU---
UAUUUGUAAGUUAUAAUUAAGGAACUCGGCAAA-UAUUA---------UGUUCGCCUGUUUAUCAAAAAC-A[-????]
Teinobasis_alluaudi_ZTA2                          ??????????????????????????------????????????????-???-?????????--??????---????????
?-?????-??????-????????????UGG-UAUCUAGGU-UUUUAAGAAU-UAAA-UUUAAUUUAUU-UUUAGUAAUU--ACUUUUUUCUUUUUU-AAUUAA-----UUAUUUACUAAA UAU--
ACAAUGUUAAGGGAUAAGCUUUAACUUUUA--UCUAAAAUUUUAAUUUAAUU--AAA-----UUA-AGUAGGAAUAAAAUCACCCAUCUUGA---AAUUACGUUAUAGUAUACUUU---
AUUUAUAUUUGAUUUUCU---UUUAUUU-AGUUAUG--UAUUAAAAUAUAUUAA-UUAA-UU-UUAUUUUAAUA-UAAAUUAUGAUUAAAU-UAGUAUAUA---UUUUUGUUUGAGGUUUAAU----
AUGUGUUAAUUAUAUUUAAGGAAUUCGGCAAA-AAUUA---------UGUUCGCCUGUUUAUCAAAAAC-A[-????]
Nehalennia_gracilis_COE_ONG                       CUCGAUUUUAUAAGAGCUAAUAAAAUU-----AUGUUAUUUAUUGUAG-UAU--AAAUAUUA--AUAAUA---GUGAUUAG
U-GGAGA-AAUUCU-AUUCGUUUAUAAUUG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGC-CCUAAUA-GU--UAUUUUUUUAUUUUUUAAUAAA-----AUAUUUUUUAGG UUA--
AAAUUUGUAAGGGAUAAGCUUUACUUUUU---UCUAUAAAUUUGUUAUUUUU--AAG-----UUU-AGUAGGAAUAAAAUCACCCAUCUUUU-UAGAUUACGUUAUAUUAUAUUUU---
AUGAGAAUUUAAUUUUCU---UGUUUUU-AGAUAUU--UAUUAAAUUAUAUUAA-AUUAAUU-UUAUUUUAAUA-GUAAUAAUGAUUAAAU-UAGUAUAAA--AUUUUUGUUCAUUAUUUAUU----
UUUUGUUAUUUUUAAAUAAGGAACUCGGCAAA-UAUUA---------UGUUCGCCUGUUUAUCAAAAAC-A[-????]
ZCG_Coryphagrion_grandis                          ??????????????????????????------????????????????-???-?????????--??????---????????
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Microstigma_rotundatum_PST_OMRt_BMRt              CUCGAUUUUAUAAGAGUUAAUAUUUU------AUUUUAUUCAUUGUUU-UAA--AAUUGUUA--AUAAUA---UUUAUUAG
U-GGAGA-UAUUUC-AUUCGUUUAUAAAGA-UAUCUGGUU-UUUUAAGAAU-UAAA-UUUAAUUUAAU-UUUAAUA--U--UUACUUUUUUAUUUUUAAUAUU----UUGUUGUAUUAAA GUU--
AAUAUGUUAAGGGAUAAGCUUUAACUUUU---UCUAUAAGGUUUAUAUUUA--CAAA-----UUU-AGUAGGAAUAAUAUUAUCUUUCUUUG-UUGAUUAAAUUAUAUUAUAUUUU---
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GUUUGAAUUGGAUUUAUU---UUUUUUU-AGGUUUA--UAUUAAAAUAAUUUAG-UUAA-UU-UUGUUUUAAUG-GAAAUUAUGAUUAAAU-UAGUAUAUA---AUUUUGUAAGUUAUAAGAU----
AUAUUUAAAAUAGUAUAAAGGAACUAGGCAAA-UAAUA----------UGUUCGCCUGUUUAACAAAAAC-A[-????]
Microstigma_anomalum_BMA ---

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Mecistogaster_ornata_ZMO ??????????????????????????------????????????????-???-?????????--??????---????????
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EU477624_Mecistogaster_linearis NGUUUCAAAAGANNNGCUAAUUUAAU------AAUUUAAUUAAUAUUA-UAU--AAUUAUUA--AUAAUU---UAUUUUAG
G-AGAGA-AAUUCU-AUUCGUUUAUAAAGA-UAUCUGGUU-UUUUAAGAGU-AAAA-UUAAAUUUAAU-UUUGAUAUUU--AAUCUUUAAUUUCU-AAGGGUUU------AUUUAUUAAA UUU--
UAAAUGUUAAGGGAUAAUCUUUAACUUAUU---CUAUAAAUAAUUUUUUAUA---AG-----CUU-AGUAGGAUUAAAAUCUCCCAUCUUUU-UAAAUUACGUUAUAGUAUUUCUU--
AUAAAAAAAUUGAUUUUAUU---UUUU-UU-AGAUUUAU-UAUUAAAAAUUUUUAU-CUAA-UA-UUACUUUAAAU-GUAAUUAUGAUUAAAU-UAGUAUAUA-ACUA-UAGUUGGGAAUUAUU---
UAUUUUUAAAUUG-AUUUUAAGGAACUCGGCAAA-UAUUA----------UGUUCGCCUGUUUAUCAAAAAC-A[-????]
Megaloprepus_caerulatus_PSE_ZMC CUCGAUUUUAUAAGAGCUAAUAUUUU------AUUUUAUUCAGUGUAU-CAU--AAUUGUUA--AUAAUA---UUAAUUAG
A-GGAGA-AAUUUC-AUUCGUUUAUAAUGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUAAAUUUAGU-UUUAAUUUUC--UUACUUUUUUAUUUUUAAUGAA----AUUAUUAAUUAAA AGU--
UAAAUGUAAAGGGAUAAGCUUUUACUUUU---GCUAAAAAUUUUAUUUACAUUAAAG-----AUUUAGUAGGAAUAGAAUUUUCCUUCUUUAUUAAAUUAUUUAAUAGUAUAUUUU---
UUAUUAAUUAAAUUUAUUU--UUGUUUU-AGUUUUA--UAUUAAAAUAUUUUAG-UUAA-UU-UUAUUUUAAUA-GUAAUUAUGAUUAAAU-UAGUAUAUA---AUCUUGUUUUUAUGAAAGA----
AUUAUAAAAAUAAUUUGGAGGAACUAGGCAAA-UAUUA----------UGCUCGCCUGUUUAACAAAAAC-A[-????]
Haplostigma_modesta_ZHM ??????????????????????????------????????????????-???-?????????--??????---????????
?-?????-??????-???????????????-?????????-??????????-????-???????????AUUUA-UAGUU--AAUUUUUUAAUUUUU-AAUAAU-----UUAUUUAUUAAA UUA--
AUAAUGUUAGUGGAUAAUCUUUUACUUU----UCUAUAAAAUAAUAUAUUU--UAAG-----UUU-AGUAGGAUUAAUAGCAUUCUUCUUUUUUAAUUUACGUUAUAGGAUAUCUU--
AUUUAAUUAUAAUUUUCUU---UAUUUUU-AGUUUUAU-UAUUAAAAUGUUUUAU-UUAA-UU-UUAUUUUAUAG-GUAAAAAUAAUUAAAU-UAGUAUAAA-AAAUUCUGUUGUUAAUUAAAU----
UUUGUGUAACUAAUUUUAAGGAACUCGGCAAA-UAUUA----------UAUUCGCCUGUUUAUCAAAAAC-A[-????]
Pseudostigma_aberrans_OPA CCCGAUUUUUUAAGAGCUAAAUAAUU------AAUUUGAUUAAUGUUA-UAU--AAUUAUCA--AUAAUU---UUUUUUAG
A-AAAGA-GAUUUU-AUUCGUUUAUAAUGG-UAUCUGGUU-UUUUAAGAAU-UAAA-UUUAAUUUAAU-UUUAGUACUU--AAAUUUUUAAUUUUUUAAUAUU-----UUAUUUAUUAAA UUU--
AAUAUGUUGAGGGAUAAUCUUUUA-UUUA---UCUAAAAAUAUCAAAUAUU--UAAG-----UUU-AGUAGGAUUAAAAGCAUCCUUCUUUA-UAAAUUACGUUAUAGGACAUUUU--
AUUUAAAUAUUUAUUUUUU---UUAUUUU-GGGUUUAU-UAUUAAAAUAUUUUAU-UUAA-CU-UAAUUUUAAAU-GUAAUAAUGAUUAAAU-UAGUAUAUA--AUUUUUGUUUUUAAUUGUAA----
GUUUUGUUACGAAAA?????????????????-?????----------??????????????????????-?[-????]
Rhinagrion_mima_ZRM CUCGAUUUUAUAAGAGCUAAUAAAUU------AAUAUUUUUUCUUGUU-UCA-UAAAGAUUU--AUAAUA---UUUAUUAG
U-GGAGA-AAUUCU-AUUCGUUUAUAAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAUU-GUUUAACUUU--AUUUAUCAAUUUGUAAGAUUUA-----CUAUUUUAAAAU AAA--
AAUUUAAUAGGGGAUAAGCUCUAUUUUUU--GUUUAAAACUUUUUUGUUUGUAUAGA-----UUU-UGUAGGGUUGAAAUCAUUCAUCUAUA--AGAUUUCGUUAUAGAAUAUUCU--AGUUU-
AUUUGGAUUUUCU---UUUGUUU-AAUUAUU--UAUUAAAAUGUUACAU-UUAU-UU-AUUUAUUGCUA-GUAAUAAUGAUUAAAU-UAGUAUAUU--UUUAUUGUUUUUUAUUUAUU--
AUAAUGUUUAUUUUUAUAUAAGGAACUCGGCAAA-UAUAA----------UAUUCGCCUGUUUAUCAAAAAC-A[-????]
Sciotropis_cyclanthorum_BSC ??????????????????????????------????????????????-???-?????????--?????????????????
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Heteragrion_mitratum_ZHMt CUCGAUUUCAGAAGAGCUA--?????------????????????????-???-?????????--??????---????????
?-?????-??????-???????????????-?????AGUU-UUUUAAGAAA-UAAA-UUUAAUUUAUU-GUUAAUUUUU--AUUUAUGUUACUUUUUACAUAG-----CUAUUUUUUAAU UAA--
AAAAUAAUGGGGGAUAAGCUCUUUUUUUU--GUCUAAAACAGCUCUU-AUU-UUAUU-----UGU-AGUAGGGUUAAAAUCAUCCUUCUUUU---UAUUACGUUAUAGUUAA-CAA--
AUUCUUAUUUUGAUUUACU---UUUAUUU-AGAAAUU--UAUUAAAAUAUAUCAU-UUAA-UU-UUAUCUUGUUA-GUAAUUAUGAUUAGAU-UAGUAUAUU--CUUUCUGUUUAUUAUUUAAU----
UUUUAUUAUUUUGUAAUAAGGAAUUCGGCAAA-UAUGG----------UGUUCGCCUGUUUAUCAAAAAC-A[-????]
EU477623_Heteragrion_sp NNNNNNNNNNNNNNNNNNNNNNNNNN------NNNNNNNNNNNNNNNN-NNN--NNNNNNNN--NNNNNN--NNNNNNNNN
N-NNNNN-NNNNNN-NNNNNNNNNNNNNNN-NNNNNAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAUU-GUUAAUUUUU--A-----UU--UU--UUUU------------AAUUAAAA
AAU--AA-----UGGGGGAUAAGCUCUUUUUUUAU-U-------------UG-----------------UUAGUAGGGUUAAAAUCAUCCUUCUUUU---UAUUACGUUAUAGUUAA-CAA---------

----------------------UAGAAAUU--UAUUAAAAUAUAUCAU-UUAA-UU-UUAUCUUGUUA-GUAAUUAUGAUUAGAU-UAGUAUAUU--C-U--UUUUUAUUAU-UU----UGU------
-------AAUAAGGAAUUCGGCAAA-UAUGG----------UGUUCGCCUGUUUAUCAAAAAC-A[-????]
Oxystigma_cyanifrons_ZOC ???????????????????????????------????????????????-???-?????????--??????---????????
?-?????-??????-???????????????-?????????-??????????-????-???????????-AUAGAUUUAU--UUGUAUUAUUUUUGAUACAUAU-------AUUUUUUAGU UUU--
AAAAUAAUGGGGGAUAAGCUCUUUUUUUUU---ACUAAAAA-UUUCUAUAUUUUCUUU-----AUU-AGUAGGGUUAAUAACAUCCUUCUUUCA--UAUUGCGUUAUAGUAUA-UAA--
AGUUAAUUUUUGAUUUAUUU--AUUUUUU-AGUUUUU--UAUUAAAAUAUAUUAU-UUAA-UU-UUAUUUUAUUA-GUAAUAAUGAUUAUAU-UAGUAUACU--UUUAUUGUUUAUUUAUUUAU---
UGUUAUUUAUUUUCUGAUAAGGAAUUCGGCAAA-UAUGA----------CUUCCGCCUGUUUAUCAAAAAC-A[-????]
ZDP_Dimeragrion_percubitale ???????????????????????????------????????????????-???-?????????--??????---????????
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aauauaaugggggaucagcuccuu-uuua-uuucuaaaa-uuauuuagggcaaaaau----uuuu-aguaggguucagauuauccuucuuuag---auuacguuguaguaucuuau--
uuuuuuguuaugAUUUUUUU--AU-AUUU-AGAAUUU--UAUUAAAAU- UAUAUAUUUAA-UU-UUUUAUUAGUA-GUAAUAAUaauugaau-uagcauauu--uuuuuuguuuauuguuuaua-
uuacauuguuaauccauguacaggaauucagcaaa-uauaa----------cgcucgccuguuuaucaaaaac-n
Tatocnemis_malgassica_ZTMa ???????????????????????????------????????????????-???-?????????--??????---????????
?-?????-??????-???????????????-?????????-??????????-????-???????????-????????AU--AAUUAUAAUUUUAUUUAAAUUAC---AUAUUUUUAAUAG UGU--
AAAAUUAUAAGGGAUAAGCUUUAUUUUUA--AUCUAAAA--UUUGUAUUUUUUGAAU-----UUU-AGUAGGGUUGAAAUCAUUCAUCUUUAA---AUUACGUUAUAGUUUAUUUU---
UAAUUAAUUUGAUUUACU---UUUAUUU-AGUUUAU--UAUUAAAAUAUUUUAU-UGAA-UU-UUUUU-UAAAA-GUAAUUAUGGUUAUAU-UAGUAUAUC---UUAUUGUUUAUUGAGGAAA--
UUUGUGUUAAUCUUUUUAUAAGGAACUCGGCAAA-UAUAA----------UUCUUGCCUGUUUAUCAAAAAC-A[-????]
Philogenia_cassandra_BPCs ???????????????????????????------????????????????-???-?????????--??????---????????
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Philogenia_terraba_bernice_ZPT_ZPBn ???????????????????????????------????????????????-???-?????????--??????---????????
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ZPBn_Philogenia_bernice ---

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Teinopodagrion_venale_ZMV_BTV ???????????????????????????------????????????????-???-?????????--??????---????????
?-?????-??????-?????????????GG-UAUCUAGGU-UUUUAAGAAA-UAAA-UUUAAUUUACU-GUCGUUUUGU--ACUUAUAAUUUUAUUGGAAAGAU---UUAUUUGUAAUAG UGU--
AAAAUAAUAAGGGAUAAGCUUUAUUUUAG---ACUAAAA--UGUAAAUUGUUUAAAU-----UUU-AGUAGGGUUGAAAUCAUCCAUCUUUG---UAUUACGUUAUAGUUUAUUUU---
UUAUUAAUUUGAUUUAUU---UUUAUUU-AGUUUUU--UAUUAAAAUAUUUUAU-UUAA-UU-UUUU--UAAAA-AAAAUUAUGAUUAAAU-UAGUAUAUU---UUAUUGUUUGUUGGUAAGU---
UUUUGAC-AUCUUUUUAUAAGGAACUCGGCAAA-UAUAA----------UUCUUGCCUGUUUAUCAACAAC-A[-????]
Teinopodagrion_lepidum_ZTL ???????????????????????????------????????????????-???-?????????--??????---????????
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Amanipodagrion_gilliesi_ZAG CUCGAUUUUAUAGGGGCUAAUAUUUU------AAUAUGGUUAUUGUUA-UAU--AAUUAUCU--UGAAUA---UUUAUUUG
U-AAAGA-UAUUUU-AUUCGUCUAUAAAGG-UAUCUAGUU-UUUUAAGAGA-UAAA-UUUAAUUUACU-CUUGAGUUUU--AUUUUUUUUCUUAUUUGGAAAA----AUAUAUACUUGGG UUG--
UAGAUAGUAGGGGAUAAGCUCUAUUAUUU---UUUAAAACUUCUUUUUAUG-UUAAU-----UGU-UGUAGGGUUAGAAUCAUCCUUCAUUU--UUAUUACGUUAUAGUGUAUUUU---
AGUUUUUUGGGAUUUAGCU--UUUGUUU-AAUAUUAU-UAUUAAAAUUUGUUAA-UAAA-UU-AUUUUUUAUUA-GUAAUAGUGAUUGAAU-UAGUAUAGU---UUAUUGUUUUUUAUUUAG----
GGCUGGUUAUUUUAAUAUAAGGAAUUCGGCAAA-UAUAG----------UGUUCGCCUGUUUAUCAAAAAC-A[-????]
Nesolestes_elizabethae_ZNE CUCGAUUUUACAAGAGCUAAUAAUUU------AAUUUGUUUAUUGUUU-CAU--UACUAUCA--UUAAUA---UUUAUUUG
U-AGAGA-AAUUCU-AUUCGUUUGUAAAGG-UAUCUAGUU-UUUUAAGAAG-UAAA-UUAAAUUUAUU-UUUAUAACUU--ACUUUCUCUUU-UUUUGGAAAA----UUUAUAUUAUAAU AAA--
UAAAUAAUAGGGGGUUAGCUCUAUUUUUUU-UUCUAAAACAUUUUGUUUUUUUUAAU-----UU--UGUAGGAUUAUAAUCAUCCAUCUUUU--UGAUUACGUUAUAGUAUAAUUU---

AGUUUUUUUUGAUUUAUCU---UUGUUU-AGGUUAU--UAUUAAAACUUUUUAA-UUAA-UA-UUUUAUUAGUA-UUGAUUAUGAUUAAAU-UAGUAUAGC---UAUUUGUUUGAUUUUUUA---
UUAUUUGUAAUUUUUUUAUAAGGAACUCGGCAAA-AUUAU----------UAUUCGCCUGUUUAUCAAAAAC-A[-????]
Protolestes_kerckhoffae_ZPKc   ??????????????????????????------????????????????-???-?????????--??????---????????
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Argiolestes_ochrostomas_ZAOc   CUCGAUUUCAUAAGAGCUGGGGAACU------AUAGUAGUUAUUGUUU-UAU--AAAUAUUA--UAAAUA---UUUUCCAG
U-GAAGA-UAUUUU-AUUCGUUUUUGAGGG-UAUCUAGUU-UUUUAAUAAA-UAAA-UUUAAUUUAAU-AUUAUUCUUU--AAUUUUCUUUUUCUUUAGAUU-----AUUAUUUUGUAAU UUA--
UAUGAGUUGGGGGACAAGCUCUGAUUCAAU-AUCUAAAA-UUUUUGUUUUUU-CAAU-----UAG-GGUAGGGUUAAAAUCAUUCUUCCUUU-----UUACGUAAUAGAAUUAUAU--
UGAUUUUUAUUGAUUUCUU---UAAAUUU-AGGGGCA--UAUUAAAAUAUACUAA-UUAA-UU-UUU-AUUAGUA-UUAUUAAAGAUUAAAU-UAGUAUAUG--GAUUUUGUAGAUCAUGGUU----
AUUUGUUAUUUUUUUUAUAAGGAACUCGGCAAA-?????---------??????????????????????-?[-????]
Argiolestes_sidonia_BAS   ??????????????????????????------????????????????-???-?????????--??????---????????
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Caledopteryx_maculata_BCM   ??????????????????????????------????????????????-???-?????????--??????---????????
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Trineuragrion_percostale_BTP   ??????????????????????????------????????????????-???-?????????--??????---????????
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Caledargiolestes_uniseries_BCU   ??????????????????????????------????????????????-???-?????????--??????---????????
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Podopteryx_roseonotata_ZPR   CUCGAUUUUAUAAGAGCUAUUAAAAU------AUUUUGGUUGUUGUAG-CAU-ACACUU-CA--CUAAUA---UUUAUUUG
A-AAAGA-UAUUUU-AUUCGUUUAUAAGGG-UAUCGGGUU-UUUUGAGAGA-CAAA-UAUAAUUUAAU-GUUUUUUCUU--AUUUGGUUUUUUAUU-GAAGCU----UUUAUUUUAUGAU UAA--
AAGAUAUUGGGGGACUAGCUCCGGUAUUU---AUUAUAAUUUUUU---AUAUUCAAU-----UUA-AGUAGGGUUAAGAUCAUUCAUCUUUG---GAUUACGUUAUAGUUUAUUUU--
GUUAUAUUAUUGAUUUAUU---UUUAUUU-AGGUUAU--UAUUAAAAUGUUUUAA-UUAA-UU-UUAAAUUUUUA-UUAUUAAUGAUUAAAU-UAGUAUAUU----UUUUGUAUAUUUUGUUU---
AUAGUUGUUAUUUUUUUAUAAGGAACUUGGCAAG-UAUAU----------UGCUCGCCUGUUUAUCAAAAAC-A[-????]
Austroargiolestes_icteromelas_OAIc   CUCGAUUUUAUAAGGGCUAGUAAGUU------AUUUUGGUUGUUGUUG-UAA--CACUUUCA--UUAAUA---UUUACUUG
A-AAAGA-AAUUUU-AUUCGUUUAUAAGGG-UAUCUAGUU-UUUUAAGAUA-UAAA-UUUAAUUUAUU-GUCACUUUUU--AUUUAUUUUUUUAUU-GAAAUU----UUUAUUUUGUGGC UUA--
AAGAGAUUAGGGGAUUAGCUCUAAUUUUU--UUCUAUAAUUUUUGAU-AUU-UCAAU-----UUA-AGUAGGGUUAAAAUCAUCCAUCUUCA---AAUUACGUUAUAGUUUAUUUU--
GAGUUCUUGGUGAUUUAUU---UUUAUUU-AGAAUUU--UAUUAAAAUGUUUUAA-UUAA-UU-UUUUAUUAAUA-UUAUUAAUGAUUAAAU-UAGUAUAGA---UUUUUGUUUGUUGUAUUU---
ACAUUUGUUAUUUUUGUAUAAGGAACUCGGCAAA-AUAUU-----------ACUCGCCUGUUUAUCAAAAAC-A[-????]
Griseargiolestes_albescens_eboracus_BGA_ZGE   ??????????????????????????------????????????????-???-?????????--??????---????????
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Grisagriolestes_eboracus_ZGE_BGA   ---

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Miniargiolestes_minimus_ZMMn ???????????????????????????------????????????????-???-?????????--??????---????????
?-?????-??????-?????????????GG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAUU-GUCAUUUUUU--AUUUGCUUUUGUGUU-GAAGCA----GUUAUUUUAUGAU UUA--
AAUGAGUUGGGGGAUUAGCUCUGACUUUA--CUCUAUAAUUUUGGAAUUAU--UAAU-----UUU-UGUAGGAUUAAAAUCAUCCAUCUUUU--UAAUUACGUUAUAGUUUAUUUU--
AUUUUCAGAUUGAUUUAUU---UUUAUUU-AGUAUUU--UAUUAAAAAUAUUUUAA-UUAA-UU-UUUACUUAAUA-GUAUUAAUGAUUUAAU-UAGUAUAGU---UAUUUGUAUUUUGUUUAU---
GUAGUUGUUAAUUUUUUAUAAGGAACUCGGCAAA-AAUUU----------UACUCGCCUGUUUAUCAAAAAC-A[-????]
Lestomima_flavostigma_OPBc3 ???????????????????????????------????????????????-???-?????????--??????---????????
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??-?????---------???????????????????????-?[-????] Rhipidolestes_hiraoi_ORH
CUCGAUAUUGUAAGAGCUAAUAAUUU------AAUUUGUUUAUUGUAG-UAA--AAAUAUCA--AUAAUA---AUUAUUUG
U-AAAGA-AAUUUU-AUUCGUUUAUAAAUA-UAUCUAGUU-UUUUAAGAAA-UAAA-UUGAAUUUAAU-UCUGUUUUAU--UAUUUUGUUUUC-UUAUUUAGA--CUUAUAAAGUGCAGA UUA--
AAAAUGAUAGGGGAUAAGCUCUAUCUUU---UUCUAAAAUAUAAUUUCAU--UUAAU-----UUU-UGUAGGUUUAGAAUCAUCCAUCAUUU--GAAUUACGUUAUAGUUUAUAUU--
AUUUUGUUUUUGAUUUAUU---UUUAUUU-AGUGUAAA-UAUUAAAAAUAUUUAAG-UUAA-CU-UAAACCUUAAA-GUAAUUAUGAUUAAAU-UAGUAUAUU--AUUGUUGUUAGUUGAGUAA----
UAAAAGUUAAUUCAUAAUAAGGAAUUCGGCAAA-UAUAA----------AGUUCGCCUGUUUAACAAAAAC-A[-????]
Rhipidolestes_aculeata_BRA ???????????????????????????------????????????????-???-?????????--??????---????????
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Paraphlebia_zoe_OPZ CUCGAGACUAUAAGAGCUAAUAUUCU------AUUGUGAUUGUUGUUA-CAA--AACCAUCA--AUAAUA---GUUAUUUG
A-AAAGA-UAUUUU-AUUCGUUUAUAGGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUUUU-CCUACUUUUU--ACUGUUUUUUUU-AAUAAAAAU----UUUAUUUUGUAGG CCG--
AAGAUAUUGGGGGAUAAGCUCCAAUUUU---UACUAAAACAGGGCUAGUUUGUGAAU-----UUU-UGUAGGGUCAUAAUCAUCCAUCUUUU--AAAUUACGUUAUAGUUUAGGUU-
UGCGUUUUUUUUGAUUUAUG--GUUUGUUU-AGUAUCU--UAUUAAAAUGUCUUAU-UCAA-UA-AUUAUUUUUGU-UUAAUUAUGAUUAAAU-UAGUAUAUA---UUUUUGUUUUAAUGAAUUU--
UUAUAUGUUAUCUUAUAAUAAGGAAUUCGGCAAA-UAUAA----------UGUUCGCCUGUUUAUCAAAAAC-A[-????]
Thaumatoneura_inopinata_THA_OTI ???????????????????????????------????????????????-???-?????????--??????---????????
?-?????-??????-?????????????GG-UAUCUAGUU-UUUCAAGAAA-UGAA-UUUAAUUUAUU-CCCAUAUUUU--AUUGUUUUAAUU-AUUUAAUUU----UCUAUUAUUUGGG GGA--
AAAUUAAUGGGGGAUAAGCUCCAUUUAU----UUGCUACAAUAGCAUAUUAGAAAAU-----UUU-UGUAGGGUUUAAAUCAUCCAUCUUUU--AGAUUACGUUAUAGUUUAAAUU---
UUUAUUUGAUAAUUUAUU---UUUGUUU-AGUUAGU--UAUUAAAAUGUUUUAU-UUAA-UA-AUUUUUUAUGA-UUAAUAAUGAUUAAAU-UAGUAUAUA---
UUUUUGUGUUUGAUUAUAAUUGUGUUGUUGAUUUUGUUGUAAGGAAUUCGGCAAA-ACUAG----------UUUUCGCCUGUUUAUCAAAAAC-A[-????] Hypolestes_clara_HYP_OHC
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?-?????-??????-?????????????GG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAUU-CUUAGAUAUU--AUUUUCUUAAUU-AUUUAGGUC---GCUAUUAUCUCAAG AA---
AAUUUAAUAAGGGAUAAGCUUUAUUAAU----UUCUAGAAUUCUUUUUGUUAAAAAU-----UUU-UGUAGGGUUGAAAUCAUCCAUCAUUU--AAAUUACGUUAUAGUUUAUUUU--
GUUAUUUUUUUUAUUUAUU---AUUUUUU-AGUUUAC--UAUUAAAAUACAUUGG-UUUA-UU-AUUUAUCUUUG-GUAAUUAUGAUUAAAU-UAGUAUAAU-----UUUGUUGUUUAUUU-
AUUUAUUUUUGUUAUUUCAAAUUAAGGAAUUCGGCAAA-UUAAA----------UGUCCGCCUGUUUAACAAAAAC-A[-????]
Hypolestes_sp_BYB ---

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Agriomorpha_fusca_ZAF6 ???????????????????????????------????????????????-???-?????????--??????---????????
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Cora_marina_POL_OCMr CUCGAUUUUAUAAGAGCUAAUUGUUU------AUUUUUUUUGUUGUGU-UAA--CAACAUGC--AUAAUA---UUAAUUUG
U-AAAGA-UAUUUU-AUUCGUUUAUAAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAUU-UUAUUUAUUU--AGUUGUUGCUGAUUUUUUAGCUU---UCUAUUCGGGUAA UUU--
AAUUUGGUGAGGGAUAAGCUUCGCUAAU--GCUUUAAAACUUUUAUUUACAAUUUUC-----AU--AGUAGGGUUAGAAUCAUUCUUCUUUU---GAUAACGUUAUAGUUCAUUGA--
UUUAUAUAAUUGAUUUUUU---UUUGUUU-AGAUUUU--UAUUAAAAUAUUUUAU-UUAA-CG-UUUUUAUUUAA-GUAAUUAUGAUUAAAU-UAGUAUAUA-UUUAUAUGUUUGUUGUUUUU--
AUGUUUGUUAAACUUAAAUUAAGGAACUCGGCAAA-UAUAA---------UUUCUCGCCUGUUUAUCAAAAACGA[- ????]
Cora_cyane_BCC ???????????????????????????------????????????????-???-?????????--??????---????????
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Polythore_sp_Z_ZPZ CUCGAUUUUGUAAGAGCUAAUUAAUU-----AUUAUUAUUUGUUGUUG-UAU--CAACAUGC--UUAAUA---UUUUUUUG
U-AGAGA-AAUUUU-AUUCGCUUGCAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAUU-CCAUUUAAUU--AGUUGUUGUUAAUUUUUUAAC---UUUCUAUUAGGCUGG GUA--
AAGUUGGUGUGGGAUAAGCUUCACUAAC--AUUUUAAAACUUUUGUAUAUUUUAUUU-----AU--AGUAGGGUUAGAAUCAUCCUUCUUCU--GGAUUACGUUAUAGUUUAUUA---
UUUAUUAAGUUGAUUUAUU--UUGAGUUU-AAUACUUAUUAUUAAAAUGUUUUAG-UUAA-UA-AAGUUCUUUGG-GUAAAAAUGAUUAAAU-UAGUAUA---UUUAUAUGUUUAUUAUGUUG---
GGGCUGAUUAAUUUAUUUUAAGGAACUCGGCAAA-UAUAGU---------UCUCGCCUGUUUAUCAAAAAC-A[-????]
Polythore_boliviana_BPB ???????????????????????????------????????????????-???-?????????--??????---????????
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Euthore_fasciata_ZEF3_BEFs ???????????????????????????------????????????????-???-?????????--??????---????????
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Rimanella_arcana_ORA CUCGAUUUUGUAAGAGCUAUUUUUUU------AUUAAGGUUAUUGUGG-UAA--AAGUAUCU--UUAAUA---UUUUUUAG
U-UGAGA-UAUUCU-AUUCGUUUAUAAAGG-UAUCUAGUU-UUUUAAGAUU-UGAA-UUUAAUUCAGC-UUCUUCUAUU--UAAAUUUUAUUUAUUUAAUUUU-----UUAUUUGUUGAU AGU---
AAAAGUUAGGGGACAAGCUCUAUA???--????????????????????????????-----???-???????????????????????????-???????????????????????--
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Pentaphlebia_stali_OPSt ???????????????????????????------????????????????-???-?????????--??????---????????
?-?????-??????-?????????????GG-UAUCUAGGU-UUUCAAGAAU-UAAA-UUUAAUUUGUU-UCCUUAUAUU--UAUUUGCCUUAUUUUUAAGGUU----UUUAUUUCAUGGA GGG--
AAAAUAGGGGGGGAUAAUCUCUUUUAUU-UUUUUUAUAAUUUCUUUUCUUGGUAUGG-----UUUGUGUAGGGUUAUAAUCAUUCAUCAAUU-UUGAUUACGUUAUAGUUUAUACC-- AUUAUUUUU-
GGAUUUUUU---AUUAUUU-AAUAUUU--UAUUAAAUUGUUUUAU-UUAA-UU-UUAUUUUAUGA-GUUAUAAUGAUUGCAU-UAGUAUAA---UUUGUUGUUUUAUUAUUUA--
UUUAUUGAUUAUCUUGAUGUAAGGAAUUCGGCAAA-UAUAA----------UGUCCGCCUGUUUAUCAAAAAC-A[-????]
Devadatta_podolestoides_BDP ???????????????????????????------????????????????-?????????????--??????---????????
?-?????-??????-???????????????-?????????-??????????-????-???AAUAAAGAUCCUGAGUUAU--UUUAUUUAUUAUUAAAUAUUU-----CUAUUUCUUUAGG UUG--
AAUAUAAUGGGGGAUCAGCUCCUUUUUA--UUUCUAAAAUUAUUUAGGGCAAAAAUU-----UUU-AGUAGGGUUCAGAUUAUCCUUCUUU---AGAUUACGUUGUAGUAUCUUAU--
UUUUUUGUUAUGAUUUUUU--UAUA-UUU-AGAAUUU--UAUUAAAAUUAUAUAU-UUAA-UU-UUUUAUUAGUA-GUAAUAAUAAUUGAAU-UAGCAUAU-- UUUUUUUGUUUAUUGUUUAUAUUACAUUG-
UUAAUCCAUGUACAGGAAUUCAGCAAA-UAUAAC----------GCUCGCCUGUUUAUCAAAAAC-C[-????] Amphipteryx_longicaudata_ZAL5
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Pseudolestes_mirabilis_OPMb CUCGAUUUCAUAAGAGCUGACUGUUA------AUUUUGGUUAGUGUUG-CAU--CAUUAUCA--AUAAUU---UUUGUCUG
U-AGAGA-UAUUCU-AUUCGUUUGUGAGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUACU-UUUGGUCUUU--AUUUUCUUUAUUUU-UAAGAA-----UUUAUGUUCCAGA
UGUAAAAUUUAAUAGGGGAUAAGCUCUGAUU-----UUCUAUAAUUUUUGUUUUCUGU-AAU-----UUU-UGUAGGAUUAGAAUCGUCCAUCUUUU----AUUACGUUGUAGUAUCUGUU--
ACUUUUAUUU-GAUUUUCU---UUUAUUU-AGAUAAU--UAUUGAAAUACUUAAU-UUAA-UG-UUUUAUUUGAG-GUAAAAAUGAUUAAAU-UAGUAUAA---UUUUUUGUUUAGUUGUUUU---
UCUUAUUAUUGUUGUUUUUAAGGAAUUCGGCAAA-UUUAU---------AUACUCACCUGUCUAUCAAAAC-A[-????]
Philoganga_vetusta_OPVt_BPVt CUCGAUCUUAUAAGAGCUAACAUGUU------AAUUUGUUUAUUGUGA-UAA--AACUAUCA--UUAAUA---UUUGUUUG
A-AGAGA-AAUUCU-AUUCGUUUAUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUACCCCUGGUAUUUA--UUUAUUUUUAUAUUAAAGUAU------CUAUUUACCAG UUGU-
AAUUUAGUAGGGGAUAAGCUCUACUAUUU-UUGCUAAAAUUUAGUUUUAAUU--AAU-----UUU-UGUAGGAUUAAAAUCACCCAUCAUUU---GAUUACGUUAUAGUAGUUGUU--
AUUUAAAUUUUGAUUUACU---UUUUUUU-AGGAUUU--UAUUAAAACAUUUUAU-UUAA-UA-UAAUAUUAAAU-UUGAUAAUGAUUAAAU-UAGUAUAU---AUAUUUGUUUUUUAUUUUG---
AUGAUUGUAAUUUUAUUAUAAGGAACUCGGCAAA-UUUAAU---------UUUCGCCUGUUUAUCAAAAC-A[-????]
Philoganga_robusta_PGN_OPRb2 CUCGAUCUUAUAAGAGCUAACAUGUU------AAUUUGUUUAUUGUGA-UAA--AACUAUCA--UUAAUA---UUUGUUUG
A-AGAGA-AAUUCU-AUUCGUUUAUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUACCUCUAGUAUUU---AUUUAUUUUUAUAUUAAAGUA------UUUAUUUGCUAG UUGU-
AAUUUAGUAGGGGAUAAGCUCUACUAUUU-UUGCUAAAAUUUAGUUUUAAUU--AAU-----UUU-UGUAGGAUUAAAAUCACUCAUCAUUU---UAUUACGUUAUAGUAGUUGUU--
AUUUAAAUUUUGAUUUACU--UUUUUUU-AGGAUUU--UAUUAAAACAUUUUAU-UUAA-UA-UAAUAUUAAAU-UUGAUAAUGAUUAAAU-UAGUAUAU---AUACUUGUUUUUUAUUUUG---
AUGAUUGUAAUUUUAUCAUAAGGAACUCGGCAAA-UUUAA---------UUUUCGCCUGUUUAUCAAAAC-A[-????]
Lestoidea_conjuncta_ZLC CUCGAUGCUAUAAGAGCUAGUAUUUU------AAUUUGUUUGUUGUGU-UAA--AACCAUCA--UUAAUA---UUUACUUG
U-AAAGA-UAUUUU-AUUCGUUUAUAGGGG-UAUCUAGUU-UUUUGAGAAU-UAAA-UUUAAUUUAUU-CUUGUUAGUU--AUAUGUUCUUUUGUUGGGGCA-----CUUAUUUGAUAAG GUU--
AAAAUUGUAGGGGAUAAGCUCUAUUUUU---UUCUAAAACUUCUUAUUUUUGUGAUU-----UU--UAUAGGGUUAAAAUCACCCAUUUGUU--UAAUUACGUUAUAGUUUAAAUC- AAUAAUUAUUU-
AAUUUGUU--UGGGGUUU-AGUUAUU--UAUCAAGAUUUCUUAU-UUAA-UA-AAAUUUUAAGA-GUAUUUAUGAUUAGAU-UAGUAUAU---UUUGUUGUUUAUUUAAUAU---
CAUCAGAUUAUUUUAAAUUAAGGAACUCGGCAAA-UACAG---------UGUCCGCCUGUUUAUCAAAAC-A[-????]
Diphlebia_lestoides_ZDL CUCGAUUUUAUGAGAGCUAGCAUUUU------AAUUUGGUUGUUGUGU-UAA--AACCAUCA--AUAAUA---UUUGCUUG
U-AAAGA-UAUUUU-AUUCGUGCAUGAAUG-UAUCUAGUU-UUUUAAGACU-UAAA-UUUAAUUUACC-CUUAUUGAGC--ACUUCUUUAAUUUUAAAAGG------CUUGUUUAAUAAG UGG--
AAAAUAAUAGGGGAUAAGCUCUAUUUUU---UGCUAAAAUGAUAGUAUAUC-UCAAU-----UUUUUGUAGGGUUAGAAGCCCCCAUCUCUU--AAAUUACGUUAUAGGAUAUAAU---
UGUUUAUUUUGAUUUUCU--UGGUGUUU-AGUGUGG--UAUUAAAAUGUUUUAU-UGAA-AC-UUAACGUAAUA-GUAUUUAUGAUUAAAU-UAGUAUAU---AUUGUUGUUUGUUGAUUAA--
GGUAGUUGGUAUUUUAUUUUAAGGAACUCGGCAAA-UAUAA---------CGUUCGCCUGUUUAUCAAAAC-A[-????]
Diphlebia_caerlesaens_ODC CUCGAUUUCAUGAGAGCUAGCAUUAU------AAUUUGGUUGUUGUGU-UAA--AACCAUCA--UUAAUA---UUCGCUUG
U-AAAGA-UAUUUU-AUUCGUGCAUGAAGG-UAUCUGGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGC-CUUGUUAAGU--ACUUCCUUAAUUUUUAAGGA------CUUCUUUGGCAAG AUA--
AAAAUAAUAGGGGAUAAGCUCUAUUUUU---CUCUAAAAUGUCAUUUUUA--UCAAU-----UUUUUGUAGGGUUAGAAGCGCCCAUCUAUU--UAAUUACGUUAUAGGAUAUAAU---
UGUUUAUUUUGAUUUUCUU-UAUCAUUU-AGUUUUAC-UAUUAAAAUUUUUUAU-CUAA-UU-UUUACGUAAAA-GUAUUUAUGAUUAAAU-UAGUAUAU---GUUGUUGUUUUGAGUUAAU---
AUACUUGGAAUUUUAUUUUAAGGAACUCGGCAAA-UAUAG---------CGUUCGCCUGUUUAUCAAAAC-A[-????]
Bayadera_melanopteryx_EUP_ZBM CCCGAUUUUAUAAGAGCUGGUAAUUU------AAUUUGGUUAUUGUAG-CAU--AACUAUCA--AUAAUA---AUUUCCUG
U-AAAGA-UAUUUU-AUUCGUUUAUAAGGG-UAUCUGGUU-UUUUAAGAAU-UAAA-UUUAAUUUAAU-UCUACAAUUU--AUUCUUUUUUUUAAAAAAGAUU----UUAUUUUGUUAGA UUA--
AAAAUAAUAGGGGAUAAGCUCUGUUUUU---UUCUAAAAUUAUUUUUUUAC-UAAAU-----UGU-UGUAGGAUUAGUAGCGUCCAUCUAUU--
UAAUUACGUUAUAGGGUUAAAUUUAUUUAUAUGUUGAUUUAUC--UUUUAUUU-AGAAUUU--UAUUAAAAUAUUUUAU-UUAA-UU-UUGGAUUAAAU-GUAAUUAUGAUUAAAU-UAGUAUAG---
UUAUUUGUUUAUUAUUUUA---AAUUAUUUUAUUUUGGGUUAAGGAACUCGGCAAA-UAUAG---------UUUUCGCCUGUUUAUCAAAAC-A[-????] Bayadera_brevicauda_BBB--------
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Dysphaea_gloriosa_ODG CUCGAUUUUAUAAGAGCUGGUAAUUU------AAUUUAUUUAUUGUAG-CAU--AAAUAUUA--AUAAUA---AUUAUCUG
U-AAAGA-UAUUUU-AUUCGUUUAUAAGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGC-UUCAUAAAUU--ACGUUCUUUUUUGAUGAAGAU----CUUAUUUUAUUGAA UUA--
AAUAUUAUGGGGGAUAAGCUCUGUUUUAU--UUCUAAAAUAAUUUAUUUUUGUUGAG-----UUUUUGUAGGGUUAGAAUCACCCAUCUAAU--UGAUUACGUUAUAGUUUAUACU--
CGUUUUUUGUUGAUUUAUUUAUUUUAUUU-AGUUUUCU-UAUUAAAGCGUUUUAU-UUAA-UU-UUGUUUUAUAU-UUGAUAAUGAUUAAAU-UAGUAUAG---UUAUGUGUUUUAUUUUUUA----
UUACUUUUAUUUUAGGUUAAGGAAUUCGGCAAA-UUUAA---------UGAAAGCCUGUUUAUCAAAAC-A[-????]
Euphaea_formosa_ CUCGAUUUUAUAAGAGCUGAUUAAUA-----UAAUUUGGUUACUGUGG-CAU--AAUUAUCA--AUAAUA---UUUUUCUG
U-AAAGA-AAUUUU-AUUCGUUUAUAAUGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGA-UCCAUAACUU--AUUGUUUUAUUUUAAAAAGAU-----UUUAUUUUAUGGG UUU--
AAAAUAAUGGGGGAUGAGCUCUGUUGUUU--UUCUAAAAUUUUUCUUUUGUUGAAUU------UU-UGUAGGGUUAGAAGCACCCAUCUUU---UGAUUACGUUAUAGGGCUGAUU--

CGUUUAUAUUUGAUUUAUU--AUUUAUUU-AGAAUUU--UAUUAAAAUAUUUUAU-UUAA-UU-UUUUAGUAAAA-GUUAUUAUGAUUAAAU-UAGUAUAG---UUAAUUGUUUAAUUUAUUU---
UUAAUUUGUAUUUUGGGUUAAGGAACUCGGCAAA-UAUAA----------UGUUCGCCUGUUUAUCAAAAAC-A
Anisophaea_decorata_ZAD_OED CUCGAUUUUAUAAGAGCUGAUUAAUA-----UAAUUUGUUUACUGGG-UAU--AAUUAUCA--AUAAUA---UUAAUCUG
U-AAAGA-AAUUUU-AUUCGUUUAUAAUGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGA-UUUAUAAUUU--ACGAUUUUGUUUU-AAAAAAUU----UUUAUUUUAUGAA UUU--
AAAAUAAUGGGGGAUUAGCUCUUUUGUUU--UUCUAAAAUUUUUUUGUUGU-UGAAU-----UUU-UGUAGGGUUAGAAGCGCCCAUCCU----UGAUUACGUUAUAGUACUGAUU--
UAUUUAUUUUCGAUUUAUU--UUUUAUUU-AGUAUAU--UAUUAAAAUGUUUUAU-UUAU-UU-UUUUAAUAAAA-GUUAUUAUGAUUGAAU-UAGUAUAU---UUAAUUGUUUAAUGUGUUU---
UGGAUUUUUAUGUUGGGCUAAGGAACUCGGCAAA-UAUAA----------UGUUCGCCUGUUUAUCAAAAAC-A[-????]
Anisopleura_sp_A_EUP_ZAA CUCGAUUUUAUAAGAGCUGAUGUUUU------AAUAUGGUUAAUGUGG-UAU--AAUUAUCA--UUAAUA---UGCAUUUG
U-AAAGA-UAUUUU-AUUCGUUUAUAAUGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUAAAUUUAAU-UCUACAUUUU--AUGCUUUUCUUUUUUAAAAGGU----CUAUUUUGUUAGA UUA--
AAAAUAAUAGGGGAUGAGCUCUAUUUUUUU-UUCUAAAAUUUAUUUUUUUU-UGUUU-----UU--AGUAGGUUUAAAAUCAUCCAUCUUUU--UAAUUACGUUAUAGUUUCUAAC--
UAUUAUUUGUUGAUUUAUU--AUAAAUUU-AGUUUAUU-UAUUAAAAUAUUUUAU-UAAA-UU-AUUAAAUUUAA-GUAAUUAUGAUUAAAU-UAGUAUAA--AUUAUUUGUUUGAUUUUACA----
UAUUUUAUAUUUUGAAUUAAGGAACUCGGCAAA-UAAAA----------UGUUCGCCUGUUUAUCAAAAAC-A[-????]
Disparocypha_biedermanni_ZDB CCCGAAGUUAUAAGAGUUAAUUUGUA------AAUUUGGUUGUUGUUA-UAU--AAACAUCA--AAAAUU--AUUUUUUAG
U-AGAGA-UAUUUU-AUUCGUUUAUAAGAA-UACCUGGUU-UUUUAUGAAU-UAAA-UUUAAUUUAUC-UGUAAUGUUU--AUUUUGAUUCGAGGAACGAAAA----UAAUUAUGAGAGC
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Libellago_semiopaca_BLS ??????????????????????????------????????????????-???-?????????--??????---????????
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Heliocypha_biseriata_BHB ??????????????????????????------????????????????-???-?????????--??????---????????
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Platycypha_caligata_OPC CCCGAAUUUAUAAGAGUUAAUAAUUU------AAUUUGUUUGUUGUGA-UAU--AAUUGUCA--AUAAUA---UUUAUUAG
G-AGAGA-UAUUUU-AUUCGUUUAUAAUUU-UAUCUGGUU-UUUUAAGAUU-UAAA-UUUAAUUUAUC-UUUAGUAUUU--AAUGUUUUAUUUUUU-AAUUUA-----AUAUUUACUGAA UUA--
AAAAUUACAGGGGAUAAGCUCUGUUUUAU--UUCUAAAAUGUAAUA--AUU-UAAUU-----GG--GGUAGGAUUAUAAUCUUCUUUCCCUG--UGAGU-CGUUAUAGAAUUUU----
UUUAAAGUUUAGAUUUAUG---AUCAUUU-AGUUUAA--UAUUAAAAUAUUUUGU-UUAA-UU-UAUUUUUAUAA-UUAAUAAUGAUUAAAU-UAGUAUAU---UUAAUUGUAUGAUUAUAU-----
UUGUUGGUAUUUUGGAAUAAGGAACUCGGCAAA-UAUUG---------AUGUCCACCUGUUUAACAAAAAC-A[-????]
ZCCt ??????????????????????????------????????????????-???-?????????--??????---????????
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Sundacypha_petiolata ---

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Rhinocypha_fenestrella_ORF CCCGAAUUUAUAAGAGCUAAUAUUUU------AAUUUAUUUAUUGUGA-UAU--AAAUAUUA--AUAAUU---UUUAUUAG
G-AGAGA-UAUCCU-AUCCGUUUAUAAUUU-UAUCUGGUU-UUUUAAGAUU-UAAA-UUUAAUUUAUC-UUUAGAAUUU--AAUUCUUAUCUUUU--AAUGAA----UUAUUUUCUAUU UUA--
AAUAUUGUAGGGGAUAAGCUCUAUUUUU---UACUAAAAUUUCUUAU-AUGUUAAUU-----GG--GGUAGGAUUAGAAUCUUCUUUCCUUG--UGAUUUCGUUAUAGAAAAUUU---
UAUUUAUUUUUGAUUUUUU---GUUAUUU-AGUUUUA--UAUUAAAAUAUUUUGU-UUUA-UU-UUAUUUCAUAU-UUAAUAAUGAUUAGAU-UAGUAUUU---AUAAUUGUUUUAUUAUUU----
AUUUUUUGGAUUUCAAAAUAAGGAACUCGGCAAA-UUUAG---------AUGUUCGCCUGUUUAACAAAAAC-A[-????]
Rhinocypha_tincta_BRT ---

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EU477615_Heliocharis_amazona   CUCGAUUUCAGAAGAGCU????????------????????????????-???-?????????--??????---????????
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Heterinia_americana_CAL_OHA2   CUCGAUUUUAUAAGAGCUGAUGAAUU------AAUUUGGUUACUGUUU-CAU--AAGUAUCA--AGAAUA---UUCUUCUG
U-AAAGA-UAUUUU-AUUCGUUUAUAAAGG-UAUCUAGUU-UUUUGAGAAA-UAAA-UUUAAUUUAAU-AUCAUUUAUU--UAUUUACUUUAUUUUUAAAGUA----GCUAUUAAUUGGU UUA--
ACAAUUGUAGGGGAUAAGCUCUACUUUUG--UUCUAUAAAUAUUACGUAUUACAUAA-----AU--AGUAGGGUUAAGAUCAUUCAUCUUUA---UAUUACGUUAUAGUAUAUUA---
UGUUAAUUUUUGAUUUACU---UACUUUU-AGGAUUU--UAUCAAAAUAUUUUAA-UUAA-UU-UGGUAUUAAUA-GUAAUUAUGAUUAAAU-UAGUAUAA--UGUUAUUGUUUUUUAUUGC---
UGUUAGUUUAAUUUUAUUUUAAGGAAUUCGGCAAA-AUUAG---------UGUUCGCCUGUUUAUCAAAAAC-A[-????]
Caliphaea_confusa_ZCC   CCCGAAUUUGUAAGAGCUGAUUUGUUU-----GAUUUGGUUAAUGUGU-UAU--AAUUAUCU--UAAAUA---CUCAUCUG
U-AAAGA-UAUUUU-AUUCGUUUACAAGGU-UAUCUGGUU-CUCUAAGAAU-UAAA-UUUAAUUUAGU-GUCAGGA-GG--UAUAUAUUUUAUUAUUAAAAUA----UUUAUUUUUUGGU UUA--
AAUAUUGUGGGGGAUAAGCUCUGCAUUAA--UUCUAUAAUUAUUUCUUAUAUUAAUU-----AU--AGUAGGGUUGAAAUCAUUCAUCUUUU---AAUUACGUUAUAGUUUAUUU---
UAUUUAUUUUUGAUUUAUUU-UUUUAUUU-AGUGAUU--UAUUAGUGUGUUUUAA-UUAA-UU-UUAAAUUUUUA-UUAAUAAUGAUUAAAU-UAGUAUAA--UUUUAUUGUGUAAAAUUUA---
UUUAAUUGUAAUUUUAUGUUAAGGAACUCGGCAAA-UGAAAA--------AUGUUCGCCUGUUUAUCAAAAAC-A[-????]
Noguchiphaea_yoshikoae_AJ459228   ---

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Vestalis_beryllae_BVB   ---

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Matrona_basilaris_BMB   ??---

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CAlopteryx_atrata   ---

--CGCCUGUUUAACAAAAAC-A[-????]
Echo_modesta_BEM   ---

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Neurobasis_ianthinipennis_BNI   ---

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Sapho_orichalcea_OSO   CUCGAUUUUGUAAGAGCUGUGGGCUU-----AUUUUGUUUAAUGUUG-UAU--AAUUAUCA--AUAAUA---UCUUGCUG
U-AAAGA-AAUUUU-AUUCGUUUACAAGGG-UUUCUAGUU-UCUUGGGAAU-UAAA-UUUAAUUUAUU-AUUAUUA-UU--UAUUUGUUUAUUUUUUUAAUU----UCUUAUUUAUUAAU
UA--AAUUAUUUUAGGGGACAAUCUCUAAUUUU---UUCUAUAAGUUUA--UUAUUUUAGUU-----UU--AGUAGGGUUAAUAUCAUCCUUCUUUA---UAUUACGUUAUAGUUUAUUC---

UAUGUUAUUUUGAUUUUCU---CUAUUUU-AGAGUUU--UACCAGGAUUUUUAAU-UAAA-UU-AUUUAAUUAAA-UUAAUAAUGAUUAAAU-UAGUAUUU--AUUUAUUGUAUAUAAUUUU---
UGUGAGGAUUUAUUUGUAAUAAGGAACUCGGCAAU-AUUAU---------UACUCGCCUGUUUAUCAAAAAC-A[-????]
Calopteryx_amata_CAL_OCAm CUCGAUUUCAGAAGAGCUA???????------????????????????-???--?AAUAUCA--AAAAUA--UUCUAUCUG
U-GGAGA-UAUUCU-AUUCGUUUAUAAGGG-UAUCUAGUU-CUUUAGGAUU-CAAA-UUUAAUUUGUC-GCUAUUUAUU--UAUUUAUUUUAUUAUUAAAUU----AUUUAUUUGGUAGU
UC--UUAAAUUGUAGGGGCUAAUCUCUACUUUU---UUCUAUAAUUUAA-UUUUUGUUAGGG-----GU--AGUAGGGUUAAUAUCAUCCAUCUUUU---AAUUACGUUGUAGUUUGUCC---
UGAAUUUUGUUGAUUUUAU---UAUUUUU-AGUUUUUA-UACUAAAGUUUUUUGU-UAAA-UG-AAUAAUCAUUA-UUAAUAAUGAUUAAAU-UAGUAUAU---UUUAUUGUUUUAUCUAUU----
UAUAUUGUGAUCUUUAGUUAAGGAACUCGGCAAA-UAUAGU---------UGCUCGCCUGUUUAUCAAAAAC-A[-????]
EU477613_Calopteryx_splendens CUCGAUUUCAGAAGAGCUANNN-NNNN--NNNNNNNNNNNNNNNNNNGC-AAU---AAUAUCA--AAAAUA--UUCUAUCUG
U-GGAGA-UAUUCU-AUUCGUUUAUAAGGG-UAUCUAGUU-CUUUAGGAUU-CAAA-UUUAAUUUGUC-GCUAUUUAUU--UAUUUAUUUUAUUAUUAAAUU----AUUUAUUUGGUAGU
UC--UUAAAUUGUAGGGGCUAAUCUCUACUUUU---UUCUAUAAUUUAA-UUUUUGUUAGGG-----GU--AGUAGGGUUAAUAUCAUCCAUCUUUU---AAUUACGUUGUAGUUUGUCC---
UGAAUUUUGUUGAUUUUAU---UAUUUUU-AGUUUUUA-UACUAAAGUUUUUUGU-UAAA-UG-AAUAAUCAUUA-UUAAUAAUGAUUAAAU-UAGUAUAU---UUUAUUGUUUUAUCUAUU----
UAUAUUGUGAUCUUUAGUUAAGGAACUCGGCAAA-UAUAGU---------UGCUCGCCUGUUUAUCAAAAAC-A[-????]
Calopteryx_aequabilis_CAL --

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Iridictyon ???????????????????????????------????????????????-???-?????????--??????---????????
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Iridictyon_trebbaui_ZIT ???????????????????????????------????????????????-???-?????????--??????---????????
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Nubiolestes_diotima_PER_OND CCCGAUUACAAAUGAUCUAAUAAUUU------AUUUUAUUUAUUGUUG-CAU--AAAUAUUA--AUAAUA--UAUUUUUGG
U-GGAGA-AAUUCU-AUUCGUUUUUGUAGG-UAUCUGGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGG-UGUCUAUUUU--AUUUGUUUUAUUUUUAAAACAAG----UUUUAUGGUUUA
CU---AAAAUAAUAGGGGAUAAGCUCUAUUUUU-UU-UCUAAAACAUUUAUUUU-AUUAAAU-----U-GUUGUAGGGUUAAAAUCAUCCAUCCUUU--AG?????????????????????--
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Perilestes_kahli_ZPK2_BPK CCCGAUUGUAAUAGAGCUAUUUUUUU------AUUCUUUAUAUUGUUG-CAU--AGCUAUAU--GAAAUA--UAUU-UUAG
G-GGAGA-CAUUUU-AUUCGUUUUUACAGG-UUUCUGGUU-UUUUAAGAAU-UAAA-UUUAAUUUAUA-CAGGGUAUUU--UUACUUAUUAAAUUUUUAAUGUU----AAAUAAUUCCUU
GU--AAAGAUAAUAGGGGAUAAGCUCUGUUAUU-AUUCCUAUAAUUUUUAUUAUCUUU-AUU-----U-GUUGUAGGGUUAAGAGCAUUCUUCAUAA--UGAUUGCGUUAUAGCACAUAUU--
AGUAUUUUAUUGAUUUUUA---UUUAUUU-AGGUUUU--UAUUAAAAUAUUUUAU-UUAA-UU-UGUUUUUUUUA-GUAAUAAUGACUUAAU-UAGUAUAUGUUUAU-UGUAAUUUAUUCUUU----
UAAAUGGGAAAAUUAAUUAAGGAACUCGGCAAAUGUAAC-----------UCUCGCCUGUUUAUCAAAAAC-A[-????]
Perissolestes_remotus_BPR ???????????????????????????------????????????????-???-?????????--?????????????????
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                                                  CCCGAUUAUAGAUGAGCUAAUAAAUU------AUUUUAUUUAUUGUUG-CAU--AACUAUUA--AUAAUA--UUUUAUUAG
G-GGAGA-AAUUCU-AUUCGUUAUUAUAGG-UUUCUGGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGG-CAUUUUAUUU--UAUUUAUUUUAUUUUUUAAUUGA---AUAUUAUGUUUUG
CU---AAUAUAAUAGGGGAUAAGCUCUAUUAUC-UU-UCUAUAACUCUUGUUUU-GUUUAAU-----U-GUUGUAGGGUUAAGAUCAUCCAUCUUUG-UGAAUUACGUUAUAGUAUAGAUU--
GUCUUAAUAAUGACGAUUUUUUUAUGUUU-AGUUUUU--UAUUAAAAUAUAGUGU-GUAA-UU-AUAAUUCACUA-GUAAUAAUGAUUGAAU-UAGUAUAUA-UUAU-UGUUUUUAGUUUAUU-----
AAUUGGGACUAUUUUAUAAGGAACUCGGCAAA-UUAGC-----------ACUCGCCUGUUUAUCAAAAAC-A[-????]
Euchlorolestes_SLE_OET                            CCCGAUUAUUUACGAGCUAAUAGAUU------AUUUUAUUUGCUGUUG-CAA--AAUCAUUA--AUAAUA--UUUUAUUAG
G-GGAGA-AAUUCU-AUUCGCGUUUAUAGG-UUUCUGGUU-UUUUAAGAAA-UAAA-UUUAAUUUAUG-UACUUUAUUU--UAUUUUAUUUAUUU-AUAAUUAA---AUAUCAUAUUGUG
CU---AAGAUAAUAGGGGAUAAGCUCUGUUAUU-UU-UCUAGAACUUUCUUUUU-AUUUAAU-----U-GUUGUAGGGUUAGGAUCAUCCAUCUUCG--UGAUUACGUUAUAGUGCAAAUU--
AUUUAUAUUUUGAUUUUUU---AAUGUUU-AGUUUUU--UAUUAAAAUCUGGUGU-UUAA-UU-AUUAACCAUCA-GUAAUAAUGAUUUAAU-UAGUAUAAA-UUUU-AGUGUUAUUCUUAUU-----
AUUUGUAAUUAUUAAUUAAGGAACUCGGCAAA-UAAGC-----------ACUCGCCUGUUUAUCAAAAAC-A[-????]
Phylolestes_ethelae_OPE                           CGCGAUUAUAAAUGAGCUAAUAAUAU------AAUUUAUUUGUUGUUG-CAU--AACCAUUG--AUAAUU--UAUUAUUAG
A-GGAGA-AAUUCC-AUUCGUUUUUAUAGG-UAUCUGGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGG-UGGCUGGCUU--UAUUUAAUUUAAUCUUUAAUUAU---UUAUUGUUAUUUA
CU---UAUUUAAUAGGGGAUAAGCUCUAUUACA--U-GCUAUAACUAUUAUUAU-UUAUAAU-----U-GUUGUAGGGUUAAGAUCAUCCAUCUUUG--UGAUUACGUUAUAGUGCAUAUU--
AUAUUUAUAUUGAUUUUUA-AAAUGUUU-AGUUUUU--UAUUAAAAUCUGUUGA-UUAA-UU-AUUUUUCUUCA-UUAAUAAUGAUUAAAU-UAGUAUAUA-UAUU-UGUUUAAAUUAUUGUU----
UUGCGACAUUAUUGUUUAAGGAACUCGGCAAA-UAAGC-----------ACCCGCCUGUUUAUCAAAAAC-A[-????]
Synlestes_weyersii_ZSW                            CCCGAUUAUAGAUGAGCUAAUGAUUU------AUUUUAUUUGUUGUUG-CAU--AAACAUUA--AUAAUU---UUUGUUUG
G-AGAGA-AAUUCU-AUUCGUUUCUAUAGG-UAUCUGGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGG-CAUUUUAUUU--UAUUUACUUUCUUU--UUAAGUUUAUA--UUAUUUUUUG
CU---AGUUUAAUGGGGGAUAAGCUCUGUUAAC--U-UCUAUAACUGUUUUUAU-UUUUAAU-----U-AUUGUAGGGUUGAAAUCAUUCAUCUUUU---AAUUACGUUGUAGUGUAUUUU--
AAAUUUAAUUUGAUUUUUU---AAUGUUU-AGUGUUU--UAUUAAAAUU UGGUGU-UUAA-UA-AUAUUACACCA-GUAAUAA
UGAUUAAAU-UAGUAUAAAUUUAU-UGUUUUCAUCUUAUU-----AAUUGUUAUUAUUAAUUAAGGAACUCGGCAAA-UAAGC-----------ACUCGCCUGUUUAUCAAAAAC-A[-????
]
Synlestes_tropicus_ZST                            CCCGAUUAUAGAUGAGCUAAUGAUUU------AUUUUAAUUGUUGUUG-CAU--AAACAUUA--AUAAUU---UUUAUUUG
A-AGAGA-AAUUCU-AUUCGUUUCUAUAGG-UAUCUGGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGG-CAUUUUAUUU--UAUUUACUUUCUUU--UUAAGUUUAUA--UUAUUUUUUG
CU---AGUUUAAUGGGGGAUAAGCUCUGUUAAG--U-UCUAUAACUGUGAUUAU-UUUUAAU-----U-GUUGUAGGGUUGAAAUCAUUCAUCUUUU---AAUUACGUUGUAGUGUAUUUU--
AGAUUUAAUUUGAUUUUUUU--AAUGUUU-AGUAUUU--UAUUAAAAUUUGAUGU-UAAA-CA-AUAUUACAUCU-GUAAUAAUGAUUGAAU-UAGUAUAAAUUUAU-UGUUUUCGUUUUAUU-----
AAUUGUUACUAUUAAUUAAGGAACUCGGCAAA-UGAGC-----------ACUCGCCUGUUUAUCAAAAAC-A[-????]
Chorismagrion_risi_CHO_ZCRi                       CCCGAUUAUAAAAGAGCUAUCUAUUU------AUUUUAUUGGUUGUUG-CAU--AAACGUUA--AUAAUU--UAUUGGUAG
U-GGAGA-AAUUCU-AUUCGUUUUUAUGGG-UAUCUGGUU-UUUUGGGAAA-UGAA-UUUAAUUCAGG-CAUUUUCCGU--UAUUUGGUUUAUUU-UUAAACCACAUC--UUGUUUUUUG
CU---AAUUUAAUGGGGGAUAAGCUCUGUUAUU--U-UCUAUAACUAUUUU-AUUCAUGUAU-----UUUAUGUAGGGUUGAAAUCAUCCAUCUUUU--AAAUCACGUUAUAGUGUAUGUU-
GGUUUUUGUUUUGAUUUAUUA--AAUGUUU-AGGUUUU--UAUUAAAAUUUGAUAC-UUAA-UU-UUGAAGUGUUA-GUUAUAAUGAUUAAAU-UAGUAUAUA-AUUU-UGUUUUAAUUUUAUU----
-AUUUGUUAUUAUUUUAUAAGGAACUCGGCAAA-CAAGU-----------ACUCGCCUGUUUAUCAAAAAC-A[-????]
Episynlestes_cristatus_SYN_ZEC                    CCCGAUUAUAAAUGAGCUAAUUAUCU------AUUUUACUUGUUGUUG-CAU--AAACAUUA--AUAAUU-UUAU--UUAG
A-GGAGA-AAUUCU-AUUCGUUUUUAUAGG-UUUCUGGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGG-CUAUUUAUUU--UAUUUAAUUAAUUU-UAAAAUUUUAUA--UUAUUUUUUG
CU---AAUUUAAUAGGGGAUAAGCUCUAUUAAA--UAUUUAUAACUUGUUUUAU-CUUUAAU-----U-GUUGUAGGGUUAAGAUCAUCCAUCUUUU--UAAUUACGUUGUAGUGUAUAUU--
AUUUUUAAAUUGAUUUUUA---UUUGUUU-AAUUAUU--UAUUAAAGUGUGAUAA-UAAA-UG-UUGGCUUAUCA-GUAAUAAUGGUUGAAU-UAGUAUAUA--UUU-UGUUUUUUAUUUAUU-----
UGAGGACACUUUUAAAUAAGGAAUUCGGCAAA-UCAGC-----------ACUCGCCUGUUUAUCAAAAAC-A[-????]
Episynlestes_albicaudus_BEA                       ???????????????????????????------????????????????-???-?????????--?????????????????
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Megalestes_micans_ZMMc                            CCCGAUUAUAAAUGAGCUAAUAAUUU------AUUUUAUUUGUUGUUG-CAU--AAACAUUG--AUAAUA--UUUUUUUAG
G-GGAGA-AAUUCU-AUUCGUUUUUAUAGA-UUUCUGGUU-UUUUAAGAAG-UAAA-UUUAAUUUAGG-CACUAAU-AU--UAUUUAUUUUUUUA-UAAAAUUAAAUAUA--AUUGGCUG
UU---AAUUUAAUAGGGGAUAAGCUCUAUUAAU---AUCUAAAACUUUGGUUUUAUGUUAUC-----U-GUUGUAGGGUUAAAAUCAUCCAUCAUUU--CAAUUACGUUAUAGUAUAAGUU--
AAUUUAGUAUUGAUUUUCU--UAAAGUUU-AGGUUUU--UAUUAAAAUUUGUUGU-UUAA-UU-UUUAUUCAUCA-GUAAUAAUGAUUAAAU-UAGUAUAUA-UAUAUUGUUUUUUAUUUAUU-----
AAAUGUUAUUAUUAUAUAAGGAACUCGGCAAA-AGAGC-----------ACUCGCCUGUUUAUCAAAAAC-A[-????]
Megalestes_kurahashii_                            ??-----------------------------------------------------------------------------
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Orolestes_octomaculatus_ZOO                         CCCGAUUAUGGAAGAGCUAAUUAUAU------AUGUUAUUUGUUGUUG-CAA--AACCAUUA--AUAAUU---UUUUUUAG
G-GGAGA-AAUUCU-AUUCGUUUUUAUAGG-UAUCUGGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-UAAUCCUUAU-UUAAUUUGUUAAUUUUUUUAGUAAAUUAUA--AAUGAUUA
UU---AAUUUAAUAGGGGAUAAGCUCUAUUAAU---UGCUAUAACUUUCAUUUUUAUUUAAU-----U-GUAGUAGGGUUAAAAUCAUCCAUCUUUU---AAUUACGUUAUAGUAUAUAUU--
AAAAUAUAUUUGAUUUGAU---UUUGUUU-AGAUUUU--UAUUAAAAUUUAAUGU-UUAA-UU-AUUUCUCAUUA-GUAAUAAGGAUUGAAU-UAGGAUAAU-UUUA-UGUUUUAUAGUGAUAA---
AGGGUUUUAUAUUGAAUCAAGGAACUCGGCAAA-UAAGC-----------GCUCGCCUGUUUAUCAAAAAC-A[-????]
Austrolestes_annulosus_BAA                          ???????????????????????????------????????????????-???-?????????--?????????????????
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Sympecma_paedisca_BSP                               ???????????????????????????------????????????????-???-?????????--?????????????????
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ZSF_Sympecma_fusca                                  ??????????????????????????U------AUUUUAUUUGUUGUUG-CAU--AACCACUA--AUAAUU--UUUUAUUAG A-
GGAGA-AAUUCU-AUUCGUUUUUAUAGG-UAUCUGGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGG-UAAUACUUUU--UAUUUAUUUAAUU-----UAAUAAAUAUAUAUU-AAUUG
UUGCUAAUCUAACAGGGGAUAAGCUCUGUUAGA--AUUCUAUAACUUCAUUUUA-AUUUAAU-----U-GUUGUAGGGUUAAAAUCAUCCAUCUUAU---AAUUACGUUAUAGUAUAUAUU--
AAUAUAUUAUUGAUUUAUU---UUUGUUU-AGAUUUU--UAUUAAAAUAUAAUGA-UUAA-UU-AUAAAUCAUUA-GUAAUAAUGAUCAAAU-UAGUAUAAU-UUUA-UGUUCAUCAUUUAUU-----
AAAUGUUAUUAUUAAAUAAGGAACUCGGCAAA-UAAGC-----------GCUCGCCUGUUUAUCAAAAAC-A[-????]
Austrolestes_analis_OAAn                            CCCGAUUACGAAAGAGCUAAUAAGUA------AUGUUGUUGGUUGGUG-CAU--AACCAUUA--AUAAUU--CCUUAUUAG
A-GGAGA-AACUCC-AUUCGUUUUUGUAGG-UAUCUGGUU-UUGUAAGAAA-UAAA-UUUAAUUUAGG-UACUCCUUAU--UAGCUAUUUAAUU-CAUUAAAUAGUUAGUACG--GGGUG
CU---AAUUUAACAGGGGAUAAGCUCUGUUAAA--UAUCUAUAACUUCUGUUUU-AUUUAAU-----U-GUAGUAGGGUUAAAAUCAUCCAUCUUAU---AAUUACGUUAUAGUAUACAUU--
AAUAUAUUCUUGAUUUAUU---UUUGUUU-AGAUUUU--UAUUAAAAUUUAAUGA-UUAA-CU-AUUAUUCAUUA-GUAAUAAUGAUUAAAU-UAGUAUAAU-UUUA-UGUUUCACAUUUAUU-----
AAAUGUUACUAUUAAAUAAGGAACUCGGCAAA-UAAGC-----------GCUCGCCUGUUUAUCAAAAAC-A[-????]
Indolestes_pergrinus_LES_OIP                        CCCGAUUAUGGAAGAGCUAAUAAGUU------AUAUUGCUUGUUGUUG-CAU--AAACAUUA--AUAAUU--UCUUAUUAG
A-GGAGA-AAUUCU-AUUCGUUUUUAUAGG-UAUCUGGUU-UUUUAAGAAA-UAAA-UUCAAUUUAGG-CAUUUUUAUU--UAAUCAUUUUAUU-UAAUAAAUUAUUAUUAUA--AAAUG
CU---AAUUUAGCAGGGGAUGAGCUCUGCUAAA--UAUCUAUAACUCCAAUUUU-AUUUAAU-----U-GUAGUAGGGUUAAAAUCAUCCAUCUUAG---AAUUACGUUAUAGUAUAUAUU--
AAUAUAUUAUUGAUUUAUU---UUUGUUU-AGAUUUU--UAUUAAAAUUUAAUGA-UAAA-CU-AUUAAUCAUUA-GUAAUAAUGAUUAAAU-UAGUAUAGU-UUUA-UGUUUUACAUUUAUU-----
AGGUGAUACUAUCAAGUAAGGAAUUCGGCAAA-CAAGC-----------ACUCGCCUGUUUAUCAAAAAC-A[-????]
Indolestes_cyaneus                                  ???????????????????????????------????????????????-???-?????????--??????---????????
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Chalcolestes_viridis_LES_ZCV                        CUCGAUUUCAGAAGAGCUAAUAAUUU------AUUUUAGUUGUUGUUG-CAU--AAACAUUA--ACAAUU--UUUUAUUAG A-
GAAGA-AAUUUU-AUUCGUUUUUAUAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAG--GUAGUAUUUAUUGAAUGAUUUA-AUUAAUUAAGUAAUUCUUAAAU-ACUAC-            U---
AAUUCAAUAGGGGAUAAGCUCUAUUGAAUUAUUCUAUAACUUUCUUUUUCAUUUAAU-----U-GUAGUAGGGUUAAAAUCAUCCAUCUUUU--UAAUUACGUUAUAGUAUAUAUU--
AAUUUGUUAUUGAUUUAUU---UUUGUUU-AGUUUUU--UAUUAAAAUUUAAUGG-UUAA-UA-AUUAACCAUUA-GUAAUAAUGAUUAAAU-UAGUAUAAU-UUUA-UGUUUAAUGUGAAAU-----
GAUUUUUAUUAUUAAAUAAGGAACUCGGCAAA-UAAGC-----------GCUCGCCUGUUUAUCAAAAAC-A[-????]
Archilestes_grandis_OAG_BAG                         CCCGAUUAUAAAAGAGCUAAUGAAUU------AUGUUAGUUGUUGUUG-CAU--AACCAUUA--AUAAUU--UUUUAUUAG A-
GGAGA-AAUUCC-ACUCGUUUUUAUAGG-UAUCUGGUU-UUUUAAGAAA-UAAA-UUUAAUUUAG--GCAUUAAUUU--UAAUUAUUUUAUUAAA-UAAAUAUUUAUGUUUA-AUUGC-            U---
AAUUUAGUAGGGGAUAAGCUCUGUUAAA--UUUCUAUAACUUUCUUUAUUAUUUAAU-----U-GUAGUAGGGUUAAAAUCAUCCAUCUUUU---AAUUACGUUAUAGUAUACAUU--
AAUUUAUUAUUAAUUUAUUU--UAUGUUU-AGUUUAU--UAUUAAAAUCUAAUGA-UUAA-UU-AAGUAUCAUUA-GUAAUAAUGAUUAAAU-UAGUAUAAU-UUUA-UGUUUUUUAUUUAUU-----
AAAUGAUAAUAUUAUGUAAGGAACUCGGCAAA-UAAGC-----------GCUCGCCUGUUUAUCAAAAAC-A[-????]
Lestes_rectangularis_OLR                            CCCGAUUAUAAAAGAUCUAAUAAAUU------AUAUUAUUUGCUGUUG-CAU--AAACAUUA--AUAAUU--UUUUAUUAG
A-GGAGA-AAUUCC-AUUCGUUUUUAUAGG-UAUCUGGUU-UUAUAAGAAA-UAAA-UUUAAUUUAGG-CAUUUUU-AU--UAAGUAUUUAAUUUAA-UAAAUAUUUAUUUGA--AAUUG
CU---AAUUUAGUAGGGGAUAAGCUCUACUAAA--UUUCUAUAACUUUCUUUUUAAUU-AAU-----U-GUAGUAGGGUUAAAAUCAUCCAUCUUUU---AAUUACGUUAUAGUGUACAUU--
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AAUUUAUUAUUGAUUUAUU---UUUGUUU-AGAUUAU--UAUUAAAAUUUAAUGA-UCAA-UU-AUAUAUCAUUA-GUAAUAAUGAUUAAAU-UAGUAUAAU-UUUA-UGUUUUAUAUUUAUU-----
AAAUGUUACUAUUAAAUAAGGAACUCGGCAAA-UAAGC----------GCUCGCCUGUUUAUCAAAAAC-A[-????]
Lestes_eurinus_LES_OLE CCCGAUUAUAAAAGAUCUAAUUAAUU------AUGUUAGUUGCUGUUG-CAU--AAACAUUA--AUAAUU--UUUUAUUAG
A-GGAGA-UACUCC-AUUCGUUUUUAUAGG-UAUCUGGUU-UUAUAAGAGA-UAAA-UUUAAUGUAGG-CAUUAUUUGU--UAACCAUAUAAUUUAA-UAUAUGUUUAUUAAA--AAUUG
CU---AAUUUAAUAGGGGAUAAGCUCUAUUAAA--AUUCUAUAACUUUUCUUU-AAUU-AAU-----U-AUAGUAGGGUUAAAAUCCUCCAUCUUAU---AAUCACGUUAUAGUAUAUAUU--
AAUUUGUUAACGAUUUAUU---UUUGUUU-AGAUUAU--UAUUAAAAUUUAAUGU-UUAA-UU-AUAACUCAUUA-GUAAUAAUGAUUAAAU-UAGUAUAAA-UUUA-UGUUGCAUAUAUAUU-----
AAGUGGUACCAUUAGAUAAGGAACUCGGCAAU-UAAGC----------ACCCGCCUGUUUAUCAAAAAC-A[-????]
Hemiphlebia_mirabilis_OHM ??---

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Unaligned ----------------------99999999999999999999999999999999999999999999999999999------
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22222222222222222222222222222222222-------------------------3333333333333333------------------------[-????] Epiophlebia_superstes_OES
CUCGAUUUCAGAAGAGCUAAUUAAUU------AUUAUGGUUGCUGUU--CAU--AAUCAUUA--UAAAUA---UUUUUUAG
U-AGAGA-AAUUCU-AUUCGUUUUUAAAGG-UAUCUAGUU-UCCUAAGAAA-UAAA-UUUAAUUUAGA-GUUAUAAUUU--AAUUUAUUUAUU---UUUUAAUAAAUUAUUU--UUUAAU AUU--
AAAAUAAUAGGGGAUAAGCUCUAUUUUU---UACUAUAAAUGUCUGUUAUAUU-CAC-----UUUAUGUAGGGUUAAAAUCAUCCAACAUUA- GAGAUUACGUUAUAGUUCAUAGUGUAUUUAAAUU--
AAUUUUAAUGUUUU---U-AGUA-UUU-UAUUAGGAUUUCAUAA-UUAA-UU-UUUUAUUAUGA-GAAAUAAUGAUUAAAU- UAGUAUAAGUAUU--UUGUUUGGAAUU--
UUAUUAAUUUGUUAGUCUUUUAUAAGGAACUCGGCAAA-UAAA----------CACCCGCCUGUAUAACAAAAAC-A[-????] Epiophlebia_laidlawi ??--------------------
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Unaligned_Aeshnoidea ---
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Archipetalia_auriculata_AAAu ??????????????????????????------????????????????-???--????????--??????---???????-
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Austropetalia_victoria_AAV CUCGAUUUUAAAAGAGCUAAUAUAAU------AAUUUAUUUAAUGUUU-UAU--AAUUAUUA--AAAAUA---AAUAUUAG
A-GGAGA-AAUUCC-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-UUUAUUAUUU--AAUUUAUUUAUU---UACAAAUAAAUUAUUGA-GAUAGG AUU--
AAUAAAAUAGGGGAUAAGCUCUAUUUUA--AUUCUAUAAUGAUCUUUUGAAAAU-----UAAUUUAUGUAGGGUUAAGNNNNUCCAUCAUAAUAAGAGCGCGUUAUAGUAUA-
UAAUAAUUUAAAGAU-GAUUCUUCUUUAUU--UG-AGAA-AAU-UAUUAAAAUCUCAAUU-GUAA-UAAUAUAUUUGAGA-GUAAUAAUGAUUAAAU-UAGUAUAUAUAUU--UGUAAAAAUUUU---
-UAUUAAUUGGGAUGAUUUUAUAAGGAACUCGGCAAA-UUAA----------CACUCGCCUGUUUAACAAAAAC-A[-????]
Hypopetalia_pestilens_OHPe CUCGAUUUCAGAAGAGCUAGUUUAAU------AAUUUAUUUAAUGUUU-UAU--AAUUAUUA--GAAAUA---UAAACUAG
G-GGAGA-AAUUCU-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-UUUAUUAUUU--AAUUUAUUUAUU---UGUAGAUAAAUUAUUUA-UAUAAA GUU--
AAUGUAAUAGGGGAUAAGCUCUAUUUCA--UUCCUAUAAAUAUCUUUUAAUAAU-----UAAUUUAUGUAGGGUUAAGAACAUCCAUCAUUA-GUAAGUACGUUAUAGUAUA-
AAUUAAUUUAAAUU--GAUUUUCUUUAUUU---U-AGGA-AUA-UAUUAAAAUGUCAAAU-UUAA-UGAUUUAU-UUUGA-GUAAUAAUGAUUAAAU-UAGUAUAUAUAUU--UAUAAGAUAUUU---
-UAUUAAUUGGGAUGAUUUUAUAAGGAACUCGGCAAA-UUAA----------CACUCGCCUGUUUAACAAAAAC-A[-????]
Rheopetalia_Phyllopetalia_apicalis CUCGAUUUCAGAAGAGCUAAUAUAUU------AAUUUAUUUAAUGUUU-UAU--AAUUAUUA--AAAAUA---UAUAUUAG
A-GGAGA-AAUUCU-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-UUUAUUAUUU--AAUUUAUUUAUU---UAUAAAUAAAUUAUUUA-UAUAAA AUU--
AAUGGAAUAGGGGAUAAGCUCUAUUUUA--AUUCUAUAAAUAUCUUUAGAUAAU-----UAAUUUAUGUAGGGUUAAGAACAUCCAUCAUUA-ACAAGUACGUUAUAGUAUA-

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AAUUAAUUUAAAUU--GAUUUUCUUUAUUU---U-AGAA-AUA-UAUUAAAAUAUCAGAU-UUAA-UAAUUUAUUUUUGA-GUAAUAAUGAUUAAAU-UAGUAUAUAUAUU--UAUAAAAAUUUU---
-UAUUAAUUGAGAUGAUUUUAUAAGGAACUCGGCAAG-AUAA----------CACUCGCCUGGUUAACAUGAAC-A[-????] EU055033_130_Rheopetalia_Phyllopetalia_apollo
                                                  NNNNNNNNNNNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNNNN-NNN--NNNNNNNN--NNNNNN---NNNNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNN NNN--
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Eurypetalia_altarensis_OEA_AUS                    ??-------------------------------------------------------------------------------
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Ophiopetalia_diana_OOD                            CUCGAUUUUAAAAGAGCUAAUAUAAU------AAUUUAUUUAAUGUUU-UAU--AAUUAUUA--AAAAUA---UAUAUUAG
A-GGAGA-AAUUCU-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-UUUAUUAUUU--AAUUUAUUUAUU---UAUGAAUAAAUUAUUUA-AAUAAA AUU--
AAUGAAAUAGGGGAUAAGCUCUAUUUUA--AUUCUAUAAAUAUCUUUUGAUAAU-----UAAUUUAUGUAGGGUUAAGAACAUCCAUCAUUA-AUAAGUACGUUAUAGUAUA-
UAUUAAUUUAAAUU--GAUUUUCUUUAUUU---U-AGAA-AUA-UAUUAAAAUAUCAGAU-UUAA-UAAUUUAUUUUUGA-GUAAUAAUGAUUAAAU-UAGUAUAAAUAUU--UGUAAAAAUUUU---
-UAUUAAUUGAGAUGAUUUUAUAAGGAACUCGGCAAA-UUAA----------CACUCGCCUGUUUAACAAAAAC-A[-????]
Gomphaeschna_furcillata_OGF                       CUCGAUUUUGAAAGAGCUAAUUAUUU------AUUUUAGUUAAUGUUU-CAU--UAUUAUUA--AUAAUA---UUAAUUAG
G-GAAGA-AAUUUU-AUUCGUUUUCAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-UUUACUAUUU--AUUUAAUUAAUU---UUUUAAUUAAAUAUUG--UGUAAU AUU--
AAAAUAAUAGGGGAUAAGCUCUAUUUUU--AUUCUAAAAAUUUUUAUUUGUAAA-----UAAUUUAUGUAGGGUUAAGAUCAUCCAUCAUUU-AAAAGUACGUUAUAGUAUA-
AAUUGUUUAAAUUU--GAUUUAUUAUAUUU---U-AGAA-UUA-UAUUAAAAUAAUGAAU-UUAA-CG-AUGAUUUUUAU-GAAAUAAUGAUUAAAU-UAGUAUAAGUAUU-AUGUUUGUAAUA----
-AUUGAAUUGAGAUGAUUAAAUAAGGAACUCGGCAAA-UUAA----------CACUCGCCUGUUUAACAAAAAC-A[-????]
AF266043_Oligoaeshna_pryeri                       CUCGAUUUCAAAAGAGCUAAUUAUUU------AUUUUAGUUAAUGUUU-CAU--UAUUAUUA--AUAAUA---UUAAUUAG
G-GAAGA-AAUUUU-AUUCGUUUUCAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-UUUACUAUUU--AUUUAAUUGAUU---UUUAAAUUAAAUAUUU--UGUAAU AUU--
AAAAUAAUAGGGGAUAAGCUCUAUUUUU--AUUCUAAAAAUUUUAAUUUUUUAAA----UAAUUUAUGUAGGGUUAAAAUCAUCCAUCAUUU-AAAAGUACGUUAUAGUAUA-
AUUUAUUUAAAUUG--GAUUUAUUAUAUUU---U-AGAA-UUU-UAUUAAAAUAAUAGAU-UUAA-UA-AUGAUUUCUAU-GAAAUAAUGAUUAAAU-UAGUAUAAUUAUU--UGUUUGUAAUA----
-AUUUAUUUGAGAUGAUUAAAUAAGGAACUCGGCAAA-UAA-----------CACUCGCCUGUUUAACAAAAAC-A[-????]
Austroaeschna_parvistigma_AAPs                    CUCGAUUUUAAAAGAGCUAAUUAUUU------AUAUUAGUUAAUGUUU-CAU--GAUUAUUA--AAAAUA---UUAAUUAG
G-GAAGA-GAUUUC-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAUA-UAAA-UUUAAUUUAGU-GUUAUAAAUU--AUUUAAUUAAUU---UUUUAAUUAAAUAUUU--UAUAAU AUA--
AAAAUAAUAGGGGAUAAGCUCUAUUUUU--AUUCUAUAAACUUUAAUUUGUAU------UAAUUUAUGUAGGGUUAAAAUCAUCCAUCAUUA-AUAAGUACGUUACAGUAAA-
AAUUGGUGAUAUUU--GAUUUAUUAAGUUU---U-AGUA-UUU-UAUUAAAAUAAUAAAA-UUAA-UA-AUCAAUUUUAU-GAAAUAAUGAUUAAAU-UAGUAUAAUUAUU--UGUUAAAAAUA----
-AUUGAAUUGAGAUUAUUAAAUAAGGAACUCGGCAAA-UAAA----------CACCCGCCUGUUUAACAAAAAC-A[-????]
Telephlebia_tillyardi_ATT                         CUCGAUUUUAAAAGAGCUAAUUAUAU------AUUUUAGUUAAUGUUU-CAU--UAUUAUUA--ACAAUA---UUUAUUAG
G-GAAGA-AAUUUC-AUUCGUUUUUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-AUUAUAAGUU--AUUUAAUUAAAU---GUUUAAUUAAAUAUUU--UAUAAU AUU--
AAAAUAAUAGGGGAUAAGCUCUAUUUUU--AUUCUAUAAAUUU-UAUUUUAAGU-----UAAUUUAUGUAGGGUUAAGAUCAUCCAUCAUUU-UAGAGUACGUUAUAGUAAGUGUU-
AACCAUGGAUUUGAUUUAUAUAAAUU--UU-AGAAUAA--UAUUAAAAUAAUAAAA-UUAA-UA-GUAAAUUUUAU-GAAAUAAUGAUUGAAU-UAGUAUAAUUAUU--UAUUUAUAAUA-----
AUUAUUUUGAGAUAAUUAAAUAAGGAACUCGGCAAA-UAAA----------CACUCGCCUGUUUAACAAAAAC-A[-????]
Boyeria_vinosa_OBV                                CUCGAUUUUAAAAGAGCUAAUUUAUU------AUUUUAGGUAAUGUAU-CAU--GAUUAUUA--AUAAUA---UAAAUUAG
G-GAAGA-AAUUUC-AUUCGUUUUUAAAGG--AUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGC-GUUAUAAAUU--GUUUAAUUAAUU---UUUUAAUUAAAUAUAU--UAUAAU AUU--
AAAAUAAUAGGGGAUAAGCUCUAUUUUU--AUUCUAUAAAUUCUUAUUUUUAAA-----UAAUUUAUGUAGGGUUAAGAUCAUCCAUCAUUU-AAAAGUACGUUAUAGUAAA- AAUUAAUUGAAUUU--
GAUUUAUUUAAUUU---U-AGAA-UAU-UAUUAAAAUAAUAAAU-UUAA-UG-AUAAAUUUUAU-GAAAUAAUGAUUAAAU-UAGUAUAAUUAAU--UAUUUAAAAUA----
-AUUGAAUUGAGAUGAUUAAAUAAGGAACUCGGCAAA-AUAA----------CACUCGCCUGUUUAACAAAAAC-A
EU477640_Boyeria_irene                            CUCGAUUUCAGAAGAGCUAAUUAUUU------AUUUUAGUUAAUGUAU-CAU--GAUUAUUA--AUAAUA---CUAAUUAG
G-GAAGA-AAUUUC-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUAAAUUUAGA-AUUAUAAUUU--AUUUGGUUAAUU---UUUUAAUUAAAUAUAU--UAUAAU AUU--
AAAAUAAUAGGGGAUAAGCUCUAUUUUU--AUUCUAAAAAUUCUAAUUUUAAAA-----UAAUUUAUGUAGGGUUAAGAUCAUCCAUCAUUU-AGAAGUACGUUAUAGUAAA-
AAUUAAUUGAAUCA--GAUUUAUUAAAUUU---U-AGAA-UAU-UAUUAAAAUAAUAAAU-UUAA-UA-AUAAAUUUUAU-GAAAUAAUGAUUAAAU-UAGUAUAAUUAAU--UAUUUAAAAUA----
-AUUGAAUUGAGAUGAUUAGGUAAGGAACUCGGCAAAAAUAA----------CACUCGCCUGUUUAACAAAAAC-A[-????]
Brachytron_pratense_AES                           CUCGAUUUCAGAAGAGCUAAUUAAUU------AAUUUAGUUAAUGUGU-CAU--GAUUAUUA--AUAAUA---UUAAUUAG
G-GAAGA-AAUUUC-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUAAAUUUAGA-UUUAUAAUUU--AUUUAAUUAAUU---UUUUAAUUAAAUAUUU--UAUAAA AUU--
AAAAUAAUAGGGGAUAAGCUCUAUUUUU--AUUCUAUAAAUUUGAUUUUUAAUU-----UAAUUUAUGUAGGGUUAAAAUCAUCCAUCAUUU-AAAAGUACGUUAUAGUAAA-
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AAUUAAUUUAAUAU--GAUUUUUUUAAUUU---U-AGAA-UUU-UAUUAAAAUAAUAAAU-UUAA-UA-AUAAAUUUUGU-GAAAUAAUGAUUAAAU-UAGUAUAAUUAUU--UAUUUAGAAUA----
-AUUAAAUUGAGAUGAUUAAAUAAGGAACUCGGCAAA-CAAA----------CACUCGCCUGUUUAACAAAAAC-A[-????]
Epiaeschna_heros_OEH CUCGAUUUUAAAAGAGCUAAUUGAUU------AAUUUAGUUAAUGUGU-CAU--GAUUAUUA--AUAAUA---UCAAUUAG
G-GAAGA-AAUUUC-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-UUUAUAAUUU--AUUUAAUUAAUU---UUUUAAUUAAAUAUUU--UAUAAG AUU--
AAAAUAAUAGGGGAUAAGCUCUAUUUUU--AUUCUAUAAAUUUAAUUUU-AAUU-----UAAUUUAUGUAGGGUUAAAAUCAUCCAUCAUUU-AAUAAUACGUUAUAGUGAG-
GAUUAAUUUAAUAU--GAUUUAUUUAAAUU--UU-AGGA-UUU-UAUUAAAAUAACAGAU-UUAA-UA-AUUAAUUUUGU-GAAAUAAUGAUUAAAU-UAGUAUAAUUAAU--UAUUUAAAAUA----
-AUUAAAUUGAGAUGAUUAAAUAAGGAACUCGGCAAA-UAAA----------CACUCGCCUGUUUAACAAAAAC-A[-????]
EU477639_Caliaeschna_microstigma CUCGAUUUCAGAAGAGCUAAUUUAUU------AUUUUAGUUAAUGUAU-CAU--GAUUAUUA--AUAAUA---UAAGUUAG
A-GAAGA-AAUUUC-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUAAAUUUAGA-AUUAUGAAUU--AUUUAAUUAAUU---AUUUAAUUAAAUAUAU--CAUAAU AUU--
AAAAUAAUAGGGGAUAAGCUCUAUUUU---AUUCUAUAAAUU-UUUAUUUAAAA-----UAAUUUAUGUAGGGUUAAGAUCAUCCAUCAUUA-AAAAGUACGUUAUAGUAAA-
AAUUAAUUAAAUUA--GAUUUAUUCAAUUU---U-AGAA-UUA-UAUUAAAAUAAUAAAU-UUAA-UU-AUAAAUUUUAU-GAAAUAAUGAUUAAAU-UAGUAUAAUUUUGUUUAUUUAAAAUA----
-AUUAAAUUGAGAUAAUUAAAUAAGGAACUCGGCAAA-AUAA----------CACUCGCCUGUUUAACAAAAAC-A[-????]
EU477649_Anaciaeschna_isoceles CUCGAUUUCAGAAGAGCUAAUUAAUU------AAUUUAGUUAAUGUAU-CAU--GAUUAUUA--AUAAUA---UUAAUUAG
G-GAAGA-AAUUUC-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUAAAUUUAGA-AUUAUAAUUU--AUUUAAUUAAUU---UUUUAAUUAAAUAUAU--UGUAAU AUU--
AAAAUAAUAGGGGAUAAGCUCUAUUUUU--AUUCUAUAAAUUUUAUAUUUAAUU-----UAAUUUAUGUAGGGUUAAGAUCAUCCAUCAUUU-UUAAGUACGUUAUAGUAAG-
AAUUAAUUAUAUAU--GAUUUUUUUUUAAU-UUU-AGAA-UUA-UAUUAAAAUAAUAAAU-UUAA-CA-AUAAAUUUUAU-GAAAUAAUGAUUGAAU-UAGUAUAAUUAUU--UAUUUAAAAUA----
-AUUAAAUAGAGAUGAUUAAAUAAGGAACUCGGCAAA-UAAA----------CACUCGCCUGUUUAACAAAAAC-A[-????]
GQ118252_82_Oplonaeschna_sp NNNNN------NNNNNNNNNNNNNNN------NNNNNNNNNNNNNNNN-NNN--NNNNNNNN------------------
---NNNNNNNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNN----NNNNNNNNNNNNNNNN-NNNNNNN-
---NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
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-NNNNNNNNNNNNNNNNNNN----NNNNNNNN------NNNN----------NNNN----NNNNNNNNNNNNNNN-N[-????]
Aeschna_canadensis_OAC CUCGAUUUUAAAAGAGCUAAUUGAUU------AAUUUAGUUAAUGUAU-CAU--GAUUAUUA--AUAAUA---UUAAUUAG
G-GAAGA-AAUUUC-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUAAAUUUAGA-AUUAUAAUUU--AUUUAAUUAAUU---UUUUAAUUAAAUAUUU--UAUAAU AUU--
AAAAUAAUAGGGGAUAAGCUCUAUUUUU--AUUCUAUAAAUUAUAAUUUUAAAU-----CAGUUUAUGUAGGGUUAAGAUCAUCCAUCAUUU-AUAAGUACGUUAUAGUAAA-
AACUGAUUAAAUUA--GAUUUUAUUAAUUU---U-AGAA-UUA-UAUUAAAAUAAUAGAU-UUAA-CA-GUAAAUUUUAU-GAAAUAAUGAUUAAAU-UAGUAUAAUUAUU--UAUUUAAAAUA----
-AUUAAGUUGAGAUGAUUAAAUAAGGAACUCGGCAAA-UAAA----------CACUCGCCUGUUUAACAAAAAC-A[-????]
EU054953_5053_Aeshna_multicolor NNNNNNNNNNNNNNNNNNNNNNNNNN------NNNNNNNNNNNNNNNN-NNN--NNNNNNNN--NNNNNN---NNNNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNN---NNNNNNNNNNNNNNNN--NNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNN--NNNNNNNNNNNNNN---N-NNNN-NNN-NNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNNNNN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN-----------------
-------------------------------------NNNN------------------NNNNNNNNNNNNNN-N[-????]
AF268609_Aeshna_cyanea NNNNNNNNNNNNNNNNNNNNNNNNNN------NNNNNNNNNNNNNNNN-NNN--NNNNNNNN--NNNNNN---NNNNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNN---NNNNNNNNNNNNNNNN--NNNNNN NNN--
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NNNNNNNNNNNNNN--NNNNNNNNNNNNNN---N-NNNN-NNN-NNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNNNNN-NNNNNNNNNNNNNNNN-NNNNNNNNN--------------------
--[-????]
EU477645_Aeshna_grandis CUCGAUUUCAGAAGAGCUAAUUAAUU------AAUUUAGUUAAUGUAU-CAU--GAUUAUUA--AUAAUA---UUAAUUAG
G-GAAGA-AAUUUC-AUUCGUUUU-AAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUAAAUUUAGA-AUUAUAAUUU--AUUUAAUUAAUU---UUUUAAUUAAAUAUUU--UAUAAU AUU--
AAAAUAAUAGGGGAUAAGCUCUAUUUUU--AUUCUAUAAAUUGUAGUUUUAAAU-----CAAUUUAUGUAGGGUUAAGAUCAUCCAUCAUUU-AUAAGUACGUUAUAGUAAA-
AAUUGAUUAAAUUA--GAUUUUAUUAAUUU---U-AGAA-UUA-UAUUAAAAUAAUAAAU-UUAA-CA-AUAAAUUUUAU-GAAAUAAUGAUUAAAU-UAGUAUAAUUAUU--UAUUUAAAAUA----
-AUUAAGUUGAGAUGAUUAGAUAAGGAACUCGGCAAA-UAAA----------CACUCGCCUGUUUAACAAAAAC-A[-????]
EU477643_Gynacantha_japonica CUCGAUUUCAGAAGAGCUACUUAAUU------AAUUUAGUUACUGUAU-CAU--GAUUAUUA--AUAAUA---UUAAUUAG
A-GAAGA-AAUUUC-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUAAAUUUAGA-AUUAUAACUU--AUUAAAUUAAUU---UUUUAAUUUAAUAUAG--UAUAAU AUU--
AAAAUAAUAGGGGAUAAGCUCUAUUUUU--AUUCUAUAAAUUGUU-UAAAAAUU-----CAAUUUAUGUAGGGUUAAGAUCAUCCAUCAUUU-AAAAGUACGUUAUAGUAAA-
AAUUGAUUUAAUUU--GAUUUAUUUAAUUU---U-AGUA-UUU-UAUUAAAAUAAUAAAU-UUAA-CU-AUAAAUUUUAU-GAAAUAAUGAUUAAAU-UAGUAUAAUUAUU--UAUAAAAAGUU----
-AUUAAAUUGAGAUGAUUGAAUAAGGAACUCGGCAAA-UAAA----------CACUCGCCUGUUUAACAAAAAC-A[-????]
Austrogynacantha_heterogena_AAH ??????????????????????????------????????????????-???--????????--??????---??????-?
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EU477650_Hemianax_ephippiger                      -UCGAUUUCAGAAGAGCUAAUUAAUU------AAUUUAGUUAAUGUGU-CAU--GAUUAUUA--RAAAUA---UUAAUUAG
R-GAAGA-AAUUUC-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-AUUAUAAAUU--AUUUAAUUAAUU---UUUUAAUUAAAUAUAU--UAUAAU AUU--
AAAAUAAUAGGGGAUAAGCUCUAUUUUU--AUUCUAUAAAUUUAAW-UUUUAAU-----CAAUUUAUGUAGGGUUAAGAUCAUCCAUCAUUU-AUGAGUACGUUAUAGUAAA-
AAUUGAUUAAAUUU--GAUUUAUUUAAAUU--UU-AGAA-UAU-UAUUAAAAUAAUAAAU-UUAA-CA-AUAAAUUUUAU-GAAAUAAUGAUUAAAU-UAGUAUAAUUAUU--UAUUURAAAUA----
-AUUAAAUUGAGAUGAUUAAAUAAGGAACUCGGCAAA-UAAA-----------CACUCGCCUGUUUAACAAAAAC-A[-????]
Anax_junius_OAJ                                   CUCGAUUUUAAAAGAGCUAAUUAAUU------AAUUUAGUUAAUGUGU-CAU--GAUUAUUA--AAAAUA---UUAAUUAG
G-GAAGA-AAUUUCUAUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-AUUAUAAAUU--AUUUAAUUAAUU---UUUUAAUUAAAUAUAU--UAUAAU AUU--
AAAAUAAUGGGGGAUAAGCUCUAUUUUU--AUUCUAUAAAUUUAAA-UUUUAAU-----CAAUUUAUGUAGGGUUAAGAUCAUCCAUCAUUU-AUGAGUACGUUAUAGUAAA-
UAUUGAUUAAAUUA--GAUUUAUUUAAAUU--UU-AGAA-UUU-UAUUAAAAUAAUAGAU-UUAA-CA-AAAUAUUUUAU-GAAAUAAUGAUUAAAU-UAGUAUAAUUAUU--UAUUUAUAAUA----
-AUUAAUUUGAGAUGAUUAAAUAAGGAACUCGGCAAA-UAAA-----------CACUCGCCUGUUUAACAAAAAC-A[-????]
EU477652_Anax_imperator                           CUCGAUUUCAGAAGAGCUAAUUAAUU------AAUUUAGUUAAUGUGU-CAU--GAUUAUUA--AAAAUA---UUAAUUAG
G-GAAGA-AAUUUC-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-AUUAUAAAUU--AUUUAAUUAAUU---UUUUAAUUAAAUAUA---UAUAAU AUU--
AAAAUAAUAGGGGAUAAGCUCUAUUUUU--AUUCUAUAAAUUUAGA-UUUUAAU-----CAAUUUAUGUAGGGUUAAGAUCAUCCAUCAUUU-AUGAGUACGUUAUAGUAAA-
UAUUGAUUAAAUUA--GAUUUAUUUAAAUU--UU-AGAA-UUU-CAUUAAAAUAAUAAAU-UUAA-CA-AAAUAUUUUAU-GAAAUAAUGAUUAAAU-UAGUAUAAUUAUU--UGUUUAUAAUA----
-AUUAAAUUGAGAUGAUUAAAUAAGGAACUCGGCAAA-UAAA-----------CACUCGCCUGUUUAACAAAAAC-A[-????]
Unaligned_Gomphidae                               ----------------------9999999999999999999----------------99999999999999999------
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Sinogomphidia_kruegeri_ASK                        CUCGAUUUUAAAAGAGCUAAGUUUAU------AAUUUCUUUAAUGUUU-CAU--AAUUAUGAA-GAAUAU---AAUUUUAG
A-GGAGA-AAUUCC-AUUCGAUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UGAA-UUUAAUUCAAC-ACAAAUAGGU--AUACUUUUAUUU----UUUUUAUAAGUCUAUUGGUUUGU UUA--
AAGGUUUUAGGGGAUAAGCUCUGGAGCU--UUAUUAAAAGAUUAUUAUUGAUU------UAAAUUUUGUAGGAUUUGUAACGUCCAUCAUUA-AUUAGUACGUUAUAGUUUA-
AUUUAAUUAGAUUU--GAUUUUCUUUAUUC-UUU-AAUA-UCU-UAUUAAAAUGAUGUGU-UAAA-UC-UUGUAUCACUU-GUAAU--UGAUUGAAU-UAGUAUAAUAUUU--UGUUAUAUAUUU-U-
-AUUUUAAUGUGACAAUUUAAUAAGGAACUCGGCAAA-UAAA-----------CUCCCGCCUGUUUAUCAAAAAC-A[-????]
EU054969_5066_Ictinogomphus_australis             NNNNNNNNNNNNNNNNNNNNNNNNNN------NNNNNNNNNNNNNNN-NNN--NNNNNNNN--NNNNNN---NNNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN------------------------------------------------------
---------NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNN--NNNNNNNNNNNNNN---N-NNNN-NNN-NNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNN-NN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN-----------------
--------------------------------------NNNN-------------------NNNNNNNNNNNNNN-N[-????]
Ictinogomphus_sp                                  ---------------------------------------------------------------------------------
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EU477674_Lindenia_tetraphylla                     CUCGAUUUCAGAAGAGCUAAAUUUAU------AAUUUCUUUAAUGUAU-CAU--AAUUAUGG---AGAAUAUAA-UUUUAG
G-GGAGA-AAUUCU-AUUCGAUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UGAA-UUUAAUUCAGU-GUUAAUUGUU--AUAUUAUUUAUU---UUCCUUAAUAAUAUAUUAGUUAAU AAA--
AAGAGCUUAGGGGAUAAGCUCUAAGCUU--AUUUUAAAAGCAUUAAUUUAUU-------UAAAUUGUGUAGGAUUUGUAACGUCCAUCAUUA-AUUAGUACGUUAUAGUUUA-
AUUUAAUUAAAUUU--GAUUUUUUAUUGUU--UU-AAUA-UUU-UAUUAAAAUUAGACGU-UUAA-CU-UUGUAUCGUUU-GUAAUAAUGAUUAAAU-UAGUAUAUGGUUG-UUGUAAUUAUUUU---
-AAUUGAAUGGCAUAAUUAAAUAAGGAACUCGGCAAA-UAAA-----------CUCCCGCCUGUUUAUCAAAAAC-A[-????]
Phyllogomphoides_stigmatus_GOM                    CUCGAUUUUAAAAGAGCUAAUUUUUU------AUUUUUUUUUAAUGUUU-CAU--AAUUAUAA---AUAAUUUAA-UUUUAG
U-GGAGA-AAUUUU-AUUCGCUUUUAAAGG-UAUCUGGUU-UUUCAAGAAA-UGAA-UUUAAUUCAAU-GUUAGUUUUU--AAUACUUUUAUU---UGUUAAGGCUAUUAUAA-AUUAAU UUA--
AAGAUUUUAGGGGAUAAGCUCUAAGAUUUUAUUUAUAAAUUUAUUUUAUUU--------UAAUUUUUGUAGGAUUUAUAACGUUCAUCAAUA-AUUAGUACGUCGUAGUUUA-
UUUUAUUUUUAUAU-GGAUUUUCUUUUAUU--UU-AAUA-UUU-UAUUGAAAUAGGGUGU-UUAA-UU-UUGUAACACUU-GCAAUAAUGAUUAAAU-UAGUAUAUAUGUU--UGUUAUAAAUUU---
--AAUUUUUGGGAUUAUUAAUUAAGGAACUCGGCAAA-UAUA----------ACUCUCGCCUGUUUAUCAAAAAC-A
AF266080_Progomphus_obscurus                      CUCGAUUUCAGAAGAGCUAAAACUAU------AAUUUUUUUAAUGUUU-CAU--AAUUAUAU---AUAAUAUAG-UUUUAG
G-GGGGA-AACCCC-AUUCGACUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UGAA-UUUAAUUCAAU-AUCAAUUUUU--AUAAGCUUUAUUG-UUAUUAAUCUUGUAUAUUAAUUGGU UGA--
AAGGUUUUAGGGGAUAAGCUCUGUAACU--UUAAUUAAAAACUUAAAUUAACU------UAGAUUUUGUAGGAUUUAUAUCGUCCAUCGAUG-GUUAGUACGUUAUAGUUUA-
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AUCUAGCUUAAUUA--GAUUUUCUUUACUU--UU-AAUA-UUU-UAUUAAAAUAGGGCAU-UUAA-UU-UUUAAAUGCUU-GUAAUAAUGAUUAAAU-CAGUAUAUUUAUC--UGUAUUUUAUUU---
--AUUUUUUGAGAUUAUUAUUUAAGGAACUCGGCAAA-UUUAA----------UUCUCGCCUGUUUAUCAAAAAC-A[-????]
EU054982_5078_Progomphus_borealis                  N-NNNNNNNNNNNNNNNNNNNNNNNN------NNNNNNNNNNNNNNNN-NNN--NNNNNNNN---NNNNNNNNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNN--NNNNNNNNNNNNNNNNN-NNNNN NNN--
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NNNNNNNNNNNNNN--NNNNNNNNNNNNNN--NN-NNNN-NNN-NNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNNNNN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN------------------
--------------------------------------NNNN------------------NNNNNNNNNNNNNN-N[-????]
EU477667_Hagenius_brevistylus                      CUCGAUUUCAGAAGAGCUAAAA-CCA------GUUAAAAUUAAUGUGG-CAU--AAUUAUAGU--UUAACUGGG-UUUUAG
G-GGAGA-AAUUCU-AUUCGAUUUUAAAGG-UAUCUAGUU-UUUCAAGAAU-UAAA-UUUAAUUUAGG-CUUAUAUUUU--AAUGAAUUAAUU---UAUUUAAUUUUUUAUGGAUAUGAU GCU--
AAUAUUUUAGGGGAUAAGCUCUAAUUUA--CUUUUAAAAAUACUAUAUUGGGU------UAAUUUAUGUAGGAUUUAUACCGUUCAUCAAUA-AAAAGUUCGUUAUAGUUUA-
UUUUGAUUUGUUAU--GAUUUUUUUUUAUU--UU-AGUA-GAU-UAUUGAAAUAUUAUUU-AUAA-UU-UUAUAAAAUUU-GUAGUAAUGAUUAAAU-UAGUAUAUUAGUA--UGUUUACUAUUA---
-UUUAUAGUGGUAUGAUUAAAUAAGGAACUCGGCAAA-UAUAA----------CGCUCGCCUGUUUAUCAAAAAC-A[-????]
Lanthus_vernalis_OLV                               CUCGAUUUUAAAAGAGCUAAAAUUAA------AUUAUAAUUGUUGUUU-UAU--AACCAUAA--UUAAUUUUAA-UUUUAG
G-GGAGA-AAUUCU-AGUCGAUUUUAAAGG-UAUCUAGUU-UUUUAAGAGA-UAAA-UUUAAUUUAGA-UUUAAUUCAU--UAAAUAGUUAAU--UUUUAUUAAUUAUUUAUUAAUUGAA GUU--
AAAAUUUUAGGGGAUAAGCUCUAAAUUU-UAUUCUAUAAAAGAGGGUUUAUU-------UAAUUUAUGUAGGGUUUAAAACAUUCAUCAUUA-AUGAGUCCGUUGUAGUUCA-
AAUUAAACUGAAUU--GAUUUUCUUAUAUU--UU-AGUA-UUC-UAUUAAAAUAAUAUUU-UUAA-UU-UUAUAUAAUUU-GUAAUAAUGAUUAAAU-UAGUAUAUGAUUU--UGUAUAUCAUUU---
--AUAUUGUGGUAUAAUUAAAUAAGGAAUUCGGCAAA-UACAA----------UUCUCGCCUGUUUAUCAAAAAC-A[-????]
EU477668_Davidius_nanus                            CUCGAUUUCAGAAGAGCUANUAAAUUU-------UAUU--UGCUGUUU-UAU--AACCAUGU---UUAAUUUAA-UUUUAG
A-AGAGA-AAUUUU-AUUCGAUUUUGGAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGA-UCUGGG-UGU--UAAAUGUUUUAU----UUAUUAAUUAUUUAUUAACUAGG AUU--
AAAAUAUUAGGGGAUAAGCUCUAAUUUU-AAUACUA-AAAAGUUUAUUUUUAUU-----UUAUUUAUGUAGGCUUUAAAACAGCCAUCAUUU-UUGAGUUCGUUGUAGUUAA-
AAUUUAAUUAAUUG--GAUUUUCUUUGUUU--UU-AGUUUUAU-UAUUAAAAUGUUACUU-UUAA-UG-GUAAAAAGUUU-GUAAUAAUGAUUGAAU-UAGUAUAGGUGUA--UUGUAUACAAAA-U-
-UAUCUUUUUGUAGUAUUAAAUAAGGAAUUNNNNNNN-NNNNN----------NNNNNNNNNNNNNNNNNNNNNN-N[-????]
EU477680_Neogomphus_edenticulatus                  CUCGAUUUCAGAAGAGCUAAAUUUAUAA------UUUCUUUAAUGUUU-UAU--AAUUAUGG---AAAAUUUAU-UUUUAG
G-GGAGA-AAUUCU-AUUCGAUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UGAA-UUUAAUUCAGA-AUUGAUUAAU--UAGUUAUUUUAUUUUUUUUUUAAUUUGCUAUUAAYCAAU UUU--
AAAAUUUUAGGGGAUAASCYCUGAAUUU--UUAUUUAUAACUUUAAUAUAUU-------UAAAUUAUGUAGGAUUUAUAACGUUCAUCAUUA- AAUAGUACGUUGUAGUUUAAUUUAAUUCGUUUAU--
GAUUUUUUGUUGUU--UU-AAUA-UUU-UAUUAAAAUUAAAUUU-UUAA-UU-UUGUAAUAUUU-GUAAUAAUGAUUAAAU- UAGUAUAUUUUGU--AUGUUUACAGUU----
GUUAUUUUGGGAUUAUUAAAUAAGGAACUCGGCAAC-UAUAA----------UUCUCGCCUGUUUAUCAAAAAC-A[-????] Armagomphus_armiger_AAAr
                                                   ?????????????????????????????------??????????????-???--????????---?????????-????-?
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Hemigomphus_comitans_AHC                           ?????????????????????????????------??????????????-???--?????????--????????--????-?
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EU477683_Hemigomphus_heteroclytus                  CUCGAUUUUAAAAGAGCUAGGAUCAUAU------UACUUUUAAUGUGU-CAU--AAUUUUAU---UUAAUGUGA-UUUUGG
C-GGAGA-AAUUCU-AUUCGAUUUUAAAGG-UAUCUAGUU-UUUUAAGAGA-UGAA-UUUAAUUCUAU-GUUUAUUUAU--UAAUUAAUUGAU----UUUUUAAUUAAUUAUUAAUGAAC UUG--
AAUACUUUAGGGGAUGAGCUCUAAAUUA-UUUUUAUAAGCUUUUAAUUUCAMU------UAAUUCCUGUAGGAUUUGUAACGUCCAUCAUUA--UUAGUACGUUAUAGUUUM-
MAUUAMUUUUGUUU--GAUUUUUUGGGCUU---U-AAUA-UUU-UAUUAAAAUAGAGUCU-AUAA-UU-UUUAUUGAUUU-GUAAUAAUGAUUAUAU-UAGUAUAUUUCUU--UGUAAUAUAUUU---
--UUUAAUUGGGAUUAUUAAAUAAGGAACUCGGCAAA-UAUAG----------UUCUCGCCUGUUUAUCAAAAAC-A[-????]
EU054939_5039_Hemigomphus_magela                   NNNNNNNNNNNNNNNNNNNNNNNNNNNN------NNNNNNNNNNNNNN-NNN--NNNNNNNN-NNNNNNNN-N--NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNN-NNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNN--NNNNNNNNNNNNNN---N-NNNN-NNN-NNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNNNNN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN------------------
--------------------------------------NNNN------------------NNNNNNNNNNNNNN-N[-????]
Trigomphus_sp                                      --------------------------------------------------------------------------------
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EU477665_Stylogomphus_albistylus   CUCGAUUUCAGAAGAGCUANNNNNNN------NNNNNNNNNNNNNNNN-NNN--NNNNNNNN--NNNNNN--NNNNNNNN
N-NNNNN-NNNNNN-NNNNNNNNNNNNNN-NNNNNAGUU-UUUUAAGA---UAAA-UUUAAUUUAGA-CUUAAU-CGU--UAAGUGGUUAAU--UUGUUAACCAC--UCAUAGGUUGAG AUU--
AAGACUUUAGGGGAUAAGCUCUGAAUUUAU-UCUAAAAGUAUAAUUAUUAUUU-------AUAUGUUGUAGGAUUUAAAACGUCUAUCAUUU-AUAAGUUCGUUAUAGUUUA-
UUAUAUUUUGUAUU--GAUUUUUUAU-GUU--UU-AGUA-UAU-UAUUAAAAUGUUAUUU-UUAA-UU-UCGUAAAGUUU-GUAACAAUGAUUGAAU-UAGUAUAGGAUUA-UUGUAUAUUAUAU---
--UUAUUUUGAUAUAAUUAGAUAAGGAAUUCGGCAAA-AACAG---------UGCUCGCCUGUUUAUCAAAAAC-A[-????]
EU477679_Stylogomphus_shirizui   CUCGAUUUCAGAAGAGCUAUAUUUAAAU------UGUAGUUGUUGUUU-CAU--AACCAUAG---CUAAUUUAA-UUUUAG
A-GGAGA-AAUUCC-AUUCGAUUUUAAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGA-CUUGAUUGUU--AAGUGGUUAAU-----UUAUUAAUUACUUAUGUGUUAAU GUU--
GAGAUUUUAGGGGACAAGCUCUGGAUUAUAUACUA-AAAGUAUAAAUUGAUAU------UAUGUUUUGUAGGAUUUGAAACGUUCAUCAUUU-GUAAGUUCGUUAUAGUUUA-
UUAUGUUUUGUAUU--GAUUUUUUUGUGUU--UU-AGUA-UUU-UAUUAAAAUGAUGCUU-UUAA-UA-UUAUAAAUUUU-GCAAUAAUGAUUAAAU-UAGUAUAGAAUUU--UGUAUAUUAUAU---
--UUAUUUUGAUAUAAUUAGAUAAGGAAUUCGGCAAA-AAUAG---------UGCUCGCCUGUUUAUCAAAAAC-A[-????]
EU054997_5093_Davidioides_martini   NNNNNNNNNNNNNNNNNNNNNNNNNNNN------NNNNNNNNNNNNNN-NNN--NNNNNNNN---NNNNNNNNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNN-NNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-N---NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNN--NNNNNNNNNNNNNNN---N-NNNN-NNN-NNNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNNNNN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN-----------------
--------------------------------------NNNN------------------NNNNNNNNNNNNNN-N[-????]
Burmagomphus_collaris_ABC   CCCGAUUUCAGAAGAGCUAAUUUCAAAU------UAUUGUUGUUGUUU-UAU--AAACAUAU---UUAAUUUGA-UUUUAG
A-AGAGA-AAUUUU-AGUCGAUUCUGAAGG-UAUCUGGUU-UUUUAAGAAA-UAAAAUUUAAUUUAGU-CUUAGUUUUU--AUAUAAUUAAU-----UUUUUAAUUAUUUAUUAAUUAAG UUU--
GAGAUAUUAGGGGAUAAGCUCUAAUAUUA--UUCUAUAAAUUCAUUUUAAUU-------UAUCUGUUGUAGGCUUUAAAUUAGCCAUCGUUG-UUGAGUUCGUUGUAGUUCA-
UGAUAAUAUGUUUAU-GAUUUUCUGUGUU---UU-AGUA-UAU-UAUUAAAAUGUUAUUU-UUAA-UU-UUAUAAAAUUU-GUAAUAAUGAUUAAAU-UAGUAUAUAAUUU--UGUAUAUCAUUU---
--AUUUUUUGAUAUAAUUAAAUAAGGAAUUCGGCAAA-UAUAA---------CGCUCGCCUGUUUAUCAAAAAC-A[-????]
EU054996_5092_Cyclogomphus_heterostylus   NNNNNNNNNNNNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNN-NNN-N-NNNNNNN-NNNNNNNN-N---NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNN-NNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-N---NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNNNNN---NN-NNNN-NNN-NNNNNN-NNNNNNNNN-NNNN-NN-NNNNNNNNNNN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN-----------------
--------------------------------------NNNN------------------NNNNNNNNNNNNNN-N[-????]
Anisogomphus_pinratanai   --

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Dromogomphus_spinosus_GOM   CUCGAUUUCAGAAGAGCUA--?-??????----??????????????-???-?-???????-????????-?---????-?
?-??????-?????-???????????????-?????AGUU-UUUUAAGAAG-UAAA-UUUAAUUUAGA-CUUUAAUUUU--UAAGUAAUUUAU-UUAUUAAUUACUUAUU---AAUUGAG AUU--
AAGAUAUUAGGGGAUAAGCUCUAAUAUUA--UUCUAGAAAUUUUAUUUUAUU-------UAAUUUUUGUAGGCUUUAAAUCAGCUAUCAUUA-AAGAGUUCGUUGUAGUUCA- AUAAGUGAAAUUUAU-
GAUUUUCU-UUAUU--UU-AGUA-UUU-UAUUAAAAUGAUAUUU-UUAA-UU-UUAUAAAAUUU-GUAAUAAUGAUUAAAU-UAGUAUAUUUGUU--UGUUGUUUAUCA--
UUUAUUUUUUGAUAUAAUUAAAUAAGGAAUUCGGCAAU-UUUAA---------CACUCGCCUGUUUAUCAAAAAC-A[-????]
Arigomphus_villosipes_OAV   CUCGAUUUUAGAAGAGCUAAUU-UUAAAUUA-----UUGUGGGUGUGG-UAU--AACCAUAU---UUAAUUUAA-UUUUAG
A-GGAGA-UAUUCC-AUUCGAUUCUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-CUUGUGUAU---UAAAUGGUUAAU-UUAUUAAAUAUUUAUU--GAAUUAUG- UU--
AAUAUAUUAGGGGAUAAGCUCUAAUAUUU--UUCUAUAAGUUUAUAUUCUGUU------UAAUUUUUGUAGGCUUUAAAUCAGCUAUCAAUA-AAGAGUUCGUUGUAGUUCA- AGUAGAGGGAAUUGU-
GAUUUUUUUUUAUU--UU-AGUA-UAU-UAUUAAAAUAUUAUUU-UUAA-UU-UUGUAAAAUUU-GUAAUAAUGAUUAAAU-UAGUAUAUAUU----UGUUGUAUAUCA--
UUUAUUUUUUGGUAUAAUUAAUUAAGGAAUUCGGCAAA-AUUAA----------CACUCGCCUGUUUAUCAAAAAC-A[-????]
Arigomphus_cornutus   CUCGAUUUCAGAAGAGCUAAUU-UUAAAUUA-----UUGUUGUUGUGG-UAU--AACCAUAU---UUAAUUUAA-UUUUAG
A-GGAGA-CAUUCC-AUUCGAUUCUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGG-CUCAAUUCAU--UAGGUUGUUAAU-UUAUUAAUUAUUUAUU--GAAUUAUG
CU---AAUAUAUUAGGGGAUAAGCUCUAAUAUU---UUUCUAGAAAUUUUUAUUUUAU-----UUAAUUUUUGUAGGCUUUAAAUCAGCUAUCAAUA-AAGAGUUCGUUGUAGUUCA-
AAUAGAUGAAAUUGU-GAUUUUUU-UUAUU--UU-AGUA-UAU-UAUUAAAAUAUUAUUU-UUAA-UU-UUAUAAAAUUU-GUAAUAAUGAUUAAAU-UAGUAUAUAUUUA---UUGUAUCUCAU---
UUAUUUUUUGAUAUAAUUAAUUAAGGAAUUCGGCAAA-AUUAA----------CACUCGCCUGUUUAUCAAAAAC-A[-????]
Stylurus_intricatus_GOM   CUCGAUUUCAGAAGAGCUAAUU-UUAAAUUA-----UUCUUGUUGUAA-CAU--AACCAUAU---UUAAUUUAA-UUUUAG
G-GGAGA-UAUUCC-AUUCGAUUCUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-CUUUUUUAU---UAAAUAAUUUAU-UUAUUAAUUAUUUAUU---AAUUGAG AUU--
AAGAUAUUAGGGGAUAAGCUCUAAUAUUU--UUCUAAAAAUUUCGUUUUUUU-------UAUUUUUUGUAAGCUUUAAAUUAGCUAUCAUUU-AUGAGUUCGUUGUAGUUCA-

AAAUAGUAAAAUUAU-GAUUUUCUUUAAUU--UU-AGUA-UUU-UAUUAAAAUAAUGUUU-UUAA-UU-UUAUAAAACUU-GUAAUAAUGAUUAAAU-UAGUAUAUAUAUU--UUUGUGUGUUGU---
UUAUUUUUUGUUAAAAUAAAAUAAGGAAUUCGGCAAU-UUUAA----------CGCUCGCCUGUUUACCAAAAAC-A[-????]
Stylurus_amnicola CUCGAUUUCAGAAGAGCUAAUU-UUAAAUUA-----UUCUUGUUGUAA-UAU--AACCAUAU---UUAAUUUAA-UUUUAG
G-GGAGA-UAUUCC-AUUCGAUUCUGAAGA-UAUCUGGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-CUUGGUUAU---UAAAUAAUUUAU-UUAUUAAUUAUUUAUU---AGUUAAG AUU--
AAAAUAUUAGGGGAUAAGCUCUAAUAUUA--UUCUAAAAAUUUCGUUUUUUU------UUAUUUUUUGUAAGCUUUAAAUUAGCUAUCACUU-AUGAGUUCGUUGUAGUUCA-
AAAUAAUAAAAUUAU-GAUUUUCUUUAAUU--UU-AGUA-UUU-UAUUAAAAUGAUAUUU-UUAA-UU-UUAUAAAAUUU-GUAAUAAUGAUUAAAU-UAGUAUAUAUUUA-UUUUGUGUGUUGU---
UUAUUUUUUGUUAGUAUAAAAUAAGGAAUUCGGCAAA-UUUAA----------CGCUCGCCUGUUUACCAAAAAC-A[-????]
EU477659_Stylurus_nagoyanus CUCGAUUUCAGAAGAGCUAAUU-UUAAAUUA-----UUUUUGUUGUAA-UAU--AACCAUAU---UUAAUUUAA-UCUUAG
A-GGAGA-UAUUCC-AUUCGAUUCUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGG-CUUAGUUAU---UAAAUAAUUUAU-UUGUUAAUUAUUUAUU---AAUUAAG ACU--
GAGAUAUUAGGGGAUAAGCUNUAAUAUUU---UCUAAAAAUUUCAUUUUUUU-------UGUUUUUUGUAAGCUUUAAAUCAGCUAUCAUUU-AUGAGUUCGUUGUAGUUCA- AAUUAAUAAAAUUAU-
GAUUUUCUUUAAUU--UU-AGUA-UCU-UAUUAAAAUAAUAUUU-UUAA-UU-UUAUAAAAUUU-AUAAUAAUGAUUAAAU-UAGUAUAUAGUUA-UUUUGUGUGUAG---
UUUAUUUUUUGUUAGUAUUAAAUAAGGAAUUCGGCAAA-UUUAA----------CACUCGCCUGUUUACCAAAAAC-A[-????]
Gomphurus_Gomphus_externus CUCGAUUUCAGAAGAGCUAAUU-UUAAAUUA-----UUGUUGUUGUAG-CAU--AACCAUAU---UUAAUUUAA-UUUUGG
A-GGAGA-UAUUUU-ACUCGAUUUUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-CUUAAUUAU---UAAGUAAUUUAU-UUAUUAAUUAUUUAUU---AAUUGGG AUU--
AAAAUAUUAGGGGAUAAGCUCUAGUAUUA--UUCUAAAAAUUUUUGUUUUAUU------UAAUUUUUGUAGGCUUUAAAUCAGCUAUCAUC--AAGAGUUCGUUGUAGAUCA-
AAUAAAUAGGAUUGU-GAUUUUCU-UUAUU--UU-AGUA-UUU-UAUUAAAAUGAUAUUU-UUAA-UU-UUAUAAAGUUU-UUAAUAAUGAUUAAAU-UAGUAUAUUUUUA---UUGUAUAUCAU---
UAAUUUUUUGGUAUAAUUAAAUAAGGAAUUCGGCAAA-UUUAA----------CGCUCGCCUGUUUAUCAAAAAC-A[-????]
EU477664_Asiagomphus_melaenops ---

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Gomphus_Phanogomphus_exilis CUCGAUUUCAGAAGAGCUAAUU-UUAAAAUUA----UUGUUGUUGUUA-UAU--AACCAUAU---UUAAUUUAA-UUUUAG
A-GGAGA-UAUUCC-AUUCGAUUUUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-UUUGUUUAU---UAAAUAAUUUAU-UUAUUAAUUAUUUAUA---AAUCGGA AUU--
AAAAUAUUAGGGGAUAAGCUCUAAUAUUA--UUCUAAAAGUUUUGUAUUAUC-------UUGUUUUUGUAGGCUUUAAAUCAGCCAUCUUUA-AGGAGUUCGUUGUAGUUCA-
AAUAAGUAUGAUUAU-GAUUUUCU-UAAUU--UU-AGUA-UUU-UAUUAAAAUGAUAUUU-UUAA-UU-UUUUAAAAUUU-GUAAUAAUGAUUAAAU-UAGUAUAUGUUUU---UUGUAUAUCAU---
UUAUAUUUGGGUAUAAUUAAAUAAGGAAUUCGGCAAA-UUUAA----------CACUCGCCUGUUUAUCAAAAAC-A[-????]
Gomphus_Gomphus_graslini CUCGAUUUCAGAAGAGCUA--?-??????----???????????????-???--???????-?--???????-?-????-?
?-??????-?????-???????????????-?????AGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGU-CUUAGCUGU---UAAAUAAUUUAU-UUAUUAAUUAUUUAUU---AACUAAG AUU--
GAGAUAUUAGGGGAUAAGCUCUAAUAUUA--UUCUAAAAAUUCUGUUUUAUU-------UAAUUUUUGUAAGCUUUAAAUUAGCUAUCAUUA-AAGAGUUCGUUGUAGUUCA- AAUAAAUAAUAAUGU-
GAUUUUCU-UUAUU--UU-AGUA-UUU-UAUUAAAAUGAUAUUU-UUAA-UU-AUAUAAAAUUU-AUAAUAAUGAUUGAAU-UAGUAUAACUUUA---UUGUAUAUCAU---
CUAUUUUUUGAUAUAAUUAAAUAAGGAAUUCGGCAAA-UUUAA----------CGCUCGCCUGUUUAUCAAAAAC-A[-????]
Gomphus_Hylogomphus_adelphus_OGA CUCGAUUUCAGAAGAGCUAAAU-UUGAAUUG-----GUGGUGGUGGUA-UAU--AAUCAUAA---UUAAUUUAA-UUUUAG
G-GGAGA-UAUUCC-AUUCGAUUUUGAAGG-GAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-CUUGGGUAU---UAAAUAAUUAAU-UUAUUAAUUAUUUAUU---AAUUAAG AAU--
GAGAUAUUAGGGGAUAAGCUCUAAUAUUA--UUCUAAAAAUUUCGGUUUAUU-------UAAUUUUUGGAGGCCUUAAAUUAGCCAUCAUUA-GGGAGUUCGGUGUAGUUCC-
AAUAAAUGAAAUUAA-GAUUUUUUUUUAUU--UU-AGUA-UUU-UAUUAAAAUGAUAUUU-UUAA-UU-UUAUAAAAUUU-GUGAUAAUGAUUAAAU-UAGUAUAUGUAUG---UUGUAUAUCAU---
UUAUUUUUUGAUAUAAUUAAAUAAGGAAUUCGGCAAA-AUUAA----------CACUCGCCUGUUUAUCAAAAAC-A[-????]
Gomphus_Gomphus_vulgatissimus CUCGAUUUCAGAAGAGCUAAUU-UUAAAUUA-----UUGUUGUUGUGA-UAU--AACCAUAU---UUAAUUUAA-CUUUAG
A-GGAGA-UAUUCC-AUUCGAUUUUGAAGA-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGU-CUUGGCUGU---UAAGUAAUUUAU-UUAUUAAUUACUUAUU---AACUAAG AUU--
GAAAUAUUAGGGGACAAGCUCUAAUAUUA--UUCUAAAAAUUCUGUUUUAUU-------UAAUUUUUGUAAGCUUUAAAUUAGCUAUCAUUA-AAGAGUUCGUUGUAGUUCA- AAUAAGUAAUAAUGU-
GAUUUUCU-UUAUU--UU-AGUA-UUU-UAUUAAAAUGAUAUUU-UUAA-UU-UUAUAAAAUUU-AUAAUAAUGAUUGAAU-UAGUAUAACUUUA---UUGUAUAUCAU---
UUAUUUUUUGAUAUAAUUAAAUAAGGAAUUCGGCAAA-UUUAA----------CACUCGCCUGUUUAUCAAAAAC-A[-????]
Megalogomphus_sp ---

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Onychogomphus_Onychogomphus_uncatus CUCGAUUUCAGAAGAGCUA--?????------????????????????-?????????????--??????-??????????
?-?????-??????-???????????????-?????AGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGA-UUUUAUUUUU--AAAUAUUUAAUU-AAAU-UAAAUAUUUAUA-AUUUAAAA- UU--
AAAAUUCUAGGGGAUAAGCUCUAGUUUUA-UGACUAUAACUUUUAUUAUUAU-------UAAAAUAUGUAGGCUUUAAAUUAGCUAUCAUUUAUUGAGUUCGUUGUAGUUCA-

UUUUAAUAUAAUUG--GAUUUACU-UAGGU-UUU-AGUA-UUU-UAUUAAAAUAUUAUUU-UAAA-CU-AUAAAAAGUUU-GUAAUAAUGAUUAAAU-UAGUAUAG-GAU---
UUUGUAUUAAAUAAUAUUAUUUAAUAU--AAUUGAAUAAGGAACUCGGCAAA-UAUAA---------CAAUCGCCUGUUUAUCAAAAAC-A[-????]
Onychogomphus_Onychogomphus_forcipatus CUCGAUUUCAGAAGAGCUAUUU-UUAAAUUA-----CUUUUACUGUUU-CAU--AAGUAUAU---UGAAUUUAA-UUUUAG
U-GGAGA-AAUUUU-AUUCGAUUCUAAGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGAUUUUAUUUU-U--AAACAUUUUAU--UAAUUAAAAUGUUUAUA--AUUUAAA AUU--
AAAAUAUUAGGGGAUAAGCUCUAAUUUUA-UUUCUAUAACUUUAAUUAUUAU-------UAAAUUAUGUAGGCUUUAAAUCAGCUAUCAUUUGUUGAGUUCGUUGUAGUUCA-
UUUUAAUAUAAUUA--GAUUUACU-UGAGU--UU-AGUA-UUU-UAUUAAAAUAUUACUU-UAAA-CC-AUAAAAAGUUA-GUAAUAAUGAUUAAAU-UAGUAUAAAAUUU--UGUAUUAAAUAU---
-UAUUAUUUGAUAUAAUUGAAUAAGGAACUCGGCAAA-UAUAA---------CAAUCGCCUGUUUAUCAAAAAC-A[-????]
EU477672_Onychogomphus_sp NNNNNNNNNNNNNNNNNNNNNN-NNNNNNNN-----NNNNNNNNNNNN-NNN--NNNNNNNN-NNNNNNNNNN--NNNNAG
U-GGAGA-AAUUUU-UUCGGAUUCUAAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGAUUUUAUUUU-U--AAACAUUUUAU--UAAUUAAAAUGUUUAUA--AUUUAAA AUU--
AAAAUAUUAGGGGAUAAGCUCUAAUUUUA-UUUCUAUAACUUUAAUUAUUAU-------UAAAUUAUGUAGGCUUUAAAUCAGCUAUCAUUUAUUGAGUUCGUUGUAGUUCA-
UUUUAAUAUAAUUA--GAUUUACU-UGAGU--UU-AGUA-UUU-UAUUAAAAUAUUACUU-UAAA-CC-AUAAAAAGUUA-GUAAUAAUGAUUAAAU-UAGUAUAAAAUUU--UGUAUUAAAUNN---
-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNN---------NNNNNNNNNNNNNNNNNNNNN-N[-????]
Ophiogomphus_Ophionurus_carolus_OOC CUCGAUUUUAGAAGAGCUAAUU-UUAAAUUA-----UUUUUACUGUUU-CAU--AAGUAUAU---UGGAUUUAA-UUUUGG
U-GGAGA-AAUUUU-AUUCGAUUCUAAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGAUUUUAUUUAUU--AAGUAUUUUAU-UUAAUUAAAUAUUUAUA---AUUUAAA AUU--
AAAAUACUAGGGGAUAAGCUCUAGUUUUAAUAUCUAUAAUUUUUAUUUUGAU-------UAAAUUAUGUAGACUUUAAAACAGUCAUCAUUU-UUGAGUACGUUGUAGUNNN-
NNNNNNNNNNNNNN--NNNNNNNN-NNNNN--NN-NNNN-NNN-NNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNNNNN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNNN--NNNNNNNNNNNN---
-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNN---------NNNNNNNNNNNNNNNNNNNNNN-N[-????]
Ophiogomphus_severus_GOM CUCGAUUUCAGAAGAGCUAAUU-UUAAAUUA-----UUUUUACUGUUU-CAU--AAGUAUAU---UAAAUUUAA-UUUUAG
U-GGAGA-AAUUUU-AUUCGAUUCUAAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGAUUUUAUUUAUU--AAAUAUUUUAU-UUAAUUAAAUAUUUAUA---AUUUAAA AUU--
AAAAUACUAGGGGAUAAGCUCUAGUUUUAAUAUCUAUAAUUUUUAUUUUGUU-------UAAAUUAUGUAGACUUUAAAACAGUCACCAUAU-UUGAGUUCGUUGUAGUUCA-
UUUUAAUAUAAGUA--GAUUUACU-UGAUU--UU-AGUA-UUU-UAUUAAAAUAUUACUU-UAAA-UU-AUAAAAAGUUG-GUAAUAAUGAUUAAAU-UAGUAUAUGAUUU--UGUAUUAAAUAA---
-UAUUAUUUGAUAUAAUUGAAUAAGGAAUUCGGCAAA-UAUAA---------CAAUCGCCUGUUUAUCAAAAAC-A[-????]
Ophiogomphus_caecilia --

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Leptogomphus_elegans_GOM_OLEg CUCGAUUUUAGAAGAGCUAAUU-UUGAAUAA-----UGAUUACUGUUU-CAU--AAUUAUCA---UUAAUUCAA-UGUUGG
G-GGGGA-AACCUC-AUUCGAUUUUAAUGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGG-UUUGUUUAUU--AAUUUGUUUUUU----AGGGAGUGGAUUAUU-AGGCAAA GCA--
AACGCUUUAGGGGAUAAGCUCUUAGGUGUGAAAGUUAUAAUUUUGUAGUGUU-----UUUAAUUUAUGUAAGCUUUAAAUUAGCUAUCAUUG-GGAAUUUUGUUAUAAAUUG-
UUUUAGUUUAAUUU--GAUUUACU-UUAAU--UU-AGAA-UUU-UAUUAAAAUGUUACUU-UUAA-UG-UGAAAAGGUUU-GUAAUAAUGAUUAAAU-UAGUAUAUGUAAA-AUGUGUGAGGUUA---
-AUUGUAUAGUGAGGAUUUUAUAAGGAAUUCGGCAAA-UAUAA---------CAGUCGCCUGUUUAUCAAAAAC-A
EU477681_Leptogomphus_sauteri CUCGAUUUCAGAAGAGCUAUGA--AAAA--------UGGUUGCUGUUU-CAU--AAUUAUCA---UGAAUUCAA-UAUUAG
G-GGGGA-AACCCC-AAUCGGUCUUAAUGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGG-UUUGUUUAUU--AAUUUGUUUUUU----GAGAAAUAAAUUAUC-AAAUAUA GCA--
AAUAUUUUAGGGGAUAAGCUCUAAACUGA-AGACUAUAAUUUUUUAUUAUUUU------UAAUUUAUGUAGGCUUUAAAUUAGCUAUCAUUG-GUAAUUUUGUUAUAAAUUG-
UUUUAAUUUAAUUU--GAUUUAUU-UAAAU--UU-AGUA-UUU-UAUUAAAAUGUCGCUU-UUAA-UG-UGAAAAAGUUU-GUAAUAAUGAUUAAAU-UAGUAUAUUAUAU--UGUAUAAAGUUG---
-AUUAUAUAGUGAGGAUUAUAUAAGGAAUUCGGCAAA-UAAAA---------CAGUCGCCUGUUUAUCAAAAAC-A[-????]
Epigomphus_compactus_AEC CUCGAUUUUGAAGGAGCUAAUU-UUAAAUUA-----UUUUUAUUGUUU-CAU--AAAUAUUU---UUAAUUUGA-UCUUAG
U-AAGGA-AAUCUU-AUUCGACUUUGAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGA-UUUAUCUGUU--AAAUAUUUAAUU---GUAUUAUAUUUUUAUU-AGUUGAA AUU--
GAAAUGUUGGGGGAUAAGCUCUGGCUUUA--UACUAUAAAUUUAUUAACAUUU------UAAUUUAUGUGGGCUUUAAAUCAGCCAUCAUUA- UGGAGUUCGUUUUAGAUUAGAUUUUGUUAUAU--
GAUUUUCU-UUUUU--UU-AGUA-AUU-UAUUAAAAUUAUAUUU-UUAA-UA-UUUUAAAUUUU-GUAAUAAUGAUUAAAU- UAGUAUAUAUAAA--UUGUUUAUAAUU---
UUAUUUAUAAAUAAAAUUAAAUAAGGAAUUCGGCAAA-UUUAA---------CAUUCGCCUGUUUAUCAGAAAC-A EU477678_Microgomphus_chelifer
CUCGAUUUCAGAAGAGCUAAAU-UUAUAUUU-----UAUUUGUUGUUU-CAU--AAACAUUA---AAAAUUUAA-UUUUAG
G-GAAGA-AAUUUC-AUUCGAUUUUAAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGG-UUUAUUUAUU--AUUUAAUUAAUU----UAUUAAUUAUUUAUU-AAAUAAU ACA--
AAAAUAUUGGGGGAUAAGCUCUAAUUUUG--UUCUAUAUGUUUUUAUUA-UU-------CAGUUUUUGUAGGACUUAAAACACCCAUCGUUG- AAAAAUUCGUUGUAGUUUAUGCUUGUUUUAAUAU--
GAUUUUCUUUGUAC--UU-AGUA-UUU-UAUUAAAAUAAUAUUU-UUAA-UU-UUAUAAAUUUG-GUAAUAAUGAUUAAAU- UAGUAUAUUUUAU--CUUGUAAUUUAU-U--
UAUUUGUGGUGAUAAUUAAAUAAGGAAUUCGGCAAA-UAUAG---------UAGUCGCCUGUUUAUCAAAAAC-A[-????] EU477666_Heliogomphus_retroflexus
CUCGAUUUCAGAAGAGCUAGUU-UUAAAUUA-----UAGUUGUUGUUU-CAU--AACCAUUG---UAUAUUUAA-UUUUAG
G-GGAGA-AAUUCC-AUUCGAUUUUAAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGG-UUUAUUUGUU--AAUUAAUUUAUU----UAUGAGUUGAUUAUU-AGAUAAG GCU--
GAAAUAUUAGGGGACAAGCUCUAAUUUUU--UCCUAUAAUUUUCGUUUAAUU-------UAAUUUUUGUAGGGUUUAAACCAUCCAUCAUUA-AAGAGUUCGUUAUAGUUUA-

UAUUGAAUUAAUUU--GAUUUUCU-UUUAU--UU-AGUA-UCU-UAUUAAAAUAUAAUUU-UUAA-UU-UUAAAAAUUUU-GUAAUAAUGAUUGAAU-UAGUAUAAUUGUU--UUGUGAAAUAUU---
-UAUUUAUUGUUAUAAUUAAAUAAGGAAUUCGGCAAA-AAUAA---------CAGUCGCCUGUUUAUCAAAAAC-A[-????]
Macrogomphus_parallelogramma ---

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Ceratogomphus_pictus_OCH ??????????????????????-?????-----???????????????-???--????????---?????????-????-?
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Lestinogomphus_angustus_GOM_ALA CUCGAUAUUAAAAGAGCUAGGA-GAUAAA-----UAAUUUUGUUGUGG-UAU--AACCAUAU---UUAAUUAUU-UUCUUG
A-AGGAA-UAUCCU-AUUCGAUUUUAAAGG-UAUCUAGUU-UUUUAAGAGA-CAAA-UUUAAUUUGAA-UAAUUAUUAU-AAAAUAAUUAAUU-UUUUUUUAAUUGUUUUUUAAUAAUUG UUU---
AGAUAUUAGGGGAUAAGCUCUAAUUUUU-UUUAUAAAUAUAAUUUCUUUA--------UAAUUUAUGUGGGCUUUAAAUUAGCCAUCAUUU-UUGAGUUUGUUAUAAAUUA-
UUUUAAUUUAUUAU--GAUUUUAUUUAUUU---U-AGUU-GUU-UAUUAAAAUAUUAUUU-UUAA-UU-UUUGAAAAUUU-UUAAUAAUGAUUAAAU-UAGUAUAUAAGUU--UGUAUUUUAUCU---
--AUAAAAUUAAAUUAUUAAAUAAGGAACUCGGCAAA-UAAU----------UAGUCGCCUGUUUAUCAAAAAC-A
Austrogomphus_guerini_AAG ??????????????????????-?????-----???????????????-???--????????---?????????-????-?
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EU054978_5074_Austrogomphus_amphiclitus NNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNNNNNNN-NNN-N-NNNNNNN-N--NNNNNNN-N-NNNNNN
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EU054972_5068_Antipodogomphus_acolythus NNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNNNNNNN-NNN-N-NNNNNNN-N--NNNNNNN-N-NNNNNN
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Tanypteryx_hageni_OTH CUCGAUUUUAAAAGAGCUAAUU-AAAU-----AAUUUAAUUGGUGUUA-UAU--AACCAUUA----AUAAUAUA-AAUUAG
G-GGAGA-AAUUCU-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-CUUUUAAUUU--AAUUUAUUAAUU----UUUAAAUAAAUUAUU-UUAUAAG UUU--
AAAAUUUUAGGGGAUAAGCUCUAAUUUUG--UUCUAUAAAUAAUAAUUUUAUU------AAACUUUUGUAGGGUUAAGAACAUCCACCAUUA-AAGAGUACGUUAUAGUUUA- AGUUGAUUAAAUUU--
GAUUUUCUUUAUUU---U-AGUA-UUU-UAUUAAAAUAUUAAAU-UUAA-UU-AAUAUUUUUAA-GUAAUAAUGAUUAAAU-UAGUAUAAUUUAU--AUGUAUUUAUAU--
UUUAUUAUUUGAGAUGAUUUUAUAAGGAACUCGGCAAA-UUAG----------CGCUCGCCUGUUUAACAAAAAC-A
Tanypteryx_sp ---

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Tanypteryx_pryeri_PET CUCGAUUUCAGAAGAGCUAAUUGAAUG------AUUUAUUUGAUGUUG-CAU--AAUCAUUG----AAAAUGUUGAAUUAG
A-GGAGA-AAUUCU-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-CUUUUAAAUU-UAAUUUAUUUAUU----UUGAAAUAAAUUAUU-UUAUGAG UUU--
AAAAUUUUAGGGGAUAAGCUCUAAUUUUA--UUCUAUAAAUAGAAAUUAUAAA------AAAUUUUUGUAGGGUUAAGAACAUCCAUCAUUG-AAGAGUACGUUAUAGUUUA-

AAUUAAUAGAAUUU--GAUUUUCUUUAUUU---U-AGUA-UUU-UAUUAAAAUAUUAAAU-UUAA-UU-GAUAUUUUUAG-GUAAUAAUGAUUGAAU-UAGUAUAAUUUAU--AUGUAUUUAUAU--
UUUAUUAUUUGGGAUAACUUUAUAAGGAACUCGGCAAA-UUAG----------CGCUCGCCUGUUUAACAAAAAC-A[-????]
AF266081_Tach
opteryx_thoreyi CUCGAUUUCAGAAGAGCUAAUA-UAAGAAAUA-AUUUAUUUGAUGUUG-CAU--AAUCAUUA----AUUAUAUA--GUCAGU-AGAGA- AAUUCU-
AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAG-UAAA-UUUAAUUUAGA-CUUUUAAUUU--AAUUUAUUUAUU----UAUACAUUGAUUAUU-UUAGGAGUUU--AAGAUU
UUAGGGGAUAAGCUCUGAUUUUA--UUUAUUAAAAAUUUUGAUUAGAAU----GAAUCUUUGUAGGGUUAAGAACAUCCAUCAUUA-AAGAGUACGUUAUAGUUCA-AAUUAUUUCAAGAU--
GAUUUUCUUUAUUU---U-AAUA-UUU-UAUUAAAAUAUUAAAU-UUAA-UU-AUAUUUUUUGA-GUAAUAAUGAUUAAAU-UAGUAUAAUUUUA--UUGUAUUAUAUA---
UUAUUAUUUGAGAUGAUUAAGUAAGGAACUCGGCAAA-UAAG----------CGCUCGCCUGUUUAACAAAAAC-A[-????]
Phenes_raptor_PET CUCGAUUUCAGAAGAGCUAAUAUUAUA------AUUUAUUUGAUGUUA-CAU--AAUCAUUA----AAAAUAUA-AGUUAG
U-GGAGA-UAUUCU-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-UUUUUAAUUU--AAUUUAUUAAUU-----UUUAAUAAAUUAUU-UUAUGAA AUU--
AAGAUUUUAGGGGAUAAGCUCUAAUUUUA--UUCUAAAAAUUUAUUUUAUUAA------UAAUCUAUGUAGGGUUAAAAGCAUCCAUCAUUA-AUAAAUACGUUAUAGUUUA-
GAUUAUAAUAAUUA--GAUUUUCUUUAUUU---U-AGUA-UUU-UAUUAAAAUUUCAAUU-UUAA-UU-AGUGAAAUUGA-GUAAUAAUGAUUAAAU-UAGUAUAAUUAUU--AUGUUUAUAAAU---
-UAUUAAUUGAGAUAAUUAGAUAAGGAACUCGGCAAA-UUAA----------CACUCGCCUGUUUAACAAAAAC-A[-????]
Phenes_centralis_OPR ??????????????????????-????-?----???????????????-???--????????-???????????-????-?
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EU477633_Uropetala_carovei CUCGAUUUCAGAAGAGCUAUAU-UAUA------AUUUAUUUGAUGUUA-CAU--AAUCAUUA----AAAAUAUA-AGUUAG
A-GGAGA-AAUUCU-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-UUUUUAAUUU--AAUUUAUUAAUU----UUUUAAUAAGUUAUU-UUUUGAA GUU--
AAAAUUUUAGGGGAUAAGCUCUAAUUUUA--UUCUAGAAAUAUUGAUUAUAGU------UAAUUUAUGUAGGGUUAAGAUCAUCCAUCAUUA-AGGAGUACGUUAUAGUUAA-
GAUUAUUAUAAGUU--GAUUUUUUUUAUUU---U-AGUA-AUU-UAUUAAAAAUUUCAGUU-UUAA-UU-AUAAAUUUUGA-GUAAUAAUGAUUAAAU-UAGUAUAAUUGAA-UAUGUUUAUAAUU---
UUAUUGAUUGAGAUGAUAAAGUAAGGAACUCGGCAAA-UUAA----------CACUCGCCUGUUUAACAAAAAC-A[-????]
Petalura_hesperia_PET_APH ??????????????????????-?????-----???????????????-???--????????-???????????-????-?
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EU054963_5061_Petalura_gigantea NNNNNNNNNNNNNNNNNNNNNN-NNNNN-----NNNNNNNNNNNNNNN-NNN--NNNNNNNN-NNNNNNNNNNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNN---NNNNNNNNNNNNNNNN-NNNNNNN NNN--
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Petalura_litolae_PET_OPG2 CUCGAUUUUGGAAGAGCUAAUA-UUAUA-----AUUUAUUUGAUGUUU-CAU--AAUCAUUA----AAAAUAUA-AGUUAG
A-UGAGA-AAUUCA-AUUCGUUUCUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-UUUUUAAUUU--AAUUUAUUAAUU---UAUGAAUAG-GUUAUU-GUAUAGA AAU-
UAAAAUAUUAGGGGAUAAGCUCUAAUUUUA--UACUAAAAA-UUCAAUUUGAGUU------AAUUUAUGUAGGGUUAAAAUCAUCCAUCAUUA-AGAAUUACGUUAUAGUUUA- UUUUAACAAGAAAU--
GAUUUUUUUUAUUU---U-AGUA-UUU-UAUUAAAAUUUUAAUU-UUAA-UU-AAUAAAGUUAA-GUAAUAGUGAUUAAAU-UAGUAUAAUUAUG--
GAAUUGUUUUUUAUAUUAUUAAUUGAGAUAAUUAGUUAAGGAAUUCGGCAAA-UAAA----------CACUCGCCUGuuuaacgaaaac-g
Petalura_ingentissima_API CUCGAUUUAGGAAGAGCUAAUA-UAGUA-----AUUUAUUUGAUGUUU-CAU--AAUCAUUA----AUAAUAUA-GGUUAG
A-GGAGA-AAUUCA-AUUCGUUUUCAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGA-UUUUUGAUUU--AACUUAUUAAUU---AGUAAAUAA-GUUAUU-UUAUAGG AUU--
AAAAUAUUAGGGGAUAAGCUCUAAUUUUA--UUCUAAAAA-UUUUAUUUGAAUU------AAUUUAUGUAGGGUUAAGAUCAUCCAUCAUUA-GGGAUUACGUUAUAGUUUA- UUUUAAUAAGAGAU--
GAUUUUUUUUAUUU---U-AGUA-UUU-UAUUAAAAUUUUAAUU-UUAA-UU-AAGAGGGUUAG-GUAAUAAUGAUUAAAU-UAGUAUAAUUAUA--
GGAAUGUUUAUCGUAUUAUUAAUUGGGAUGAUUAGUUAAGGAAUUCGGCAAA-UAAA----------CACUCGCCUGUUUAACAAAAAC-A[-????]
Zoraena_bilineata_OZB ---

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Taeniogaster_obliqua_OTO CUCGAUUUCAGAAGAGCUAAUU-AAAUA-----UUUUAGUUGAUGUUU-CAU--AAUCAUUA---AAAAUAUUU-AAUUAG
G-GGAGA-UAUUCU-AUUCGUUUCUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAU-UUUAUACCUU--AAUUUAUUAAUU---UUUGA-AUAAAUUUUU-GUAUAAA UGA--
UAUAAUUUAGGGGAUAAGCUCUAAAUUAA-UUUCUAAAAUUUCAUUUUUAUUUC------AAUUUAUGUAGGGUUGAAAACAUCCAUCAUUA-AAAAGUACGUUAUAGUUUA-

AAUUGAAAUUAAUU--AAUUUAUUUUUAUU---U-AGAA-UAU-UAUUAAAAUUUAAAAU-UUAA-UU-AUAAAAUUUUA-GUAAUAAUGAUUAAAU-CAGUAUAAUUAUU--UGUUUAAAAUUU---
--AUUAGAAGAGAUGAUUAAAUAAGGAACUCGGCAAA-AUAAG---------UGCUCGCCUGUUUAACAAAAAC-A[-????]
Kaliptogaster_erronea_OKE NNNNNNNNNNNNNNNNNNNNNN-NNNNN-----NNNNNNNNNNNN----UCU--AAUC-UUA----AAAAUAUA-AAUUAG
G-GGAGA-UAUUCU-AUUCGUUUYGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAN-NNNNNNNNNN--NNNNNNNNNNNN---NNNNNNNNNNNNNNNN-NNNNNNN NNN--
NNNAAUUUAGGGGAUAAGCUC-AAAUUAA-UUUCUAAAAUUUCAUUUUYAUUUU------AAUUUAUGUAGGGUUGAAAACAUCUAUCAUUA-AAAAGUACGUUAUAGUUUA-
AAUUAAAAAUUAAUU--GAUUUAUUAUAU-----U-AGAA-UAU-UAUUAAAAAUUUAAAAU-UUAA-UA-AUAAAAUUUUA-GUAAUAAUGAUUAAAU-UAGUAUAAUYAUU--CGCUUAAAAUUC---
--AUUAUAAGGGAUGAUUAANUAAGGAACUCGGCAAA-AUAAG---------NGCUCGCCUGUUUAUCAAAAAC-A[-????]
Pangaeagaster_Cordulegaster_maculata --

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EU054988_5084_Cordulegaster_dorsalis NNNNNNNNNNNNNNNNNNNNNN-NNNNN-----NNNNNNNNNNNNNNN-NNN--NNNNNNNN-NNNNNNNNNNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNN---NNNNNNNNNNNNNNNN-NNNNNNN NNN--
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EU477688_Cordulegaster_boltonii CUCGAUUUCAGAAGAGCUANNN-NNNNN-----NNNNNNNNNNNNNNN-NNN--NNNNNNNN----NNNNNNNN-NNNNNN
N-NNNNNNNNNNNN---NNNNNNNNNNNNN-NNNNNAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAU-UUUAUACUUU--AAUUUAUUAAUU---UUUGA-AUAAAAUUUUU-GGAUAAA UGU--
UAUAAUUUAGGGGAUAAGCUCUAAAUUAA-UUUCUAAAAUGUUAUUUAUAUUU------UAAUUAAUGUAGGGUUGAAAACAUCUAUCAUUA-GAAAGUACGUUAUAGUUUA-
AAUUAAAAAUUAAUU--GAUUUACUUUUAUU---U-AGGA-AAU-UAUUAAAAAUUUAAAAU-UUAA-UU-AUAAAAUUUUA-GUAAUAAUGAUUAAAU-UAGUAUAAUUGUU--UGUUUAAAAUUU---
--AUUAUAAGAGAUGAUUAAAUAAGGAACUCGGCAAA-AUAAG---------UGCUCGCCUGUUUAACAAAAAC-A[-????]
EU477685_Cordulegaster_picta CUCGAUUUCAGAAGAGCUAAUU-UAAUA-----UUUUAGUUGAUGUUU-CAU--AAUCAUUA----AAAAUAUA-AAUUAG
G-AGAGA-UAUUCU-AUUCGUUUCUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAU-UUUACACCUU--AAUUUAUUAAUU---UUUGA-AUAAAAUUUUU-GUGUAAA UGA--
UAUAAUUUAGGGGAUAAGCUCUAAAUUAA-UUUCUAAAAUCUUGAUUAAAUUU------UAAUUUAUGUAGGGUUGAAAACAUCUAUCAUUA-AAAAGUACGUUAUAGUUUA-
AAUUAGAAUUAAAU--GAUUUACUUUUAUU---U-AGAA-UAU-UAUUAAAAUUUAAAAU-UUAA-UU-AUAAAAUUUUA-GUAAUAAUGAUUAAAU-UAGUAUAAUUAUU--UGUUUAAAAUUU---
--AUUAUAAGAGAUGAUUAAAUAAGGAACUCGGCAAA-AUAAG---------UGCUCGCCUGUUUAACAAAAAC-A[-????]
EU477686_Anotogaster_sieboldii CUCGAUUUCAGAAGAGCUAAUUAUAUA------UUUUAUUUGAUGUUU-CAU--AAUCAUUA----AAAAUAUA-AAUUAG
G-AGAGA-CAUUCU-AUUCGUUUCUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAU-UUUAUACCUU--AAUCCAUUAAUU---UUUGA-AUGGAUUUUU-GUAUAAA UGA--
UAUAUUUUAGGGGAUAAGCUCUAAAUUAA-UUUCUAAAAUUGAAGUUUAAUUU------UAAUUUAUGUAAGGUUGAAAACAUCUAUCAUUA-AAAAGUACGUUAUAGUUUA-
AAUUGAGAUUAAUU--GAUUUAUUUUUAUU---U-AGAA-UAU-UAUUAAAAUUUAAAAU-UUAA-UU-ACAAAAUUUUA-GUAAUAAUGAUUAAAU-UAGUAUAAUUAUU--UGUUUAAAAUUU---
--AUUAAAAGGGAUGAUUAAAUAAGGAACUCGGCAAA-AUAAG---------UGCUCGCCUGUUUAACAAAAAC-A[-????]
AF266085_Neopetalia_punctata CUCGAUUUCAAAAGAGCUAAUAUAAUA------AUUUAGUUAAUGUAU-CAU--AAUUAUUA----AUAAUAUU-AAUUAG
U-GAAGA-UAUUUC-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAU-UUUGUAAUUU--AUUAUAUUUAUU---UAAUA-AUAUACUAUU-UUAUAAA UUG--
AAUAUUUUAGGGGAUAAGCUCUAAAUUAA--UACUAUAAAUUUGAAUUAUAUU------UAAUUUAUGUAGGGUUGAAAUCAUCUAUCAUUU-AUGAGUACGUUAUAGUUUA-
UGUUAAUUAGAAUU--GAUUUAUUUUUGUU-UUU-AGUA-UUA-UAUUAAAAAUAUUAUAU-UUAA-UU-AUUUAAUAUAA-GUAAUAAUGAUUGAAU-UAGUAUAUGUUAU--AUGUUAAUAAUU---
AUAUAAGUGGGAAUAAUAUAAUAAGGAACUCGGCAAA-UAUAA---------CACUCGCCUGUUUAACAAAAAC-A[-????]
Chloropetalia_soarer_OCSr ??????????????????????-?????-----???????????????-???--????????-???????????-????-?
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Sinorogomphus_nasutus_OSN CUCGAUUUUAUAAGAGCUAAUU-CUUUA-----AUUUAGUUAAUGUUU-CAU--AAUUAUUA----AAAAUAAG-UUUUAG
G-GGGGA-UAUCCC-AUUCGUUUUUAAGGG-UAUCUAGUU-UUUCAAGAAA-UAAA-UUUAAUUUAAU-CUUAAAUUUU--UAAUCUUUUUAU---UUUUA-AUUGAUUAUU-AUUUAAG UUA--
AAAAUUGUAGGGGAUAAUCUCUACAUUG---AAUUAUAUAUUGUUUUGAAUU-------UAACUAUAGUAGGGUUAGAAAUAUCCAUCUUUU-AUAAGUAUGUUAUAAUUUA-
UGUUAACUGAAAUU--GAUUUAUUUUAUAU---U-AAAU-UUU-UAUUGAAAUGUCAGAU-UUAA-UA-UUUAUUUCUGA-GUAAUAAUGAUUAAAU-UAGUAUAAUAAUU--AUGUAUUUUAUA---
-UAUAAGUGGUGAGGAUUAAAUAAGGAACUCGGCAAA-UAUUAG---------CAUUCGCCUGUUUAACAAAAAC-A[-????]
EU477691_Chlorogomphus_brunneus CUCGAUUUCAGAAGAGCUAAUUUCUUA------AUUUAGUUAAUGUUU-CAU--AAUUAUUA----GGGAUAAG-UUUUAG
C-GGGGA-AAUCUC-AUUCGUUUAUAAGGG-UAUCUAGUU-UUUCAAGAAA-UAAA-UUUAAUUUAAU-CUUAAAUUUU---AAUUUUUUUAU---UUUUA-AUUAAUUAUU-AUUUAAG UUA--
AAAAUUAUAGGGGAUAAUCUCUAUAUUG---AAUUAUAUAUAAAGUUUAAUU-------UGGUUGUAGUAGGGUUAGAAAUAUCCAUCUUUU-AUAAGUAUGUUAUAAUUUA-

UGCUAGUUUGAAUA--GAUUUAUUUUAUAU---U-AAUA-UUU-UAUUGAAAUAUCAGAU-UUAA-UU-AUUAUUUCUGA-GUAAUAAUGAUUGAAU-UAGUAUAAUGUUA--UGUAUUUUAUAA---
--UUAAAUGGUAAGGAUUAAAUAAGGAACUCGGCAAA-UAUAG----------CAUUCGCCUGUUUAACAAAAAC-A[-????]
Chlorogomphus_sp --

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Synthemis_eustalacta_OSE CCCGAUUUCAGGAGAGCUAAUU-UAUUA-----UUUUAUUUAUUGUUG-CAU--AACUAUUA----AUAAUAUA-AAUUAG
G-GAAGA-AACUUC-AUUCGUUCUUGAUGG-UAUCUGGUU-UUUUAAGAAA-UAAA-UUUAAUUUAUU-UUCAUUAAUU--AAAUUAUUUAUU---UAAAU-AUAGUUUAUU-UAUUGAA UUU--
AAUAUUAUAGGGGAUAAGCUCUAUAUUU---UUCUAUAAGUUUAUAUUUAUU-------UAUUUUGUGUAGGGUUAAAAUUAUCCAUCAUUU- AAAAGUAUGUUAUAAUAUAAAUUAAUUAUUAAUU--
GAUUUUAUUUACUU---U-AGAU-UUU-UAUUAAAACGUUGAAU-AAAA-UU-UUAAUAUUCAA-GUGAUAAUGAUUAAAU- UAGUAUAUUUAUU--UUGUUUUAAAUU----
AAUUUAAUGAGAUGAUAAAUUAAGGAACUCGGCAAA-UAUAA----------CACUCGCCUGUUUAACAAAAAC-A[-????] EU055067_Synthemis_marcrostigma
NNNNNNNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNNNNNNNNN-NNN--NNNNNNNN-N-NNNNNNNNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNN--
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NNNNNNNNNNNNNN---N-NNNN-NNN-NNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNNNNN-NNNNNNNNNNNNNNNN- NNNNNNNNNNNN---------------------------------------
-----------------NNNN------------------NNNNNNNNNNNNNN-N[-????] EF631516_Synthemis_leachii NNNNNNNNNNNNNNNNNNNNNN-----
NNNNNNNNNNNNNNNNNNNNN-NNN--NNNNNNNN-N-NNNNNNNNN-NNNNNN N-NNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-
NNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----
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NNNNNNNNNNN-NNNNNNNNNNNNNNNN- NNNNNNNNNNNN--NNNN------------------
NNNNNNNCAAAAAC-A[-????] Eusynthemis_brevistyla_OEB ??????????????????????-----?????????????????????-???--????????-?-?????????-????-?
?-??????-?????-???????????????-?????????-??????????-????-???????????-??????????--???????????????????????????????????????
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?????????????--????????????--???????????????????????-??????????????-?????----------??????????????????????-?[-????]
EU477692_Eusynthemis_guttata CCCGAUUUCAAGAGAGCUAAUA-UUAAUA----AUUUAUUUAUUGUUG-CAU--AACUAUUA----AAUAUAUA-UAUUAG
A-GAAGAAAUUUCA--UUCGUUCUUGAUGG-UAUCUGGUU-UUUUAAGAAU-UAAA-UUUAAUUUAUU-UUCGUUAUUU--AAAUUAUUUUUU---UUAAU-AUAAUUUAUU-UAUCGAA UUA--
AAAAUUAUAGGGGAUAAGCUCUAUAUUG---AUUUAUAAGUUUGAUUAUAUUU------UAUUUUAUGUAGGGUUAAGAUUAUCUAUCAUUA- AGAAGUGUGUUAUAAUAUAAAUUAGUUAUGAAUU--
GAUUUUUUUUACUU---U-AAUU-UAU-UAUUAAAAUAUUUGAU-UUAA-UU-UUAGUUUCUAG-GUAAUAAUGAUUAAAU- UAGUAUAAUUAUU--UUAUUUUUAAUU----
AAUUUUAUGAGAUAAUAAAUUAAGGAACUCGGCAAA-UAUAA----------CACUCGCCUGUUUAACAAAAAC-A[-????] EU054973_5069_Eusynthemis_nigra
NNNNNNNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNNNNNNNNN-NNN--NNNNNNNN-N-NNNNNNNNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--
NNNNNNNNNNNNN--NNN-NNNN-NNN-NNNNN-NNNNNNNNNN-NNNN-NN-NNNNNNN--NN-NNNNNN-NNNNNNNNN- NNNNNNNNNNNN---------------------------------------
-----------------NNNN------------------NNNNNNNNNNNNNN-N[-????] EU054974_5070_Choristhemis_flavoterminata
NNNNNNNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNNNNNNNNN-NNN--NNNNNNNN-N-NNNNNNNNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--
NNNNNNNNNNNNN--NNN-NNNN-NNN-NNNNN-NNNNNNNNNN-NNNN-NN-NNNNNNN--NN-NNNNNN-NNNNNNNNN- NNNNNNNNNNNN---------------------------------------
-----------------NNNN------------------NNNNNNNNNNNNNN-N[-????] Synthemiopsis_gomphomacromioides_ASG CCCGAUUUCAGGAGAGCUAAUC-UUAUA-
----AUUUACUUAUUGUUG-CAU--AAUUAUUA----AUAAUAUA-GAUUAG G-GGAGA-GAUUCU-AUUCGUUCUUGAAGG-UAUCUGGUU-UUUUAAGAAU-UAAA-UUUAAUUUAUU-UUCAUUAAUU-
-AAAUUUUUUCUU--UUAUAGAUAUAAUUUAUUUAAUGAA UUA--AAAAUUGUAGGGGAUAAGCUCUACAUUG---AUCUAUAAGAAUAUAAUUACU-------
UAUUUUAUGUAGGGUUAAUAUUAUCCAUCAUUG- UGAAGUGUGUUAUAAUAUAAAUUAAUUUUUAGUU--GAUUUUUGUUUAC--UUU-AGGU-UUU-UAUUAAAAUAUCAAAU-UCAA-UU-
UUGAAUUUUGU-GAAAUAAUGAUUAAAU- UAGUAUAAUUAUU-UUGUUUUUAAUU-----AAUCUUAUGAUAUGAUAAAUUAAGGAACUCGGCAAA-AAUAA----------
CACUCGCCUGUUUAACAAAAAC-A[-????] Gomphomacromia_chilensis CUCGAUUUUAAGAGAGCUAAUU-UAAUA-----AUUUAGUUAGUGUUG-CAU--AACUAUNA----
AAAAUAUA-NNUUAG A-GGAGA-ANUUCC-AU?CG????????GG-UAU??????-??????????-????-???????????-??????????--????????????--
???????????????????????AU UGA--AAAAUUAUAGGGGAUAAGCUCUAUGUUU---AUACUAUAAAUUUAUAUUUUAAU-----UAAUUUAUGUAGGGUUAAGAUUAUCUAUCAUUA-

UAAAGUAUGUUAUAAUUUAAAUUAAUUAUUAAGA--GAUUUUAUUUAUU---UU-AGAU-UUU-UAUUAAAAUAUUGAAU-UUAA-UU-UUGAAUUUUAA-GUAAUAAUGAUUAAAU- UAGUAUAUUUUGU--
UGUUUAUAUAAA-----AUUAAAUGAGAUGAUAGAAUAAGGAAUUCGGCAAA-UAUAA----------CACUCGCCUGUUUAACAAAAAC-A[-????] Gomphomacromia_paradoxa --
CCGUUUCAAAAGAGCUAAUU-UAAUA-----AUUUAGUUAGUGUUG-CAU--AAUUAUUA----AAAAUAUA-AUUUAG A-GGAGA-AAUCC-AUUCGUUCUUAAUGG-UAUCUAGUU-UUUUAAGAAA-
UAAA-UUUAAUUUAGC-UUCAUUAAUU--AAGUUACUUAUUAUUU-AAGGAAUUUAU--UUA-UUGAU UGA--AAAAUUAUAGGGGAUAAGCUCUAUAUUU---AUACUAUAAGUUUAUAUUUUAAU-----
UAAUUUAUGUAGGGUUAAGAUUAUCUAUCAUUA- UAAAGUAUGUUAUAAUUUAAAUUAAUUAUUAAAA--GAUUUUAUUUAUU---UU-AGAU--UUUUAUUAAAAUAUUGAAU-UUAA-UU-
UUGAAUUUUAA-GUAAUAAUGAUUAAAU- UAGUAUAUUUUGU--UGUUUAUAUAAG-----AUUAAAUGAGAUGAUAGAAUAAGGAAUUCGGCAAA-UAUAA----------
CACUCGCCUGUUUAACAAAAAC-A[-????] GQ329647_Syncordulia_serendipator NNNNNNNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNNNNNNNN-NNN-N-NNNNNNN-
NNNNNNNN-NNN-NNNNNN N-NNNNNNNNNNNNN---NNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----
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NN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNNN--NNNNNNNNNNNN-- NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNN----------NNNNNNNNNNNNNNNCAAAAAC-A[-
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GQ329646_Syncordulia_venator NNNNNNNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNNNNNNNN-NNN-N-NNNNNNN-NNNNNNNN-NNN-NNNNNN
N-NNNNNNNNNNNNN---NNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNN--
NNNNNNNNNNNNNN---N-NNNN-NNN-NNNNNN-NNNNNNNNN-NNNN-NN-NNNNNNNN-NN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNNN--NNNNNNNNNNNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNN----------NNNNNNNNNNNNNNNCAAAAAC-A[-????]
EU054998_5094_Idionyx_imbricata NNNNNNNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNNNNNNNN-NNN-N-NNNNNNN-NNNNNNNN-NNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNN--NNNNNNNNNNNNNN---N-NNNN-NNN-NNNNNN-NNNNNNNNN-NNNN-NN-NNNNNNNN-NN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN------------------
-------------------------------------NNNN------------------NNNNNNNNNNNNN-N[-????]
Idionyx --

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Macromidia_rapida_OMR CUCGAUCUUAGAAGAGCUAGAU-UAUAGA-------UUUAUUUAAUGU-GAU--AAGAUUAUUAA--AGAUUUU-AUUUAG
G-GGGGA-AAUCCU-AUUCGUUUCUGAAGG-UAUCUAGUU-UUUUAAGAUA-UAGA-UUUAAUUUAUU-UUUAUUAAUU--AAGAUUUUUAU------UUGUAAGAUUUUAUUUUUAGA UUA--
AAGAUUAUAGGGGAUAAUCUCUAUAUUA----UUCUAUAAGAUUAUUAAUU-AAU----UAAUUUUUGUAGGGUUAAGAUUAUCCAUCAUUU- GUAAUUAUGUUAUAAUUUAUAUUAAUUAUUAAUA--
GAUUUUUUUUAUU---UU-AGUU-UUC-UAUUAAAAUAUUUGAU-UUAA-UU-UAGUAUUUAUU-GAAAUAAUGAUUAGAU- UAGUAUAGAUAUA--UUGUAUAUAAUU---
UAGAUGGUUGUAAUGAUAUUAUAAGGAA-UCGGCAAG-AUUAAU----------GCUCGCCUGUUUAACAAAAAC-A[-????] EU477701_Oxygastra_curtisii
CUCGAUUUCAGAAGAGCUAAAU-UAAUAU-------UUUAUUUAUUGU-UAU--AUAAAUAUUAA--AAAUAUA-AUUUAG
A-AGGGA-UAUCUU-AUUCGUAUUUGAUGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGU-UUUAAUAUUU--AAAUUUAAUUA--AUGUAAUUAUUAAUUUAUUUAUUAAA AUA--
AAAUUUGUAGGGGAUAAGCUCUAUUUAU----UACUAUAAAUGUAUCUUUAUC------UAUUUAUUGUAGGGUUAAAAAUAUCCAGCAUGA- UUAAGUAUGUUAUAAUUUAUAUUAGAUAUAAUUU--
AAUUUUUUAUUAU--UUU-AGUA-UAC-UAUUAAAAUAAUUAAA-UGAA-UA-AGGAAUUUUAU-GAAAUAAUGAUUAAAU- UAGUAUAAUUAUA--UUGNUUAAUUUU----
AAUUAUUGUUAUAAUAAAAUACAGGAACUCGGCAA--AGAUAA---------UACUCGCCUGUUUAACAAAAAC-A[-????] EU054955_5054_Cordulephya_pygmaea
NNNNNNNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNNNNNNNN-NNN-N-NNNNNNN-NNNNNNNN-NNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNN--NNNNNNNNNNNNNN---N-NNNN-NNN-NNNNNN-NNNNNNNNN-NNNN-NN-NNNNNNN--NN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN------------------
-------------------------------------NNNN------------------NNNNNNNNNNNNN-N[-????]
EF631566_Pseudocordulia_circularis NNNNNNNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNNNNNNNN-NNN-N-NNNNNNN-NNNNNNNN-NNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNN--NNNNNNNNNNNNNN---N-NNNN-NNN-NNNNNN-NNNNNNNNN-NNNN-NN-NNNNNNN--NN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN------------------
-------------------------------------NNNN------------------NNNNNNNCAAAAAC-A[-????]
EU054968_5065_Hesperocordulia_berthoudi --

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EF631556_Lathrocordulia_metallica NNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNN-NNN-N-NNNNNNN-NNNNNNNN-NNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNN--NNNNNNNNNNNNNN---N-NNNN-NNN-NNNNNN-NNNNNNNNN-NNNN-NN-NNNNNNN--NN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN-----------------
---------------------------------------NNNN-------------------NNNNNNNCAAAAAC-A[-????]
EU054959_55057_Micromidia_convergens NNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNN-NNN-N-NNNNNNN-NNNNNNNN-NNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNN--NNNNNNNNNNNNNN---N-NNNN-NNN-NNNNNN-NNNNNNNNN-NNNN-NN-NNNNNNN--NN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN-----------------
---------------------------------------NNNN-------------------NNNNNNNNNNNNNN-N[-????]
EF631557_Micromidia_atrifrons NNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNN-NNN-N-NNNNNNN-NNNNNNNN-NNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNN--NNNNNNNNNNNNNN---N-NNNN-NNN-NNNNNN-NNNNNNNNN-NNNN-NN-NNNNNNN--NN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN-----------------
---------------------------------------NNNN-------------------NNNNNNNCAAAAAC-A[-????]
Austrophya_mystica --

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EF631559_Austrocordulia_refracta NNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNN-NNN-N-NNNNNNN-NNNNNNNN-NNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNN--NNNNNNNNNNNNNN---N-NNNN-NNN-NNNNNN-NNNNNNNNN-NNNN-NN-NNNNNNN--NN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN-----------------
---------------------------------------NNNN-------------------NNNNNNNNNNNNNN-N[-????]
EF631580_Archaeophya_magnifica NNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNN-NNN-N-NNNNNNN-NNNNNNNN-NNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNN--NNNNNNNNNNNNNN---N-NNNN-NNN-NNNNNN-NNNNNNNNN-NNNN-NN-NNNNNNN--NN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN-----------------
---------------------------------------NNNN-------------------NNNNNNNCAAANAC-A[-????]
EF032715_Epophthalmia_elegans NNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNN-NNN-N-NNNNNNN-NNNNNNNN-NNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNN--NNNNNNNNNNNNNN---N-NNNN-NNN-NNNNNN-NNNNNNNNN-NNNN-NN-NNNNNNN--NN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN-----------------
--CGCCUGUUUAACAAAAAC-A[-????]
Didymops_transversa_ODT ???????????????????????-----?????????????????????-???-?-???????-????????-???-????-?
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?????????????--????????????----???????????????????????????????????????-??????---------??????????????????????-?[-????]
EU477697_Macromia_illinoiensis CUCGAUUUCAGAAGAGCUAUGN-UAAUAA----UUCCAGUUAAUGUGG-AAU--AAUUAUUG----AUAAUAUA-ACAUAG
G-UGGGA-UAUCUA-AUUCGUUUUUGAAGG-UAUCUGGUU-UCUUAAUAAU-UAAA-UUUAAUUUAUU-CUUUAUAUUU--AAAUAUCUUA-----UUUUUGAGGGUUUUAUAUGUAAAG UUA--
AAUAUUAUAGGGGAUAAGCUCUGUAUUAU--UUCUAUAAUUGUUGUUUAUUU-------CAUUUUUUGUAGGGUUAUAAUUAUCCAUCAUUA- UAAAGUGUGUUAUAAUUUAGAUUGUAAUUAAUAU--
GAUUUUUUUAUAU---UU-AGUA-UUU-UAUUAAGAAUAGAGAG-UGAA-UU-UUUUGUUCUGU-GAAAUAAUGAUUAAAU- UAGUAUAUUUAAU--UUGUUUAUAAUA----
AAUUUAAUGAGAGGAUAAAAUAAGGAACUCGGCAAA-AUAA-----------UUCUCGCCUGUUUAUCAAAAAC-A[-????] Macromia_amphigena_MAC
CUCGAUUUCAGAAGAGCUAUGU-UAGUA-----AUUUAUUUAAUGUGG-AAU--AAUUAUUG----AUAAUACA-UCA-AG
A-UGGGA-UAUCUA-AUUCGUUUUUAAAGG-UAUCUGGUU-UUUUAAUAAA-UAAA-UUCAAUUUAUU-CUUUAUAUUU--AAAUGUCUUA-----UUUUUUAGGCUUUUAUAUUUAAAG UUA--
AAUAUUAUAGGGGAUAAGCUCUAUAUUAU--UUCUAUAAUUAUUGAUUAUUU-------CAUUUUUUGUAGGGUUAUAAUUAUCCAUCAUUA-

UAAAGUGUGUUAUAAUUUAAAUUGUAAUUAAUAU--GAUUUUUUGGUAU---UU-AGUA-UUU-UAUUAAGAAGAUAGAA-UAAA-UU-UUUUAUUCUGU-GAAAUAAUGAUUAAAU- UAGUAUAUUUAAG--
CUGUUUAUAAUA----AUUUAAAUGAGAGGAUGAAAUAAGGAAUUCGGCAAA-A-AUAA---------UUCUCGCCUGUUUAUCAAAAAC-A[-????] EU055001_97_Macromia_eurynome
NNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNNNNNNNN-NNN--NNNNNNNN--NNNNNNNNNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--
NNNNNNNNNNNNN---NN-NNNN-NNN-NNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNNNNN-NNNNNNNNNNNNNNNN- NNNNNNNNNNNN--
-----------------NNNN------------------NNNNNNNNNNNNNN-N[-????] EF640463_Macromia_magnifica CCCGAUUUUAAAAGAGCUAUGU-UAGAA-
----AUUUAUUUAAUGUAG-AAU--AAUUAUUA----AUAAUUCG-GCAUGG A-UGGGA-UAUCUA-AUUCGUUUUUAAAGG-UAUCUGGUU-UCUUAAUAAU-UAAA-UUUAAUUUAUU-CUUUAUAUUU-
-AAAUAUCUUA-----UUUUGGAGAUUUUUAUAUUUAAAG UUA--AAUAUUAUAGGGGAUAAGCUCUAUAUAAU--UUCUAUAAUUAUUAUCUAUUU-------
CAUUUUUUGUAGGGUUAUAAUUAUCCAUCAUUA- UAAAGUGUGUUAUAAUUUAAAUUGUAUUUAAUAU--GAUUUUUUUUUAU---UU-AGUA-UCU-UAUUAAGAAUAGAAGG-UGAA-UU-
UUUUGCCUUGU-GAAAUAAUGAUUGAAU- UAGUAUAUUUAAU--UUGUUUUAUAAUA----AAUUUAAUGAGAGGAGAAAAUAAGGAAUUCGGCAAA-AUAA-A---------
UUCUCGCCUGUUUAUCAAAAAC-A[-????] EU477696_Macromia_splendens CUCGAUUUCAGAAGAGCUAUGU-UAGUA-----AUUUAUUUAAUGUGG-AAU--
AAUUAUUA----AUAAUACA-UCAUAG A-UGGGA-UAUCUA-AUUCGUUUUUAAAGG-UAUCUGGUU-UUUUAAUAAA-UAAA-UUUAAUUUAUU-CUUUUUAGUU--AAAAUUCUUA-----UUUUU-
AGGAUUUUAUAUUUAAAG UUA--AAUAUUAUAGGGGAUAAGCUCUAUAUUAA--UACUAUAAUUGUUAUUUAUUU--------AUUUUUUGUAGGGUUAUAAUUAUCCAUCAUUA-
UAAAGUGUGUUAUAACUUAAAUUGUUGAUAAUAU--GAUUUUUUUUUAU---UU-AGUA-UUU-UAUUAAAAAAAAUAGAA-UAAA-UU-UUUUGCUCUAU-GAAAUAAUGAUUGAAU- UAGUAUAUUUAAU--
UUGUUUAUAAUA----AAUUUAAUGAGAGGAUAAGAUAAGGAAUUCGGCAAA-AUAA-----------UUCUCGCCUGUUUAUCAAAAAC-A[-????] Phyllomacromia_sp_JF912413
CUCGAUUUCAAAAGAGCUACUU-U
AUUA-----AUUUACUUAAUGUGG-AAU--AAUUAUUA----AAAAUAUA-AUGUGGU-UGGGA-UAUCCA-AUUCGUUUCUAAAGG-UAUCUGGUU-UCUUAAUAAU-UAAA-UUUAAUUUAUU-
CUUUUGCUUU--AAAAUUUUUA-----UUUAUUAAAAUUUUAUAUCUUAAGUUA--AAUAUUAUAGGGGAUAAGCUCUAUAUUAU--UUCUAUAAUUUAUAUAAAUUA-------AUUUUUG
UGUAGGGUUAGAAUUAUCCAUCCUUG-CAGAGUGUGUUAUAAUUUAGAUUUAAUUUUUUUUU-GAUUUUUAUUUAU---UU-AGAA-UUU-UAUUAAGAUAAUGGAA-UUAA-UU-UUUUAUUUUAU-
AAAAUAAUGAUUGAAU-UAGUAUAAUAUU---UUGUUUAUUAUA--UAUGGAAUUGUUAGGAUUUUUAUAAGGAACUCGGCAAA-UCUA-A---------UUCUCGCCUGUUUAUCAAAAAACA[-
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EU477694_Idomacromia_proavita CUCGAUUUUAAAAGAGCUAAUU-UAUUA-----UUUUAGUUAAUGUAA-CAU--AAUUAUUA----AUAAUAUA-AUUUAG
G-AGGGA-UAACCU-AAUCGUUUUUAAUGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGU-UUUAAUAUUU--AAAUUAAUUA----UUU-UUUAUUAAUUUAUUUAUUAGA UUA--
AAUAUUAUAGGGGAUAAGCUCUAUAAUUUU-CUAUA---AGUAUUUAUUUGAAU-----CAUUUUAUGUAGGAUUAAGAAUUUCCAUCAUUG- UAGAUUAUAUUAUAAUUUAUAUUGAUGAAUAAUG--
GAUUUUUUUUACU---UU-AGUAUUAU-UAUUAAAAUAAUUUGU-GUAA-CA-AGAAUUUUUUU-GAAAUA-UGAUUAAAU- UAGUAUAGUUUUA--UGUAUAUAAUAU-----
AUUUAUUGAUAUAAUAAAAUAAGGAACUCGGCAAA-UAUU-A---------UACUCGCCUGUUUAACAAAAAC-A[-????] EF631540_Aeschnosoma_forcipula
NNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNNNNNNNN-NNN--NNNNNNNN--NNNNNNNNNN-NNNNNN
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NNNNNNNNNNNNN---NN-NNNN-NNN-NNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNNNNN-NNNNNNNNNNNNNNNN- NNNNNNNNNNNN--
-----------------NNNN------------------NNNNNNNNNNNNNN-N[-????] EF631528_Pentathemis_membranulata NNNNNNNNNNNNNNNNNNNNNN-
NNNNNN----NNNNNNNNNNNNNNN-NNN--NNNNNNNN--NNNNNNNNNN-NNNNNN N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-
NNNNNNNNNN--NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNN NNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-N--
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NNNNNNNNNNN-NNNNNNNNNNNNNNNN- NNNNNNNNNNNN--NNNN------------------
NNNNNNNNNNNNNN-N[-????] EU477709_Tetragoneuria_cynosura CUCGAUUUCAGAAGAGCUAAAC-UAUUA-----AUUUAUUUAUUGUUA-CAA--AACUAUUA----
AUAAUAUA-GUUUAG G-GGGGA-AAUCCU-AUUCGUUUUUGAUGG-UAUCUGGUU-UUUUAAGAAU-UAAA-UUUAAUUUAAU-UUCAUUAUUU--AAUUUUUAUC----
UUUUUAUUAAAGGUUAUUUAUUGAA UUA--AAAAUUGUAGGGGAUAAGCUCUACAUUAA---UCUAAAAU-AUUUAUUAUUAAU-----CAAUUUAUAUAGGGUUAAGAUUAUCCAUUAUUA-
UUAGGUGUGUUAUAAUUUAUAUUGAUUAUUAAUU--AAUUUAUUUAUUU---UU-AGAA-UCA-UAUUAAAAUAUCUAGA-UUAA-UU-UUUUGUUUAGU-GAAAUAAUGAUUAAAU- UAGUAUAAUUAAU--
AUGUUUAAUAUA----AUUUUUUAUUUAUAAUAAGAUAAGGAAUUCGGCAA--AUGUAA---------UACUCGCCUGUUUAACAAAAAC-A[-????] EU477713_Epitheca_costalis
CUCGAUUUCAGAAGAGCUANNN-NNNNNN----NNNNNNNNNNNNNNN-NNN--NNNNNNNN--NNNNNNNNNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-N--NNNNNNN-NNN-----NNNNNNNN-NNNNNNNNNN--NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNNNN-N--NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--
NNNNNNNNNNNNN---NN-NNNN-NNN-NNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNNNNN-NNNNNNNNNNNNNNNN- NNNNNNNNNNNNN--NNNNNNNNNNNN----
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN---------NNNNNNCCUGUUUAUCAAAAAC-A[-????] EU477712_Epitheca_canis
CUCGAUUUCAGAAGAGCUANNN-NNNNNN----NNNNNNNNNNNNNNN-NNN--NNNNNNNN--NNNNNNNNNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-N--NNNNNNN-NNN-----NNNNNNNN-NNNNNNNNNN--NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNNNN-N--NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN-

NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNN---NN-NNNN-NNN-NNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNNNNN-NNNNNNNNNNNNNNNN- NNNNNNNNNNNNN--
NNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNN---------NNNNNNCCUGUUUAUCAAAAAC-A[-????] EU477710_Epitheca_princeps
CUCGAUUUCAGAAGAGCUAAAU-UAUUA-----AUUUAUUUAUUGGUUAUAA--AACUAUUA----AUAAUAUA-AUUUAG
G-GGGGA-AAUCCU-AUUCGUUUUUGAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAAU-UUCAUUAUUU--AAAUUUUAUC----UUUUUAUUAAAUUUUAUUUAUUGAA UUA--
AAAAUUGUAGGGGAUAAGCUCUACAUUAA---UCUAAAAU-AUUUAUUAUUAAU-----CAAUUUAUAUAGGGUUAAAAUUAUCCAUUAUUA- UUAGGUGUGUUAUAAUUUAUAUUGAUUAUUAAUU--
AAUUUAUUUGUUU---UU-AGAA-UAU-UAUUAAAAUACCUAGA-UUAA-UU-UUUUAUUUAGU-GAAAUAAUGAUUAAAU- UAGUAUAAUUAAA--UUGUUUAAUAUG----
AUUAAAUAUUUAUGAUAAGAUAAGGAAUUCGGCAA--AUAUAA---------UACUCGCCUGUUUAACAAAAAC-A[-????] EU477711_Epitheca_marginata
CUCGAUUUCAGAAGAGCUANNN-NNNNNN----NNNNNNNNNNNNNNN-NNN--NNNNNNNN--NNNNNNNNNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-N--NNNNNNN-NNN-----NNNNNNNN-NNNNNNNNNN--NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNNNN-N--NNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--
NNNNNNNNNNNNN---NN-NNNN-NNN-NNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNNNNN-NNNNNNNNNNNNNNNN- NNNNNNNNNNNNN--NNNNNNNNNNNN----
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNN-------------------NNNNNNNNNNNNNN-N[-????] EU477708_Epitheca_bimaculata
CUCGAUUUUAAAAGAGCUAAAU-UAUUA-----AUUUAUUUAUUGUUG-CAA--AACUAUUA----AUAAUAUA-AUUUAG
A-GAGGA-AAUCUU-AUUCGUUUUUAAUGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAUU-UUCUUUAUUU--AAGUUUUAAC----UUUUUAUUAUAACUUAUUUAUUGAA UUA--
GAAAUUGUAGGGGAUAAGCUCUAUGAUAA---UCUAAAAG-AUUUAUUUUUAAU-----CAAUUUAUAUAGGGUUAGAAUUAUCCAUUAUUA- UUAGGUGUGUUAUAAUAUAUAUUGAUUAUUAGUU--
AAUUUUUUUUAUU--UUU-AGAA-AUU-UAUUAAAAUGUUUGGA-UUAA-UU-AUAUAUCUGAU-GAAAUA-UGAUUAAAU- UAGUAUAAUUAUA--UUGUUUAAUGUG----
AAUUUAAUUUUAUAAUAAAAUAAGGAAUUCGGCAA--AUAUAA---------UACUCGCCUGUUUAACAAAAAC-A[-????] EF631590_Rialla_villosa
NNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNNNNNNNN-NNN--NNNNNNNN--NNNNNNNNNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-N--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--
NNNNNNNNNNNNN---NN-NNNN-NNN-NNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNNNNN-NNNNNNNNNNNNNNNN- NNNNNNNNNNNN-------------------------------------
-----------------NNNN------------------NNNNNNNNNNNNNN-N[-????] EU477707_Cordulia_aenea CUCGAUUUUAAAAGAGCUAAUU-UAUUA-----
AUUUAUUUAUUGUUU-CAU--AAUUAUUA----AUAAUAUA-AAUUAG G-AGGGA-AAUCCU-AUUCGUUUUUAAUGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAU-UUCUUUAUGU--
AAAUUUUAAU----UUU-UAUUAUAAUUUAUUUACUGAA UUA--AAGAUUAUAGGGGAUAAGCUCUAUAUUGA---UCUAAAAAAUUUUUUUAUUAAU-----
CAAUUUAUGUAGGGUUAAAAUUAUCCAUUAUUA- UUAAGUGUGUUAUAAUAUAUAUUGAUUAUUAAUU--GAUUUAUUUAUUU---UU-AGAA-UUU-UAUUAAAAUAUUUGAA-UUAA-UU-
UUAAAUUCAAU-GAAAUAAUGAUUGAAU- UAGUAUAAUUAUU--UUGUUUAAAAUG----AAAUUUUAUUUAUGAUAAAAUAAGGAAUUCGGCAA--AGAGAA---------
UACUCGCCUGUUUAACAAAAAC-A[-????] EU477705_Cordulia_shurtleffii   CUCGAUUUCAGAAGAGCUAAUU-UAUUA-----AUNUAUUUAUUGNUU-CAU--AAUUAUUA----
AUAAUAUA-AAUUAG G-AGGGA-AAUCCU-AUUCGUUUUUAAUGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUGAAUUUAAU-UCCUUUAUGU--AAAUUUUAAC----UUU-
UAUUAUAAUUUAUUUAUUGGA UUA--AAGGUUAUAGGGGAUAAGCUCUAUAAUAA---UCUAAAAA-UUUUUUUAUUAAU-----CAAUUUAUGUAGGGUUAAAAUUAUCCAUCAUUA-
UUAGGUGUGUUAUAAUAUAUAUUGGUUAUUAAUU--GAUUUAUUUAUUU---UU-AGGA-UUU-UAUUAAAAUAUUUGAA-UUAA-UU-UUAAAUUCAAU-GAAAUAAUGAUUAAAU- UAGUAUAAUUAUU--
UUGUUUAAAAUA----AAAUUUUAUUUAUGAUAAAAUAAGGAAUUCGGCAA--AUAUAA---------UACUCGCCUGUUUAACAAAAAC-A[-????] EU477700_Somatochlora_alpestris
CUCGAUUUCAGAAGAGCUAAAU-UAUUA-----AUUUAUUUAUUGUUA-CAA--AACUAUUA----AUAAUAUA-AUUUAG
U-GGGGA-AAUCCU-AUUCGUUUUUGAUGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAAU-UUCUUUAUGU--AAAUUUUAAC----UUUUUAUUAUAAUUUAUUUAUUGAA UUA--
AAAAUUAUAGGGGAUAAGCUCUAUAUUAA---ACUAAAAA-AUUUUUUAUUAAU-----CAAUUUAUGUAGGGUUAAAAUUAUCCAUCAUUA- UUAUGUGUGUUAUAAUUUAUAUUGAUUAUUAAUU--
AAUUUAUUUAUUU---UU-AGAA-UUU-UAUUAAAAUAUCUAAA-UUAA-UU-UUAUAUUUAGU-GAAAUAAUGAUUAAAU- UAGUAUAAUUAUA--UUGUUGAGAAUU----
UAUUUAUAUAAAUGAUAAAAUAAGGAAUUCGGCAA--AUAUAA---------UACUCGCCUGUUUAACAAAAAC-A[-????] EU477704_Somatochlora_flavomaculata
CUCGAUUUCAGAAGAGCUAAGU-UAUUA-----AUUUAUUUAUUGUUA-CAA--AACUAUUA----AUAAUAUA-AUUUAG
U-GGGGA-AAUCCU-AUUCGUUUUUGAUGG-UGUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAAU-UUCUUUAUGU--AAAUUUUAAA----UUUUUAUUACAAUUUAUUUAUUGAA UUA--
AAGAUUAUAGGGGAUAAGCUCUAUAUUAA---ACUAAAAA-UUUUUUUAUUAAU-----CAAUUUAUGUAGGGUUAAAAUUAUCCAUCAUUA- UUAUGUGUGUUAUAAUUUAUAUUGAUUAUUAAUU--
GAUUUAUUUAUUU---UU-AGAA-UUU-UAUUAAAAUAUCUGAA-UUAA-UU-UUGAAUUUAGU-GAAAUAAUGAUUAAAU- UAGUAUAAUUAUA--UUGUUUGGAAUA----
AAUUUAUAUUUAUGAUAAAAUAAGGAAUUCGGCAA--AUAUAA---------UACUCGCCUGUUUAACAAAAAC-A[-????] Somatochlora_metallica_CORD
CUCGAUUUCAGAAGAGCUAAGU-UAUUA-----AUUUAUUUAUUGUUA-CAA--AACUAUUA----AUAAUAUA-AUUUAG
U-GGGGA-AAUCUU-AUUCGUUUUUGAUGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAAU-UUCUUUAUGU--AAAUUUUAAU----UUUUUAUUAUAAUUUAUUUAUUGAA UUA--
AAAAUUAUAGGGGAUAAGCUCUAUAUUAA---ACUAAAAA-UCUUUUUAUUAAU-----CAAUUUAUGUAGGGUUAAAAUUAUCCAUCAUUG- UUAUGUGUGUUAUAAUUUAUAUUGAUUAUUAAUU--
GAUUUAUUUAUUU---UU-AGAA-UUU-UAUUAAAAUAUCUAAA-UUAA-UU-UUGAAUUUAGU-GAAAUAAUGAUUAAAU- UAGUAUAAUUAUA--UUGUUUAAUAUA----
AAUUUAUAUUUAUGAUAAAAUAAGGAAUUCGGCAAA-UGUA-A---------UACUCGCCUGUUUAACAAAAAC-A[-????] Somatochlora_tenebrosa_OSTn
CUCGAUUUCAGAAGAUCUAAGU-UAUUA-----AUUUAUUUAUUGUUA-CAA--AACUAUUG----AUAAUAUA-AUUUAG
U-GGGGA-AAUCUU-AUUCGUUUUUGAUGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAAU-UUCUUUAUGU--AAAUUUUAAA----UUUUUAUUAUAAUUUAUUUAUUGAA UUA--
AAAAUUAUAGGGGAUAAGCUCUAUAUUGA---ACUAAAAAAUCUUUUUAUUAAU-----CAAUUUAUGUAGGGUUAAAAUUAUCCAUCAUUA-

UUAUGUGUGUUAUAAUUUAUAUUGAUUAUUAAUU--GAUUUAUUUAUUU---UU-AGAA-UUU-UAUUAAAAUAUCUAAA-UUAA-UU-UUGAAUUUAGU-GAAAUAAUGAUUAAAU- UAGUAUAAUUGUA--
UUGUUUAAUGUA----AAUUAAUAUUUAUGAUAAAAUAAGGAAUUCGGCAAA-UAUA-A---------UACUCGCCUGUUUAACAAAAAC-A[-????]
EU477714_Hemicordulia_mindana_nipponica CUCGAUUUCAGNNNNNNUAAUU-UAUUA-----AUUUAUUUAUUGUUA-UAU--AACUAUUA----AUAAUAUA-AAUUAG
G-AGGGA-AACCCU-AUUCGUUUUUGAAGG-UAUCUAGUU-UUUUAAGAAA-UGAA-UUUAAUUUAAC-UUCAUUAUUU--AAAUUUUAAA----AUAUUAUUAUUAUUUAUUUAUUGGA UUA--
AAAUUUAUAGGGGAUAAGCUCUAUAAAUU---ACUAAAAA-UGUUUUUUUUAAU-----CAAUUUAUAUAGGGUUAAAAUUAUCCAUUAUUA- UUAGGUGUGUUAUAAUUUAUAUUGAUUAUUAAUA--
GAUUUAUUUAUUU---UU-AGUU-UUU-UAUUAAAAUGUUAAAA-UUAA-CU-UUAUAUUUAUU-GAAAUAAUGAUUAAAU- UAGUAUAAUUAUU--UUGUUUUUUAUG----
AAUGAAAUUAUAUAAUAAGAUAAGGAACUCGGCAA--AUAUAA---------UACUCGCCUGUUUAACAAAAAC-A[-????] EU054977_5073_Hemicordulia_australiae
NNNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNNNNNNN-NNN-N-NNNNNNN-N-NNNNNNNNN-NNNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNN NNN--
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NNNNNNNNNNNNNN-N[-????]
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111111111111111111-----111111111111---
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DQ021431_Notiothemis_robertsi CUCGAUUUUAUAGGAGCUAAAU-UAUUA-----UUUUAGUUAAUGUUG-CAU--AAUYAUUA-----UUUAAUA-AUUUAG
A-GGAGA-AAUUUU-AUUCGAUUAUAAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAAU-CCUAGUAAUU--AAUUGNUUUAU----UUUUAU-AUAAAUUAUAUAUUAGG UUA--
AAUACUAUAGGGGAUAAGCUCUAUAUUUU---UUUAUAAGGGUCUAUU-UUAAU-----UAAUUUUUGUAGGUU-AAAAAUAUCC-UCAUUA-GUAAGGGGGU- AUAAUUUAUUUUUAUUAUUAAUU--
AAUUUUAUUUUCU---UU-AAUU-AUU-UAUUAAAAUACCAAUA-UUAA-CU-UUCURUUUUGG-GAAAUAAUGGUUAAAU-UAGUAUAAAUAAA-- UGUUUAUUAUAU-----
UAUUCAUUUUAUGAUAAAAUAAGGAGCUCGGCAAA-UAUA-G---------UUCUCGCCUGUUUAUCAAAAAC-A[-????] EU477726_Tetrathemis_irregularis
CUCGAUUUCAUGGGAGCUAAAU-UUUUA-----UUUUAGUUAAUGUUA-CAU--AAUUAUUA----UAAAUAUU-GUUUAG
U-GAAGA-AAUUUU-AUUCGGUCUUGAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAUU-UCUAAUAUUU--AAUUAUUUUAU----UU-UAUUAUUUAUUAUUUAUUAGA GGA--
UAUAUUAUAGGGGAUAAGCUCUAUAUUUU---UUUAUAAAGUUUUAUU-UUAAU-----UAAUUUUUGUAGGUUUAAAAUUAUCCAUCAUUA- GUAAGUGUGUUAUAAUUUAUUUUUUUAUUAAUU--
AAUUUAUAGGUUU---UU-AAUU-UAU-UAUUAAAAUCUUUAAA-CUAA-CU-UUUUAUUUUUA-GUAAUAAUGGUUGAAU- UAGUAUAAUUUAC--UGUUUAUAAUUU-----
UAAAAUCUUUAUUAUAAAAUAAGGAACUCGGCAA--UAUA-G---------UUCUCGCCUGUUUAACAAAAAC-A[-????] DQ021430_Tetrathemis_polleni
CUCGAUUUUGAGGGAGCUAAAU-UUUUA-----UUUUAGUUAAUGUGG-CAA--AAUUAUUA----AAAAUAAU-UUUUAG
U-GAAGA-AAUUUU-AUUCGGCCUUGAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAUU-UUUGUUAUGU--AAUUAUUUUAU----UUAUAUUAUUAAUUAUUUAACAAA UUA--
AAUAUUAUAGGGGAUAAGCUCUGUAUUUU---UUUAUAAAAUUUUGUAGUUAAU-----AAAUUUUUGUAGGUUUAAAAUUAUCCAUCAUUA- AUGAGUGUGUUAUAAUUUAUUUUUAUUAUUAAUU--
GAUUUAAGGGUUU---UU-AAUU-UUU-UAUUAAAAUAUCAUAA-UUAA-UU-UAUUAUUUUGA-GUAAUAAUGAUUAAAU- UAGUAUAAUUUGU--UGUUUAUAAUUC-----
UAUAAAUUUUAUUAUAAAAUAAGGAACUCGGCAAA-UAUA-G---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EU477723_Urothemis_cf_signata
CUCGAUUUUAGAUGAGCUAUUU-UAUUA-----UUUUAGUUAAUGUUU-CAU--AAUUAUUA----GUAAUAAA-UUUUAG
U-GGAGA-AAUUUU-AUUCGGUUCUAAGGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGU-CUUCUUAUUU--AAUUAUUAAAU----UUUAUUAUACUAUUAUAUGAGAAG GUA--
AAUUUUAUAGGGGAUAAGCUCUAUUUUUU---UCUAUAAUGAUUGUU-AUUAAU-----UUAUUGGAGUAGGUUUAAAAUUAUCCAUCUUUG- AUAAGUGUGUUAUAAUUUAUUUUUUUUUAUUAAU-
UAAUUUAAUUGGUU--UUU-AGUU-AUC-UAUUAAAAUGUUAUAA-UUAA-UU-UUUUAUUGUAA-GCAAUAAUGAUUAAAU- UAGUAUAGAAAUG--UGUUUAUAUUAC-----
UGUUAAGUAAAUAAUAAGAUAAGGAACUCGGCAA--AUAUAG---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EF640460_Urothemis_assignata
CUCGAUUUUAGAGGAGCUAUUU-UAUUA-----UUUUAGUUAAUGUUU-CAU--AAUUAUUA----AUAAUAUA-AUUUAG
A-GGAGA-AAUUUU-AUUCGGCUCUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGU-UUUGUCAUUU--AAAUUUUAUAU----UUAUAUUAUACUUUAUUUGACAAG UUA--
AAUAUUAUAGGGGAUAAGCUCUAUUUUAU---UCCAUAAAAUUUAUA-AUUAAU-----UUAUUGCAGUAGGUUUAAAAUUAUCCAUCUUUA- UUAAGCGUGUUAUAAUUUAUUUUUUUUAUUAAUU--
AAUUUUUUUCUUU---UU-AGUUAACU-UAUUAAAAAAUUAUAA-UUAA-UA-AUAUAUUAUAA-GUAAUAAUGAUUGAAU- UAGUAUAAAAUUG--UGUUUAUAUAGU-----
UGUUAUAUAAAUAAUAAAGUAAGGAACUCGGCAA--UUAUAG---------UUCUCGCCUGUUUAACAAAAAC-A[-????] Macrodiplax_cora CUCGAUUUCAAAAGAGCUAAUU-UUUUA-
----UUUUAUUUAAUGUUG-UAU--AAUUAUUA----AUAAUAUU-AAUUAG A-GGAGA-AAUUUU-AUUCGGUUAUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAU-CUUUUUAUUU-
-AACUUUUAUAU---UUAAUUAUACUUUAU-AUA-AAAAG CUA--AAUUUUAUAGGGGAUAAGCUCUAU-UUAUUUUUAUAAAG---UUGAUUUU-AAUUUA-----
UUAAAGUAGGUUUAAAAGUAUCCAUCAUUA-GUAAUUGUGUUAUAAUUUAUUUU--

UUUUAUUAAUUAAUUUUCUU---UUUUUU-AGUAUU--CUAUUAAAAUAUUAUAA-GAAA-UU-UUUAAUUUUAA-GAAAUAAUGAUUGAAU-UAGUAUAAUAUUU--UGUUUAUAUAAGU-----
AAUAUGUAGAUAAUAAAUUAAGGAACUCGGCAAU-UAUGAU---------UCUCGCCUGUUUAACAAAAAC-A[-????]
EF640459_Macrodiplax_balteata CUCGAUUUUAAAUGAGCUAAUU-UAUUA-----UGUUAGUUAUUGUUG-CAC--AACUAUUA----AUAAUAUA-AAUUAG
A-GGAGA-AAUUUU-AUUCGAAUUUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGC-CUUUAUAUUU--AACUAGAACAU----UUAUUUUAUAUGUUAUAUAUAAAG UUA--
AAAUUUUUAGGGGAUAAGCUCUAACAAGG---UUUAUAAAAGUUGAA-UUUAAU-----UUAUUGUUGUAGGAUUAGAAAUUUCCAUCGUUA- GUAAGUAUGUUAUAAUUUGUUUUUAUAAUUAAUU--
AAUUUUCUUUUUU----U-AAUA-UUU-UAUUAAAAUACCAUAA-UAAA-UG-UUUAAUUUUGG-GAAAUAAUGAUUAAAU- UAGUAUAGAAUUG--UGUUUAUAUAAU-----
UGUAAUUUUUAUAAUAAAAUAAGGAACUCGGCAA--AAAUAG---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EF631568_Zyxomma_elgneri
NNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNNNNNNNN-NNN--NNNNNNNN-N-NNNNNNNNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-N--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--
NNNNNNNNNNNNN---NN-NNNN-NNN-NNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNN-NN-NNNNNNNNNNNNNNNN- NNNNNNNNNNNN---------------------------------------
-----------------NNNN------------------NNNNNNNCAAAAAC-A[-????] AB708296_Zyxomma_petiolatum ------------------------------------
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---[-????]
EU477724_Zygonyx_torrida CCCGAUUUUAAAAGAGCUAAUC-UUUUA-----UUAUAGUUAAUGUUA-CAU--AAUUAUUA----UAAAUAGU-GAUUAG
A-GGAGA-AAUUUU-AUUCGUUUUUAAGGG-UAUCUGGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGC-UUUAAUAUUU--AAUUAUUAUA----AUUUUUUAUACAGUUAUUUAUUAAA AUA--
AAAAUUAUAGGGGAUAAGCUCUAUAUUUA--GUCUAAAAAUUUUUUA-UUUAUU-----UAAUUUAUGUAGGUUUAAGAAUAUCCACCAUUA-
AUAAAAGUGUUAUAAUUUAUUUUUUUUAAAAAAAAUUUUUUUUAAUUGU--UUU-AGUA-UAU-UAUUAAAAUUUCAGAA-UUAA-UU-UUUUAUUMUGA-GUAAUAAUGAUUAAAU- UAGUAUAAUUAUA--
UGUAUGAUUAAU-----UUUAUUUUAAAUGAUAAAAUAAGGAAUUCGGCAA--AUUUAA---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EU054944_5044_Nannophlebia_sp
NNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNNNNNNNN-NNN--NNNNNNNN-N-NNNNNN-NNNNNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-N--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NN-----
NNNNNNNNNNNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNN---NN-NNNN-NNN-NNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNNNNN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN-----
---NNNN------------------NNNNNNNNNNNNNN-N[-????]
DQ021432_Bironides_sp CUCGAUUUCAAAAGAGCUAAGA-GUAUA-----UAUUAGUUAAUGUUG-AAU--AAUUAUUA----AAAAUAGG-UUUUAG
U-AGAGA-AAUUUU-AUUCGUUUUUAAAGG-UAUCUGGUU-UUUUAAGAAA-UAAA-UUGAAUUUAAU-UUCAUUACUU--AUAUUUAACCU-----AUGUUAUAUA-UUAUUUAUUGAA UUA--
AAAAUUAUAGGGGACAAGCUCUAUAUUAA---ACUAUAAU--UAUUAAUGGAAU-----UAAUUUCUGUAGGUUUAAAAAUAUCCAUCAUUG-
AUGAUUUUGUUAUAAUUUAUAUUAAUUUAUUAAU-UAAUUUUUUUAAAAAAAUUUAGAA-UUU-UAUUAAAAUAUUACUA-UUAA-UU-ACAUUUUAUAA-UUAAUAAUGGUUAAAU-UAGUAUAAU- AAUG-
UGUUUAAAUAUAUA---UUUAUAUAUAAUAAUAAGGUAAGGAAUUCGGCAA--AUAUAA---------UUCCCGCCUGUUUAACAAAAAC-A[-????] DQ021429_Huonia_epinephela
CCCGAUUUUAAAAGAGCUAAAU-UCUUA-----UUUUAUUUAAUGUGG-UAU--AAUUAUUA----AUAAUAAUAAUUUAG
A-UGAGA-AAUUUU-AAUCGUUUUUAAAGG-UAUCUGGUU-UUUUAAGAAU-UAAA-UUUAAUUUAAU-UUCAUUAUUU--AUAAUUAUAAU------UUGUUAUUUAUUAUUUAUUGAA UUA--
AAUAUUGUAGGGGAUAAGCUCUACAUUUA--U-UUAUAAUUUCUUAA--UUAAU-----UAAUUUUUGUAGGUUUAAGAAUAUCCAUCAUUA- AUGAUUUUGUUAUAAUUUAUAUUUCCUGAUUAAU-
UAAUUUUGUUGAG---UUU-AGUA-UAA-UAUUAAGAUUUUAUGA-UUAA-CA-UUAUAUCAUAA-GGAAUAAUGAUUAAAU- UAGUAUAAUAUAU--UGUUUAUUAAUU-----
UUUUAAUUUAAUAAUAAAAUAAGGAAUUCGGCAA--UAAUAA---------UUUCCGCCUGUUUAACAAAAAC-A[-????] EF631587_Huonia_oreophila
NNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNNNNNNNN-NNN--NNNNNNNN-N--NNNNNNNNNNNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNN-----NNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-N--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--
NNNNNNNNNNNNN--NNN-NNNN-NNN-NNNNN-NNNNNNNNNN-NNNN-NN-NNNNNNNNNNN-NNNNNNNNNNNNNNNN- NNNNNNNNNNNN---------------------------------------
-----------------NNNN------------------NNNNNNNCAAAAAC-A[-????] EF640408_Onychothemis_testacea CUCGAUUUUAGAAGAUCUAGUU-UAUUA-----
UUUUAUUUAAUGUUU-CAU--AAUUAUUA----AUAAUAAA-AACUAG A-GGAGA-AAUUCU-AUUCGUUUCUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAU-CCUAUUAUUU--
AAUUAUUAUA-----AUUAUUUAUAUAUUAUUUGAUAGG UUA--AAAGUUAUAGGGGAUAAGCUCUAUAUUUA--UUCUAUAAAUUGUU-A-UAUAAU-----
AAAUUUUUGUAGGUUUAAGAAUAACCAUCAUUA- AAGAGUAUGUUAUAAUUUAUAUUUAUUUUUAUUC--GAUUUUCUCAUUUU-UUU-AGUA-UUU-UAUUAAAAUAUCAAAA-UUAA-UU-UUUAUUU-
UGA-GGAAUAAUGAUUGAAU- UAGUAUAAAAUAA--UGUUUAUUUAAA------UUGAAUUAUAUGAUAAAAUAAGGAACUCGGCAA--UAUA-A---------UUCUCGCCUGUUUAACAAAAAC-A[-
????] EF640451_Rhyothemis_variegata CUCGAUUUCAAAUGAGCUAAUU-UUUUA-----UUUUAGUUAAUGUAU-CAU--AAUUAUUA----AAAAUAUUAAAUUAG
A-AGAGA-AAUUUU-AUUCGGUUUUGAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGU-AUCAUUAUUU--AAUUUUUAUAU----UUUAUUAUAUAAUUAUUUAUUGAU AAU--
AAAAUUGUAGGGGAUAAGCUCCAUUUUUU--U-CUAUAAAUAUGAAU-UUAAAU-----UAAUUUUUGUAGGGUUAAAAUUAUCCAUCAUUA-GAAAGUGUGUUAUAAUUUAUAUU-

AGUAAUUAAU-UAAUUUUA-UAAAU--UUU-AGGU-UUU-UAUUAAAAUAUCAGAA-UUAA-UU-UUCUAUUUUGA-GUAAUAAUGAUUAAAU-UAGUAUAAU-AAAU-UGUUCAAAUA-AUU----
GAAUUUUUUAUGAUAAAAUAAGGAACUCGGCAAA-UAUAA---------UUCUCGCCUGUUUAACAAAAAC-A[-????]
EU477719_Rhyothemis_fuliginosa CUCGAUUUCAAAUGAGCUAAAA-UUUUA-----UUUUAGUUAAUGUUU-CAU--AAUUAUUA----AUAAUAAAAUUUUAG
G-GGAGA-AAUUUU-AUUCGACUUUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGU-AUCAUUAAUU--AAUUUUUAUAU----UAUAGUAUAUAAUUAUUUAAUGAU AAA--
AAAAUUAUAGGGGAUAAGCUCUAUUUUUA--U-CUAUAAAUAUUAUUCUUAAAU-----UAAUUUUUGUAGGGUUAAAAUUAUCCAUCAAUA- GAAAGUGUGUUAUAAUUUAUAUUAAUAUUUAAUU--
AAUUUUAUUUAUU---UU-AGAU-UAC-UAUUAAAAUAUCAUAA-UUAA-UU-AUUCAUUAUGA-GUAAUAAUGAUUAAAU- UAGUAUAAUAAAU--UGUUCAUAUAAU-----
UGAAUCUUUUAUGAUAAAAUAAGGAACUCGGCAA--AUAUAA---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EF640449_Miathyria_marcella
CUCGAUUUUAAAAGAGCUAAUU-UAAUA-----UAUUAUUUAAUGUUU-CAU--AAUUAUUA----AUAAUAUU-AUUUAG
U-AGGGA-AAUCCU-AAUCGAUUUUAAAGG-UAUCUAGUU-UUUUAAUAAA-UAAA-UUUAAUUUACU-UUAUUCAUUU--AUAUUUUAUAU----UUUAUUAUAAU-AUAUUUGCUUAA GGA--
AAUAUUAUAGGGGAUAAGCUCUAUAUUAU--UCCUAUAAUAAUUGAU--UUAAU-----AAAUUUUUGUAGAAUUAAAAGUAUUCAUCAUUA-
UAGAGGUUGUUAUAAAUUAUAUUUUUUAUUAAUU-GAUUUUU-UUUUA---UUU-AGAA-UAA-UAUUAAAAUAUUAAAG-UGAA-UU-UAUUAUUUUUA-GUAAUAAUGAUUAAAU-UAGUAUAAA- AUUU-
UGUUUAUUAUUUGU---AAUAAUUU--AUGAUAAAAUAAGGAACUCGGCAAA-UAUAA---------UUCUCGCCUGUUUAUCAAAAAC-A[-????]
Miathyria_simplex ??--

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DQ021423_Tholymis_citrina CUCGAUUUCAGAAGAGCUAAAA-UUUUA-----UAUUAGUUAGUGUGU-CAU--AAUUAUUA----AUAAUAUA-UUUUAG
A-AGAGA-AAUUCU-AUUCGGCUUUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUACC-UUUAAUAUUU--AAAUUUCACAU-----UAUUUUGUAUUUUAUUUAUUAAA AUA--
AAUAUUGUAGGGGAUAAGCUCUACAUUUU---UCUAUAAAGAUUAAUUUAAUA-------UAUUUUUGUAGGUUUAAGAAUAUCCAUCACUG- AUAAGUUUGUUAUAAUAUAUUUAUAUUAUUAAUU--
AAUUUAAUUUUUU---UU-AGUU-UUC-UAUUAAAAUUUUUUAA-UUAA-UU-UAAUAUUUUUA-GUAAUAAUGAUUAAAU- UAGUAUAAUAAUU--UGUUUAAAAUGA-----
UUUAUUUUUAAUGAUAAAAUAAGGAACUCGGCAAA-AUUU-A---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EF640452_Tholymis_tillarga
CUCGAUUUUAAAUGAGCUAAGA-AGUUA-----UUUUAGUUAUUGUAU-CAU--AAUUAUUU----AUAAUAUU-UUUUAG
A-AGAGA-AAUUCU-AUUCGGAUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUACU-UUUAUUAUUU--AUUGGCUACAU-----UAAUUUAGCUCAUAUAUAAUAAA UGA--
AAUCUUAUAGGGGAUAAGCUCUUUAUGUU---ACUAUAAUUAGUUGAUUAAAU------GAAUUUUUGUAGGUUUAAGAUUAUCCAUCAUUG- AAAAGUGUGUUAUAAUUUAUAUAUACUAUUAAUU--
AAUUUUUUUUUAU---UU-AGUA-ACU-UAUUAAAAUGCCUUAA-UUAA-UU-UAUUAUUUUUG-UUAAUAAUGAUUAA AUCUAGUAUAAUUAUA--UGUAUAAUAUUU-----
UAUUUUUGUUAUGAUAAAAUAAGGCACUCGGCAA--AUAUUA---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EF640450_Pantala_flavescens
CUCGAUUUCAGAAGAUCUAAUU-UAUUA-----UUAUGGUUAAUGUAG-CAU--AAUUAUCA----UUAAUAUA-AAUUAG
A-GGAGA-AAUUCU-AUUCGAUUUUGAAGG-UAUCUAGUU-UUUUUAGAAA-UAAA-UUUAAUUUAUC-CUUGAACCUU--AACUGUUAAUU----UUAAUUAUAAGUUAUACUUUCAAG UAA--
AAAAUUAUAGGGGAUAAGCUCUAUAUUGU---UCUAUAAAAUUUUUGUUUAAU------UAAUUUCUGUAGGUUUAAAAUUAUCCAUCAGUA- AUAAGUGUGUUAUAAUUUAUUUUUUUUAUUAAU-
CAAUUUUAUUAUUU---UU-AGAA-UUC-UAUAAAAAUAUUAUAA-UUAA-UU-UUAUAUUAUAA-GAAAUAAUGAUUAAAU- UAGUAUAAUAAUA--UGUUCAAAUAAA-----
UUGAAUAUUUAUGAUAAAAUAAGGAACUCGGCAA--AUACAG---------UUCCCGCCUGUUUAACAAAAAC-A[-????] AF266099_Tramea_lacerata
CUCGAUUUCAGAAGAGCUAAUU-UUCUA-----UUUUACUUAAUGUUU-CAU--AAUUAUUA----AAAAUAAA-AAUUAG
U-AGGGA-AAUCCU-AUUCGGUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGU-CUUUUUACUU--ACUAAUUAUAU----UUUAUUAUAUUUGUAUUUAUUAAG AAA--
AAAAUUAUAGGGGAUAAGCUCUAUAUUUU---ACUAUAAUCUCGAUAUCAAUAA-------GUUUUUGUAGGUUUAAAAAUAUCCAUCAUUA- AUAAGUUUGUUAUAAUUUAUGUUUGAUUUUAAUU--
GAUUUUAGUUGAU--UUU-AGUA-GUA-UAUUAAAAUAUUUUAA-UAAA-UU-UAGUAUUAUAG-GAAAUAAUGAUUAAAU- UAGUAUAAAACUU--UGUGCAUUAUUU-----
GUUUAAUUUAAUGAUAAAAUAAGGAACUCGGCAAA-UAUA-G---------UUCUCGCCUGUUUAACAAAAAC-A[-????] Tramea_calverti CUCGAUUUCAGAAGAGCUAAUU-UGUUA-
----UUUUAUUUAAUGNGU-CAU--AAUUAUUA----AUAAUAAA-AAUUAG C-AGGGA-AAUCCU-AUUCGGUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAU-CCUAUUAUUU-
-AUUUGUUAUAU----UUUUUUAUAAAUAU-AUA-UUAGG GGA--AAAAUUAUAGGGGAUAAGCUCUAUAUUUU---ACUAUAAUUCUCUUAUCAAUAA-------
GUUUUUGUAGGUUUAAAAAUAUCCAUCAUUA- AUAAGUUUGUUAUAAUUUAUAUUUAAUAUUAAUU--GAUUUUGGUUUUU---UU-AGUA-AAU-UAUUAAAAUACUUUAA-UAAA-UU-UUAUAUUGAAG-
GAAAUAAUGAUUAAAU- UAGUAUAAUAAUU--UGUAUAAUAUUU-----UUAAAAAAUAAUGAUAAAAUAAGGAACUCGGCAAA-UAUAAU---------UCUCGCCUGUUUAACAAAAAC-A[-????]
Sympetrum_Kalosympetrum_janeae_OSJ CUCGAUUUCAGAAGAGCUAAUU-UAUUA-----UUUUAGUUAUUGUAU-CAU--AAUUAUUU----UUAAUAUA-AUUUAG
U-AGAGA-AAUUUU-AUUCGUUUUUGAGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGU-UUUAUUACUU--AAAUGUUAUAU----UUUAUGUAUAUAUUAUUUAAUAAA UUA--
AAAUUUAUAGGGGAUAAGCUCUAUAUUUU---UCUAUAAAAGUUUUUAUUAAU------AGAUUUUGGUAGGUUUAAAAUUAUCCAUCAUUA- GUAAUUGUGUUAUAAUUUAUAUCUAUUGUUAAUU--
AAUUUUGUUAUUU---UU-AGUA-ACA-UAUUAAAAUACUAUAA-UUAA-UU-UUUUAUUAUAG-GAAAUAAUGAUUAAAU- UAGUAUAAAAAUA--UGUAUACAAUUU-----
UAUAAUUUGUAUGAUAAAAUAAGGAACUCGGCAAA-UAAA-G---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EF640443_Sympetrum_Kalosympetrum_obtrusum
CUCGAUUUCAGAAGAGCUAAUU-UAUUA-----UUUUAGUUAUUGUGU-CAU--AAUUAUUU----UUAAUAUA-AUUUAG
U-AGAGA-AAUUUU-AUUCGUUUUUGAGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGU-UUUAUUACUU--AAAUGUUAUAU----UUUAUGUAUAUAUUAUUUAAUAAA UUA--
AAAUUUAUAGGGGAUAAGCUCUAUAUUUU---UCUAUAAAAGUUUUU-AUUAAU-----AGAUUUUGGUAGGUUUAAAAUUAUCCAUCAUUA-

GUAAUUGUGUUAUAAUUUAUAUCUAUUGUUAAUU--AAUUUUGUUAUUU---UU-AGUA-AUA-UAUUAAAAUACUAUAA-UUAA-UU-UUUUAUUAUAG-GAAAUAAUGAUUAAAU- UAGUAUAAAAAUA--
UGUAUAUAAUUU-----UAUAAUUUAUAUGAUAAAAUAAGGAACUCGGCAA--AUAAAG---------UUCUCGCCUGUUUAGCAAAAAC-A[-????] EU477739_Sympetrum_vulgatum
CUCGAUUUCAGAAGAGCUAAUU-UGUUA-----UUUUAGUUAAUGUAG-CAU--AAUUAUUU----AUAAUACA-UCUUAG
U-AGAGA-AAUUUU-AUUCGUUUUUGAGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUGAAUUUAGU-UUUAUUAUUU--AAAUAUUAUAU-----UAUUAUAUAAUUUAUUUAAUAAA UUA--
AAAAUUAUAGGGGACAAGCUCUAUAUUUU---UCUAUAAAAC-UUUU-UAGAAU-----AAAUUUUGGUAGGUUUAAGAUUAUCCAUCAUUA- GUAAUUAUGUUAUAAUUUAUAUUUAUUAUUAAUU--
AAUUUUAUUAUUU---UU-AGUU-AUC-UAUUAAAAUACCAUAA-UCAA-UU-UUUUAUUUUGG-GAAAUAAUGAUUAAAU- UAGUAUAAAAAAA--UGUUUAUAAUUU-----
UAUAAUUUUUAUGAUAAAAUAAGGAACUCGGCAA--AUAAAG---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EF640444_Sympetrum_Sympetrum_pedemontanum
CUCGAUUUCAGAAGAGCUAAUU-UGUUA-----UUUUAGUUAAUAUGG-CAU--ACUUAUUA----AUAAUACA-AAUUAG
A-GAAGA-AAUUUU-AUUCGUUUUUGAGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAAC-UUUAUUAUUU--AAAUUUUAUAU-----UAACUUAUAUUUUAUUUAGUAGA UUA--
AAAAUUAUAGGGGAUAAGCUCUAUAUUUU---UCUAAAAAAGGUUUU-AUAAAU-----AAAUUUUGGUAGGUUUAAGAUUAUCCAUCAUUA- AUAAUUGUGUUAUAACUUAUAUUUUUUAUUAAUU--
AAUUUUAUUAUUU---UU-AGUA-AUU-UAUUAAAAUACCAUAA-UUAA-UU-UUUCAUUUUGG-GAAAUAAUGAUUAAAU- UAGUAUAAAAUAA--UGUUUAUAAUAU-----
UAUAACUUUUAUGAUAAAAUAAGGAACUCGGCAA--AUAAAG---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EF640429_Sympetrum_Nesogonia_blackburni
CUCGAUUUUAAAAGAGCUAAAU-UAUUA-----UUUUAGUUAGUGUUU-CAU--AAUUAUUU----AUAAUAUA-AUUUAG
U-AGAGA-AAUUCU-AUUCGUUUUUGAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGU-UUUAUUAUUU--AAUUGUUAUAU-----UAUUUUAUAAAUUAUAUAUUAAA AUA--
AAAAUUAUAGGGGAUAAGCUCUAUAUUUU---UCUAUAAAAAUUUU--GUUAAU-----AAAUUUUAGUAGGUUUAAAAUUAUCCAUCAUUA- GUAAGUGUGUUAUAAUAUAURUUUGUAGUUAAUU--
AAUUUUAUUAUUU---UU-AGAA-UCA-UAUUAAAAUACUGUAA-UUAA-UU-UUUUAUUUUAG-GGGAUAAUGAUUAAAU- UAGUAUAGAAUAG--UGUUUAUAAAAU-----
UACGAGUUUUAUGAUAAAAUAAGGAAUUCGGCAA--AUAUAA---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EU477743_Sympetrum_Sympetrum_sanguineum
CUCGAUUUCAGAAGAGCUAAUU-UGUUA-----UUUUAGUUAAUGUAG-CAU--AAUUAUUU----AUAAUACA-UUUUAG
U-AGAGA-AAUUUU-AUUCGUUUUUGAGGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUGAAUUUAGU-UUUAUUAUUU--AAAUAUUAUAU-----UAUUAUAUAAUUUAUCUGGUAAA UUA--
AAAAUUAUAGGGGAUAAGCUCUUUAUUUU---UCUAUAAAAC-UUUU-AUGAAU-----AGAUUUUGGUAGGUUUAAGAUUAUCCAUCAUUA- GUAAUUGUGUUAUAAUUUAUGUCUGUUAUUAAUU--
AAUUUUAUUAUUU---UU-AGUU-GUA-UAUUAAAAUACCAUAA-UCAA-UU-UUUUAUUUUGG-GUAAAAAUGAUUAAAU- UAGUAUAAGAAAA--UGUUUAUAUUAU-----
UAUAAUUUUUAUGAUAAAAUAAGGAACUCGGCAA--AUAAAG---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EF640439_Sympetrum_Tarnetrum_corruptum
CUCGAUUUCAGAAGAGCUAAGU-UAUUA-----UUUUAGUUAAUGUUA-CAU--AAUUAUUU----AUAAUAUG-AUUUAG
G-AGAGA-AAUUUU-AUUCGUUUUUGAAGG--AUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGU-UUUUUUAUUU--AACUAUUAUAU-----UUUU-UAUAAGUUAUUUAUUAAA AUA--
AAAAUUAUAGGG-AUAAGCUCUAUAUUGU---UCUAUAAAAAUAUUU-AUUAAU-----AAAUUUUAGUAGGUUUAA-AUUAUCCAUCnnnA-GUA-GUGUGU- AUAAUUUAUAUUUAUAAUUAAUU--
AAUUUUAUUAUUU---UU-AGCA-UAA-UAUUAAAAUACCAUAA-UUAA-CU-UUUUAUUUUGG-GAAAUAAUGAUUAAAU-UAGUAUAGAAAAA-- UGUUAAUAAUAU-----
UAUAACUUUCAUAAUAAAAUAAGGAACUCGGCAA--AUAUAG---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EF640440_Sympetrum_Tarnetrum_fonscolombii
CUCGAUUCCAAAAGAGCUAGAU-UAUUA-----UUUUAGUUAAUGUAU-CAU--AAUUAUUU----AUAAUAUA-AUUUAG
A-AGAGA-AAUUUU-AUUCGUUUUUGGGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGU-UUUGUUACUU--AGACAUUAUAU-----UUUAUUAUAUAUUAUCUAACAAA AAU--
AAAAUUAUAGGGGAUAAGCUCUAUAUUAU---ACUAUAAAAUCUUUU-AUUAAU-----AAUUUUUAGUAGGUUUAAAAUUCUCCAUCAUUA- GUAAGUGUGUUAUAAUUUAUAUUUAUAAUUAAUU--
AAUUUUAUUAUUU---UU-AGUA-UUU-UAUUAAAAUAUCAUAA-CUAA-CU-UUUUAUUUUGA-GAAAUAAUGAUUAAAU- UAGUAUAAAUAAA--UGUUAAUAAUUU-----
UAUAUUUUAUAUGAUAAAAUAAGGAACUCGGCAA--AUACAG---------UUCUCGCCUGUUUAACAAAAAC-A[-????] Sympetrum_Tarnetrum_illotum
CUCGAUUUCAAAAGAGCUAAAU-UGUUA-----UUUUUUUUAAUGUAG-CAU--AAUUAUGU----GAAAUAUA-AUUUAG U
-GGAGA-AAUUCC-AUUCGUUUUUGAGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGC-UUUAUUAUUU--AAAUAUUAUAU-----UACCCUAAUAAUUAUUUAAUAAU UUU--
AAAAUUAUGGGGGAUAAGCUCCAUAUUUU---UCUAUAAAA-CUUUU-GUUAAU-----UAAUUUUGGUAGGUUUAAAAUUAUCCAUCAUUA- GUAAUUAUGUUAUAAUUUAUAUUUAAUAUUAAUU--
AAUUUUUGUUUUU---UU-AGUA-CAA-UAUUAAAAUAUUAAAA-UUAA-CU-CACUAUUUUAU-GAAAUAAUGAUUAAAU- CAGUAUAAGAAAA--UAUUUAUAAUUU-----
UAUAUAUCAUAUGAUAAAAUAAGGAACUCGGCAA--UUAAA---------UCUCUCGCCUGUUUAACAAAAAC-A[-????] Sympetrum_Tarnetrum_infuscatum
CUCGAUUUUAAAAGAGCUGAAU-UAUUA-----UUUUAGUUAAUGUUU-CAU--AAUUAUUU----AUAAUAUG-AUUCAG
A-AACGA-AAUUUU-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGU-UUUAUUAUUU--AAACAUUAUAU-----UAUUAUAUAUUUUAUUUGAUAAA UUA--
AAAGUUAUAGGGGAUAAGCUUUAUAUCAU---UCUAUAAAAAUUUUU-AUUAAU-----AAAUUUUGGUAGGUUUAAAAUUAUCCAUCAUUG- GUAAUUAUGUUAUAAUUUAUAUUUAUAAUUGAUU--
AAUUUUAUUAUUU---UU-AGUA-UAA-UAUUAAAAUACCAUAA-UUAA-UU-UUUUAUUUUGG-GAAAUAAUGAUUAAAU- UAGUAUAAACUAU--UGUUUAUAAUUU-----
UAUAAACUUCAUGAUAAAAUAAGGAACUCGGCAA--AUAUAG---------UUCUCGCCUGUUUAACAAAAAC-A[-????] Sympetrum_danae   CUCGAUUUCAGAAGAGCUAAUU-UAUUA-
----UUUUAGUUAAUGUAG-CAU--AAUUAUUU----UUAAUAUA-AUUUAG U-AGAGA-AAUUCU-AUUCGUUUUUGAGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAAU-UUUAUUACUU-
-AAAUAUUAUAU-----UUUUAUAUAUUUUAUUUAAUAAA UUA--AAAAUUAUAGGGGACAAGCUCUAUAUUUU---UCUAUAAAAAUUUUG--UUAAU-----
AAAUUUUGGUAGGUUUAAAAUUAUCCAUCAUUA- GAAAUUGUGUUAUAAUUUAUAUUUAUUAUUAAUU--AAUUUUAUUAUUU---UU-AGUA-ACU-UAUUAAAAUACCAUAA-UUAA-UU-
UUUUAUUUUGG-GAGAUAAUGGUUAAAU- UAGUAUAAAAUAA--UGUUUAUAAUCU-----UAUAAUCUUUAUGAUAAAAUAAGGAACUCGGCAA--AUAAAG---------
UUCUCGCCUGUUUAACAAAAAC-A[-????] Sympetrum_meridionale   CUCGAUUUCAGAAGAGCUAGAU-UGCAU------UUUAGUUC-UGUAG-CAU--AAUCAUUA----
AUCAUACA-UUUUAG U-AGAGA-AAUUUU-AUUCGUUUUUGAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUGAAUUUAAU-UUUACUACUU--AAAUAUUAUAU-----
UAUUAUAUAAUUUAUUUGGUAAA UUA--AAAAUUAUAGGGGAUAAGCUCUAUAUUCU---UCUAUAAAACUUUUG--UGAAU-----AGAUUUUGGUAGGUUUAAGAUUAUCCAUCAUUA-

GUAAUUGUGUUAUAAUUUAUAUCUAUUAUUAAUU--AAUUUUAUUAUUU---UU-AGUU-UUC-UAUUAAAAUACCACAA-UUAA-UU-UUAUAUUUUGG-GAAAAAAUGAUUAAAU- UAGUAUAAGAAAA--
UGUUUAUAUUAU-----UAUAAAUUUUAUGAUAAAAUAAGGAACUCGGCAA--AUAUAG---------UUCCCGCCUGUUUAACAAAAAC-A[-????] EU477752_Leucorrhinia_pectoralis
CUCGAUUUCAGAAGAGCUAAAU-UGUUA-----UUUUAGUUAAUGUAU-CAU--AAUUAUUU----AUAAUAAA-UUUUAG
G-AGAGA-AAUUUU-AUUCGUUUUUGAGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAUU-UUUAUUAUUU--AACUGUUGUAU-----UAUUACUUAGGUUAUUUAUUAAA AGA--
AAAAUUAUAGGGGAUAAGCUCUGUAUUUU---UCUAUAAAAAUUUUU-AUUAAU-----AAAUUUUGGUAGGUUUAAAAUUAUCCAUCCUUA- GUGAGUUUGUUAUAAAUUAUAUUUUUAAUUAAUU--
AAUUUUGUUGUUU---UU-AGUA-UAU-UAUUAAAAUACCAUAA-CUAA-UU-AAAUAUUUUGG-GAAAUAAUGAUUAAAU- UAGUAUAAAAACG--UGUUUAUUAUUU-----
UGUGAUUUAUAUGAUAAAAUAAGGAAUUCGGCAA--AUUUAG---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EF640394_Leucorrhinia_glacialis
CUCGAUUUCAGAAGAGCUAAAU-UGUUA-----UUUUAGUUAAUGUAU-CAU--AAUUAUUU----AUAAUACA-UUUUAG
U-AGAGA-AAUUUU-AUUCGUUUUUGAGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAUC-UUUAUUAUUU--AACUGUUAUAU-----UUUCAUUUAAGUUAUUUAUUAAA GGA--
GAAAUUAUAGGGGAUAAGCUCUAUACUUU---UCUAUAAUA-UUUUU-AUUAAU-----AAAUUUUGGUAGGUUUAAAAUUAUCCAUCUUUA- GUGAGUUUGUUAUAAAUUAUGUUUUCAAUUAAUU--
AAUUUUGUUUUUU---UU-AGAA-UAU-UAUUAAAAUACCAUAA-AUAA-UU-AAUUAUUUUGG-GAAAUAAUGAUUAAAU- UAGUAUAAAAAUA--UGUUUAUUAUUU-----
UAUAAUUUUUAUGAUAAAGUAAGGAACUCGGCAA--AUAUAG---------UUCUCGCCUGUUUAACAAAAAC-A[-????] DQ021425_Celithemis_elisa
CUCGAUUCYAAAAGAGCUAAUU-UAUUA-----UUUUAGUUAAUGUUG-CAU--AAUUAUUA----ACAAUAUA-UUUUAG
G-GGAGA-AAUUUU-AUUCGUUUUUGGAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGC-UUUAUUACUU--AACUAUUAUAU-----UAUAUUUUAAGUUAUUUAAUAAU AGA--
AAAAUUAUAGGGGACAAGCUCUAUAUUUA---UCUAAAAGGUUUUU--AUUAAU-----AAAUUUUAGUAGGUUUAAAAUUAUCCAUCUUUA- GUAAGUGUGUUAUAAUUUAUAUUUAAAAUUAAUU--
AAUUUUAUUGUUU---UU-AGUA-UAU-UAUUAAAAUACCAUAA-UUAA-UU-UUUUAUUUUGG-GAAAUAAUGAUUAAAU- UAGUAUAAAUAUA--UGUUUAUAUUUU-----
UAUUAUAUUAAUGAUAAAAUAAGGAAUUCGGCAAA-UAUAAY---------YSMCGCCCUGUUUAWCAAAAAC-A[-????] EF640393_Celithemis_eponina
CUCGAUUCCAAAAGAGCUAAAU-UAUUA-----UUUUAGUUAAUGUUG-CAU--AAUUAUUA----UUAAUAUA-UUUUAG
G-AGAGA-AAUUUU-AUUCGUUUUUGGAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGC-CUUGCCAUUU--AAUUAUUAUAU-----UAUAUUUUAAUUUAUUUGGUAAG AGA--
AAAAUUAUAGGGGAUAAGCUCUAUAUUUA---UCUAAAAAUUUUUUC-GUUAAU-----GAAUUUUAGUAGGUUUAAGACUAUCCAUCUUUA- GUAAUUAUGUUAUAAUUUAUGUGUUUAAUUAAUU--
AAUUUUGUUGAUU---UU-AGUA-UAA-UAUUAAAAUUCUAUAA-UUAA-UU-UAUUAUUUUAG-GUAAUAAUGAUUAAAU- UAGUAUAAUUAUA--AGUUCAUAAUUU-----
UGUUAAUUAAAUGAUAAAAUAAGGAACUCGGCAA--AUAUAA---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EF640392_Brachymesia_gravida
CUCGAUUCCAAAAGAGCUAAAU-UAAUA-----UUUUGGUUAAUGUAU-CAU--AAUUAUCA----AAAAUAUA-AUUUAG
A-GGAGA-AAUUUU-AUUCGGUUUUGGAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAU-UUUAYAUUUU--AAUUUUUAUAU-----UGUAUUAUAGAUUAUUAUAUAAA UUA--
AAAAUUAUAGGGGAUAAGCUCUAUA-UUA--UUCUAUAAAUAUUUUC-UUCAAU-----AAAUUAUUGUAGGUUUAGAAAUAUCCAUCUUUA- GCAAGUGUGUUAUAAUUUAUUUUUUUUUAUUAAU-
AAAUUUAAUUAAUU---UU-AGUU-AAU-UAUUAAAAUAUUGAGA-UGAA-UA-UAAACUCUCAA-GUAAUAAUGUUUAAAU- UAGUAUAAAUAUA--AGUUUAUAAUAU-----
UGAAUAAUAUUAGAUAAAAUAAGGAACUCGGCAA--AUAUAG---------UUCUCGCCUGUUUAWCAAAAAC-A[-????] Brachymesia_herbida ??---------------------------
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EF640412_Brachythemis_leucosticta CUCGAUUUUAAAAGAGCUAAUU-UAUUA-----UUUUAGUUAAUGUAU-UAU--AAUUAUUA----AAAAUAUA-AAUUAG
C-GGAGA-AAUUUC-AUUCGAUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUCAAUUUAAU-UUUAAUAGUU--AAAUUAUAUAU-----UAUUAUAUAAUUUAUAUAUUAAA UUA--
AAAAUUAUAGGGGAUAAGCUCUAUAAUUA--UUCUAUAAAAAUUUUA-UUAAAU-----AAAUUUUUGUAGAAUUAAAAUUAUUCAUCAUUA- AUAAGUAUGUUAUAAUAUAUAUUUAAUAUUAAUU--
AAUUUUAUUUUUU---UU-AGUU-UAA-UAUUAAAAUAUAUUAA-UUAA-UU-UUAAAUUUUUU-GAAAUAAUGAUUAAAU- UAGUAUAAUAAAU--UGUAUAUUUUUA-----
AUUAUAUUUUAUGAUAAAAUAAGGAACUCGGCAAA-AUUU-A---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EF640411_Brachythemis_contaminata
NNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNNNNNNNN-NNN--NNNNNNNN-N-NNNNNNNNN-NNNNNN
N-NNNNN-NNNNNN-NNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--AAAUUGUAUAU-----UAAUAACAAUUUAUUKGAUUAAU UUA--
AAGUUGAUAGGGGAUAAGCUCUAGUAUAU--UUAUAAAAUUGUUUGA-UUAAUA------AGUUUUAGUAGGUUUAAAAUUAUCCAGCUAUA- UAAAGUUUGUUAUAAAUUAUUUUUUUUAUUAAUU--
AAUUUUUUUAUUU---UU-AAUA-UUU-UAUUGAAAUGUUUGAU-AUAA-UU-UUUACUUCUAA-GUAAUAAUGAUUAAAU- UAGUAUAAUAUUU--UGUAUUAUUUUG-----
AUUAAUAUAAAUAAUAAAAUAAGGAACUCGGCAA--AUGUUA---------UUCCCGCCUGUUUAACAAAAAC-A[-????] EF640417_Deielia_phaon
CUCGAUUUCAAAAGAGCUAAUU-UAAUA-----UGUUAGUUAAUGUUU-UAU--AAUUAUUA----AUAAUAUA-AAUUAG
A-UGAGA-AAUUUU-AUUCGGUUUUGAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAAC-UUUAUUAUUU--AAAUUAUAUAU------UUUAUAUAAUUUAUAUAUUAAA UUA--
AAAUUUAUAGGGGAUGAGCUCUAUAUAUU--UUUAUAAAAUUUUUUA-AUUAAU-----AAAUUUUGGUAGGUUUAAAAUUAUCCAUCAAUUAUUAAGUGUGUUACAAUAUACAUU- UGUUAUUAAU-
UAAUUUUUUUUGUU--UUU-AGUU-AAA-UAUUAAAAUACUUUAA-AUAA-UU-UAAUAUUUUAG-GAAAUAAUGAUUAAAU-UAGUAUAAAUAAU--UGUUUAUUUU-AAU----
UUAUAAAUAAUGAUAAAAUAAGGAACUCGGCAA--AUAUUA---------UUCUCGCCUGUUUAACAAAAAC-A[-????]
EF640433_Pachydiplax_longipennis CUCGAUUUUAAAAGAGCUAAUU-UAAUA-----UUUUAGUUAAUGUUU-CAU--AAUUAUUA----AAAAUAUA-AUUUAG
A-GGAGA-AAUUUU-AUUCGGUUUUAAAGG-UAUCUGGUU-UUUUAAGAAU-UAAA-UUGAAUUUAGC-UUUAAUAUUU--AAUUUUUAUAU-----UUAUUUAUAUAUUAUUUAUUAAG GGU--
AAAAUUAUAGGGGAUAAGCUCUAUAUUU---UCCUAUAAAUUUAAU--UUUGAC-----UUAUUUUUGUAGGGUUAAAAUUAUCCAUCAUUA-

GAGAGUGUGUUAUAAUUUAUAUAUGUAUUUAAUC--AAUUUUAUUAUUU---UU-AGUU-UUU-UAUUAAAAUAUCAUAA-UUAA-UU-GCAUAUAUUGA-GCAAUAAUGAUUAAAU- UAGUAUAAAUAUU--
UGUUUAUUAUUU-----UAUUUAAGUGAUGAUAAUAUAAGGAACUCGGCAA--AUAUAA---------UUCUCGCCUGUUUAACAGAGAC-A[-????]
AY750042_Erythemis_sp_simplicicollis ---

---CGCCUGUUUAACAAAAAC-A[-????]
EU477753_Acisoma_panorpoides CUCGAUUUUAAAAGAGCUAAUU-AAUUA-----UUUUAGUUGAUGUUG-CAU--AAUUAUUA----AAA-UAUU-AAUUAG
G-AGAGA-AAUUUU-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGU-UUCAUUAUGU--AACUUUUUUAU-----UAUUUUAUUGGUUAUUUAUUGAA UAA--
AAAUUUAUAGGGGAUAAGCUCUAUAUAUA---UCUAUAAAAUUUUUU-GAUAAU-----UAAUUAAUGUAGGUUUAUAAAUAGCCAUCUUUA- AAGAGUAUGUUAUAAUUWAUUUAUUUUUAUUAUU-
UAAUCUUAGGAUUUU--UU-AGCA-AAU-UAUUAAAAUAUCAUAA-UAAA-UU-AUUAAUUUAGA-GUAAUAAUGAUUAAAU- UAGUAUAAAAAAU--UGUUMAUAUGAA----
UAUUAUUUUUCAUGAUAAAAUAAGGAACUCGGCAA--AUAUAG---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EU054950_5050_Erythrodiplax_minuscula
NNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNNNNNNNN-NNN--NNNNNNNN-N-NNNNNNNNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNN-----NNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNN--NNNNNNNNNNNNNN---N-NNNN-NNN-NNNNNN-NNNNNNNNN-NNNN-NN-NNNNNNNN-NN-NNNNNNNNNNNNNNNN-NNNNNNNNNNN-----------------
--------------------------------------NNNN-------------------NNNNNNNNNNNNNN-N[-????]
EF640423_Erythrodiplax_basalis CUCGAUUUCAGAAGAUCUAAUU-UAUUA-----AUUUAGUUAAUGUUU-CAU--AAUUAUUG----AUAAUAUA-AAUUAG
C-AGAGA-AAUUCU-AUUCGGUUUUGAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAAU-UUUGCUAUUU--AAUGACCAUAU-----UAUUUUGGUUAUUAUUCUGUGAA UUA--
AAAAUUUUAGGGGAUAAGCUCUAAAUUAU---UCUAUAAAAGGGCU--GGUAAU-----UAAUUUUUGUAGGGUUAUAAGUAUCCAUCAUUA- AUAAUUGUGUUAUAACUUAUUUUAGAUAUUACU--
UGAUUUUUUCUUUU---UU-AGUA-ACU-UAUUAAAAUAUUAGGA-UUAA-CU-UUUUAUUUUUA-GGAAUAAUGAUUAAAU- UAGUAUAUUUAUU--UGUUUAUAAUUU-----
UUUAUAAAUCAUGAUAAAAUAAGGAACUCGGCAA--AUAUAA---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EF640416_Crocothemis_servilia
CUCGAUUUCAGAAGAGCUAAUC-UUUUA-----UUUUAGUUAAUGUUU-CAU--AAUUAUUA----AUAAUAUU-GAUUAG
G-AAAGA-AAUUUU-AUUCGGUUUUGAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGC-CUUGUUAAUU--AAAUAUUACAA-----UAUUAUAAUAUUUAUAUAACAAG AUA--
AAAAUUAUAGGGGAUAAGCUCUAUAUUAU---UCUAUAAAUUUUCUA-UAUAAU-----UAAUUCUUGUAGGGUUAUAAAUAUCCAUCAUUA- GUGAGUAUGUUAUAAUUUAUUUUUUUAUUUUAA-
UUGAUUUUAUUUCU---UUU-AGUA-UAA-UAUUAAAAUAUUAUAA-UAAA-UG-UUAAAUUAUAA-GAAAUAAUGAUUAAAU- UAGUAUAAGAUUU--UGUUCAUUAAUU----
UUUUAUUGAUCAUGAUAAGAUAAGGAACUCGGCAA--AUAUAG---------UUCUCGCCUGUUUAACAAAAAC-A[-????] AF266100_Crocothemis_erythrea
CUCGAUUUCAGAAGAGCUAAUC-UUUUA-----UUUUAGUUAAUGUU--CAU--AAUUAUUA----AUAAUACU-GAUUAG
A-GAAGA-AAUUUU-AUUCGGUUUUGAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGU-UUUGUCAAUU--AAAUAUUAUAA-----UACAAUAAUUUUUAUUUGACAAG GUA--
AAAAUUAUAGGGGAUAAGCUCUAUAUUAU---UCUAUAAAUUGUUUA-UUUAAU-----UAAUUCUUGUAGGGUUAUAAAUAUCCAUCAUUA- AUAAGUAUGUUAUAAUUUAUUUUUUAUUUUAAG--
UGAUUUUAUUUCUU---UU-AGUA-UUA-UAUUAAAAUAAUAUAA-UAAA-UA-UUAAAUUAUAG-GAAAUAAUGAUUAAAU- UAGUAUAAUAUAU--UGUUCAUUAAUU----
UUUUAUUGAUCAUGAUAAGAUAAGGAACUCGGCAA--AUAUAG---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EU477744_Rhodothemis_rufa
CUCGAUUUUAAAAGAGCUAACU-GUUUA-----UUUUAGUUAAUGUG--CAU--AAUUAUUA----AAAAUAAC-UUUUAG
A-GGAGA-AAUUUU-AUACGCUUUUAAGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAUU-UUCUUUAAUU--AACUUUUAUAU----UAUUUUAUUUAGUUAUUUAUUGAA UUA--
AAAUUUAUAGGGGAUAAGCUCUAUAUAUU---UCUAUAAACUGAUUA-UUUAAU-----UGACUAAUGUAGGCUUAUAAAUAGCCAUCAUUA- AUAAACAUGUUAUAAUUUAUUUUUAAUUUWAAC-
GUAAUUUUUUUAGUU---UU-AGAA-UCU-UAUUAAAAUACCAGAA-UUAA-UA-GUUAAUUUUGG-GUAAUAAUGAUUAAAU- UAGUAUAAAAUU---UGUCUAUAUAUU-----
UAUUAUAUUGAUGAUAAAAUAAGUAACUCGGCAA--AUAUGA---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EF640430_Neurothemis_fulvia
CUCGAUUUCAGAAGAGCUAACU-UUUUA-----UUUUAGUUAAUGUUU-CAU--AAUUAUUA----UGAAUAUG-GGUUAG
G-UGAGA-AAUUCU-AUUCGGUUUUGAAGG--AUCUAGUU-UUUUAAUAAA-UAAA-UUUAAUUUAGU-UCUUUUAUUU--AAAAAUUAUAU-----UUCAUUAAUUUUUAUUUAAAAGA UAA--
AAAAUUAUAGGGGAUAAGCUCUAUAUUAA--A-CUAUAAAUCUUGUA-AUUAUUC----UAAUUUUUGUAGGGUUAUAAUUAUCCAUCAUUA- GGAAGUGUGUUAUAAUUUAUUUUUUUUACUAUA--
UGAUUUUUUUUAUU---UU-AGUG-UCA-UAUUAAAAUACUAUAA-UAAU-UA-AUAUAUUUUAG-GAAAUAAUGAUUAAAU- UAGUAUAAUAAAA--UGUUUAUAAAUU-----
UUGUUCAUUUAUGAUAAAAUGAGGAACUCGGCAA--AUAUAG---------UUCUCGCCUGUUUAACAAAAAC-A[-????] Neurothemis_ramburi -----------------------------
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EF640419_Diplacodes_lefebvrei CUCGAUUUCAAAAGAGCUAAUU-UAUUA-----UUUUAGUUAAUGUAU-CAU--AAUUAUUA----AAAAUAUA-AAUUAG
G-GAAGA-AAUUUC-AUUCGGUUUUGAGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGC-UUUGUCAAUU--AAUUAUUAUAU-----UAUGUUAUAUAUUAUUUGUCAAA AUA--
AAAAUUAUAGGGGAUAAGCUCUAUAUUUU---UCUAUAAAAUUUAAU--CUAAU-----UAAUUUUUGUAGGGUUAAAAUUAUCCAUCAUUA-AUAAGUGUGUUAUAAUUUAUUUU--

UACAUUAU--UGGAUUUAAUGUUU--UUU-AGUA-UAU-UAUUAAAAUACUAAAA-UGAA-CU-UUAUAUUUUAG-GAAAUAAUGGUUAAAU-UAGUAUAAAAAUU--UGUAUAUGUA-AUU---
UGAAUAUA-CAUGAUAAAAUAAGGAACUCGGCAA-AAUUAA---------UUCUCGCCUGUUUAACAAAAAC-A[-????]
EF64042_Diplacodes_trivialis CUCGAUUUCAGAGGAGCUAAUU-UAUUA-----UUUUAGUUAAUGUUU-CAU--AAUUAUUA----AUAAAUAUA-UUUUAG
C-AGAGA-AAUUCU-AUUCGGUUCUGAGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAUC-UUUAUUAAUU--AAUUUCUAUAA-----UUUUUUAGAUUUUAUUUAAUAAA AGU--
AAAAUUAUAGGGGAUAAGCUCUAUAUUUU---UCUAUAAAAUUUUCA-GCUAAU-----AAAUUUUUGUAGGGUUAUAAUUAUCCAUCAUUA- GAAAGUGUGUUAUAAUUUAUUUUUUAUAUUAAU-
UGAUUUUAUUUUUUU----U-AGUA-UAA-UAUUAAAAUAACCAAA-UGAA-UU-UUUAAUUUUGA-GUAAUAAUGGUUAAAU- UAGUAUAUUAAAA--UGUAUAUUUAUA-----
UUUAAGAAUAAUGAUAAAAUAAGGAACUCGGCCA-AUAUA-G---------UUCCCGCCUGUUUAACAAAAAC-A EF640414_Bradinopyga_strachani
CUCGAUUUCAGAAGAGCUAAUU-UAUUA-----AUUUAGUUAAUGUGU-CAU--AAUUAUUA----AUAAAUAUA-AAUUAG
G-UAAGA-AAUUUU-AUUCGGUUUUGAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGC-UUUCUUAAUU--AAUUUUUAUAU-----UAUAUUAAAAGUUAUUUAGGAAA UUA--
AAAAUUAUAGGGGAUAAGCUCUAUAUUAU---UCUAAAAAUUAUUUU-UUAUAU-----UAAUU-UAGUAGGGUUAAAAUUAUCCAUCUUUA- AUAAAUGUGUUAUAACUUAUUUUUUUCUGUAUA-
UGGAUUUUUAUCAUU---UU-AGAU-AAU-UAUUAAAAUAUCAUAA-UUAA-CU-UUAUAUUUUGA-GAAAUAAUGAUUAAAU- UAGUAUAAGAUUA--UUUUGUUUAUAA--
AUUAUUAUAAUGAAUAAUAAAAUAAGGAACUCGGCAA-AUUUUAG--------UUCUCGCCUGUUUAACAAAAAC-A[-????] EU054976_5075_Brachydiplax_denticauda
NNNNNNNNNNNNNNNNNNNNNN-NNNNNN---NNNNNNNNNNNNNN-NNN-N-NNNNNNN-N---NNNNNNN--NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNN-----NNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--
NNNNNNNNNNNNNNN---NN-NNNN-NNN-NNNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNNNNN-NNNNNNNNNNNNNNNNN- NNNNNNNNNNNN-------------------------------------
------------------NNNN------------------NNNNNNNNNNNNNN-N[-????] EU477717_Brachydiplax_chalybea_flavovittata
CUCGAUUUCAGAAAAGCUAGGU-UAAUA-----HUUUAGUUAAGGGGU-CAU--NAUAAUUA-UUAAUAAUAUA-UUCUAG
G-UAAGA-AAUUUU-AUUCGGUUUUGAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAUU-UUUUUAAAUU--AACUUUUGUAA-----UCUGUCAUAAGUUAUUUUGAAAA UAA--
AAAAUUAUAGGGGAUAAGCUCUAUAUUUU---UCUAUAAAUAUUUUU-UUAAUA-----AAAUUUUUGUAGGGUUAGAAUUAUCCAUCAAUU- GAAAUUGUGUCAUAAUUUAUUUUUUUUAUUAAU--
UAAUUUUUUUUUUAUUUUU-AGUA-UUU-UAUUAAAAUUUUAUAA-UAAU-CU-UUGAAUUAUAG-GUAAUAAUGAUUAAAU- UAGUAUAAAUAUU--UGUUUUUAAUUU-----
UUUAUCAGUUAUGAUAGGGUAAGGAACUCGGCAA-UAGU-AA---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EU477716_Chalcostephia_flavifrons
CUCGAUUUCAGAAGAGCUAAAU-UGAUA-----UUUUAUUUAUUGUAU-CAU--AAUUAUUA----AUAAUACA-AUUUAG
G-AAAGA-AAUUUU-AUCCGGUUUUGAGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAAC-UCUUUUAUUU--AUUUUGUAUAU-----UUUUAUACAUUCUAUUUAUAAGG UUA--
AAAAUUAUAGGGGAUAAGCUCUAUAUUUU---UUUAUAAAUAUUGUU-AAUAUU-----AUGAUUUUGUAGGGUUAAAAUUAUCCAUCAAUG- UAAAAUGUGUUAUAAUUUAUUUUUUUUAUUAAU--
CAAUUUUAUUUUUU---UU-AAUA-UGU-UAUUAAAAUUUUGUAA-UAAA-CU-UUAUGUUGCAA-UUAAUAAUGAUUAAAU- UAGUAUAAUUACC--UGUUUAUAGUGC-----
AGUUGUUGUAAUGAUAAAAUAAGGAACUCGGCAA-UUAUA-A---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EF631508_Micrathyria_aequalis
NNNNNNNNNNNNNNNNNNNNNN-NNNNNN---NNNNNNNNNNNNNN-NNN-N-NNNNNNN-NNN-NNNNNNN-NNNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--
NNNNNNNNNNNNNNN---NN-NNNN-NNN-NNNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNNNNN-NNNNNNNNNNNNNNNNN- NNNNNNNNNNNN-------------------------------------
-----------------NNNN-------------------NNNNNNNCAAAAAC-A[-????] EF640386_Micrathyria_atra CUCGAUUUCAGAAGAGCUAAUU-UAUUA-----
UUAUAGUUAAUGUGU-CAU--AAUUAUUA----UAAAUAUA-AAUUAG A-AGAGA-AACUUU-AUUCGAUUUUGAGGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGU-UUUAUUAAUU--
AAUUUUUAUAU-----UUAUGUACCAAUUAUUUAAUGAA AGU--AAAAUUAUAGGGGACAAGCUCUAUAUUU---UUCUAUAAAAUUUAU--UGAAAC-----
AUAUUUUUGUAGGUUUAAAAUUAUCCAUCAAUA- GUAAGUGUGUUAUAAUUUAUGUAUUUUAUUUAA--CAAUUUUGUGGAUU---UU-AGUA-UAA-UAUUAAAAUAUCAUAA-UUAA-UU-
UUUUAUUUUGG-GAAAUAAUGAUUGAAU- UAGUAUAAAGUAU--UGUUUAUGAUUU-----UAUUUAUUGAAUGAUAAUAUAAGGAACUCGGCAA-AUAUA-G---------
UUCUCGCCUGUUUAACAAAAAC-A[-????]
DQ021421_Micrathyria_didyma_G057 CUCGAUUUCAGAAGAGCUAAUUUUUUUA-----UUAUAGUUAAUGUUU-CAU--
AAUUAUUA----UUAAUAUA-AAUUAGU-AGAGA-AAUUUU-AUUCGAUUUUAAAGG-UAUCUAGUU-UUUUAAUAAA-UAAA-UUUAAUUUAGC-UUUAUUAAUU--AACUUUUAUAU----
-UGUUUUAUAAGUUAUUUAUUAAGAGU--AAAAUUAUAGGGGAUAAGCUCUAUAUUU---UUCUAUAAAA-AUCA-AUAAAAU-----UUAUUUUUGUAGGGUUAAAAUUAUCUAUCAUUA-
GUAAGUUUGUUAUAAUUUAUAUAUUUUAAUUAU--UAAUUUUAGGAUUU---UU-AGUA-UAU-UAUUAAAAUAUUAUAA-UUAA-UU-UUAUAUUUUAA-GUAAUAAUGAUUAAAU- UAGUAUAAGAAUU--
UGUUUAAAAUGU-----UGUUUAUUUUAUAAUAAUAUAAGGAACUCGGCAA-AUAUA-G---------UUCUCGCCUGUUUAACAAAAAC-A[-]
AY274509_Uracis_imbuta CUCGAUUUCAGAAGAGCUAAUU-UAUUAN----UUUUAGUUAAUGUAU-CAU--AAUUAUUA-NN-AAAAUAUA-AAUUAG
G-GGAGA-AAUUUU-AGUCGGUUUUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAUU-UUCAUUAAUU--AAUUUUUAUAU-----UUUUUUAUUUAUUAUUUGAUGAU AAA--
AAUUUUUUAGGGGAUAAGCUCUAAAUAA---UUCUAUAAGUAUUAA--UUAAU---U--UAAUUUUUGUAGGGUUAAAAUUAUCCAUCAUUA- AACAGUGUGUUAUAAUUGAUUUUAAUUAUUAAU--
UAAUUUAUUUUUAU--UUU-AGUU-UUC-UAUUAAAAUAAUGAUU-UUAA-UA-AUAUAAUUCAU-GAAAUAAUGAUUAAAU- UAGUAUAGUAAAA--UGUAUUUAAUUU-----
UAUAUAUAAUAUGAUGAUUUAAGGAACUCGGCAAAUAUA--G---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EF640391_Uracis_infumata
CUCGAUCUUGGAAGAGCUAAUU-UAUUA-----UUUUAGUUAAUGUGU-UAU--AAUUAUUA----AAAAUAUA-AUUUAG
A-GGAGA-AAUUUU-AAUCGGUUCCAAUGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAUU-UUUAUUAAUU--AAAAAUUAUAU-----UUUUGUAAAUUUUAUUUAAUAAA GUA--
AAAUUUUUAGGGGAUAAGCUCUAAAUAUU---UCUAUAAAUAAU-AA-UUAAUU-----UAAAUUUUGUAGGUUUAAAAUUAUCCAUCAUUA-

AAAAAUGUGUUAUAACUUAUUUUUGUUAUUAAU--UAAUUUAUUUUAAU--UUU-AGUA-CUC-UAUUAAAAUAAUAAAA-UUAA-UA-AUUAAUUUUAU-GGGAAAAUGAUUAAAU- UAGUAUAAUAAUA--
UGUAUUUAAUUU-----UGCUUAUAAAAUGAUGAUUUAAGGAAUUCGGCAA-AUAUA-G---------UUCUCGCCUGUUUAACAAAAAC-A[-????] DQ021420_Nannophya_pygmaea
CUCGAUUUCAGAAGAGCUAAUU-UGCUA-----UUAUAAUUAAUGUUG-CAU--AAUUAUUG---UUAAUACAA-AUUAAG
U-AAAGA-AACUUU-AUUCGUUUGUGAGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGU-UUUAUUAAUU--AAUUUUUAUAU------UCAGUAAAAUUUAUUUAAUGAA AUA--
AAUAUUAUAGGGGAUAAGCUCUAUACUGU---UCUAUAAAU-UUCAU-AUAAAU-----UAAUUUAUGUAGGGUUAUAAUUAUCCAUCAUUU-AUGAGUGUGUUAUAAUUCAUUUUUU- AUCUAAU--
UGAUUUUUUAUAAU--UUU-AGUA-UUC-UAUUAAAAUUUAAUAA-UCAA-UU-UUGCAUUAUUA-GGAAUAAUGAUUAAAU-UAGUAUAAUAAUU--GGUUUAUUAAUU-----
UAUUAAACUUAUGAUAAAAUAAGGAACUCGGCAA-AUAUA-G---------UUCUCGCCUGUUUAACAAAAAC-A[-????]
EF640388_Nannothemis_bella CUCGAUCUCAAAAGAGCUAAUU-UAUUA-----UUUUAGUUAAUGUUG-CAU--AAUUAUUA----UGAAUAUA-GAUUAG
U-AAAGA-AAUUUUAUUUCGGUUUUGAUGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAUU-UUCUUUAUUU--AACUUAUAUAU-----UUGUUUAUAAUUUAUUUAUUGAA UAA--
UAGUCUAUAGGGGAUAAGCUCUAUAUAUC---UCUAUAAAUAUUAAU-UUGAUA-----AAAUUUAUGUAGGGUUAUAAUUAUCCAUCAUUU- AUAAGUGUGUUAUAAUUUAUUUUUUUUAUUAAU--
UGAUUUUUUUUAUU---UU-AGUU-UUU-UAUUAAAAUACCAUAA-AAAA-UA-AUUAAUUGUGG-GAAAUAAUGAUUAAAU- UAGUAUAAUAAUU--GGUUUAUAAAUA-----
UUAUUUAUUAAUAAUAAAAUAAGGAAUUCGGCAA-AUAUA-G---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EF640455_Paltothemis_lineatipes
CUCGAUUUCAGAAGAGCUAAUU-UAUUA-----UUUUAUUUAUUGUAG-CAU--AAAUAUUA----AUAAUAUA-AUUUAG
A-AAAGA-AAUUUU-AUUCGAUUUUGAGGG-UAUCGAGUU-UUUUAUGAAA-UGAA-UUUAAUUUAGC-UUAUUUAAUU--AAGGUUUUAU------UAAUUUAUUACUUAUUUAAAUAA AGU--
AAAAUUGUAGGGGAUAAGCUCUAUAUUUU---UCUAUAAUUUUUUUA-UUAAGA-----AAAUU-AUGUUGGAUUAAUAUUGUCCAUCAUUA- AUAAGUUUUUUAUAAUUUAUUUUUACAUUAUU--
AAAUUUUGUGAUUU---UU-AGAU-UUU-UAAUGAAAUAUUUUAA-UUAA-UU-UAUUACUGAAA-GUAAUAAUGAUUAAAU- UAGUAUAAUUUUA--UGUAUUAUAUUU-----
UAAUACUGUAAUGAUAAAAUAAGGAACUCGGCAA-AUAAA-G---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EF640453_Brechmorhoga_mendax
CUCGAUAUCAGAAGAGCUAAUU-UAUUA-----UAUUAGUUAAUGUUG-CAU--AAUUAUUA---AUAAUAUA--UUUUAG
A-GGAGA-AAUUUU-AUUCGGUUCUGAUUG-UAUCUAGUU-UUUUAUGAAA-UAAA-UUUAAUUUAGC-UUAGUUAUUU--AAAUUUUAUAU----UAAUUUAUUAU-UUAUUUAAUUAA AGU--
AAAAUUGUAGGGGAUAAGCUCUAUAUUUA--UUCUAUAAUUUUUU-U--UUAUU-----AAAUUUAUGUGGGAUUAAwwCUGUCCAUC- UUUUAGUAAGUUUUUUAUAAUUUAUUUUUCUUUAUUUA-
UAAAUUUUGAUUUUU-UUU-AGUU-UUG-UAAUAAAAUAUCUUAA-UUAA-UU-UGUUAUUUUGA-GUAAUAAUGAUUAAAU- UAGUAUAAUUUUA--UGUAAUAUAUUU-----
UAUUACUUUAAUGAUGAAAUAAGGAAUUCAGCAA-AUAUAA----------UUCUCGCCUGUUUAWCAAAAAC-A[-????] Brechmorhoga_praedatrix ??----------------------
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EF640454_Dythemis_fugax CUCGAUUUUAGAAGAGCUAAGU-UGUUA-----UUUAAGUUAAUGUUU-CAU--AAUUAUUA----UCAAUAUA-ACUUAG
A-GGAGA-AAUUCC-AUUCGAUUCUAAGGG-UAUCUAGUU-UUUUAAUAAA-UAAA-UUUAAUUUAGC-CUUCUUAUUU--AUUUAUAAUU------UUUUUUAUAAUUUAUUGGAGAAU GGU--
AAUAUUAUAGGGGAUAAGCUCUAUAUUUU---UCUAUAAUUUUUUUG-UUUAAU-----GAAUUAAUGUAGGUUUAGAAAUAGCCAUCAUUG- UUAAUUUUGUUAUAAUUUAUUUUCUUUAUUAAU--
AAAUUUCUGUUUUU---UU-AGGA-UGU-UAUUAAAAUACGUUAA-UUAA-CU-UAUUAUUAAUG-GUAAUAAUGAUUAAAU- UAGUAUAAUAUAU--UGUGAAUAUUUA-----
AUUUAUGGUAAUAAUAAAAUAAGGAACUCGGCAA-AUAUA-A---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EU477749_Trithemis_aurora
CUCGAUUUCAGAAGAGCUAAUU-UAUUA-----AUUUAGUUAUUGUAU-CAU--AAUUAUUA----AUAAUAUA-AGUUAG
A-GGAGA-AAUUUU-AUUCGGUUUUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUAAAUUUAUU-CCUUAUAUUU--AGUUUUUAUAU-----UAUUUUAUGAACUAUAUAUUAGG UAA--
AAAAUUAUAGGGGAUAAGCUCUAUAUUUA---UCUAUAAAUUAAUUA--UUAAU-----AAAUUUUUGUAGGUUUAAAACUAUCCAUCAUUA- UAAAGUAUGUUAUAAUUUAUAUUUUUUAUUAAU--
UGAUUUUAUUAAUU---UU-AGUA-UAU-UAUUAAAAUAUCAGAA-UUAA-UU-UUAUAUUUUGG-GAAAUAAUGAUUAAAU- UAGUAUAAUAGAA--UGUAUAUCAUAA-----
UUGAAUAGAUAUGAUAAAAUAAGGAACUCGGCAA-AUAUA-G---------UUCUCGCCUGUUUAACAAAAAC-A[-????] Trithemis_africana -----------------------------
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EF640456_Trithemis_arteriosa CUCGAUUUCAAAGGAGCUAACU-UAAUA-----AUUUAGUUACUGUAU-CAU--
AAUUAUUA----AUAAUAUA-AGUUAGG-GGAGA-AAUUUU-AUUCGGCUUUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUCAAUUUAAA-CUUAAUACUU--AGGUUUUAUAU----
-UAUAAUAUAAACUAUAUGUUAAGUGA--AAAAUUAUAGGGGACAAGCUCUAUACUUU---UCUAUAAAUUUUUUA--UUAAU-----AAAUUUCUGUAGGUUUAAAAUUAUCCAUCAUUA-
UAAAGUGUGUUAUAAUUUAUAUUUUUUAUUAAU--UGAUUUUAUAAAAUU--UU-AGUA-UAU-UAUUAAAAUAUCAAAA-UUAA-UU-UUAUAUUUUGG-GAAAUAAUGAUUAAAU- UAGUAUAAUGAAG--
UGUUUAUUAUGUU----CUUAUGGUU-AUGAUAAAAUAAGGAACUCGGCAAA-UUUA-G---------UUCUCGCCUGUUUAACAAAAAC-A[-]
EF640409_Perithemis_tenera CUCGAUUUUAAAAGAGCUAAUU-UAUUA-----UUAUAUUUAUUGUGA-UAU--AACUAUUA----UUAAUAUA-GAUUAG
A-GAAGA-UAUUUU-AUACGAUUUUAAAGG-UAUCUAGUU-UUUUGAGAAA-AAAA-UUUAAUUUACU-UAUACUAUUU--AAAUUGUUUAU-----UUUUAAACAUUUUAUUUAUUAUA UGC--
AAAAUUAUAGGGGAUAAGCUCUAUAUUUU---ACUAUAAAAAAGAUU--UUAAU-----AAAUUAAAGUAGGUUUAAGAUUAUCCAUCUUUA-

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UAGAGUGUGUUAUAAUUUAUAUUUAUUAUUAAU--UAAUUUAUUUUAUU---UU-AGGA-AUA-UAUUAAAAUGUCAAAA-UUAA-UA-UUAUAUUUUGA-GUAACAAUGAUUAAAU- UAGUAUAAUUUAU--
UGUUUAAACUUU-----UUUUUAUUUUAUAAUAAAAUAAGGAACUCGGCAA-AAUUA-A---------UUCUCGCCUGUUUAACAAAAAC-A[-????] EU054947_55047_Perithemis_intensa
                                                                              NNNNNNNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNNNNNNNN-NNN-N-NNNNNNN-NNNN-NNNNNNN-NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--N--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNN--NNNNNNNNNNNNNN---N-NNNN-NNN-NNNNNN-NNNNNNNNN-NNNN-NN-NNNNNNNN-NN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN-----------------
----------------------------------------------------------NNNN------------------NNNNNNNNNNNNNN-N[-????]
DQ021422_Perithemis_lais                                      CUCGAUUUCAGAAGAGCUAAUU-UUUUA-----UUUUGUUUAAUGUAA-UAU--AAUUAUCA----AUAAUAUA-AAUUAG
A-AAAGA-UAUUUU-AUUCGGUUUUGAAGG-UAUCUAGUU-UUUUAAGAGA-AAAA-UUUAAUUUACC-UUUUUUACUU--AAUUUGUUUAU-----UUUGGAAUAGAUUAUAUAAUAAA UGU-
GUAAAUUAUAGGGGAUAAGCUCUAUAUUUU---UCUAUAAAAAGUUCUUUAUAAU-----AAAUUAGAGUAGGUUUAAAAAUAUCCAUCUUUA- UAGAGUAUGUUAUAAUUUAUAUUUAUAAUUAUU--
UGAUNNNNNNNUUUUUUUUUAGUA-GWU-UAUUAAAAUACUAAAA-UUAA-UU-UAAUAUUUUUG-GGAAUAAUGAUUAAAU- UAGUAUAAUAUUU--UGUUUAUGGUUU-----
UAAUGAUUYUAUAAUAAAUUAAGGAACUCGGCAA-AUUUA-G---------UUCUCGCCUGUUUAACAAAAAC-A EF631577_Palpopleura_lucia  NNNNNNNNNNNNNNNNNNNNNN-----
NNNNNNNNNNNNNNNNNNNN-NNN-N-NNNNNNN-NNNN-NNNNNNN-NNNNNN N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-
NNNNNNNNNN--NNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNN NNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--N--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNNNN-
NNNNNNNNNNNNNN--NNNNNNNNNNNNNN---N-NNNN-NNN-NNNNNN-NNNNNNNNN-NNNN-NN-NNNNNNNN-NN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN-----------------
----------------------------------------------------------NNNN------------------NNNNNNNCAAAAAC-A[-????]
EU477757_Diastatops_pullata                                   CUCGAUUUCAGAAGAGCUAAGU-UAUUA-----UUUUAGUUAGUGUUU-UAU--AAUUAUUU----AUAAUAUA-ACUUAG
A-GGAGA-GAUUUU-AUUCGGUUUUGAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGU-AUUAAUAUUU--AAGUUUUUUAU-----UUAAAUAGAAUUUAUUUAUUGAU AAU--
AAAAUUGUAGGGGAUAAGCUCUACAUUAA---UUUAUAAGACUUCUU-UUUAAU-----AAUUUAUUGUAGGUUUAGAAUUAUCCAUCUUUA- AUAAGUUUGUUACAAAUUAUAUUUAUUUAUUUA-
UUAAUUUGGUUUAC---UUU-AAUU-UAA-UAUUAAAAUUUUCGGA-UUAA-UU-UUUUGUCCUUA-UUAAUAAUGAUUAAAU- UAGUAUAAUAAAA--UGGUUAAUUUAU----
UUAUUCUUCUAUAAUAAAGUCAAGGAACUCGGCRA-AGAA-AG---------UCAUCGCCUGUUUAGCAGCAUC-A[-????] EF631596_Zenithoptera_fasciata
                                                                              NNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNNNNNNNN-NNN--NNNNNNNN--N-NNNNNNNNNNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--N--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--
NNNNNNNNNNNNNN---NN-NNNN-NNN-NNNNNNNNNNNNNNNN-NNNN-NN-NNNNNN--NNN-NNNNNNNNNNNNNNNN- NNNNNNNNNNNN-------------------------------------
-----------------NNNN-------------------NNNNNNNNNNNNNN-N[-????] DQ021435_Neodythemis_afra      CUCGAUUUCAGAAGAGCUAAAU-UAAUA-----
UUUUAGUUAAUGUAA-AAU--AAUUAUUAA---UGAUAUUA-AUUUAG A-GGAGA-AAUUUU-AUUCGUUUUUGAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAUA-UUUAUUUAUU--
AAUUAGUAUAU-----UGUUAUAUUAAUUAUAAAGUAAA AUA--AAGAUUAUAGGGGAUAAGCUCUAUAAUUA---UCUAUAAAAAUUUUU-AUUAAU-----
UAAAUUUUGUAGGGUUAAAAAUAUCCAUCAUUA- AUAAGUUUGUUAUAAUAUAUUUUAUUUAUUAAU-UGAUUUUUUAUUAUU--UUU-AGUA-UAA-UAUUAAAAUAUUAGAA-UAAA-UU-
UAUGAUUCUAG-GUAAUAAUGAUUAAAU- UAGUAUAAAAUUU--UGUUUAUUAUAU-----AAUUAUGUUUAUAAUAAGUUAAGGAACUCGGCAAUUAUA--G---------
UUCUCGCCUGUUUAUCAAAAAC-A[-????] Selysiothemis_nigra ------------------------------------------------------------------------------------------------------------------------------
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EF640448_Trithetrum_navasi                                    CUCGAUUUUAAAAGAGCUAGUU-UAUUA-----UUUUAGUUAGUGUGA-CAU--AAUUAUUA----UUAAUAUA-AUUUAG
G-AAAGA-AAUUUU-AUUCGUUUUUAAAGG-UAUCUAGUU-UUUUAAUAAU-UAAA-UUUAAUUUACU-UCUAUUAUUU--AAUAAUUAUAU----UAUUUUAUCUUUUUAUUUAUUAGA GGA--AUAAU-
AU-GGGGAUAAGCUCGAUAUUGU---UCUAUAAUUAUUUAUA-UUAAU-----UAAUUUAUGUAGGUUUAAGAUUAUCCAUCAUUA-
AUAAGUGUGUUAUAAUUUAUGUUUAUUUAUUAAU-UAAUUUUAUUUUUU--UU--AGUUAAAA-UAUUAAAAUAACAAAA-UUAA-UU-UUUUAUUUUGU-GUAAUAAUGAUUGAAU-UAGUAUAAU- UAAC-
UGUAUAUUUA-UUU----AUUUUUGAUAUGAUAAAAUAAGGAACUCGGCAA--AUAUAA---------UUCUCGCCUGUUUAACAAAAAC-A[-????]
EF640389_Porpax_risi                                          CUCGAUUUUAUAAGAGCUAACA-AUAUA-----UUUCAGUUAAUGUAG-UAU--AAUUAUUG----AUAAUAAU-UGUUAG
A-GGAGA-AAUUUU-AUACGCUUUUAAGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAGC-CUCAUUACUU--AAAUUUUAUAU-----UAUUAUAUUAUUUAUUUAUUGAG UUA--
AAUUUUAUAGGGGAUAAGCUCUAUAUAUA---UCUAUAAAGAAUUGU--UUAAU-----UAAUUAAUGUAGGCUUAAGAAUAGCCAUCUUUU-AUGAAUAUGUUAUAGUUUAUUUGAUUU- AUUAAU-
UAAUUUUAUAAUU---UUU-AGUA-UUU-UAUUAAAAUGUUAGAA-UGAA-CU-GUUUAUUUUAA-GUAAUAAUGAUUGAAU-UAGUAUAUAAGAAU-UGUUUAUACA--AU---
UAUUUAUUGGAUAAUAAAAUAAGUAACUCGGCAA--AUAUGA---------UUCUCGCCUGUUUAACAAAAAC-A[-????]
DQ021436_Micromacromia_camerunica                             CUCGAUUUCAGAAGAGCUAAAC-UGUUA-----UUUUAGUUAAUGUUG-AAU--AAUUAUUA----AUAAUA UA-
UUUUAGU-GAAGA-AAUUUU-AUACGGUUUUGAGGG-UAUCUGGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAU-UUUGUUCAUU--AAAUUUUAUAU-----
UAAAUUAUAUUUUAUUGAACAAAUUA--AAUAUUAUAGGGGACAAGCUCUAUAUUUU---UCUAUAAAAGGUUUU-AUUAAU-----UAAUUUUUGUAGGUUUAGAAUUGACCAUCAUUA-
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AAAAAUAUGUUAUAAAUUUAUAUUAAGGUAUUGAUUAAUUUUUUUUUAU--UUU-AGUU-UAC-UAUUAAAAUGUUAAAA-UGAG-UA-AUUUAUUUUAA-GUAAUAAUGAUUAAAU- UAGUAUAAAUUAC--
UGUUUAUUUUAU-----UAUAAGAUUUAUGAUAAAGUAAGGAACUCGGCAAA-AUUA-G---------UUCUCGCCUGUUUAUCAAAAAC-A[-????] DQ021434_Neodythemis_preussi
CUCGAUUUCAGAAGAGCUAAAU-UAAUA-----UUUUAGUUAAUGUGU-AAU--AAUUAUUA----AUAAUAUA-AUUUAG
G-GAAGA-AAUUUU-AUUCGUUUUUGAGGG-UAUCUAGUU-UUUUAAGAGU-UAAA-UUUAAUUUAUU-UUUAUUUCGU--AAUAUAUAUAU----UGUAUUAUAUUUUAUGUAAAUAGA UUA--
AAGAAUAUAGGGGAUAAGCUCUAUAUUGU---UCUAUAAAAAUUUU--AUUAAU-----UAAUUAUUGUAGGGUUAAAAAUAUCCAUCUUUA- GUAAGUCUGUUAUAAUAUAUAUUAGAAAUUUAU--
UAAUUUUUGUCUUU---UU-AGUU-AAA-UAUUAAAAUAUCAGAA-UAAA-UU-UUUAAUUUUGG-GUAAUAAUGAUUAAAU- UAGUAUAAAAUUU--UGUUUAUAAUAU-----
UAUUUAUUAUAUAAUAAAUUAAGGAACUCGGCAAU-UAUA-G---------UUCUCGCCUGUUUAUCAAAAAC-A[-????] DQ021437_Neodythemis_klingi
CUCGAUUUCAAAAGAGCUAAAU-UACUA-----UUUUAUUUAAUGUGU-AAU--AAUUAUUA----AUAAUAUA-AUUUAG
G-AAAGA-AAUUUU-AUUCGUUUUUGAGGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAUU-UUUAUCUCGU--AAAUAAUAUAU----UAAAUUAUAUUUUAUGAAGAUAAA UUA--
AAGAAUAUAGGGGAUAAGCUCUAUGGAGU---UCUAUAAAAAUUUU--AUUAAU-----UAAUUUUUGUAGGGUUAAAAUUAUCCAUCAUUA- GUAAUUGUGUUAUAAUUUAUAUUAAAAAAUUAU--
UAAUUUUAUUUUUU---UU-AGUA-GCA-UAUUAAAAUAUUAAAA-UAAA-UU-UUUAACUUUAG-GUAAUAAUGAUUAAAU- UAGUAUAAAAUUU--UGUUUAUGAUAU-----
UAAUUAUUUUAUAAUAAGUUAAGGAACUCGGCAAU-UACA-G---------UUCUCGCCUGUUUAUCAAAAAC-A[-????] DQ021440_Hadrothemis_infesta
NNNNNNNNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNNNNNNNN-NNN--NNNNNNNN-NUUAUAAAUAA-GUUUAG
A-GAAGA-AAUUUU-AUUCGAUUCUAAGGG-UAUCUAGUU-UUUUAAGAAA-UAAU-UUUAAUUUAUC-CUUGAUUUUU--AAACCUUAUAU------UUUAUUAGGUAUUAUUUGCCGG GUA--
AAAUNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-N--N--NNNNNNNNNNNNNN-NNNNNNNNNNNNNNNNNN-NNN-
NNNNNNNNNNNNNNNNNNNNNNNNNNNAUU--UAAUUUUCUUUUUU---UU-AGGU-UAC-UAUUAAAAUGUUAAAA-UUAA-UU-UAUUAUUUUUA-GUAAUAAUGAUUAAAU-UAGUAUAAAAUUU-
-UGUUUAUUAUAU------CUUUUAUAAAGAAUAAAAUAAGGAACUCGGCAAA-UAUA-A---------UUCUCGCCUGUUUAACAAAAAC-A[-????]
DQ021438_Thermorthemis_madagascariensis CUCGAUUUCAAUUGAGCUAAAUUGUUUA----AUUUUAGUUAUUGUGG-AAU--AAAUAUUA----AUAAUAUA-AUUUAG
A-GGAGA-AACUUU-AUUCGAUUUUGAAGG-UAUCUAGUU-UUUUAAGAAU-UAAA-UUUAAUUUAAC-UCCAAUUUUU--AAUUGUUACAU-----UUAAUUAUACAUUAUUAGUUGGA AUA--
AAUAUUAUAGGGGAUAAGCUCUAUAUUUU---UCUAUAAAAUUUUU--AUUAAU-----GAAUUUUUGUAGGUUUAAAAUUAUCCAUCAUUA- GUAAUUAUGUUGUAAUUUAUAUUUAAGUAAAAU--
UAAUUUUAUUUUUU---UU-UGAA-AUU-UAUUAAAAUGUCAGAA-UUAA-UU-UUUUAUUCUGG-GUAAUAAUGAUUAAAU- UAGUAUAAAAUAA--UGUUUGGUAUAU-----
UACUAAUUAUAGUAUAAUAUAAGGAACUCGGCAAU-UGGA-A---------UUCUCGCCUGUUUAUCAAAAAC-A[-????] DQ021439_Agrionoptera_insignis
CUCGAUUUCAGAAGAGCUAAGU-UAUUA-----UUUUAGUUAAUGUGG-AAU--AAUUAUUA----AUAAUAUA-AUUUAG
U-AAAGA-AAUUUU-AUUCGGUUUUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGC-UUUAUUUAUU--AAAUUUUAUAU-----UAUAUUAUAAUUUAUAAAAUAAA AUA--
AAUAUUAUAGGGGAUAAGCUCUAUAUUUU---UCUAUAAAA-UGUUA-AUUAAU-----UUAUUCUUGUAGGUUUAAAAUUAUCCAUCAUUA- GUAAGUGUGUUAUAAUUUAUUUUUAUUAUUAAU--
UAAUUUUUUUUUAUU-UUU-AGUA-UAU-UAUUAAAAUAUCAGAA-UUAA-UU-UUUUAUUGUGA-UUAAUAAUGAUUAAAU- UAGUAUAAAUUAU--UGUUUAUUGUAU-----
AAUUUAUUUUAUAAUAAAAUAAGGAACUCGGCAAA-UAUA-G---------UUCUCGCCUGUUUAUCAAAAAC-A[-????] DQ021441_Cratilla_metallica
CUCGAUUUCAGAAGAGCUAAAU-UAUUA-----UUUUAGUUAAUGUGG-AAU--AAUUAUUA----AGAAUAUA-UUUUAG
A-GGAGA-AAUUUU-AUUCGAUUUUGAGGG-UAUCUAGUU-UUUUGAGAAA-UAAA-UUUAAUUUAGU-UUCAUUAAUU--AUAUUUUAUAU-----UAAUAUAUAAUCUAUAGAAUGAA AUA--
AAUAUUAUAGGGGAUAAGCUCUAUAUUAU---UCUAUAAAAAAAUUU--AUGAAU-----UUAUUUUUGUAGGGUUAGAAUUAUCCAUCAUUA- GUAAGUGUGUUAUAAUUUAUAUUUGUUAUUAAU--
UAAUUUAAUUUUUU---UU-AGUA-CAU-UAUCAAAAUAUUAAAU-UUAA-CU-UAUUAAUUUAA-GUAAUAAUGAUUAAAU- UAGUAUAAAAUUA--UGUUAAUUAUAU-----
AAUUAACUUUAUGAUAAAAUAAGGAACUCGGCAAA-UAUA-G---------UUCUCGCCUGUUUAUCAAAAAC-A[-????] EF640435_Pseudoleon_superbus
AUCGAUUUCAAAAGAGCUAAUU-UUUUA-----AUUUACUCAAUGUUU-CAU--AAUUGUUA---AUAAUAGA--AAUUAG
A-AGGGA-AAUCCU-AUUCGAUUUUGAGGG-UAUCUAUUU-UUUUAAGAAU-UAAA-UUCAAUUUAGC-CUUCUUAUUU--AACAUUCACAU----UUUAGUGACUG-UUAUCUGGGCAG AGA--
AAAAUUAUAGGGGAUAAGCUCUAUACUAU---UCUAUAAAUUUAUCA-UUAUUU-----AAUUUUUAGUAGGGUUGCAAGUAUCCAUCAUUA-
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UGUUUUUAAUU------UUAAUAAGUCAUGAUGAAGUAAGGAACUCGGCAAA-UGUA-G---------UCCUCGCCUGUUUAACAAAAAC-A[-????] DQ021444_Orthemis_cultriformis
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A-GGAGA-AAUUUU-AUUCGGCUUUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAC-UUUGAUUUUU--AAUUUUUACAU-----UUAUUUAUAUAUUAUAAGUCAAA
AUA--AAUAUUAUAGGGGAUAAGCUCUAUAUUUU---UCUAUAAAAUUCUUG-AUUAAU-----AUGUUUUUGUAGGUUUAGAAUUAUCCAUCAUUA- GUAAGUGUGUUAUAAUUUAUAUUUAUAAUUAAU--
UAAUUUUAUUUAUU---UU-AGUA-AUU-UAUUAAAAUAUCAAAA-AUAA-UU-CAUUAUUUUGA-GUAAUAAUGAUUAAAU- UAGUAUAAAAUAU--UGUUCAUUAUAU-----
UAUGAAUUUCAUGAUAAAAUAAGGAACUCGGCAAA-UAUA-G---------UUCUCGCCUGUUUAUCAAAAAC-A[-????] EF640402_Orthemis_ferruginea
CUCGAUUUCAAAGGAGCUAAAU-UAUUA-----UUUUAGUUAAUGUGG-AAU--AAUUAUUA----AAAAUAUA-AUUUAG
U-GGAGA-AAUUCC-AUUCGGCUUUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGC-UUCAGUUUUU--AAUUAUUAUAU-----UUAUUUAUAUAUUAUAAACUGAA UUA--
AAUAUUAUAGGGGAUAAGCUCUAUAUUUU---UCUAUAAAAAUUUCA-AUUAAU-----AUGUUUUUGUAGGGUUAGAAUUAUCCAUCAUUA- GUAAGUGUGUUAUAAUUUAUAUUUGUUAUUAAU--
UAAUUUUAUUAUUU---UU-AGUA-AAA-UAUUAAAAUAUCAAAA-UUAA-UU-CAUUAUUUUGA-GUAAUAAUGAUUAAAU- UAGUAUAAAAUAU--UGUUCAUCAUAA-----
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CUCGAUUUCAGAAGAGCUAAUG-UAUUA-----UUUUAUUUAAUGUUG-AAU--AAUUAUUA----AUAAUAUA-UAUUAG
A-GGAGA-AAUUUU-AUUCGGUUUUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAU-UUCAUUAUUU--AAUUUUUUUAU-----UACCAUAUAAAUUAUUUAUUGAA GUA--
AAAAUUAUAGGGGAUAAGCUCUAUAUUAU---UCUAUAAAAUUUUUA-AUUAAU-----UAAUUUUUGUAGGGUUAAAAUUAUCCAUCAUUA-

GAAAGUGUGUUAUAAUUUAUAUUUAUUAUUAAU--UAAUUUUAUUUUUU---UU-AGAA-GAU-UAUUAAAAUAACAAAG-UGAA-UU-UUUUACUUUGG-GAAAUAAUGAUUAAAU- UAGUAUAAAAUAU--
UGUUUAUUAUAU----UAUUAAUAUUCAUGAUAAAAUAAGGAACUCGGCAAA-UAUA-G---------UUCUCGCCUGUUUACCAAAAC-A[-????] EF640403_Orthetrum_pruinosum
CUCGAUUUUAAAAGAGCUAAUU-UAUUA-----UUUUAUUUAAUGUUG-AAU--AAUUAUUA----AUAAAUAUA-AAUUAG
U-GAAGA-AAUUUU-AUUCGAUUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGU-CUCAUUAUUU--AAUUUUUACAU-----UAUUAUAUAAGUUAUUAAUUGGG AUA--
AAAUUUAUAGGGGAUAAGCUCUAUAUUUU---UCUAUAAAAUUUU-A-AUUAAU-----UAAUUUAUGUAGGGUUAGAAGUAUCCAUCAUUG- GAAAGUAUGUUAUAAUUUAUAUUUGCUAUUAAU--
UAAUUUUAUUUUUU---UU-AGAA-UAU-UAUUAAAAUAUUAAAG-UAAA-CU-UUUUACUUUAA-UUAAUAAUGAUUAAAU- UAGUAUAAAAUAU--UGUUUAUUAUAU----
UAUAAAUAUUUAUGAUAAAAUAAGGAACUCGGCAAA-UAUA-G---------UUCUCGCCUGUUUACCAAAAC-A[-????] DQ021445_Orthetrum_coerulescens
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AAAAUUAUAGGGGAUAAGCUCUAUAUUUU---UCUAUAAAAUUUUUA-AUUAAU-----UAAUUUUUGUAGGGUUAAAAUUAUCCAUCAUUA-
GAAAAAGUGUUAUAAUUUAUGUUUAUUAUUAAU--UAAUUUUAUUUUUU---UU-AGUA-UUU-UAUUAAAAUAUUAAAG-UUAA-UU-UUUUACUUUAA-GUAAAAAUGAUUAAAU-UAGUAUAAA- AAUU-
UGUUUAUUAUAA---AUAUAUAUUUAUAUGAUAAAAUAAGGAACUCGGCAAA-UAUA-G---------UUCUCGCCUGUUUACCAAAAC-A[-????] DQ021442_Lyriothemis_elegantissima
CUCGAUUUUAGAGGAGCUAACU-UAUUA-----UUUUAAUUAAUGUGG-AAU--AAUUAUUA----AUAAUAUU-UGUUAG
G-AAAGA-GAUUUU-AUUCGGUUCUAAAGG-UAUCUAGUU-UUUUAAGAGA-UAAA-UUUAAUUUAGC-UUUAUCUAUU--AUUUUUUAUAU----UACUAUAAAUUAAUAUAUGAUAAA
UUA--AAGAUUAUAGGGGAUAAGCUCUAUAUUUU---UCUAUAAAAGUUUAA-UUUAAU-----UAAUUUUUGUAGGCUUAAGAUUAGCUAUCAUUA- GUAAAAGUGUUAUAAUUUAUAUUUAUUAUUAAU--
UAAUUUUAUUUAUU---UU-AGUG-GUC-UAUUAAAAUAUCAAAA-UUGA-CU-UAAUAUUUUGA-GUAAUAAUGAUUAAAU- UAGUAUAAAAUAU--UGUUUAUGGUAU-----
AAAAUUUUUCAUGAUAAAAUAAGGAACUCGGCAAA-UAUA-G---------UUCUCGCCUGUUUAUCAAAAAC-A[-????] EU477728_Ladona_fulvaCUCGAUUUCAGAAGAGCUAAUU-UAUUA-
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-AAUUGUUAUAU-----UAUAUUAUAAAUUAUAAAAUGAG UUA--AAAAUUAUAGGGGAUAAGCUCUAUAUUUU---UCUAUAAAGGUUUUG-AUUAAU-----
UAAUUUUUGUAGGGUUAAAAUUAUCCAUCAUUG- GUGAUAAUGUUAUAAUUCAUUUUUGUUAUUAAU--UAAUUUUAUUUUUUU-UUU-AGAU-UAU-UAUUAAAAUAUCAAUU-UUAA-UU-
UAAUAUUUUGA-GUAAUAAUGAUUAAAU- UAGUAUAAAAUAU--UGUUUAUUAUAU-----UAUUUAUUGAAUGAUAAAAUAAGGAACUCGGCAAU-UAUA-G---------
UUCUCGCCUGUUUAUCAAAAAC-A[-????] Ladona_julia --

--CGCCUGUUUAACAAAAAC-A[-????]
EU477730_Ladona_Platetrum_depressa CUCGAUUUCAGAAGAGCUAAUU-UAUUA-----UUUUAUUUAUUGUGG-AAU--AACUAUUA----AUAAUAUA-AAUUAG
G-AAAGA-AAUUUY-AUUCGGUUUUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAUU-CUUACUAUUU--AAUUAUUAUAU-----UAUAAUAUAAGUUAUAAAGUAAG UUA--
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UAAUUUUAUUUUUU---UU-AGUA-UCU-UAUUAAAAUAUUAAAU-UAAA-CU-UUUUAUUUUAA-GUAAUAAUGAUUAAAU- UAGUAUAAAAUAU--UGUUUAUUAUAU-----
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CUCGAUUUUAGAAGAGCUAAUU-UAUUA-----UUUUAGUUAAUGUGG-AAU--AAUUAUUA----AAAAUAUA-AUUUAG
G-GAAGA-AAUUUU-AUUCGAUUCUGAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAU-CUCAUUAUUU--AAUUUUUAUAU-----UAUAUUAUAAGUUAUUUAAUGAG UUA--
AAAUUUAUAGGGGAUAAGCUCUAUAAUGA---UCUAUAAAUUAUCAA-UUUAAU-----UAAUUUUUGUAGGGUUAAGAAUAUCCAUCAUUA- GUGAGUGUGUUAUCAAUAUAUAUUUAUUAUUAA-
UUGAUUUUAUUUUUU---UU-AGUA-UUU-UAUUAAAANGUCAAAA-UGAU-UA-AAAUAUUUUGA-GUAAUAAUGAUUAAAU- UAGUAUAAAAAAU--UGUUUAUUAUUU-----
AAUUAUUUUUAUGAUAAAAUAAGGAACUCGGCAAU-UAUA-G---------UUCUCGCCUGUUUACCAAAAC-A[-????] EF631552_Plathemis_lydia_OPLd
NNNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNNNNNNNNN-NNN--NNNNNNNN-N--NNNNNNNNNNNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNN NNN--
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------------------NNNN------------------NNNNNNNCAAAAAC-A[-????] DQ021418_Libellula_quadrimaculata CUCGAUUUCAGAAGAGCUAAGU-UAUUA-
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-AAUUUUUAUAU-----UUUUAUAUUUAUUUAUUAUAAGUUAAA AUA--AAAAUUAUAGGGGAUAAGCUCUAUAUUUU---UCUAUAAAAGUUUUU-AUUAAU-----
UAAUUUCUGUAGGUUUAAAAUUAUCCAUCAUUG- GUAAGUAUGUUAUAAUUUAUAUUUAUUAUUAAU--UAAUUUUAUUUUUU---UU-AGUA-AAU-UAUUAAAAUAUCAGAA-UGAA-UC-
AAUUAUUUUGA-GUAAUAAUGAUUAAAU- UAGUAUAAAUUAU--UGUUUAUUAUAU-----UAUUAUUUUUAUGAUAAAAUAAGGAACUCGGCAAA-UAUA-G---------
UUCUCGCCUGUUUAUCAAAAAC-A[-????] Libellula_Syntetrum_angelina --
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---CGCCUGUUUAUCAAAAAC-A[-????]
Libellula_Eolibellula_semifasciata   ---

---CGCCUGUUUAACAAAAAC-A[-????]
EF640401_Libellula_Belonia_saturata   CUCGAUUUUAGAAGAGCUAAUU-UGUUA-----UUUUAGUUAAUGUGG-AAU--AAUUAUUA----AUAAUAUA-AAUUAG
U-GAAGA-AAUUUU-AUUCGAUUCUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAC-CUCAGCACUU--AAUUUUUAUCU-----UUUUAUAUAAAUUAUAUGCUGGG AUA--
AAAAUUAUAGGGGACAAGCUCUAUUUUUU---UCUAUAAAAUUUUGU-AUUAAU-----AUAUUUAUGUAGGAUUAAAAAUAUCCACCAUUA- GUAAAUAUAUUAUAAUUUAUAUUUAUCAUUAAU--
UAAUUUUAUUUUUU---UU-AGUA-UAU-UAUUAAAAUAUCAAAA-UAAA-UU-AAAUAUUUUGA-GGAAUAAUGAUUAAAU- UAGUAUAAUUUAU--UGUUUAUUAUAU-----
UAUUAUUUUUAUGAUAAAAUAAGGAACUCGGCAAUAUAUA-G---------UUCUCGCCUGUUUAUCAAAAAC-A[-????] AF195727_Libellula_Eotainia_composita
NNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNNNNNNNN-NNN--NNNNNNNN-N--NNNNNNNNNNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNN-----NNNNNNNNNNNNNNNNNNNNNNN NNN--
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--N--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN--
NNNNNNNNNNNNNN---NN-NNNN-NNN-NNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNNNNN-NNNNNNNNNNNNNNNN- NNNNNNNNNNNN--------------------------------------
------------------CGCC-------------------UGUUUAUCAAAAAC-A[-????] Libellula_Neotetrum_pulchella_OLP   CUCGAUUUCAGAAGAGCUAAAU-UAUUA-
----UUUUAGUUAAUGUGG-AAU--AAUUAUUA----AUAAUAUA-AUUUAG A-GGAGA-AAUUUU-AUUCGGUUCUGAGGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAGC-UUCAGCACUU-
-AAUUAUUAUAU-----UUUUUUAUAAUUUAUAGGCUGAA AUA--AAAAUUAUAGGGGACAAGCUCUAUAUUU---UUCUAUAAAAUUUUAUUUUAAUA------
UAUUUCUGUAGGGUUAAGAAUAUCCAUCAUUA- AUAAGUAUGUUAUAAUUUAUAUUUAUUAUUAAU--UAAUUUUGGGAUUU---UU-AGUA-UUU-UAUUAAAAUAUCAAAA-UAAA-UU-
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UUCUCGCCUGUUUAUCAAAAAC-A[-????] AF037182_Libellula_Holotania_comanche   NNNNNNNNNNNNNNNNNNNNNN-NNNNNN----NNNNNNNNNNNNNNN-NNN--
NNNNNNNN-N--NNNNNNNNNNNNNNN N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNN-----
NNNNNNNNNNNNNNNNNNNNNNN NNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
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NNNNNNNNNNNN--CGCCUGUUUAACAAAAAC-A[-????]
Libellula_Holotania_auripennis   ---

---CGCCUGUUUAACAAAAAC-A[-????]
Libellula_Holotania_axilena   ---

---CGCCUGUUUAACAAAAAC-A[-????]
Libellula_Holotania_luctuosa   ---

---CGCCUGUUUAACAAAAAC-A[-????]
EF631501_Aethriamanta_rezia_69   NNNNNNNNNNNNNNNNNNNNNN-NNNNNNN---NNNNNNNNNNNNNNN-NNN--
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-NNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
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NNNNNNNNNNNNN--NNNNNNNNNNNNN---NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNN-N---------NNNNNNNNNNNNNNNCAAAAAC-A[-   ]
Tetrathemis_corduliformis_   ---

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Diplacina_ismene_   ---

--[-????]
Erythemis_vesiculosa_   ---

--[-????]
Nannophyopsis_clara_   ---

--[-????]
Oligoclada_amphinome_   ---

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Atoconeura_sp_HOL_2010_   ---

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Elga_leptostyla_   ---

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Fylgia_amazonica_   ---

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                            EF631571_Hemistigma_albipunctatum_42   NNNNNNNNNNNNNNNNNNNNNN-NNNNNNN---NNNNNNNNNNNNNNN-NNN--
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-NNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
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Porpacithemis_sp_   ---


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Thermochoria_equivocata_                                       -------------------------------------------------------------------------------------------
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                            DQ021433_Malgassophlebia_bispina_F110             CUCGAUUUUAAAAGAGCUAUUU-UGUUA-----UUUUAGU-AACGUGG-UAU--
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UGUUUAUCAUUAU----AUAAUGAAA-AUAAUAAAAUAAGGAACUCGGCAAA-UAUA-G---------UUCUCGCCUGUUUACCAAAAAC-A[-                        ]
Micromacromia_zygoptera_                                 ----------------------------------------------------------------------------------
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Argyrothemis_argentea_                                         -------------------------------------------------------------------------------------------
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Pseudothemis_zonata_                                           -------------------------------------------------------------------------------------------
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                            EU477755_Oxythemis_phoenicosceles_2               CUCGAUUUUAAAUGAUCUAAUU-UAUUA-----UUUUAGUUAAUGUGG-AAU--
AAUUAUUG----GUAAUAUA-AAUUAGG-GGAGA-AAUUUU-AUUCGAAUUUAAAGG-UAUCUAGUU-UUUUAAGAAA-UAAA-UUUAAUUUAAU-UUCAUUAUUU--AAUUGUUGUAU----
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UGUUUAUAUGAUU-----GUUUAUUUUAUGAUAAAAUAAGGAACUCGGCAAA-UAUA-G---------UUCUCGCCUGUUUACCAAAAAC-A[-                        ]
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UUAAGUGUGUUAUAAUUUAUAUUU-AUAAUUAAU-UUAUUUUA-UUUUUU--UU-AGAA-UUU-UAUUAAAAUAAUAAAA-UUAA-UU-UUUUAUUUUGA-GUAAUAAUGAUUAAAU-
UAGUAUAGAAUAU--UGUUUAUUAUAUU-----GUUGUAGUAAUAAUAAAAUAAGGAACUCGGCAAA-UGUA-G---------UUCUCGCCUGUUUAUCAAAAAC-A[-          ]
Unaligned                                          ----------------------99999999999999999999999999999999999999999999999999999------
--------------------------------------------------------------------------11111111111111111111111111111111111111111-------
-------------------------------22222222222222222222222222222222222222-----------------------333333----------------
111111111111111111-----111111111111------------------------------------------------------------------------
22222222222222222222222222222222222-------------------------3333333333333333------------------------[-????] Ephemerella_sp_AY749918
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Paraleptophlebia_vaciva_AY749922   ---

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Anthopotamus_sp   ---

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Caenis_luctuosa   ---

---------UGCAAAGGACA[-????]
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UAUUAUAAUAUA---------AAUAAUAAAUUUAUAAUCUU-----AAGCAAGGAACUCGGCAAU-GAUUUUACU---------CGCCUGUUUAUCAAAAAC-A[-????]
Callibaetis_sp_AY749925   ---

--UGCAAAGGC--[-????]
Callibaetis_ferrugineus_AY859557   ---

---CGCCUGUUUAACAAAAAC-A[-????]
Baetis_sp_PC2010_genome   CCCGAAACUGGGGGGAGUUAUU-UAGCU----AUAUUGCCGUGGUGG-CAA--CCCCCGUU--UAUAAUAUCU-AAAUAG
U-GGCGA-AAAGUC-AGCCGGCCCCGGUGAUACCGUGGUUUGGUGGGGAAA-UGAA-UUUAAUUCAAG-CACGUG--CCGUG
???????????UAAGGAC----AAGCUUAAACCCAGACUAUAAUUAUUUUAAGUUUUUAG-----------AGUAGGCUUGCAAUCAGCCACCU
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Cloeon_dipterum_AF461220   ---

--UGCAAAGGC--[-????]
Leucrocuta_maculipennis_AY749959   ---

---[-????]
Centroptilum_luteolum_AY749935 ---

--UGCAAAG----[-????]
Stenonema_sp_AY749928 ---

--UGCAAAGGC--[-????]
Trigoniopthalmus_altern ---

---[-????]
Allomachilis_froggart ---

---[-????]
EF199981_Machilis_hrabei ---

--UGCAAAG----[-????]
Dilta_littoralis_AY859570 ---

---[-????]
Ctenolepisma_longicaudataAY210810 ---

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Lepisma_sp_X93390 ---

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EU376048_Lepisma_saccharina ---

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Thermobia_domestica_genome CCCGAAA-UGGAAAGAGCUAAA-GUAUU---AUUAUAUUGUAGGUGG-CAU--AUUAUUUA--UG-AAUUUUA-UUUUAG
U-GGUGA-GAUGCC-UUUCGGUUUCUAUUA-UAUCUGGUU-GUACAAGAAU-UGGA-UUUAAUUCAGC-CACAGUUAGAUUUGUUGUGAGG-----UUGGUUCAUUAUAGUUUUGCUGUG
???????????AAGGGGGAUUUGCUCUUUACUUUUGUUUAUUUAUAAUGUGGUUUUAUGUUAGAUGAAAGAUGUGGGCUUAGAAGUAGCCAUCA

??UUGUACUAUUGUUU-UAAA--UUAAUUAAGACAA-UUUAUAAUGGUGUUAU-
UAGUAUAUUGGUGA-----------------------GAAUG------AUUAAAGGAAUUCGGCAAA-AAUUUCCUC----------CGCCUGUUUAUCAAAAAC-A[-????]
Tricholepidion_gertschi_genome   CUCGAAA-UAAUUAGAGCUAUA-UUAUU----UUUAUAGUAAGUGUAA-CAU--AACUUUUG--UA-CAGGGUA-AUAUGG
UUGGUGA-AAUGCC-AUUCGAUAAUUGUGA-UAUCUAGUU-AUUUAAUAAU-UGAA-UUUAAUUCGGUUAAAGUUAAUUGAACCAAAUAUC------UUGGGUAUUUGAUUUUUUACUUU
???????????GUGGGGGAUUAGCUUCAUUAAUUUGUCGUUAUUUAUAAUGUUGUCUAUUUUUGUAAUUGAGUUGGGCUUGAAGGUAGCUAUAU
??UUAAAU????????????????????????????-GAUAUAAUGAAUAUAU-
UAGUAUAUAAUUUU-----GUAUUUUGUAUUGUGUAAUUUUA------AUGAAAGGAACUAGGCAAU-AUUUGAUUA??????????CGCCUGUUUAUCAAAAAC-A[-????]
Gromphadorhina_laevigata_AY210819   ---

---CGCCUGUUUAUCAAAAAC-A[-????]
Isoperla_davisi_AY125288   ---

---CGCCUGUUUAUCAAAAAC-A[-????]
EU414717_Isoperla_sp   ---

---[-????]
Gomphocerus_sibiricus_tibetanus_genome   CUCGAUU-UGGGUUGAUCUAUA-AACAA----AUAAUAUUUAAUGUGU-UAU--AAUUAUUA--AU-AAUUUGU-UUAUAG
A-AAUGA-AAUGUU-AUUCGUUUCCUAAGG-UUUCUAGUU-UCUUAAGAAA-AAAU-UUAAUUUUUUAUGUUUAAUGUUUUAUUUAAUUUU----------UUAAUUAUAAAUAUUAAAC
???????????UAAGGGGAUAAGCUCUUAAAUAAGUAUUCUAUAAUUUAU-----UUGAUUUUAAUAUAAUAAUAAGCUUUAAAUCAGCUAUUU
??UUAAGA????????????????????????????-GUAAUAAUGAUUGAAU-
UAGUAUAU??????????????????????????????????------UUAUAAGGAACUAGGCAAA-UUAAUUUC-----------CGCCUGUUUAUCAAAAAC-A[-????]

[EU054943_5043_Hagenius_sp   NNNNNNNNNNNNNNNNNNNNNNNNNN------NNNNNNNNNNNNNNNN-NNN--NNNNNNNN-NNNNNNNN----NNNNNN
N-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNNNNNNNNN-NNNN-NNNNNNNNNNN-NNNNNNNNNN--NNNNNNNNNNNNN--NNNNNNNNNNNNNNNNNN-NNNNN
NNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN----NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN- NNNNNNNNNNNNNN--
NNNNNNNNNNNNNN--NN-NNNN-NNN-NNNNNNNNNNNNNNNN-NNNN-NN-NNNNNNNN-NN-NNNNNNNNNNNNNNNN-NNNNNNNNNNNN------------------
--------------------------------------NNNN------------------NNNNNNNNNNNNNN-N[-????]
Hemiphlebia_mirabilis_OHM   CUCGAUUUUAUUAGAGCUAAUUUGUU-----UAAUGUGGUUAUUGUGU-UAA--AAAUAUCA--UAAAAA---CUUUUUG
U-AGGGA-UAUCCU-AUUCGUUAGUAAAGG-UAUCUAGAU-UUUUAAGAAA-UGAA-UUUAAUUCAGA-AUUAUUAAUU--UAUUUUAUUUAUUUAA-AUAAUAA-UAU????--?????
???--??????????????????????????????-??????????????????????????????-----?????????????????????????????????-????????????????????????--
????????????????????---???????-???????--?????????????????-????-??-???????????-?????????????????-
??-?????-----------?????????????????????-?[-????]
]

[AB707578_Paracercion_calamorum   ---UCCUCAUGU-----UUAUAUUUGAGGUU--UGGCCUGCCC-GGUGAUUU----UAAUUUAACGGC-CGCGGUAUA---
-----UGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGAAUG-AAAGGUUU-AACGAAAAAAnnGCUGUCUCAG-UUAUAAA--UUUG---AAUUUAACU UUUAAGUUAAAAGGCU--
----UAAA-----UUUUUUUGUAGGACGA--GAAGACCCUAUAGAGCUUUACAUUUAAUG---UUUUGUUAUAUU---- AAUUUAGAUUAAUACUUUUAAUUAACUUUAAA-AAAUGUUUU-
GUUGGGGUGACA-AGAAAUAUAUAUUUAACUUUUAUUAUUAU-A---UUUUCAUUAA-UUUAUG------UUUAUU-GGAUC CAAAA-UU-UUUGAUC-
AUUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCCC-UCAGAGUUCAAA-UUUACGGGA--AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUGACA- AUUGGGUGC-AGU-AGCU-CA-
AUUU-GUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU--------------------
]
 [66
69   71   67â€šÃ„Ã´   64â€šÃ„Ã´
72   73   74   75   80   81
86   88   74â€šÃ„Ã´   89   ]

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Unaligned                                        ---- ------4444444444444--------------------------5555555555-----------------------
------------------------------------------------------------------------------------6666666666666666------------------------
----------------------------------------------------------11111111111111111111111111111111111111111111111111111111111--------
------------22222222------------3333333333333333333-----------------------------------------------------------------------------
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--------------222222222222222[-????]
Unaligned                                        ---- ---------------------------------------------5555555555-----------------------
------------------------------------------------------------------------------------6666666666666666------------------------
----------------------------------------------------------11111111111111111111111111111111111111111111111111111111111--------
------------22222222------------3333333333333333333-----------------------------------------------------------------------------
-------------------------------------------------------------------------------------------------------------------------------
--------------222222222222222[-????]
Protosticta_sp_A_ZPA                             -UCUCUUCUUGUUU----AUUAUAAGAAGUU--UGACCUGCCC-GGUGAUUA------UUUAACGGC-CGCGGUAUU-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUUCUUUAAUAGGGAACUGGUAUG-AAGGGUUU-GACGAGGAGUUAACUGUCUCAA-UUUUUUAA-UUUUUUGAACUUAACU UUUUAGUUAAAAGGCU---
-UUAAAA-----UUUUGUUGGUAGACGA--GAAGACCCUAUAGAGCUUUACAUUUAAUU--UAUUU--AUUUUA-UUU--GUUU--AAUUUUUAUUUAUUUAUU-- UUUU-UCUUGUUUU-
GUUGGGGUGAUG--UAUGAAUAUAAAUAACUUCUUUUUUCUU------UUUCAUUGA-UUUAUG-----UUUUUUU--GAUCCUUUA-CU-AGAGAUU- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUUCC-UUGGAGUUCUUA-UUUACGGAA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-ACUUGGUGU-AGU-AGCU-UA-GU UG-GUGGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
ZPCs_BPCp                                        ---- ------------------------------------------------------------------------------
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Protosticta_sanguinostigma_BPS                   -?????????????----?????????????--??????????-??????????-?????????????-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCCUUUAAUAGGGGGCUGGUAUG-AAGGGUUU-GACGAAGAGCUUACUGUCUCUU-GUUUA--A-UUAUUAGAAUUUGACU UUUUAGUUAAAAGGCU--
----UAGA-----UUUUGUUGGUAGACGA--GAAGACCCUAUAGAGCUUUACAUUUUAUG--GAUUUUUUGUUUU-GUU--GUUU-- AAUGUUUUACUUAAGAUUUAGUUU-CGGUGUUUU-
GUUGGGGUGAUA--UUUGAAUAUAAUUAACUUCUUUUGUUUU------UUUCAUUGA-UUUAUG-----UUUCUUU--GAUCCUUUA-UU- GACGAUU-UUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUUUC-UUGGAGUUCUUA-UUUACGAAA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUACA-UUUGGGUGU-AGU- AGCU-UA-AUUG-GUGGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Sinosticta_ogatai_ZSOg                           -UGUCUUCCUGUUU-----AUUUAGGAAGUC--UGACCUGCCC-AGUGAAU------UAUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGACUGGUAUG-AAGGGUUU-GACGAGGUGUUAGCUGUCUCAA-AAUUA--A-UUUCUUUAAUUUAACU UUUUAGUUAAAAGGCU----
UAAAAA-----UAUUGUUGGUAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAUUU--UUUAU-UUAUUAU-UUU--GUUU--AUUUUAUUAUUUA-UUCUU---- U-AAUUAUUCU-GUUGGGGUGACA-
-UUAAAAAAUUGCUUAACUUUUAAUUAUUU-----UUUUCAUUUA-UUUAUG-----UUUAUUC--GAUCCAUUA-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUUUU-
UGGGAGUUCAUA-UCUGCAAAU--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-CUUGGGUGU-AGC-UGCU-UA-AG GU-AUGGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
---------[-????]
Palaemnema_paulicoba_ZPP                         -UCUCCUCUUGUG------AAUAAGGAGGUC--AGACCUCCCC-AGUGAAA-----AAUUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUAACUGUCUCAG-AAUUAUAA-UU-UUUGAAUUUGACU UUUUAGUUAAAAGGCU---
-UGAAAA-----UUUUGUUGGUAGACGA--GAAGACCCUAUAGAGCUUUACAUUUAUUC--UUUAA-AAUUAUA-UUU--GUUU--AUUGGUUUUGUUU-UAUUU-- AAU-AAUUGUUUU-
GUUGGGGUGACA--UUUAAAUAUAAUUAACUUUUUUUUUGUU----UCGUGCAUUGA-UUUAUG-----UUUUAUU--GAUCCAUUA-UU-AGUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUUUC-UUGGAGUUCUAA-UUUGCGAAA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-ACUAGGUGU-AGU-CGCU-UA-GU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Palaemnema_domina_ZPDm                           -?????????????----?????????????--??????????-??????????-?????????????-CGCGGUAUC-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCCGGUAUG-AAGGGUUC-GACGAGGUGUUGACUGUCUCGU-AAUUGAUU-UU--UUGAAUUUGACU UUUUAGUUAAAAGGCU---
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GUUGGGGUGACA--UUUGAAUAUAUUUAACUUUUAUUUAUUU-----CGUGCAUUGA-UUUAUG-----UUUUAUU--GAUCCAUUA-UU-AAUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUUUC-UUGGAGUUCUAA-UUUGCGAAA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUG-AUUAGGUGU-AGC-CGCU-UA-AU AC-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Palaemnema_melanostigma_BPM                      -?????????????---??????????????--??????????-???????-----????????????-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUCUUAAUAGGAGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUGACUGUCUCAU-CUUAAUUU--UA--UGAAUUUGACU UUUUGGUUAAAAGGCU--
--UUAAAA-----UUUUAUUGGUAGACGA--GAAGACCCUAUAGAGCUUUACAUUUAUUU--UUUGA-AGUUAUU-UUU--GUUU--AUUUCUUUAUUUU-UUUU---
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GAU-AAUUGUUUU-GUUGGGGUGACA--UUUAAAUAUAAUUAACUUUUUUAUUUUU-----UAUACAUUGA-UAUAUG-----UUUUUUU--GAUCCAUUA-UU-AAUGAUU-
AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUUUC-UUGGAGUUCUAA-UUUACGAAA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUG-AUUAGGUGU-AGC-CGCU-UA-AU AC-
AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU--------------[-????]
Isosticta_robustior_BIR                           -?????????????---??????????????--??????????-???????-----????????????-CGCGGUAUU-
UUGACCGUGCAA-GG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGAAUG-AAGGGUUU-AACGAGGCAUUAACUGUCUCAU-UUUUAUA---UU--AGAAUUUAACU UUUAAGUUAAAAGGCU---
---UAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAACUAUAU--UUUUU-AAU-ACU-UUU--AUUUU-AUGAUUUGUAUU--UAUU-- UAUUUAAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUGAUUAACUUUUGUUAUUUU----AUAAACAUAAA-UUUAUG-----AUUAUUG--GAUCCAGUA-UU-ACUGAUC- AUUAGUCUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCC-UCAGAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUG?-AGA-AGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Rhadinosticta_simplex_ZRS                         -UGUCCUCUCGUGU---UUGGUUGGGAGGUC--AGGCCUGCCC-GGUGAU------GUUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGAAUG-AAAGGUUU-AACGAGGCAUUGACUGUCUCAU-UUUUAUU---UUU-AGAAUUUAAUC UUUAAGUUAAAAAGCU---
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GUUGGGGUGACA--AAAACAUAUAAUUAACUUUUGUUAUUUU----AUGAACAUUAA-UUUAUG-----AUUAUUG--GAUCCAAUA-AU-AUUGAUC- AUUAGUCUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCC-UCAGAGUUCAAA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAAGUGC-AGA-AGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Amphisticta_silvarum_ISO_ZAS                      -UGUCCUCUUGUCU---UUGUUUAAGAGGUC--AGGCCUGCCC-AGUGAGA-------AUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGAAUG-AAAGGUUA-AACGAGGCAUUAGCUGUCUCAU-UUUUAUU---UU--AGAAUUUAAUA UUUAAGUAAAAAAGCU---
---UAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAUU---UUUCU-AAAUGAA-UUU--GGCUA-UAAAUUUUAUUUU-UAUU-- GAAUUAAGUAUUCU-
GUUGGGGCGACA-AAAAAUAUAUGAUUAACUUUUAUUAUUUU----UAAACCAUAGA-UUUAUG-----AAUAUUG--GAUCCAAUA-UU-AUUGAUC- AUUAGUCUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCC-UCAGAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGA-AGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Labidosticta_vallisi_OLVa_BLVa                    -UGUCCUCUUGUUU----UGUUUAGGAGGUC--AGGCCUGCCC-AGUGAUA----GUUGAUUAACGGC-CGCGGUAUU-
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GUUGGGGUGACA--AAAAUAUAUAAUUAACUCUUAUUAUUCU---AUUGACCAUAAA-UUUAUG-----AUUAUUG--GAUCCAAUA-AU-AUUGAUC- GUUAGUCUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCC-UCAGAGUUCAAA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUGGGUGU-AGA-AGCU-UG-AU UA-AUAGG-UC-UG-U-C-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Orosticta_filiciola_ISO_ZOF                       -UGGCCUCUUGUUU---UAUUUAGGAGGUC--AGGCCUGCCC-AGUGAUAU---UAGAUUAAACGGC-CGCGGUAUU-
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GUUGGGGUGACA--AAAAUAUAUGAUUAACUCUUAUAAUUUA----UUAACCAUAAA-UUUAUG-----AUUAUUG--GAUCCAGUA-AU-AUUGAUC- AUUAGUCUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UCAGAGUUCAAA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGC-AGA-AGCU-UG-AU UA-AUAGG-UC-UG-U-C-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Platycnemis_pennipes_OPPp                         -UGUCCUCUUGCUU-----AUUUUGGAGGUC--UGACCUGCCC-AGUGAAA-----AUUUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGAAUG-AAAGGUUU-AACGAAUCAUUAGCUGUCUCAU-UUUUAUA--AUUU-AAAACUUAAUU UUUAAGUUAAAAAGCU---
---UAAA-----UGUUGUUGGAGGACGA--GAAGACCCUAUAGAGCUUUAUAUUAAUU---UUUUU--AAUAAAAUGUU-GAUU--UAUAUCUUAGGUA- UUAAAAUAACUUAUUAUUUU-
GUUGGGGUGACA--AAAAUAAAUAAUUAACUGUUUU-AUUGU----UUAAACAUAGA-UUUAUG-----AGUUUUU--GAUCCAUUA-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUUUU-UUGGAGUUCAAA-UUUACAAAA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUCUGGUGC-AGU-AGCU-AG-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Copera_annulata_OCAn_ZCAn                         -UGGCCUCUUGGGU---UUAUU-AAGAGGUC--UGACCUGCCC-AGUGAAA-----AUUUU-AACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGAAUG-AAAGGUUU-AACGAAUCAUUAGCUGUCUCAU-UUUUAUA--AUUU-AAAACUUAAUU UUUAAGUUAAAAAGCU---
---UAAA-----UUUUAUUGAUGGACGA--GAAGACCCUAUAGAGCUUUAUAUUAAAU---UUUUU--AAUAAAAUGUU-GAUU--UAUAUUU-AUUUA- UUAAAAUUAUUUAUUAUUUU-
GUUGGGGUGACA--GAAAUAAAUAAUUAACUUUUUU-AUAAU----UUAACCAUUAA-UAUAUG-----AGUUUUU--GAUCCAUCA-CU-GUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUUUU-UUGGAGUUCAAA-UUUACAAAA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUUGGUGC-AGU-AGCU-GA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
EU055103_Copera_vittata                           ---- ---------------------------------------------------------AACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAAACAUUAGCUGUCUCAU-ACUUAUA--AUUU-AAAAUUUAAUU UUUAAGUUAAAAAGCU---
---UAAA-----UUUUGUUGGAGGACGA--GAAGACCCUAUAGAGUUUUAUAUUAGAA---AUUUU--AAUGAAGGGCUUGUUA--AAUAUUUUAA--A-UUAA- UUUUUUUAAUAUUUU-
GUUGGGGUGACA--AAUAAAUAUGAAUAACUUUUUU-AUUUU----AUACACAUAAA-UUUAUG-----AAUAUUU--GAUCCAUUA-UU-AUUGAUU- AUUAGAUUAAAUUACCUUAGGGAUAACAGC-
GUAAUCUUUUU-UUGGAGUUCAAA-UUUACAAAA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUUGGUGC-AGU-AGCU-AA-AU UA-AUAGG-UC-UG-UUC-GAC------------
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Copera_marsouipes_PLA_ZCM                          -UGUCCUCUUGUUU-----AUUUAAGAGGUC--UGGCCUGCCC-AGUGAAA-----UUUUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAAACAUUAGCUGUCUCAU-ACUUAUA--AUUU-AAAAUUUAAUU UUUAAGUUAAAAAGCU---
---UAAA-----UUUUGUUGGAGGACGA--GAAGACCCUAUAGAGUUUUAUAUUAGAA---AUUUU--AAUGAAGGGCUUGUUA--AAUAUUUUAA--A-UUAA- UUUUUUUAAUAUUUU-
GUUGGGGUGACA--AAUAAAUAUGAAUAACUUUUUU-AUUUU----AUACACAUAAA-UUUAUG-----AAUAUUU--GAUCCAUUA-UU-AUUGAUU- AUUAGAUUAAAUUACCUUAGGGAUAACAGC-
GUAAUCUUUUU-UUGGAGUUCAAA-UUUACAAAA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUUGGUGC-AGU-AGCU-AA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Coeliccia_albicauda_OCAL_BCC                       -?????????????----?????????????--??????????-?????????---????????????-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGCCUUUUAAUAGAAGGCUGGAAUG-AAAGGUUC-AACGAAUCAUUAGCUGUCUCAU-UUAUAUA--AUUU-AAAAUUUAAUU UUUAAGUUAAAAAGCU---
---UAAA-----UUGUAUUGUAGGACGA--GAAGACCCUAUAGAGCUUUACAUUUUAU---UUUUA--AAUAUUUUUUU-GAUA--AAUAAAUUUA-UAUUUAAA--- UUUUAAUGUUUU-
GUUGGGGUGAUA--AAAUUAUAUAAUAAACUUUUU-UAUUUU---AAAA-ACAAAUA-UUUUUG-----AUUACUU--GAUCCAUUA-UU-AUUGAUU- AAUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UUGGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUUGGUGU-AGU-AGUU-AA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
EU055081_Coeliccia_cyanomelas                      -?????????????----?????????????--??????????-?????????---??????AACGGC-CGCGGUAUU-
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GUUGGGGUGAUA--AAAUUAUAUAAUAAACUUUUU-UAUUUU---AAAA-ACAAAUA-UUUUUG-----AUUACUU--GAUCCAUUA-UU-AUUGAUU- AAUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UUGGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUUGGUGU-AGU-AGUU-AA-AU UA-AUAGG-UC-UG-UUC-GAC------------
----------------------[-????]
Calicnemia_miles_PCN_OCMi                          -UGUCCUCUUGCUU-----AUUUAUGAGGUU--UGACCUGCCC-AGUGAAUUG---AAUUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGCUUUUUAAUAGGGGGCUGGAAUG-AAGGGUUU-AACGAAACAUUAGCUGUCUCAU-UUAUAUA--UUUU-AAAAUUUAAUU UUUAAGUUAAAAAGCU---
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GUAAUCUUUUU-UUGGAGUUCAAA-UUUACAAAA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUGAUA-AUUUGGUGU-AGU-AGCU-AU-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Prodasineura_vitatta_OPV_PRN                       -UGGCUUCAUGUAU-----AAAUAUGGGAUC--CGCCCGGCCC-AGUGAA-------UUUUAAACGGC-CGCGGUAUA-
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---UAAA-----UUUUUUUGUAGGACGA--GAAGACCCUAUAGAGCUUUACAUUAAUU---UCUUG---AUAUUAUUUU-GUUU--AUGAUUUGAUAUU-AUUUU--- UUGAAAUGUUUA-
GUUGGGGUGACU-GGAAAUAUAUUCUUAACUUUUCU-GUAAU----UAUUACAUAGA-UUAAUG-----AAAUUUU--GAUCCAAUA-AU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUUUCCUU-UGGGAGUUCAAA-UUUACAAGG--AAGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUUGGUGU-AGC-AGCU-AU-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAA-
UCUU-ACAU---------------[-????]
Chlorocnemis_abboti_PRO_ZCAb                       -UGUCUUCUUGAUU----UAAAUAUGAAGUC--AGACCUGCCC-GGUGAGUU---AAUUUUAAACGGC-CGCGGUAUA-
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--UAAA-----UUUUUUUGUAGGACGA--GAAGACCCUAUAGAGCUUUACAUUUAUU---UUUUA---AUAUUAUUUU-GUUG--AUUAUUUUGUAUU-AUUUU-UA- UAA--UGUUUG-GUUGGGGUGACU-
GGAAAUAUAUUAUUAACUUUUCU-GUAAU----UAUUACAUAAA-UUAAUG-----AAAUUUU--GAUCCAUUA-AU-AUAGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUUUCCUU
 -UUGGAGUUCAAA-UUUACAAGG--AAGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUUGGUGU-AGC-ACCU-CU-AUUA-AUAGG-UC-UG-UUC-GACC-UU-UAAAA-UCUU- ACAU-
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Nososticta_solida_ZNSo                             -UGUCCUCUUGUUU-----AAAUAUGAGGUC--GGACCUGCCC-AGUGAGUAUU-AAUU-UUAACGGC-CGCGGUAUA-
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---UAAA-----UUUUAUUGGUGGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUAC---UAUAU--UAUGAUUUUUU-GAUU--UAUAUAUUGUUUU-AAUAU- UAGUAAUUUAUUUU-
GUUGGGGUGAUA--AAAAUACAUAAGAAACUUUUUU-AUUUU----AAUUUCAUUUA-UUUAUG-----AAUUAUU--GAUCCAAUA-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUUCUCCU-UUGGAGUUCUUA-UUUACAGGA--GAGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUU-UUUUGGUGU-AGC-AGCU-AU-AA AA-AUGGG-UC-UG-UUC-GACC-UU-UAAAA-
UCUU-ACAU---------------[-????]
Phylloneura_westermanni_BPW                        -????????????----??????????????--??????????-????????---?????????????-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUUCUUUAAUAGGGGACUGGUAUG-AAUGGCUU-GACGAAUUAUUAACUGUCUCAU-UUUUAUA--UAUU-AAAAUUUAAUU UUUGAGUUAAAAAGCU----
--CAUA-----UUUUGCUGGAGGACGA--GAAGACCCUAUAGAGCUUUAUAUAUUAU---UUCUU--UAUUUUGUUGG-GGUU--AAUUUUUUAUUAU-AAAGU-UA- UAAUUUAUUUU-GUUGGGGUGACA-
-GUAUUAUAUAAGAAACUUUUUU-AUUUU----AUUUACAUUGA-UUUAUG-----GUAUUUU--GAUCCAUUA-UU-AUUGAUU- AUUAGUUUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCUU-
UUGAAGUUCUUA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUU-AUUUGGUGC-AGU-GGCU-AA-GU AA-AUAGG-UC-UG-UUC-GACC-UU-UAAAA-UCUU-ACAU------
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Onychargia_atrocyana_ZOA                           -UGGCUUCUUGGGG----CUUAUGGGAAGUC--UGACCUGCCC-AGUGAUAU---UAUUUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGAAUG-AAAGGUUU-AACGAAACAUAAGCUGUCUCGU-UUUUAUA--ACAU-AUAAUUUAAUU
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UUUAAGUUAAAAAGCU------UAAC-----UUUUAUUGAAGGACGA--GAAGACCCUAUAGAGCUUUACACUUACU---UUUUU--AGUACAAUUUG-GUGU---AUAGGUUUUUAC-UAUUU- UUGUAA-
UUGUUUU-GUUGGGGUGACA--AAAAUAUAUGCGAAACUUUUUU-AUUUU----AUAAACAUAAAAUUUAUG-----GGUUUUA--GAUCCAUUA-UU-AUUGAUU-
GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCUU-UUGAAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUGAUU-AUUAGGUGC-AGU-AGCU-UA-AU UA-
AUAGG-UC-UG-UUC-GACC-UU-UAAAA-UCUU-ACAUgaucugaguucaggc[-????]
Argia_moesta_COE_OAM   -UGUCCUUUUGUUU-----AUUUAAAAGGUC--UGGCCUGCCC-AGUGAUA-----UAAAUUCACGGC-CGCGGUAUA-
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GUUGGGGUGACA--AUAAAAUAUGAUUAACUUUU-U-AUAAA----ACUUACAUUUA-UUUAUG-----AAUUUUU--GAUCCAAUA-UU-AUUGAUC- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUUCU-UAGGAGUUCAAA-UUUACAGAA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGC-AGU-AGCU-UA-AC GA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Argia_nahuana_BAN   -?????????????-----????????????--??????????-???????-----????????????-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGUAUG-AAAGGUUA-AACGAAACACUAACUGUCUUAU-UUAUAAA--UAUU-AAAAUUUAACU UUUAAGUUAAAAGGCU---
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GUAAUCUUUCU-UGGGAGUUCAAA-UUUACAGAA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGC-AGU-AGCU-UA-AU GA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Argiocnemis_rubescens_ZAR   -UGUCUUCUUGGUU-----UUUUAGGAAGUC--AGGCCUGCCC-AGUGACA-------UUUUAACGGC-CGCGGUAUU-
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GUUGGGGUGACA-AAAAAUAUAUAAUUAACUUUUAUUAUAUA----AUUUACAUUAA-UUUAUG-----GCUAAAU-GGAUCCAUUA-UU-AUUGAUC- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UGGGAGUUCAUA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGC-AGU-AGCU-UA-AU GU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Mortonagrion_binocellata_BMB   -?????????????-----????????????--??????????-??????????-?????????????-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGAAUG-AAAGGUUU-AACGAAAAAUUAACUGUCUCAU-CUUUAUU----UU-AAAAUUUAACU UUUGAGUUAAAAGGCU---
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GUUGGGGAGACA-AAAAAUAUAUAAUUAACUUUUAUUAGAUA----AUAUACAUUAA-UUUAUG------GGUUUU-GGGUCCACUU-UU-AUUGAUC- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UGGGAGUUCCUA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGC-AGU-AGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Agriocnemis_pygmaea_OAP_BAP   -UGUCCUCUUGAUU-----UUUUAGGAGGUC--AGACCUGCCC-AGUGAAAUUU-UAAUAGCCCACGC-CGCGGUAUA-
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GUUGGGGUGACA--AAAAUAUAUAUGUAACUUUUAUUAUUUU-----UUUACAUUAA-UUUAUG------AAUUUU-GGAUCCAUUA-AA-GAUGAUC- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-
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UCUU-ACAU---------------[-????]
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GUAAUCCUCUU-UCAGAGUUCAAA-UUUACAAGG--GGGUUUGCGACC-UC-GAUGUUGGAUUAAGAAAAUA-AUUAGGUGC-AGU-AGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Archibasis_viola_ZAV   ---- ---

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Coenagrion_puella_AJ488546   ---- ---

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JQ966652_Coenagrion_resolutum   ---- ---CGCGGUAUA-
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---UAAA-----UUUCGUUGAUGGACGA--GAAGACCCUAUAGAGCUUUACAUUUCAA---UUUAAU-AAAUUUAUUUG-GAUU--CAUAAUUUGAAUUUAUUU--- AUUUAAAUGUUUU-
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GUAAUCUUCCU-UCAGAGUUCAAA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGU-AGCU-UA-AU UA-AUAGG-UC-UG-UUC-GAC-------------
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Pseudagrion_cingillum_COE_OAAL_BPA   -UGGCCUCAAGAUU-----UUAUUUGAGGUU--UGGCCUGCCC-GGUGAUUU----AAUUUUAACGGC-CGCGGUAUA-
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---UAAA-----UUUUAUUGGCGGACGA--GAAGACCCUAUAGAGCUUUACAUUUUAU---UUUAAUUGAUUUUAUUUA-GCUU--UAUAAUUUAAUUUUAUUU--- AGAUAUUUGUUUU-
GUUGGGGUGACA-AAAAAUAUAUGAUUAACUUUUAUUAUCUU----UUGUUCAUUAA-UAUAUG------UUUAUU-GGAUCCAAAA-UU-UUUGAUC- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UCAGAGUUCAAA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUCAUA-AUUAGGUGC-CGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
EU055064_Pseudagrion_aureofrons   ---- --AACGGC-CGCGGUAUU-
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AGAAAUAUAUAAUUAACUUUUAUUAUUU-U---AUUUUCAUUAA-UGUAUG-----UU-UAUU-GGAUCCAAAA- UU-UUUGAUC-AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCCU-
UCAGAGUUCAAA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-
AGU-AGCU-UA-AUUA-AUAGG-UC-UG-UUC-GAC-----------------------------------[-   ]
Pseudagrion_ignifer_COE_OPi   -UGGCCUCAAGAUU-----UUAUUUGAGGUU--UGGCCUGCCC-GGUGAUUU----AAUUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGAAUG-AAAGGUCU-CACGAAAAAUUGACUGUCUCAA-UUGUAAA--UUUG---AAUUUAACU UUUAAGUUAAAAGGCU---
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GUAAUCUUCCU-UCAGAGUUCAAA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUGGGUGC-AGU-AGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
EU055105_Erythromma_najas   -NNNNNNNNNNN----NNNNNNNNNNNNNNN--NNNNNNNNNN-NNNNNNNN------NNNNAACGGC-CGCGGUAUA-
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GUUGGGGUGACA-AGAAAUAUAUAUUUAACUUUUAUCAUUUU----AUUUUCAUUAA-UUUAUG------GUUAUU-GGAUCCAAAA-AU-UUUGAUC- AAUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCC-UCAGAGUUCAAA-UUUACGGGA--AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGC-AGU-AGCU-UA-AU GU-UUAGG-UC-UG-UUC-GAC-------------
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AB707588_Paracercion_plagiosum   --GUCCUCAUGU-----UUUUAUUUGAGGUU--UGGCCUGCCC-GGUGAUUU----UAAUUUAACGGC-CGCGGUAUA-
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GUAAUCUUCCU-UCAGAGUUCAAA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAACA-AUUGGGUGC-AGU-AGCU-CA-AU AU-GUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU--------------------[-????]
EU477628_Cercion_lindeni   -UGUCCUCAUGG----UUUUA-UUUGAGGUC--UGGCCUGCCC-GGUGAUUU---U-GUUUUAACGGC-CGCGGUAUA-
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UCAGAGUUCAAA-UUUACGGGA--AGGAUUGCGACC-UC-GAUGUUGGAUUAAGAUAACA-AUUAGGUGC-AGU-AGCU-UA-AU AU-GUAGG-UC-UG-UUC-GAGC-UU-UAA------------------
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AB707582_Paracercion_hieroglyphicum_RF1738   -NGUCCUCAUGU-----UUUUAUUUGAGGUU--UGGCCUGCCC-GGUGAUUU---
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AAUUUAACUUUUAAGUUAAAAGGCU------UAAA-----UUUUUUUGUAGGACGA--GAAGACCCUAUAGAGCUUUACAUUUAAUA---UUUUGUUAUAUU----
GAUUUAGAUUUAUAUUUUUAAUUAACUUUAAA-AAAUGUUUU-GUUGGGGUGACA-AGAAAUAUAUAUUUAACUUUUAUUAUUAU-A---UUUUCAUUAA-UUUAUG------AUUAUU-GGAUC
CAAAA-UU-UUUGAUC-AUUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCCC-UCAGAGUUCAAA-UUUACGGGA--AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUAACA-
GUUGGGUGC-AGU-AGCU-CA-AUUU-GUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU--------------------

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Acanthagrion_quadratum_COE_ZAQ                   -AAGCCAAAACACGU----GUGCUAGAGGUC--UACACUGCCC-AGUGAAA-------AUUCAACGGC-CGCGGUAUA-
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GUAAUCUCCCC-UUGGAGUUCUUA-UUUACGGGG--AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGC-AGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Leptobasis_vacillans_ZLV                         ---- ------------------------------------------------------------------------------
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Amphiagrion_saucium_OAS                          -UGUCCUAUUGAUUU---UAUUUAAUAGGUC--UGACCUGCCC-AGUGAAG------UUUUUAACGGC-CGCGGUAUA-
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GUUGGGGUGACA-AUAAAUAUAAAAUCAACUUUUAUCAUAUU----AUAAACAUUAA-UACAUGA-----UUUUAU-GGAUCCAAAA-UU-UUUGAUC- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAUA-UUUACGGGA--AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGC-AGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
EU055079_Amphiagrion_abbreviatum                 ---- ---------------------------------------------------------AACGGC-CGCGGUAUA-
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GUAAUCUUCCU-CCAGAGUUCAUA-UUUACGGGA--AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGC-AGCU-UA-AU UG-AUAGG-UC-UG-UUC-GAC------------
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Xiphiagrion_cyanomelas_ZXC                       ---- ------------------------------------------------------------------------------
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Hesperagrion_heterodoxum_WHH                     -??????????????---?????????????--??????????-????????------??????????-?????????-
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GUAAUCUUCCC-UCAGAGUUCAUA-UUUACGGGA--AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGU-AGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
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GUAAUCUUCCC-UCAGAGUUCAUA-UUUACGGGA--AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGU-AGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU----------------[-????]
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GUAAUCUUCCC-UCAGAGCUCAUA-UUUACGGGA--AGGUUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGU-AGCU-UA-AU UA-AUAGG-UC-UG-UUC-GAC-------------
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Aciagrion                                        ---- ------------------------------------------------------------------------------
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UCUU-ACAU---------------[-????]
Protoneura_capillarisBPCp ---- --

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Elattoneura_analis_glauca ---- --

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GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUUAUUAUAGU----GUUAACAUUUA-UUUAUG-----GUUCUUU-GGACCCUUUA-UU-AUUGAUC- AUUAGAUUAAGUUACUUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGAUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-GUCAGGUGC-AGU-AGCU-UG-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
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GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGAUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUCAGGUGC-AGU-AGCU-UG-AC UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
EU054991_Neoneura_maria -NNNNNNNNNNNNN----NNNNNNNNNNNNN--NNNNNNNNNN-NNNNNNNN------NNNNAACGGC-CGCGGUAUU-
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GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGAUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUCAGGUGC-AGU-AGCU-UG-AU UA-AUAGG-UC-UG-UUC-GAC------------
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GUUGGGGUGACA-AAAAAUAUAUAACUAACUUUUU-UAUUUUA---UUA-ACAUUAA-UUUUUG------GUUAUU-GGAUCCAAUA-AU-AUUGAUC- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUU
AGGUGC-AGU-AGCU-UA-AUUA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU---------------[-????]
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GUAAUCUUCUU-UUGGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUUGGUGU-AGC-AGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Leptagrion_sp -?????????????---??????????????--??????????-?????????---????????????-?????????-
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GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGC-AGU-AGCU-UG-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Diceratobasis_sp_A_ZDA -UGUCCUUUCGAUU-----UUAUUUAAGGUC--AGGCCUGCCC-GGUGAAAGU---UGUAUUAACGGC-CGCGGUAUA-
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GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGU-AGCU-UG-CU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCAC-ACAU---------------[-????]
Pyrrhosoma_nymphula_1202 ---- --

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Chromagrion_conditum_OCCn -UGUCUUUUCGUUU-----AUUUGGAAAGUC--UGGCCUGCCC-AGUGAGA-------UUCAUACGGC-CGCGGUAUA-
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GUUGGGGUGACA-AAAAAUAUAUAACUAACUUUUAUAACUUA----AUAACCAUUAA-UUUAUG------AAUAUU-GGAUCCAUUA-UU-AUUGAUC- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
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UCUU-ACAU---------------[-????]
Teinobasis_alluaudi_ZTA2 -UGUCCUUUCGUUU-----AUUUGUAAGGUC--UGGCCUGCCC-AGGAAA---------CUUAACGCC-CGCGGUAUA-
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UCUU-ACAU---------------[-????]

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Nehalennia_gracilis_COE_ONG                         -UGUCCUUUUGUUU-----AAUUAAAAGGUC--UGGCCUGCCC-AGUGAGA--------UUCAACGGC-CGCGGUAUA-
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GUUGGGGUGACA--AAAAUAUAUAUUUAACUUUUAUUUUUAA-----UAAACAUUAA-UAUAUG------AUUAUU-GGAUCCAUUA-UU-AUUGAUC- AUCAGAUUAAGUUACCUUAGGGAUAACAGC-
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UCUU-ACAU---------------[-????]
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UCUU-ACAU---------------[-????]
Microstigma_rotundatum_PST_OMRt_BMRt                -UGUCUUUUUGUUU-----AUAUAAAAAGUC--AAGCCUGCCC-GGUGAAU-------UAUUAACGGC-CGCGGUAUA-
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GUAAUCUUUUU-UCAGAGACCAAA-UUUACAAAA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGC-AGU-AGCU-UA-AU AA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
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Mecistogaster_ornata_ZMO                            -?????????????-----????????????--??????????-????????------??????????-CGCGGUAAA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGUCUGGUAUG-AAAGGUUU-AACGAAACAUAAACUGUCUUUA-AUUUUA---UUUAUUGAAGUUAGCU UUUAAGUUAAAAGGCU---
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GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUU-AUUAGGUGU-AGU-AGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
EU477624_Mecistogaster_linearis                     -UGGCUUUUUGUUU-----AUUUARAAAGUC--UGGCCUGCCC-GGUGARU-------AUUUAACGGC-CGCGGUAAA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCHUUUAAUGGGAGUCUGGUAUG-AAAGGUUU-AACGAAACAUAAACUGUCUUWA-AUUUUA---UAKAUUGAAGUUAGCU UUUAAGUUAAAAGGCU---
---UAAA-----UUUAAUUGAUGGACGA--RAAGACCCUAUAGAUUUUUACWUADUUA---WUWAU--UAUUGUUWAAUUGAUU--AAAWAUGAAU-ACAAUUU--- UUAAUUUUGUUUA-
GUUGGGGUGACU-AUAAAUAUAUAAUUACCUUUUAUAUUUUA-----CAACCAUUNA-UNUAUG------ANUANU-NGAUCCAUUA-UU-AUUNAUU- AUUAGAUCAANUUACCUUAGGGAUANCAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUU-AUUAGGCGC-AGC-AGCN-UA-AU UA-AUAGG-UC-UG-UUC-GNGC-UU-UAA-----
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Megaloprepus_caerulatus_PSE_ZMC                     -UGUCUUUUUGUUU-----AUAUAAAAAGUC--GGGCCUGCCC-AGUGAUAU------UAUUAACGGC-CGCGGUAUA-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUUUUUUAAUAGGAGGCUGGAAUG-AAAGGUUU-AACGAAGUAUAAGCUAUCUUAU-UUUUAA---GAU-UAUAAUUUAAUU UUUAAGUUAAAAAGCU---
---UAAA-----UUUUAUUGGUGGACGA--GAAGACCCUAUAGAGCUUUACAUUAUUU---AUUUU-UAAUAAUAUUUU-GUU---AAUAUUUAAUUAU-UAUU-- UUAAUUGUUGUUUU-
GUUGGGGUGAUA-AAUAAUAUUUGAUUAACUUUAAUUAUUUU----GUGUACAUGGU-UAUAUG------CUUAUU-UGAUCCAUUA-AU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UAAGAGAUCGAA-UCUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGC-AGU-AGCU-GA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Haplostigma_modesta_ZHM                             -UGUCUUUUCGGUU-----UUAUGGAAAGUC--UGGCCUGCCC-AGUGAA--------UAUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGUCUGGUAUG-AAAGGUUU-AACGAAAUAUAGUCUGUCUUAU-AUUUAU---UUU-UAUAAUUUAACU UUUAAGUUAAAAGGCU---
---UAAA-----UUUUAUUGAUGGACGA--GAAGACCCUAUAGAGUUUUAUAU-AAUU--AAUUUC-AAUUAUGUUAUU-GUUU--AAAUAUGAUUAUU-GAAU-- UUUAUUUUUAUUUG-
GUUGGGGUGAUU-AUAAAUAAAUAAAUAACUUUUAUAA-AUA----AUAACCAUUAA-UUUAUG------AUUAUU-AGAUCCAUUA-UU-AUUGAUU- AUUAGAAUAAAUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUU-AUUAAGUGC-AGA-ACCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Pseudostigma_aberrans_OPA                           -?????????????----?????????????--??????????-??????--------UUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGUCUGGAAUG-AAAGGUUU-AACGAAAUACAAUCUGUCUUUA-AGAUAUA--UUU-UAUAAUUUAGCU UUUAAGUUAAAAGGCU--
----UAAA-----UUUUGUUGUUGGACGA--GAAGACCCUAUAGAGUUUUAUAAAAUAA---AUAUC-AUUUAUUAUAUU-GAUU-UAAUAUUUA-UAUU-GGUU---
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UUAGUUUUAUUUG-GUUGGGGUGAUU-AUAAAUAUAUAAUUAACUUUUAUAA-UUA----AUAGCCAUUGA-UUUAUG------AUUGUU-GGAUCCAUUA-UU-AUUGAUU-
AUUAGAUUGAAUUACCUUAGGGAUAACAGC-GUAAUCUUCUU-UCAGAGUUCAUA-UUUACGAGA--AGGAUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUU-AUUAGGUGU-AGA-AGCU-UA-AU UA-
AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU--------------[-????]
Rhinagrion_mima_ZRM -UGUCCUUUUGAUU----UAUUUUGAAGGUC--UGCCCUGCCC-AGUGAUUGA-----UUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGACUGGUAUG-AAGGGUUU-GACGAGGUGUUAGCUGUCUCAA-AAUUAAUU--UCU-UUAAUUUAACU UUUUAGUUAAAAGGCU---
---UAAA-----UAUUGUUGGUAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAUU---UUUUA-UUUAUUA-UUUU-GUUU-AUUUUAUUAUUUA----UU--- CUUUAAUUAUUCU-
GUUGGGGUGACA-UUAAA-AAUUGCUUAACUUUUAAUUAUUU-----UUUUCAUUUA-UUUAUG-----UUUAUUC--GAUCCAUUA-UU-AUUGAUU- GUUAGAUUAAGUUUCCUUAGGGAUAACAGC-
GUAAUCCUUUC-UUGGAGUUCAGA-UUUGCGAAA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAAA-CUUGGGUGU-AGC-UGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Sciotropis_cyclanthorum_BSC -?????????????---??????????????--??????????-?????????----????????????CGCGGUAUU-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCCCAUAAUAGGGGGCUGGAAUG-AAGGGUUU-GACGAAGUAUUAACUGUCUCAU-AAU-AA-UAUUUAUUGAAUUUAACU UUUGAGUUAAAAGGCU--
----CAAC-----UUUUUUUGGUAGACGA--GAAGACCCUAUAGAGCUUUAUAUAUAAAA-ACUUAU-AAAUAUU-UUU--GUU--AAAUUCUUAUUUU--UAUU-- UUUUUGUUUAUUUU-
GUUGGGGUGACA-AUAGA-AUAUAUUUAACUUUUA-UUAUUUA--UUUU-ACAUUAA-UUUAUG-----UAUCUAA--GAUCCAUUU-AU-AGUGAUC-AUUGGA- UAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUCUU-UUUGAGUUCUUA-UUUGCAAGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUG-AUUAGGUGC-AGU-AGCU-UA-AUUA-AU AGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Heteragrion_mitratum_ZHMt -UGGCCUCUAGUUU----UAUAUUUGAGGUU--UGGCCUGCCC-AGUGAAGA------UUUAAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAGGGCUU-GACGAGAUGUCGCCUGUCUCAU-UUUGAAGA-AUGGUUGAAUUUAAUU UUUAAGUUAAAAAGCU---
---UAAA-----UUUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUUUAUAAU---UUUUU-AUAUUGC-UUUU-GUUU-UAUUGUUUUUUAU--GAUU-- UAUUUAUAAAUUUU-
GUUGGGGUGAUA--AAAAUAUACAAUUAACUUUU--UUAUUUA---CAGUUCAUUUA-UUUAUG-----UUAUUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUUUU-UGGGAGUUCGAA-UCUACGAAA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUG-GUUAGGUGC-AGU-AGCU-UA-GC UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
EU477623_Heteragrion_sp -UGGCCUCUUG--------------AGGUU--UGGCCUGCCC-AGUGUA------------AACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAUGGCUC-GACGAGAUACUGACUGUCUCAU-UAUGAUUU-AUUGU--AAUUUAUUU UUUAAGUUAAAAAUCU----
--UAAA-----UUUUACUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUUUUUUU--
--AAGAAUUUU-GUUGGGGUGAUG-AGAAAUAUUUAUAUAACUUUUUUAUUUA-U----UAAACAUUUA-UUUAUG-----AGUUUUA--GAUCCAUUA-UU-AAUGAUU-
GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCCCUU-UGGGAGUUCAAA-UCUACAAGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUG-GCUAGGUGC-AGU-AGCU-UA-GU UA-
AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU--------------[-????]
Oxystigma_cyanifrons_ZOC -UGUCUUCUAGUUU-----GUUUUUGAAGUC--UGGCCUGCCC-AGUGAAAAG----UUUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAGGGCUU-GACGAGAUGUCGCCUGUCUCAU-UUUGAAGA-AUGGUUGAAUUUAAUU UUUAAGUUAAAAAGCU---
---UAAA-----UUUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUUUAUAAU---UUUUU-AUAUUGC-UUUU-GUUU-UAUUAUUUUUUAU--GAUU-- UAUUUAUAAAUUUU-
GUUGGGGUGAUA--AAAAUAUACAAUUAACUUUU-UUAUUUA----CAGUUCAUUUA-UUUAUG-----UUAUUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUUUU-UGGGAGUUCGAA-UCUACGAAA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUG-GUUAGGUGC-AGU-AGCU-UA-GC UA-AUAGG-UC-UG-UUC-GACU-CU-UAAAU-
UCUU-ACAU--------------[-????]
ZDP_Dimeragrion_percubitale -uguccucuugaaa---aaaguuuaganguc--uggccugccc-agugaaaua----ucuuuaaccgc-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUA-AUUAGUCUCUUAAUAGGAGACUGGAAUG-AAGGGUUU-GACGAGGUGUUGACUGUCUCAU-UUA-AAUA-UAUUUAGAAUUUAAUC UUUGAGUUAAAAAGCU---
---UGGA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUUGAUAUA---UUUUA-GUAUUAU-UUUU-GUUU-AAUAACUGUUUUA--CUUU-- UGUAUAUUUUUUUU-
GUUGGGGUGAUG-AAAAAUAUAUAUUUAACUUUUAUUAUUUA----UUUUACACUUA-UUUGUG-----GUUAUUA--GAUCCAUUA-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUC-UUAGAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUUAGCGC-AGU-AGCU-UU-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Tatocnemis_malgassica_ZTMa -UGUCUUCAUGAUU-----UUAUUUGAAGUC--UGACCUGCCC-AGUGAUAUUA---UUUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGAAUG-AAAGGUUU-GACGAAUAAUUAACUGUCUCAU-GUACAAUA-UAUU-AUAAUUUAACU UUUUAGUUAAAAGGCU--
----UAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUAA----AUUGU-AUUUAAG-GGUU-GCUU-UAUUAUUAAAUUA-UAAGU-- UUUUAAUUUAUUUU-
GUUGGGGUGACA-AAAAAUAUAAGAAU-ACUUUUUGUA-UUA----UAUUACAUUUA-UUUAUG-----UUUAAUA--GAUCCAUUA-UU-AUUG AUUAAUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UCGGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUU-AUUUGGGGC-AGU-CCCU- UA-AUUA-UU-GG-UC-UG-UUC-GACC-UU-UAAAC-
UCUU-ACAU--------------[-????]
Philogenia_cassandra_BPCs -?????????????---??????????????--??????????-?????????----????????????CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUCUUAAUAGGAGGCUGGAAUG-AAAGGUUU-GACGAAAUACUAUCUGUCUCAA-UUU-GA-UU-AUUUUGAAUUUUACU UUUGAGUUAAAAGGCU---
---CAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUACAUUUGUU---UAGGG-GGAUUUAUUUUU-GUUU-AAUGA-UUUAAUU--CUUUC- UUUUUAUUUGUUUU-
GUUGGGGUGACA-AGAAAUAUAUAUUUAACUUUU--UUAUGAA--UAAA-ACAUUUA-UUUAUG-----GUUAUUA--GAUCCAUUU-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UUGAAGUUCAAA-UUUACAAGA--AGGUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-UUCAGGUGC-AGU-AGCU-UG-AU UG-GUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]

Philogenia_terraba_ZPT_   ---- --

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Philogenia_berennice_ZPBn   ---- ------------------------guc--ugcccucccc-auugauuaa----uuuuuaacggc-cgcgguaUC-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUGACUGUCUCAU-AAUUGAUU---UUUUGAAUUUGACU UUUUAGUUAAAAGGCU---
---UAAA---AAUUUUGUUGGUAGACGA--GAAGACCCUAUAGAGCUUUACAUUUGUU---UUUUA-AAAUUGU-UUUU-GUUU--AUCUAUAUUAUU--UUAU- UUAAU-GAUUGUUUU-
GUUGGGGUGACA--UUUGAAUAUAUUUAACUUUUAUUUAUUU-----CGUGCAUUGA-UUUAUG-----UUUUAUU--GAUCCAUUA-UU-AAUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUUUC-UUGGAGUUCUAA-UUUGCGAAA--GGGCUUGCGACC-Uc-gauguuggauuaagauuaug-auuaggugu-agc-cgcu-ua-au ac-auagg-uc-----------------------
---------------------[-????]
Teinopodagrion_venale_ZMV_BTV   -UGUCCUCAUGGUU-----UUAUUUGAGGUC--UGGCCUGCCC-AGUGAUAUU---UAUUUUAACGGC-CGCGGUAUU-
AUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-GACAAAGAAUUGACUGUCUCAU-UUU-AAUA-UUUU-AAAAUUUAUCU UUUAAGUCAAAAGACU---
---UAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUGAUUGUU---UAUUU-AAAAUGG-UUUA-GACU--AUAAGUUUAUUU--UGUU-- UAAACUUUUAUUUU-
GUUGGGGUGACA-GUAGA-AUAUAAUUAACUUUUAUGUUUUA----UUUAACAUUAA-UAUAUG-----AUUAUUA--GAUCCUUUA-UU-AUUGAUU- UUUAGACUGAGUUACCUUAGGGAUAACAGC-
GUUAUCUUCUU-UUAGAGUUCAAA-UUUACAAGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUGGGUGU-AGU-AGCU-UG-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Teinopodagrion_lepidum_ZTL   -?????????????---??????????????--??????????-?????????---????????????-CGCGGUAUU-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGCAUG-AAAGGUUU-GACAAGGAAUUAACUGUCUCAU-UUU-AAUA-UAUU-AAAAUUUAUCU UUUAAGUCAAAAGACU---
---UAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUGGCUAUU---UAUUU-AAAAUGU-AUUG-GAUU--AUAAAUUUAUUU--UAUU-- UGAAUUUUUAUUUU-
GUUGGGGUGACA-CGAGA-AUAUGAUUAACUUUUCUAAUUUU---AUUUACCAUUGA-UAUAUG-----AUUAUUA--GAUCCUUUA-UU-AUUGAUU- UUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUUAUCUUCUU-UUAGAGUUCAAA-UUUACGAGA--AGGAUUGCGACC-UC-GAUGUUGAAUUAAGAUUAUA-AUCGGGUGC-AGU-AGCU-UG-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Amanipodagrion_gilliesi_ZAG   -UGUCCUCUCGAUU---GGAGAUGGGAGGUU--UGACCUGCCC-GGUGAUGAG---UCUUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUAGAAUG-AAAGGUUU-GACGAAAUAUUAACUGUCUCAU-AUUAAAUA--AUU-AAAAUUUAACU UUUGAGUGAGAAGGCU---
---CAAA-----UUUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUUUUG--AUUGG-AACUGUU-AUUU-GGUUGUAUUAA-AGCUUU--CCUU-- UCCUU-AUUAUUUU-
GUUGGGGUGACA-AAAAAUAUAUGUUUAACUUUU-UUAGUUA----UAUUACACUUA-UUUGUG-----UAUAUUA--GAUCCAUUA-UU-AUUGAUU- GUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UGGGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAAA-AUUAGGUGC-AGU-AGCU-UA-AU UU-UUAGG-UC-UG-UUC-GACC-UU-UAAAC-
UCUU-ACAU---------------[-????]
Nesolestes_elizabethae_ZNE   -UGUCUUCUCGUUU-----UUAUGGGAAGUC--GGGCCUGCCC-GGUGAAUUG-----UUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCCUUUAAUAAAGGGCUGGAAUG-AAGGGUUU-GACGAAAUAAUAACUGUCUCAU-UAU-AA-AG-AUUUUGAAUUUAAUU UUUAAGUUAAAAGGCU---
---UAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUAUGUU---UAUUU-GAUUUUU-AUU--GUCU--AUUAUCUUGUUU----UU-- UAUGUAUAUAUUUG-
GUUGGGGUGACG-AGGAAUAAAUAUAUAACUUUCA-UUAUUUA--UAUA-ACAUUUA-UUUAUG-----AUUAUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UGGGAGUUCAAA-UUUGCAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUGAUA-GUUAGGUGU-AGU-AGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Protolestes_kerckhoffae_ZPKc   -?????????????---??????????????--??????????-??????????--????????????-?????????-
???????????????-??????????-?????????????????????????????-????????-??????????????????????-????????--???????????????
????????????????------????-----????????????????--?????????????????????????????-??????-??????????---????-???????????????????--
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??-?????-??-??-???-????-??-?????-????-????---------------[-????]
Argiolestes_ochrostomas_ZAOc   -?????????????----?????????????--??????????-?????????-----??????????-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGAAUG-AAGGGCUU-GACGAGGUAAUAACUGUCUCAU-UUA-AAUA-AAUU-AGAAUUUAACU UUUAAGUUAAAAGGCU---
---UAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUACAUUUAAUU--UCUUU-AAUUUAUUAUUA-GUUU--AUGAAUAAAUAU-UAUUG-- UAAU-AAAUGUUUU-
GUUGGGGUGACA--AAAAUAUUUGAUUAACUUUUAU-ACUUA----UUUUACAUUAA-UUUAUG-----AUUAUUA--GAUCCAUUA-UU-AUUGAUC- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUCUU-UUGGAGUUCAAA-UUUACAAGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-AGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Argiolestes_sidonia_BAS   -?????????????----?????????????--??????????-?????????-----??????????-CGCGGUAUU-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGAAUG-AAAGGUUU-GACGAGGCAAUGACUGUCUCAU-AUG-GA-U--UUUUAAAAUUUAAUU UUUGAGUUAAAAAGCU-
-----UAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUGGGUUUCU--UUAU--GAUUUGUUAUUG-GAUUG-UUUAUUUAUUAAUUAUAAU-

UAAU-GCCUAUUUU-GUUGGGGUGACA--AAAAUAUUUAUUUAACUUUUA-UAUUUA---UUUU-ACAUUAA-UUUGUG-----GUUAUUA--GAUCCAUUUAUU-AUUGAUC-
AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCCCUU-UAGGAGUUCAAA-UUUGCAAGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUGGGUGU-AGU-CGCU-UG-AU UU-
AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU---------------[-????]
Caledopteryx_maculata_BCM -?????????????----?????????????--??????????-?????????-----??????????-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGAAUG-AAGGGUCU-CACGAAGUAAUGGCUGUCUCUC-AUA-AA-UUAUUUUAAAAUUUAAUU UUUAGGUUAAAAGGCC---
---UAAA-----UAUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUGUAUUU--CUUU--GAUUUUU-GUUG-GGUA--AUCAUU-AUUAAUUAUUU-- UAAU-AUUUAUUUU-
GCUGGGGUGGCA-AAAAAUAUAUUUUUAACUUUUA-UAUUUA---UUAU-ACACUGA-UAUGUG-----CUUAUUA--GAUCCAUUA-UU-AUUGAUC- ACUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCCCCU-UUGGAGUUCAAA-UUUACAGGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGC-AGU-AGCU-UA-GC CU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Trineuragrion_percostale_BTP -?????????????----?????????????--??????????-?????????-----??????????-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGAAUG-AAAGGUUU-AACGAAGUAAUAGCUGUCUCAA-AUAUUGAAUAAUUUAGAAUUUAUUU UUUAAGUCAAAAAACU---
---UAAA-----UUUUAUUGAAAGACGA--GAAGACCCUAUAGAGCUUUAUAGUUAAUU--UUGU--GAUAUUU-AUUG-GGCUU-AUUUUUUUUAUAUUACGG-- UAUU-AAUUAUUUU-
GUUGGGGUGACA-AAAAAUAUAUAAUUAACUUUUA-UAUUUA---UUAU-ACAUUGA-UUUAUG-----GUUAUUA--GAUCCAAUA-UU-AUUGAUU- AAUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUCUU-UUGGAGUUCAAA-UUUACAAGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUUGGUGU-AGC-AGCU-UA-AC UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Caledargiolestes_uniseries_BCU -?????????????----?????????????--??????????-?????????-----??????????-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGAAUG-AAAGGUCU-GACGAAGUAAUGACUGUCUCAU-GGUUAAAUUAUUUUAAAAUUUAUCU UUUAGGUCAAAAGACC---
---UAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAACUAUUU--UCUU--AAUUUUU-GUUG-GUUAA-AUUAUUGU-UAAUUAUGG-- UAUU-AGUUAUUUU-
GUUGGGGUGACA-AGAAAUAUAUAUUUAACUUUUAU-AUUUA----UUUUACAUUUA-UGUAUG-----GCCAUUA--GAUCCUUUA-CU-AUUGAUC- AUUAGGUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUCUU-UUGGAGUUCAAA-UUUACAAGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GCUAGGUGU-AGU-AGCU-UG-GU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Podopteryx_roseonotata_ZPR -UGUCUUCUUGAUU----UAAAUAGGAAGUC--UGACCUGCCC-AGUGAAA-------UUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGUAUG-AAAGGUUU-GACGAAGUAAUAACUGUCUCAU-ACUUAAUA--AUUUAAAACUUAAUU UUUAUGUUAAAAAGCU---
---UAAA-----UGUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUGGAAUG----UUUUU-AAUUUUU-AUU--GUUU--AUAAUGUCAAAU--UAUU-- AAUUAUUUUAUUUU-
GUUGGGGUGACA-AGAUAUAUAUAUUUAACUUUUAU-AUUUA----UUGUACAUUAA-UUUAUG-----AUUAUUA--GAUCCAAUU-UU-AUUGAUU- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUCUU-UUUGAGUUCAAA-UUUACAAGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-AGCU-UA-AU GA-UUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Austroargiolestes_icteromelas_OAIc -CGUCUUCUUGCUU----UACAUAAGAAGUC--UGGCCUGCCC-AGUGAAA------UUUUUAACGGC-CGCGGUAUU-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGAAUG-AAGGGUUU-AACGAAGUAAUAACUGUCUCAU-AUUAAAUA--AUUUAAAAUUUAAUU UUUAAGUUAAAAAGCU---
---UAAA-----UGUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUGGUUAAA---UUUUU-AAUUUUU-AUUG-GGUU--AUUAUUAUUAAU--UAUG-- AAUUAUUCUAUUUU-
GUUGGGGUGACA-AAAAAUAUAUAAAUAACUUUUAU-AUUUA----UUAUACAUUGA-UAUAUG-----AAUAUUA--GAUCCAUUA-UU-AUUGAUC- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUCUU-UUGGAGUUCAAA-UUUGCAAGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGU-AGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Griseargiolestes_albescens_eboracus_BGA_ZGE -?????????????----?????????????--??????????-?????????---????????????-CGCGGUAUU-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGAAUG-AAAGGUUU-GACGAAGUAAUAGCUGUCUCAU-GUUAA-UA--AUUUAAAACUUAAUU UUUAAGUUAAAAGGCU---
---UAAA-----UGUCAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUGACAUUUU--UUAUU-UAUUUUU-GUUG-GUAUUAAUUUUUAUUGUU--UAUA-- AAUUAAGUUGUUUU-
GUUGGGGUGACA--AGAAUAUAUAUCUAACUUUUA-UAUUUG---UUUU-ACAUUGA-UUUAUG-----AAUAUUA--GAUCCAUUA-UU-AUUGAUC- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUCUU-UUGGAGUUCUAA-UUUACAAGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUGAUA-GUUGGGUGU-AGU-AGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Grisagriolestes_eboracus_ZGE_BGA ---- ---

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Miniargiolestes_minimus_ZMMn -UGUCUUCUUGAAU-----UUAUAGGAAGUC--UGGCCUGCCC-AGUGAAACA---UUUUUAAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGAAUG-AAGGGUUU-AACGAAGUAAAAGCUGUCUCAUAAAUAA-UA--AUUUAAAAUUUAAUU UUUAAGUCAAAAGGCU---
---UAGA-----UGUAAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUGAUUAAA---UUUUU-AGUUUUU-AUUU-GAUU--AUUAUUUUUAAU--UAUA-- AAUUUAAUUGUUUU-
GUUGGGGUGACA-GUAAAUAUAUAUUUAACUUUUAU-AUUUA----AUAUACAUUGA-UUUAUG-----AAUAUUA--GAUCCAUUA-UU-AUUGAUC- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUCCU-UGGGAGUUCAAA-UUUACAGGA--GGGAUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-UUUAGGUGC-AGU-AGCU-UA-AA UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]

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Lestomima_flavostigma_OPBc3                      -?????????????---??????????????--??????????-??????????--????????????-?????????-
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??-?????-??-??-???-????-??-?????-????-????--------------[-????]
Rhipidolestes_hiraoi_ORH                         -UGUCUUCUCGCG------ACAUGGGAAGUC--UGACCUGCCC-AGUGAUACU-----UAUUAACGGC-CGCGGUAUC-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGACUGGAAUG-AAGGGUUU-GACGAAAUAUUAACUGUCUCAU-UUUGA-UA--UUUUAAAAUUUAAUU UUUAGGUUAAAAAGCU---
---UAAA-----UGUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUAAA---UUUAU-AGUUAAA-ACUU-GUUU-AAUAA-AGUAAAAC-UAUU-- AUUUUAAUUUUUUU-
GUUGGGGUGAUA-AUAAAUAUAGAUUUAACUUUUAU-AUAAUAAAAUUGUUCAUUUA-UUUAUG-----AUUAUUA--GAUCCAUUA-UU-AUUGAUC- AUUAGAACAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-GUUAGGUGU-AGC-AGCC-UA-AU CA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Rhipidolestes_aculeata_BRA                       -?????????????-----????????????--??????????-?????????----???????????-CGCGGUAUC-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGACUGGAAUG-AAGGGUUU-GACGAAAUAUUAACUGUCUCAU-UUUGA-UA--UUUUAAAAUUUAAUU UUUGAGUUAAAAAGCU---
---UAAA-----UCUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUGAA---AUUAU-GAUUAAA-ACUU-GUUU-AAUAA-AGUAGGAU-UAUU-- AUUUUAAUUUUUUU-
GUUGGGGUGAUG-AUAAAUAUAUAUUUAACUUUUA-UAUAAUAAAAUUGUUCAUUUA-UUUAUG-----AAUAUUA--GAUCCAUUA-UU-AUUGAUC- AUUAGAACAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCGGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-AGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Paraphlebia_zoe_OPZ                              -UGGCUUCUUGUUU-----AUUUAGGAAGUC--UGACCUGCCC-AGUGAGUUA----UUAUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGAAUG-AAAGGUUU-GACGAAACAUUAACUGUCUCAU-UAUAA-UA--UUGUAAAAUUUAACU UUUGAGUUAAAAGGCU---
---CAAA-----UUUCUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAGUUAAU---UUUAU-AAUAGAC-CUUUUGUUG-AAUAUGAGU-UUA--UAUA-- AUAUUACUUAUUUU-
GUUGGGGUGACA-GUAAAUAUAAGUGUAACUUUUAU-AUUUU----UAGG-CAUUUA-UUUAUG-----UUUAUUA--GAUCCUUUA-UU-AUUGAUC- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UGGAAGCUCAUA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUGAUA-AUUAGGUGU-AGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Thaumatoneura_inopinata_THA_OTI                  -UGGCCUCUUGUUU-----GUUUAAGAGGUC--UGGCCUGCCC-AGUGAAUGU-----AUUUAACGGC-CGCGGUAUC-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGAAUG-AAAGGUUU-GACGAAAAACUAACUGUCUCAC-GACAA-UA--UCUUAGAAUUUAACU UUUGAGUUAAAAGGCU---
---CAAA-----UAAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAAUUGC---AUUGU-AUUUAAG-GGUU-GCUU-UAUAAUUAAAUGAU-UAUUU- UGUC-GUUUAUUUU-
GUUGGGGUGACA-ACAAAUAUAAGAAUAACUUUUGU-AUUUU----UUUU-CAUUGA-UUUAUG-----UUUAUUA--GAUCCUUUA-UU-AUUGAUC- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UUGAAGUUCGGA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUGGGCGC-AGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-
UU-UAAAC-UCUU-ACAU--------------[-????]
Hypolestes_clara_HYP_OHC                         -UGUCUUCUCGUUU---AUUUUUGUGAAGUC--UGACCUGCCC-AGUGAAAUUU--GGUUUUAACGGC-CGCGGUACC-
AUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-GACGAGAUAUUAGCUGUCUCAU-UUUGA-UGA-UUUUAAAAUUUAAUU UUUAAGUUAAAAAGCU---
---UAAA-----UGUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUGGUU-AUA-UAUUUU-AAUAGUUUUG---GUUU-AUGUAGUUUAUAUU-AUUC-- UGUAUAGCUUUUUU-
GUUGGGGUGACA-AGAAAUAUAUAUUUAACUUUUAUUAACUA----UGAAACACUUA-UUUGUG-----AUUAUUA--GAUCCUUUU-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCCCUU-UUGGAGUUCUUA-UUUACAAGG--GGGCUUGCGACC-UC-GAUGUUGAAUUAAGAUUAUA-GUUAGGUGU-AGC-AGUU-UA-AC UU-AUAGG-UC-UG-UUC-GACC-UU-UGAAU-
UCUU-ACAU--------------[-????]
EU055088_Hypolestes_sp                           -NNNNNNNNNNN----NNNNNNNNNNNNNN--NNNNNNNNNN-NNNNNNN-----NNNNNAACGGCCCGCGGUAUC-
GUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-GACGAGGUAUUGACUGUCUCAC-UUUGA-UGA-UUUUAAAAUUUAAUU UUUAAGUUAAAAGGCU---
---UAAA-----UGGUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUGGUU-GUA---UUU--AAUAAUAGCUUUGGUUU-AUAUAUUAUAUU---AUUU-- UAUAUAACUUUUUU-
GUUGGGGUGACA-AAAAAUAUAUAUUUAACUUUUAUUAUAUA----UAAAACAUUUA-UUUGUG-----GUUAUUA--GAUCCUUUU-UU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCCCUU-UUGGAGUUCUUA-UUUACAAGG--GGGCUUGCGACC-UC-GAUGUUGAAUUAAGAUUAUA-GUUGGGUGU-AGC-AGCU-UA-AC UU-AUAGG-UC-UG-UUC-GAC------------
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Agriomorpha_fusca_ZAF6                           -?????????????---??????????????--??????????-??????????--????????????-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGACUGGAAUG-AAGGGUUU-GACGAGGUAUUAACUGUCUCAU-UGAGA-AA--UUUU-GAAUUUAUCU UUUGAGUUAAAAGACU---
---CAGU-----UGUUAUUGGUAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUAAUA-UUUUGA-CUUGAAUUUG---UUUA-GAUGAUUGUCCGCC-AUU--- UUUUUAAUUUUUUU-
GUGGGGGUGACA-ACAAAUAUAUAUUUAACUUUUGGAUUAAA----CUUAUCAUUUA-UUUAUG-----UUUAUCA--GAUCCUUUA-UU-AUUGAUU- AUUAGUUUAAGUCACCUUAGGGAUAACAGC-
GUAAUUUUCUU-UCAGAGUUCAUA-UUUACAAGA--AAGCUUGCGACC-UC-GAUGUUGGAUUAAGAUGAUA-GUUGGGUGU-AGA-AGCU-UA-AC UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Sinocnemis_yangbingi_ZSY                         -?????????????---??????????????--??????????-??????????--????????????-?????????-
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??-?????-??-??-???-????-??-?????-????-????--------------[-????]
Miocora_peraltica_ZMP                                   -?????????????---??????????????--?????UGCCC-AGUGAAUAUC-A-AUUUAAACGGC-CGCGGUAUA-
UUGGCCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAUGGGACUGGAAUGCAAGGGUUU-AACGAGGAAUUAACUGUCUCAA-UUUAA-UU--UAUUAAAACUUAGCU UUUUAGUUAAAAGGCU---
---UAGA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUACAAUUAUUU-UAAGUAAUGUUAAUUUU---GUUU-UAUUUCCACUUC---UCUU-- GACUUAAUUGUUUU-
GUUGGGGUGACA-UUAAAUAUAUAUUUAACUUUUA-UUGUUUA--GAAG-CCAUUUA-UUUAUG-----AAUAUUU--GAUCCAUUC-UU-AAUGAUC- GUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUCCUC-UUGGAGUUCUUA-UUUGCGGGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUU-GUUGGGCGU-AGU-AGCU-CG-AU UA-AUGGG-CC-UG-UUC-GACC-UU-GAA-U-
UCUU-ACAU--------------[-????]
Cora_marina_POL_OCMr                                    -UGUCCUCUUGUUU-----AUUUAGGAGGUC--UGACCUGCCC-AGUAA------------AACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCCUUUAAUAUGGGACUGGAAUG-AAAGGUUU-AACGAAGAGUUAACUGUCUCAA-UUUAA-UU--UUAUAUAAUUUAGCU UUUUAGUUAAAAGGCU---
---UAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAAAU-UUUGGA-AAAUUAUUUC---GUUU-UAUUGGUUUUA----UCUUU- AAUUUAAUUUUUUU-
GUUGGGGUGACA-UUAAAUAUAUAUUUAACUUUUAUUGUUUA----UAUAACAUUAA-UUUAUG-----AUUGUGU--GAUCCAUUC-UU-AUUGAUC- GAUAGUAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUCUC-UUGGAGUUCUUA-UUUGCGGGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUU-AUUGGGCGU-AGU-AGCU-UG-AU UA-AUGAG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Cora_cyane_BCC                                          -?????????????-----????????????--??????????-??????????--????????????-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCCUUUAAUAUGGGACUGGAAUG-AAAGGUUU-AACGAAGAAUUAACUGUCUCGA-UUUAA-UU---UAUAUAAUUUAGCU UUUUAGUUAAAAGGCU---
---UAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAAAU-UUUGGA-AAUUUAUUUU---GUUU-AAUUUGUUUUA----UCUUU- GAUUUAAUUUUUUU-
GUUGGGGUGACA-UUAAAUAAAUAUUUAACUUUUAUUGUUUG----GUAAACAUUAA-UUUAUG-----AGCUUGU--GAUCCAUUC-UU-AUUGAUC- GUUAGUAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUCUC-UUGGAGUUCUUA-UUUGCGGGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUU-AUUGGGCGU-AGU-AGCU-UA-AU UA-AUGGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Polythore_sp_Z_ZPZ                                      -UGGCCUCUUGUUU-----AUGUAGGAGGUC--UGACCUGCCC-AGUGAGAUUU---AUUUAAACGGC-CGCGGUAUC-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCCUUUAAUAUGGGGCUGGCAUG-AAGGGUUU-AACGAGGAACUAGCUGUCUCAA-UUUGA-UU--UAUUAAAAGUUAGCU UUUUAGUUAAAAGGCU---
---AAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUACAUUUACAU-UCUGUAGGAUUAAUUUU---GUUU-UAUUUAUAUAC---UUCUUU-- GUUUAGGUGUUUU-
GUUGGGGUGACA-UUAAAUAUAUAUUUAACUUUUA-UUGUUCG--GGAA-CCAUUUA-UUUAUG-----AGUAUUU--GAUCCAUUU-UU-AAUGAUC- UUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCCUUC-UUGGAGUUCUUA-UUUGUGGGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUGAUU-GUUGGGCGU-AGU-AGCU-UG-AU UA-AUGGG-UC-UG-UUC-GACC-CU-UAAAU-
UCUU-ACaugaucugaguuca-ga
Polythore_boliviana_BPB                                 -??????????????----????????????--??????????-??????????--??????AACGGC-CGCGGUAUC-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCCUUUAAUAUGGGGCUGGCAUG-AAGGGUUU-AACGAGGAACUAGCUGUCUCAA-UUUGA-UU--UAUUAAAAGUUAGCU UUUUAGUUAAAAGGCU---
---AAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUACAUUUACAU-UUUGUAGGAUUAAUUUU---GUUU-UAUUUAUAUAC---UUCUUU-- AUUUAGGUGUUUU-
GUUGGGGUGACA-UUAAAUAUAUAUUUAACUUUUA-UUGUUCG--GGAA-CCGUUUA-UUUAUG-----AAUAUUU--GAUCCAUUC-UU-AAUGAUC- UUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCCUUC-UUGGAGUUCUUA-UUUGCGGGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUGAUU-AUUGGGCGU-AGU-AGCU-UG-AU UA-AUGGG-UC-UG-UUC-GAC------------
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Euthore_fasciata_ZEF3_BEFs                              -?????????????-----????????????--??????????-??????????--????????????-CGCGGUAUC-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCCUUUAAUAUGGGACUGGAAUG-AAGGGUUU-AACGAGGAACUAGCUGUCUCAA-UUUAA-UU--UAUUAAAAUUUAGCU UUUUAGUUAAAAGGCU---
---UAGA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUACCUUUAUAU-UUUGGGAAUUUUAUUUU---GAUU-UAUUUUUAUAU----UUUUU- AAUAUACGUGUUUU-
GUUGGGGUGACA-UUAAAUAUAUAUUUAACUUUUA-UUGUUUA--GAAU-CCAUUUA-UUUAUG-----AAUAUUU--GAUCCAUUC-UU-AAUGAUC- GUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCCCUC-UUGGAGUUCUUA-UUUGCGGGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUGAUU-GUUGGGCGU-AGU-AGCU-UG-AU UA-AUGGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Rimanella_arcana_ORA                                    -?????????????-----????????????--??????????-??????????--????????????-CGCGGUAUU-
UUGCCCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGACUGGAAUG-AAGGGUUU-GACGAGGUGCCAGCUGUCUCAG-C-UAA-UUUUUUAUAAAAUUUAACU UUUGAGUUAAAAGGCU---
---CAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAAUAUUUUUU-UAUUUU-UAUCUAUUU----GUUA-AAAUAUUUGACAAC-UUUU-- GAUU-AAUUUUUUU-
AUUGGGGCGAUG-GCAAAUAUAUAUAUAACUUUUGUAUUUA-----UUAUACAUUUA-UUUAUG-----AUUUUUU--GAUCCCUUC-UU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUUCUCUU-UUGGAGUUCAUA-UUGACGAGA--AGGUUUGCGACC-UC-GAUGUUGGAAUAAGAUAAUG-GUUAGGUGC-AGC-AUCU-UA-AC UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-
UCUU-ACAU--------------[-????]
Pentaphlebia_stali_OPSt                                 -UGUCCUCUCGUUU-----AUUUGUGAGGUC--UGACCUGCCC-AGUGAUUUA-----GUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGAAUG-AAGGGUUU-GACGAGACACUAACUGUCUCA--C-UAU-UA-UAUUUAUAAUUUAACU UUUAAGUUAAAAGGCU-
-----UAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUAAAA-GUUUAA-UUUUUAUUUUU--GUUU-AGUUUAAUU------AUUC-- UUUU-AAUUAUUUU-
GUUGGGGUGACA-GUAAA-AUAAACUUAACUUUUAUUAAAUG----UUGUUCAUUUA-UUUAUG--U--UUUAUUU--GAUCCUUUA-UU-AUGGAUU-
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AUUAGAUCAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCUU-UUGAAGUUCUAA-UUUGCGAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUG-GUUAGGUGC-AGU-AGCU-UA-AC UA-
AUAGG-UC-UG-UUC-GACC-UU-UAAAC-UCUU-ACAU--------------[-????]
Devadatta_podolestoides_BDP   -UGUCCUCUUGAAA---AAAGUUUAGAUGUC--UGGCCUGCCC-AGUGAAAUAU----CUUUAACCGC-CGCGGUAUA-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUUCUUUAAUAGGGAACUGGUAUG-AAUGGUUU-GACGAAAUAAUAACUGUCUCAG-CUUUA-UU---UUUAAAAUUUAUCU UUUAGGUUAAAAGACU---
---UAAA-----UUUAGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUGCUUUC-UAUAUA---UUUAUUUAU--CAUU-AAUUUU---------AUUU- AGAAU-GUUUGUUUU-
GUUGGGGUGAUU-AUUAA-AUAUGAAUAACUU-UAUUAUUAA---AAUU-ACAUUUA-UGUAUG-----GGUUUUA--GAUCCGAUA-UU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUUAUUUUCUU-UUAGAGAUCAAA-UUUACAAGA--AAGAUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUGGGUGC-AGU-AGCU-UA-AC UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Amphipteryx_longicaudata_ZAL5   ---- --

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Pseudolestes_mirabilis_OPMb   -UGGCCUCCUGUUU-----GUUUAGGAGGUC--UGACCUGCCC-AGUGAAGAUA----CUAGAACGGC-CGCGGUAUU-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGAAUG-AAAGGUUU-GAUGAAGUAUAGGCUGUCUCAA-UAAUA-UA---UUUAAAAUUUAACU UUCAAGUUAAAAGGCU---
---UGAA-----UUUUGUAGAUAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUUAUU-GGUUGG-AGUUUUUUA----GAUU-GACAUGUUUACUU--CAUU-- UUUUAAUUUAUUUU-
GUUGGGGUGAUG--AAAAUAUAAGAUUAACUUUUUU-AUUUA----UUGUACAUUGA-UAUAUG-----AUUUUUA--GAUCCAUUA-UU-AGUGAUU- AUUAGAUGAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UUGGAGUUCAAA-UUUGCAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUGGGUGU-AGU-AGCU-UG-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Philoganga_vetusta_OPVt_BPVt   -UGUCCUCUCGUUU---UUGUUUGAGAGGUC--UGGCCUGCCC-AGUGAAUUUA---UAUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGAAUG-AAAGGCUU-GACGAGAAAUUGACUGUCUCAU-UUUAA--UU--UAUAGAAUUUAGCU UUUAAGUUAAAAGGCU---
---UAAA-----UGUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUAUU-AUAUAA-UAUUUAUU-----GUAU-AUAAAU-UGGUAUU-AAUU-- AAU-AAUUUAAUUU-
GUUGGGGUGACU--AAAAUUUAUGAUUAACUUUUA-UAUAAU---UAUA-CCACUAA-UUUGUG-----AUUAAUA--GAUCCGUUA-UU-AGCGAUU- AAUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUCCU-UUGGAGUUCAUA-UUUACGGGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUGGGUGU-AGU-AGCU-UA-AU AA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Philoganga_robusta_PGN_OPRb2   -UGUCCUCUCGUUU---UUGUUUGAGAGGUC--UGGCCUGCCC-AGUGAAUUUA---UAUUUAACGGC-CGCGGUAUG-
UUGACCGUGCAAAGGCUAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGAAUG-AAAGGCUU-GACGAGAAAUUGACUGUCUCAU-UUUAA-UU---UAUGGAAUUUAGCU UUUAAGUUAAAAGGCU---
---UAAA-----UGUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUCUUAUU-AUAUAA-UAUUUAUU-----GUAU-AUAAAU-UGGUAUU-AAUU-- AAU-GAUUUAUUUU-
GUUGGGGUGACU--AAAAUUUAUGAUUAACUUUUAU-AUAAU----UAUACCACUAA-UUUGUG-----AUUAAUA--GAUCCGUUA-UU-AGCGAUU- AAUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUCCU-UUGGAGUUCAUA-UUUACGGGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUGGGUGU-AGU-AGCU-UA-AU AA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Lestoidea_conjuncta_ZLC   -UGUCUUCCCGUUU-----GUAUGGGAAGUC--UGACCUGCCC-AGUGAUUUAU----UUUCAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGAAUG-AAAGGUUU-GACGAGACAUUAGCUGUCUCAA-UUUAA-UU--AAUUAAAAUUUACCU UUUGAGUUAAAAGGCU---
---UAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUGGCUGUAU-AUUUUA-AUUGUUUUG----GAUU-AUAAGU-UAAUAUU-AGGU--- AUCCAGGGGUUUU-
GUUGGGGUGAUG-AGAAAUAUAAGAAAAACUUUUUU-AUUUA----UAUUACAUUCA-UUUAUG-----AUUAUUA--GAUCCGUUA-AU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UUGGAGUUCAAA-UUUACAAGA--AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-UUUAGGUGU-AGC-AGCU-UA-AC UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Diphlebia_lestoides_ZDL   -UGUCUUCUUGUUUU----AAUUAGGAAGUC--UGACCUGCCC-GGUGAUAAUU----AUUUAACGGC-CGCGGUAUC-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUAGUAUG-AAGGGUUU-GACGAGGCGUUAUCUGUCUCAA-UUUGA-UG--UAUUAAAAUUUAACU UUUAAGUUAAAAGGCU---
---UAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUGGUUGUAA-UUUUUA-AUUAUUUUUA---GGUU-AUGAAU-UAUUAUU-AUUA-- UAUUCAAUCGUUUU-
GUUGGGGUGACA--AAGAAAUAUAAUUAACUUUUUU-AUUUU----AAAAACAUUUA-UUUAUG-----AUUAGGA--GAUCCAGUA-UU-AUUGAUU- AAUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UUGGAGUUCAAA-UUUACAAGG--AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUGGGUGC-AGU-AGCU-UG-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Diphlebia_caerlesaens_ODC   -UGUCUUCUUGUUUG----UUUUAGGAAGUC--UGACCUGCCC-GGUGAAUAAA----UUUUAACGGC-CGCGGUAUC-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUAGUAUG-AAGGGUUU-GACGAGACGCUAGCUGUCUCAA-UUUAA-UG--UAUUAAAAUUUAACU UUUAAGUUAAAAGGCU---
---UAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUGGUUAUAU-UUUUAA-CUAUUUUUGGU--GUGU-AUAAAU-UAUUAUU-AUUA-- AAUAUACUCAUUUU-
GUUGGGGUGACA--AAGAAAUAGGAAUAACUUUUUU-AUUUU----AAAACCAUUUA-UUUAUG-----AUUAGGA--GAUCCAAUA-UU-GUUGAUU- GAUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UUGGAGUUCAAA-UUUACAAGG--AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUUACA-AUUGGGUGC-AGU-AGCU-UG-AU UA-GUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]

Bayadera_melanopteryx_EUP_ZBM -UGUCUUCUUGUUUU-A-UAUAUGAGAAGUC--UGGCCUGCCC-AGUGAUUA------UUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAAAGGAGGCUGGAAUG-AAAGGUUU-GACGAGAUACUAUCUGUCUCAA-CCUCA-AU--UAUUAAAAUUUAACU UUUAAGUUAAAAGGCU---
---UAAA-----UUUUAUUGAUAGACGA--GAAGACCCUAUAGAGCUUUAUGAAUAU---UCUU-------UUAUAG---GUUUUAUAAA--AAAAUUU-AAUU--- UUUUAUUCAUUUU-
GUUGGGGUGACA--AAAAAACACAUUUAACUUUUUU-AUUUA----CAAAACAUUUA-UUUAUG-----UUUAAAA--GAUCCAUUA-AU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UUGGAGUUCUCA-UUUACAAGA--AGGAUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-UUUGGGUGU-AGU-AGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
EU054987_Bayadera_brevicauda -NNNNNNNNNNN----NNNNNNNNNNNNNNN--NNNNNNNNNN-NNNNNNNN------NNNNAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAAAGGAGGCUGGAAUG-AAGGGUUU-GACGAGAUACUAUCUGUCUCGG-CCGCA-AU--UAUUAAAACUUAACU UUUAAGUUAAAAGGCU----
--UAAA-----UUUUAUUGAAAGACGA--GAAGACCCUAUAGAGCUUUAUGAUUGUUU-UAUUAU----AAUUUU----AUUA--UAGAAUUUUAGCAUU-------- ACAAUUAUUUU-GUUGGGGUGACA-
AAAAAUACAAGAUUAACUUUU--UUAUUUA--UAAG-CCAUUUA-UUUAUG----AUAUAUUA--GAUCCAGUA-UU-AUUGAUU- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCUU-
UGGGAGUUCUUA-UUUACAAGA--AGGAUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUGGGUGC-AGU-AGCU-CAUAA UU-AUAGG-UC-UG-UUC-GAC--------------------------
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Dysphaea_gloriosa_ODG -UGUCUUCAUGGUU------CUUAUGGGGUU--UGGCCUGCCC-GGUGAUUA-------UGAAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAAAGGAGGCUGGAAUG-AAAGGUUU-GACGAGGCAUUAGCUGUCUCAA-UUUUA-AU--UAUUAAAAUUUAACU UUUAGGUUAAAAGGCC----
--UAAA-----UAUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUGGUUAAAA-CUUUAU---UUUAUUAUU--GUUUUUUAU---UGUUUU-----------
--AACUGUUUU-GUUGGGGUGACA-AGAAAUACAAAUUUAACUUUU--UUAUUUA--UAUA-UCAUUAA-UUUAUG---UUGUUUUUA--GAUCCAUUA-UU-AUUGAUU-
GUUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCUU-UUGGAGUUCGAA-UUUAUAAGA--AGGAUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-UGUGGGUGC-AGU-AGCU-CAUUA Au-
auagg-uc-ug-uuc-gacc-uu-uaaau-ucuu-acaugaucugaguuccaga
Euphaea_formosa_ -UGUCUUCCUGUUUU----UAUU-GGAAGUC--UGACCUGCCC-AGUGAUUA------UUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAAAGGAGGCUGGAAUG-AAAGGUUU-GACGAGACAUUGACUGUCUCAU-CCUCA-AU--UAUUAAAAUUUAACU UUUAAGUUAAAAGGCU----
--UAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUGGUUUUGU-CUUUAUUUUCUUUAUAAUUAGUUUUAU-----UGAUUG-----------
--AACUGUUUU-GUUGGGGUGACA-AGAAAUAUAAAUUUAACUUUU---UAAUACAUUUA-UUUAUG----AUUCUUUA--GAUCCAUUA-UU-AUUGAUU-
GUUAGAGUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCUU-UUGGAGUUCAAA-UUUACAAGA--AGGAUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-ACUGGGUGC-AGU-AGCU-CAGCG GU-
AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAUGAUCUGAGUUCA-GA
Anisophaea_decorata_ZAD_OED -UGUCUUCCUGUUUU----UAUUGGAAGGUC--UGGCCUGCCC-AGUGAUUA-------UUUAACGGC-?????????-
???????????????-??????????-?????????????????????????????-????????-??????????????????????-?????-??--???????????????
????????????????------????-----????????????????--?????????????????????????????-????--------?????---???????????-???????-????--
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??????????????????????????????-???????????-????????????-?????????--????????????-??-???????????????????-?????????-???-????-??-??
??-?????-??-??-???-????-??-?????-????-????---------------[-????]
Anisopleura_sp_A_EUP_ZAA -UGGCUUCUUGUUC-----UUAUAAGAGGUC--UGGCCUGCCC-AGUGAAAUAG--AAUAUAAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAAAGGAGGCUGGAAUG-AAAGGUUU-AACGAGACAUUAUCUGUCUCAA-UCUCU-AU--AAUUAAAAUUUAACU UUUGAGUUAAAAGGCU---
---UAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUGAUU--AA-AUUU--------UUGUU---UUUUCAUUAUU-AAUUUU--CAUU-- AAUUUAAUUGUUUU-
GUUGGGGUGACA-AAAAAUACAAGAAUAACUUUUUU-AUUAU----AAAUCCAUUUA-UUUAUG----UUUUAUUA--GAUCCAUUA-AU-AUUGAUU- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UGGGAGUUCUUA-UUUACAAGA--AGGAUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-UUUGGGUGC-AGU-AGCU-CG-UU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Disparocypha_biedermanni_ZDB -??????????????----????????????--????CUGCCC-GGUGAUUAA------UUUAACGGC-CGCAGUAUU-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGAAUG-AAUGGUUU-GACGAAAUAUUAACUGUCUCAU-UUUUA-UG---AAUUGAAUUUAACU UUUAAGUUAAAAGGCU---
---UAAA-----UUUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAGAAUUUG-UUUUUA-UAAAUUUUA---GGAAAAA--AUU-UGGUAU--AAUA-- AUAAUUUUAAUUUU-
GUUGGGGUGAUA-GUAAAUAAAUAUAUAACUUUU-AUUAUGAU---UUUAACAUUUA-UUUUUG-----AUUUUUA--GAUCCUUUA-UU-UAUGAUU- AUUAGACUGAGUUACCUUAGGGAUAACAGC-
GUAAUCUUUCU-UUUGAGUUCUUA-UUUGCAGAA--AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUUACA-UUUAGGCGU-AGU-GGCG-CU-AU UU-GUAGG-UC-UG-UUC-GCCC-UU-UAAAU-
UCUU-ACGU---------------[-????]
Libellago_semiopaca_BLS -??????????????----????????????--??????????-??????????--????????????-CGCAGUAUU-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGAAUG-AAUGGUUU-AACGAAACAUUGACUGUCUCAU-UUUUA-UU---AUUUGAAUUUAACU UUUAAGUUAAAAGGCU---
---UAAU-----UUUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUUUAAUUUA-UUUUGU-UGAUUUUUG---GGUUAUU-AAUU-UUAAU---AAUU- UUAAUUUAAAAUU- U-
GUUGGGGUGAUG-GUAAAUAUAUAUGUAACUUUU-AUUAUUAU--UUUU-ACAUUUA-UUUAUG-----AAAUUUA--GAUCCAU-U-UU-UAUGAUU- AUUAGAUUGAGUUACCUUAGGGAUAACAGC-
GUAAUCUUUCC-UUUGAGUUCUUA-UUUUCGGAA--AGGAUUGCGACC-UC-GAUGUUGGAUUAAGAUUACA-UUUAGGUGU-AGC-CGCU-UA-UU UU-GUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Heliocypha_biseriata_BHB -??????????????----????????????--??????????-??????????--????????????-CGCAGUAUA-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAUGGUUU-GACGAAAUAUCAACUGUCUCAU-UUUUA-UG---AAUUGAAUUUAACU UUUAAGUUAAAAGGCU-
-----UAAA-----UUUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUUAAUCUUA-UUUUUA-CGUGUAUUU---GGUGAAAAUUUU-UAUAUU--AAUU--

UUAAUUUUAAUUUU-GUUGGGGUGAUG-GUAAAUAAAUAGUUAACUUUU-AUUAUUUA--UUAA-ACAUUUA-UUUUUG----AUUAAUUA--GAUCCAU-G-UU-UUUGAUU-
AUUAGAGUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUUCC-UUUGAGUUCUUA-UUUUCGGAA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AAUAGGUGU-AGC-CGCU-UA-UU UU-
AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU--------------[-????]
Platycypha_caligata_OPC -UGGCUUGUUGUUAU----UUAUAAUAAGUC--UGUCCUGCCC-ACUGACGU------CACCAACGGC-CGCAGUAUA-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAAAGGAGGCUGGAAUG-AAUGGUUU-GAUGAGAUGUCAGCUGUCUCAU-UUUUA-UU---AAUUGAAUUUAAUU UUUGAGUUAAAAAGCU---
---UAAA-----UUUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUUAAUUUUA-UUUUUA-UUUGUUUU----GGAUUUU-UAUU-UAUAAU--AAUU-- UUAGAUUUAAUUUU-
GUUGGGGUGAUG-AUAAAUAAAUAUUUAACUUUU-AUUAUUAA---UUUUACAUUUA-UUUAUG----UAUUAUUU--GAUCCAUAU-GU-UUUGAUU- UUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUAUUUCC-UUUGAGUUCUUA-UUUUCGGGA--AUGUUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-UUUGGGUGU-AGC-UGCU-CA-AU G--GUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
ZCCt -??????????????----????????????--??????????-??????????--????????????-CGCAGUAUU-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAAAGGGGGCUGGAAUG-AAUGGAUU-GAUGAGACAUUAUCUGUCUCGU-UAUUA-UU---AGUUGAAUUUAAUU UUUAAGUUAAAAAGCU---
---UAAA-----UUUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUUAACUUUA-UUUUUA-UAUAUUUA----UGUUAU--UAUU-CAUUAU--GAUU-- UUAAGUUUGAUUUU-
GUUGGGGUGAUG-GUAAAUAAAUAUUUAACUUUU-AUUAUUAA---UUUUACAUUUG-UUUAUG----UUUUAUUU--GAUCCAU-U-UU-UUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUUCC-CUUGAGUUCUUA-UUUUCGGAA--AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAGUAUA-AUUAGGUGU-AGC-UGCU-UA-AU GU-UUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Sundacypha_petiolata ---- ---

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Rhinocypha_fenestrella_ORF -UGGCCUAUUGGUAA----UUAUAAUAGGUC--UGGCCU??CC-AGUGAGGAUC----UUUUAACGGC-CGCAGUAUA-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGAAUG-AAUGGCUU-GACGAAAUAUCAACUGUCUCAU-UUUUA-UU---AAUUGAAUUUAACU UUUAAGUUAAAAGGCU---
---UAAA-----UUUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUUAAUUUUA-UUUUUA-CAUGUAUUU---GGUGAAAAUUU--UAUAUU--AAUU-- UUAAUUUUAAUUUU-
GUUGGGGUGAUG-GUAAAUAAAUAUUUAACUUUU-AUUAUAUA---UUAUACAUUUA-UUUUUG----AUUAUUUA--GAUCCAU-U-UU-UUUGAUU- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUUCC-UUUGAGUUCUUA-UUUUCGGAA--AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AAUAGGUGU-AGU-CGCU-UA-AU GU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
EU054949_Rhinocypha_tincta -NNNNNNNNNNN----NNNNNNNNNNNNNNN--NNNNNNNNNN-NNNNNNNN------NNNNAACGGC-CGCAGUAUA-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUUUCUUAAUAAGGGGCUGGAAUG-AAUGGUUU-GACGAAAUAUCGACUGUCUCAU-UUUUA-UU---AAUUGAAUUUAACU UUUAAGUUAAAAGGCU---
---UAAA-----UUUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUUAACCUUA-UUUUUA-UUUUUUUU----GGUAAAAGGUUAUUUUAAU---UAU---- AAGUUUAAUUUU-
GUUGGGGUGAUG-GUAGAUAAAUAUUUAACUUUU-AUUAUAAG---UUUUACACUUA-UUUGUG----AUAAAUUA--GAUCCUUUU-UU--UGGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUUCC-UUUGAGUUCUUA-UUUUCGGAA--AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGC-AGC-UGCU-UA-UU UU-AUGGG-UC-UG-UUC-GAC------------
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EU477615_Heliocharis_amazona -UGUCUUUUUGUUUU----GUUUAAAAAGUC--UGACCUGCCC-AGUGAUUAG------UUUAACGGC-CGCGGUAUC-
UUGACCGUGCAAAGG0UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGUCUGGUAUG-AAUGGUUU-GACGAAAUUUUGGCUGUCUCGC-UUUUA-UG-NNNUUAGAAUUUAAUU UUUUAGUUAAAAAGCU-
-----UAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUACGUGUUUAU-GUAUUA------- UUAAAAGUUUUGUUUUAUUUUUAUUUUAUAUUUCUAUCCA-UGUUUU-
GUUGGGGCGACA--AAAAUAUAUAAUUAACUUUU--UUAUUU---AUUUUUCAUUUA-UUUAUG-----UUUAUUG-- GAUCCUUUA-UU-AUUGAUU-GUUAGAUUGAGUUACCUUAGGGAUAACAGC-
GUAAUCCUCUU-UUGGAGUUCUUA-UUUUCAAGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA- GUUGGGCGC-AGU-AGCU-CA-UAUUUAUAGG-UC-UG-UUC-GACC-UU-UAAAU-
ANNG-ACAU--------------
Heterinia_americana_CAL_OHA2 -UGUCUUCUUGAAUA-----UAUAAGAGGUC--UGGCCUGCCC-GGUGAUAAUG-----AUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGACUGGUAUG-AAGGGUUC-AACGAAAUACUAACUGUCUCAA-UUUAA-CU--UAUUAUAAUUUGAUU UUUGAGUCAAAAAGCU---
---UAAA-----UUUAAUUGAAGGACGA--GAAGACCCUAUAGAGCUUUAUAAUU--AG-UAUUAA-UAGUUAUUUU--UAUUUUAUUUU--UAUUGU--AUUA-- AUAUUAAUUUUUUU-
GUUGGGGUGACA-ACAAAUAUAUGAAUAACUUUU--UUAUUUA---CUGAUCAUUAA-UUUAUG-----UUUAAUA--GAUCCUUUA-CU-AUUGAUU- AUUAGAGUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UCAGAGUUCAUA-UUUACAGGG--AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-AGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Caliphaea_confusa_ZCC -UGUCCUCUUGUCUU----UUAUAAGAGGUC--UGACCUGCCC-AGUGAAAUUG-----UUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGAAUG-AAAGGUUU-GACGAAAUAUUUACUGUCUCAA-UGUAA-UA--AGUUAAAAUUUAGAU UUUGAGUCAUAAGACU----
--UAAA-----UUUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAGGAUUAUCU-UUUUAA-U-CUUGUU----UUUUUUAUUCUUUUAGAUU--AUUG--AU- UAGAUCUUUUU-GUUGGGGUGACA-
GAGGAUAUAUACACAACUUUU--UUAUUUU---UUGUACAUUUA-UUUAUG-----AUUAUUA--GAUCCAUUA-UU-AUUGAUU- GUUAGAUAAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCCU-
UCAGAGUUCAAA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-AGCU-UA-AA UUAAUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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Noguchiphaea_yoshikoae_AJ459228   ---- --

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EU055012_Vestalis_beryllae   -NNNNNNNNNNN----NNNNNNNNNNNNNNN--NNNNNNNNNN-NNNNNNNN------NNNNAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGACUGGAAUG-AAAGGUUU-GACGAGGCAAUAUCUGUCUCAA-UUCAA-UU--UUUUGAA-UUUAGCU UUUUGGUCAAAAGGCC---
---UAGA-----UGAUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAAGAUUAAU---UUUAUUAAUUUAU---UUUUUUUAUU--AUUUUUUUAAU----- UUUUUUAAUUUUUUU-
GUUGGGGUGACA--AGAACACAUAAUUAGCUAUU-AUUAUUUA--UUAU-ACAUUUA-UAUAUG----AU-UCUUA--GAUCCUUUU-UU-AUUGAUU- GUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UCAGAGUUCAAA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUU-AUUGGGUGU-AGA-AGCU-UA-AU UA-AUAGG-UC-UG-UUC-GAC------------
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AF170950_Matrona_basilaris   -UGUCCUCUUGUAU----UUUAUAUGAGGUC-GGUGCCUGCCC-GGUGAAUUAU---AUUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUCUUAAUAGGAGACUGGAAUG-AAAGGUUU-GACGAAGUACUAUCUGUCUCGA-UUUAA-UA--UUUCCGAAUUUAGCU UCUGAGUUAAAAGGCU--
----CAGA-----UUUUUUUGUAGGACGA--GAAGACCCUAUAGAGCUUUAAGGUUCAC---UUUUUUAAAUUUU-AAUUUUUUA------- AUUAAUAUUAUUAUUUUUUGGACUUUUUU-
GUUGGGGUGACA-AAAGAUAUAUAUUUAACUUUU-AUUAUUUA--UUUU-ACAUUUA-UUUAUG-----GUUUUUA--GAUCCUUUA-UU-AUAG AUU-GUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCGGAGUUCAAA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUG-AUCAGGUGU-AGC-AGCU- UG-GUUC-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCAU-ACAU---------------[-????]
CAlopteryx_atrata   -UGUCCUCUUGUGU----UUUAUAUGAGGUC--GUGCCUGCCC-GGUGAAUUAU---AUUUUAACGGC-CGCGGUAUU-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGAAUG-AAAGGUUU-GACGAAGUACUAUCUGUCUCAA-UUUAA-UA--UUGCUGAAUUUAGCU UUUGAGUUAAAAGGCU---
---CAAA-----UUUUCUUGAAGGACGA--GAAGACCCUAUAGAGCUUUAAGGCUUAU---UUAAAUAGCUUUU-AACUAUUUUAUAAAAUAUGUU----- AUUUUUUUU--GCUUUUUU-
GUUGGGGUGACA-AAAGAUAUAUGUUUAACUUUU-AUUAUUUA--UUAU-ACAUUUA-UUUAUG-----GUUUUUA--GAUCCUUUA-UU-AUAGAUU- GUUAGAAUAAGUUACCUUAGGGAUAACAGC-G-
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---[-????]
EU055003_Echo_modesta   -NNNNNNNNNNN----NNNNNNNNNNNNNNN--NNNNNNNNNN-NNNNNNNN------NNNNAACGGC-CGCGGUAUC-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGAAUG-AAGGGCUU-GACGAGGUACUAGCUGUCUCAA-UUUUA-UAA-C-CUAUAUCUUAGCU UUUGGGUUAAAAGGCU---
---CAGA-----UGUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAAUAUUAAU---UCACUAGGUGAGA---UUAAAUUAAU--UUUAUUCCUAU----- UGGUUUGAUUUUUUU-
GUUGGGGCGACA-AGAGAUAUAUAUUUAACUUCU-AU-GUUUA--UUUU-GCAUUGA-UUUAUG------AUUUUU-GGAUCCAUUA-UU-AUUGAUU- AGUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UCAGAGUUCAAA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUG-AUUGGGUGU-AGC-AGCU-CA-GU UA-AUAGG-UC-UG-UUC-GAC------------
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EU054952_Neurobasis_ianthinipennis   -NNNNNNNNNNN----NNNNNNNNNNNNNNN--NNNNNNNNNN-NNNNNNNN----------AACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAAGGUUU-GACGAAGUACUAUCUGUCUCAA-UAAA-AUA--UUUUUGAAUUUAGCU UUUGAGUUAAAAGGCU---
---CAAA-----UUUUUUUGAAGGACGA--GAAGACCCUAUAGAGCUUUAAGGCUUAU---UUAUUAAUUUUAU---UUAGUUUAUU-UGUUAUGUUAAU----- UUGU-UGGCCUUUUU-
GUUGGGGUGACA--UGAGAAUAUGUAUAACUUUU--UUAUUUA--UGGG-UCAUUUA-UUUAUG-----UUCAUUA--GAUCCUUUA-UU-AUUGAUU- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAAA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-AGCC-UG-AU UC-AUAGG-UC-UG-UUC-GAC------------
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Sapho_orichalcea_OSO   -UGUCCUUAUGGUU------UAUAUAAGGUC--GUACCUGCCC-AGUGAGGUAU--UUAUAUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGAAUG-AAAGGUUU-GACGAAGUAUCCACUGUCUCAU-UAUAA-UA----GUUGAAUUUAGCU UUUAAGUUAAAAGGCU----
--UAGA-----UUUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUACUGUCGAU--UUAUUA-U-UUAUUUU---UAUUUGAUUAAAU-GUUGU--UUUA--CU- UUGGGGGUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU--UUAUUUA---UUUUCCAUUGA-UUUAUG-----AUUUUUA--GAUCCAUUA-UU-AUUGAUU- GUUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCCU-
UCAGAGUUCAAA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-UGUU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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Calopteryx_amata_CAL_OCAm   -UGUCCUCUUGUGUU----UUAUUUGAGGUC--UUACCUGCCC-AGUGAAUUUA----UUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGAAUG-AAAGGUUU-GACGAAGUACUAACUGUCUCGG-UUUAA-UA--AUAUUGAAUUUAGCU UUUGAGUCAAAAGGCU----
--CAGA-----UUUUUUUGAGGGACGA--GAAGACCCUAUAGAGCUUUAAGGUUUAU--UUUUAU-UGCUAUUAU---UAUUUAAUUUUUUAAAGCU--AUUA--AU- UUAACUUUUUU-GUUGGGGUGACA-
AAGAAUAUACAAUUAACUUUU-AUUAUUUA--UUUU-ACAUUAA-UUUAUG-----AUUUUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCCU-
CCAGAGUUCAAA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUCAGGUGU-AGU-AGCU-UG-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EU477613_Calopteryx_splendens   -UGUCCUCUUGUGUU----UUAUUUGAGGUC--UUACCUGCCC-AGUGAAUUUA----UUUUAACGGC-CGCGGUAUC-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGAAUG-AAGGGUUU-GACGAAGUACUAUCUGUCUCAA-UUUAA-UA--UUAUUGAAUUUAACC UUUGAGUUAAAAGGCU-
-----CAAA-----UUUUUUUGUAGGACGA--GAAGACCCUAUAGAGCUUUAAGGCUUAU---UGUAU-UAACUAUU--UUUAUUCCAUUUU--UUGGGU-UAU---

UAUUUGGGCUUUUUU-GUUGGGGUGACA-AGAGAUAUAUAAUUAACUUUU-AUUAUUUA---UUAUACAUUUA-UUUAUG-----GUUUUUA--GAUCCAUUA-UU-AUUGAUU-
AUUAGACCAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCCU-CCAGAGUUCAAA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGU-AGCU-UG-AU UU-
AUAAG-UC-UG-UUC-GACC-UU-UAAAA-UCUU-ACAU---------------[-????]
EU055036_Calopteryx_aequabilis ---- ------------
--AACGGC-CGCGGUAUU-UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGAAUG-AAAGGUU U-
GACGAAGUACUAACUGUCUCGG-UUUAA-UA--AUAUUGAAUUUAGCUUUUGAGUCAAAAGGCU------CAGA-----UUUUUUUGAGGGACGA--GAAGACCCUAUAGAGCUUU AAGGUUUAU--UUUUA-
-UUGCUAUU---AUUAU---UUAAUUUUUUAAAGCUAUUAAUUU-AACUUUUUU-GUUGGGGUGACA-AAGAAUAUACAAUUAACUUUU-AUUAUUUA--UUUU-ACAUUAA- UUUAUG-----AUUUUUA--
GAUCCAUUA-UU-AUUGAUU-AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCCU-CCAGAGUUCAAA-UUUACAGGA--AGGCUUGCGACC-UC- GAUGUUGGAUUAAGAUAAUA-
AUCAGGUGU-AGU-AGCU-UG-AUUU-AUAGG-UC-UG-UUC-GAC-----------------------------------[-]
Iridictyon -?????????????---??????????????--??????????-?????????---????????????-?????????-
???????????????-??????????-????????????????????????????-????????-????????????????????????-??????-????????????????
????????????????------????-----????????????????--?????????????????????????????--?????-???????-???-?????--????????????--
??????????--????????-????????????--????????????????????-????????----??????????-??????----????????--????????-???-???????-
??????????????????????????????-???????????-????????????-?????????--????????????-??-???????????????????-?????????-???-????-??-??
?-??????-??-??-???-????-??-?????-????-????---------------[-????]
Iridictyon_trebbaui_ZIT -??????????????----????????????--??????????-??????????----??????????-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUUGAAUG-AAAGGUUU-GACGAGGCAUUGACUGUCUCAU-UUUAA-UU--UAUUUGAACUUAGCU UUUAAGUAAAAAGGCU----
--UAGA-----UUUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUUGCUGAU--UUUAUU-UUUUAAUUU---UAUUAAUUUUUUUUAUUAU--UGAA----- GUGGCAUUUUG-GUUGGGGUGACA-
AAAGAUAUAUAAUUAACUUCU-UU-AUUUU---UAAUACAUUUA-UUUAUG-----AUUUUUA--GAUCCAAUA-UU-AUUGAUU- AAUAGAAUUAGUUACCUUAGGGAUAACAGC-GUAAUCUUCCU-
UCAGAGUUCAAA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUG-GUUAGGUGU-AGU-AGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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Unaligned ---- ---5555555555-----------------------

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Nubiolestes_diotima_PER_OND -?????????????----?????????????--??????????-?????????---AUUUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAACAGGAGGCUGGAGGU-AAAGGUUU-GGCGAGACGUUGUCUGUCUCAU-UUAAUUUU----UUAAAAUUUAACU UUUUAGUUAAAAGGCU---
---UGUA-----UUUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAGUGUGUG--GGGUU-AUAUAUA-UUU-UGUU---AUUAUUACAAAA--UGA- GAUUGAAGUUAAUUGU-
GUUGGGGUGACA--AAAAUAAAAUAUUAACUUUU-UUAUUUAU----AUUACAUUGA-UAUAUG----GUU-UUUA--GAUCCAUUC-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCGGAGUUCGAA-UUUACAAGA--AGGAUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGC-AGC-CGCU-UA-AC U--AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Perilestes_kahli_ZPK2_BPK -UGGCUUCUUGGGG----CUUAUGGGAAGUC--UGACCUGCCC-AGUGAUAUU---AUUUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGUAUG-AAAGGUUU-GACGAAGUAAUAACUGUCUCAU-ACUUAAUA--AUUUAAAACUUAAUU UUUAUGUUAAAAAGCU---
---UAAA-----UGUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUGGAAUGUU----UUU-AA-UUUU-UAU-UGUUU--AUAAUGUCAAAU--UA-- UUAAUUAUUUUAUUUU-
GUUGGGGUGACA-AGAUAUAUAUUUAACUUUU-AUAUUUAU----UGUACAUUAA-UUUAUG----AUU-AUUA--GAUCCAAUU-UU-AUUGAUU- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUCUU-UUUGAGUUCAAA-UUUACAAGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-AGCU-UA-AU GA-UUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Perissolestes_remotus_BPR -?????????????----?????????????--??????????-??????????-?????????????-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAAAGGAGGCUGGAAUG-AAUGGUUU-GACGAAACAUUAGCUGUCUCAU-UUAUU----UUAUUAGAACUUAAUU UUUUAGUUAAAAAGCU---
---GAAA-----UUUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUAAAUU--GUAUU-U-AUU-U------GAAC--AUUUAUUUUGAA-- UAUAUGUUU--UAAUAUUGU-
GUUGGGGUGACA--AGAAUAUAUAAUUAACUUUU-CUAUAUUA----AUUUCAUUUA-UUUAUG----UUUAUUUA--GAUCCUUUA-UU-AUUGAUU- UUUAGAUCAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UCAGAGCUCAAA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUAGGGUGU-AGC-CGCU-UA-AU UU-AUGGG-UC-UG-UUC-GACC-UU-UAAUA-
UCUU-ACAC---------------[-????]
Perissolestes_magdalenae_OPMg -?????????????----?????????????--??????????-??????????-?????????????-CGCGGUAUU-
CUGACCGUGCAAAGG-GAGCAUAAUC-AUUAGUCUUUUAAAAGGAGGCUGGAAUG-AAUGGUUU-GACGAAACAUUAUCUGUCUCAU-UUAUU----UUAUUAGAAUUUAAUU UUUUAGUUAAAAAGCU---
---AAAA-----UUUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUAAACU---UAUU-U-AUC-G------GAAU--AUUUAUUUCUAG-- UAUUUAUUU--UAGUAUUAU-
GUUGGGGUGACA--AGAAUAUAUAAUUAACUUUU-CUAUAUAG----UUUACAUUUA-UUUAUG----UUUAUUUA--GAUCCUUUA-UU-AUUGAUU- UUUAGAACAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UCAGAGUUCAAA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUAGGGUGU-AGC-CGCU-UA-UU U--AUGGG-UC-UG-UUC-GACC-UU-UAAUA-
UCUU-ACAU---------------[-????]

Chlorolestes_umbrata_SLE_OCU -UGUCUUCUUGUUG----UUUAUGGGAAGUC--UGACCUGCCC-AGUGAUUAUA-UAAAUUUAACGGC-CGCGGUAUU-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGCAUG-AAUGGUUU-GACGAGGUGCUGACUGUCUCAU-UUAAUUUU-AAAUUAAAAUUUAACU UUUUAGUCAAAAGGCU---
---AAAA-----UUAUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAGUAUAUU--GACUU-AAUUGUA-UUU-UGUUU--AAUUAUUUUAAU-- UAUUUCUAC--CACUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUAU----AAUACAUGAA-UAUAUG----GCUAAUCA--GAUCCAUUU-UU-AGUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGC-AGC-CGCU-UA-AU UU-AUUGG-UC-UG-UUC-GACC-UU-UAAUU-
UCUU-ACAU--------------[-????]
Euchlorolestes_SLE_OET -UGUCUUCUUGUUG----UUUAUAGGAAGUC--UGACCUGCCC-AGUGA?????-?????????????-CGCGGUAUU-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGCAUG-AAUGGUUU-GACGAGGUGCUGACUGUCUCAU-UUAAUUUU-???UUAAAAUUUAACU UUUUAGUCAAAAGGCU---
---AAAA-----UUGGUUUGCAUGACGA--GAAGACCCUAUAGAGCUUUAUAUUGUAUU----AUU-AAUUGCA-UUU-UGCUA--AAUUAUUUUAAU-- UAUUAUUAA--CAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAUUUAACUUUU-UUAUCUAU----UUAACAUUGA-UAUAUG----AUUUAUGA--GAUCCAUUU-UU-AGUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-UGUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAA-
UCUU-ACAU--------------[-????]
Phylolestes_ethelae_OPE -UGUCUUCUGGUUA----UUUAUAGGAACAC--UGACCUGCGC-AGUGAAGU-----GUUUCAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGCAUG-AAUGGUUU-GACGAGGUGCUGACUGUCUCAU-UUAAUAUU-UUAUUAAAAUUUAACU UUUUAGUCAAAAGGCU---
---AUAA-----UGUAUUUGGAAGACGA--GAAGACCCUAUAGAGUUUUAUAAAAGUGU---AUUU-AAUCUUG-UUU-UGGUU--AAUUGUUU-GAU-- UAUUUAUAC--CUUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUUG----AUUACAUUGA-UAUAUG----GUUAUUUA--GAUCCAUUU-UU-AGUGAUU- GUUAGAUUAAAUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-UUUAGGUGU-AGC-CGCU-UA-AA GU-AUUGG-UC-UG-UUC-GACC-UU-UAAUU-
UUUU-ACAU--------------[-????]
Synlestes_weyersii_ZSW -UGUCUUCUUGUUG----UUUAUAGGAAGUC--UGACCUGCCC-AGUGAAUAG--UUGUUUUAACGGC-CGCGGUAUU-
CUGACCGUGCAAAGG-UAGCAUAAUA-AUUAGUCUUUUAAUAGGGGGCUGGUAUG-AAUGGUUU-GACGAGGUGCUAACUGUCUCAA-UUAAU----UUAUUAAAAUUUAAUU UUUUAGUCAAAAAGCU---
---AAAA-----UAAUCUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUACUAU---AAUU-AAUCUUA-UUU-UGUUU--UAUUUUUUUGGU-- UAUUUUUUU--UAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUAU----UUAACACUAA-UGCGUG----AAUUUUUA--GAUCCAUUU-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGCUCGAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUGGGUGU-AGC-CGCU-CA-UU UU-AUGGG-UC-UG-UUC-GACC-CU-UAAAU-
UCUU-ACAU--------------[-????]
Synlestes_tropicus_ZST -UGUCUUCUUGUUG----UUUAUAAGAAGUC--UGACCUGCCC-AGUGAAUAU--UUGUUUUAACGGC-CGCGGUAUU-
CUGACCGUGCAAAGG-UAGCAUAAUA-AUUAGUCUUUUAAUAGGGGGCUGGUAUG-AAUGGUUU-GACGAAGUGCUAACUGUCUCAU-UUAAU----UUAUUAAAAUUUAAUU UUUUAGUCAAAAAGCU---
---AAAA-----UACUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUAUUAU---GAUU-AAUUUUA-UUU-UGUUU--UAUUUUUUUAAU-- UAUUUUUUU--UAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUAU----UCAACACUAA-UACGUG----AGUUUUUA--GAUCCAUUU-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUGGGUGU-AGC-CGCU-CA-UU UU-AUGGG-UC-UG-UUC-GACC-CU-UGAAU-
UCUU-ACAU--------------[-????]
Chorismagrion_risi_CHO_ZCRi -UGUCUUCUUGAUU----UUUGUAAGAAGUC--UGACCUGCCC-AGUGAAUA-----GUUUUAACGGC-CGCGGUAUU-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGUAUG-AAUGGUUU-AACGAGGUGCUAACUGUCUCAU-UUAAUAUU-UUGUUGUAAUUUAAUU UUUUAGUCAAAAGGCU---
---AAGA-----UGAUCUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUACACU---GUUU-AUUCUUA-UUU-GGGUU--UAUUUUGGGGGG-- UAUUCUUUU--UAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAAGCUUAACUUUU-UUAUUUUU----AUUACAUUAA-UGUAUG--A-UUUUUUUA--GAUCCAUUU-AU-AGUGAUU- GUUAGAUCAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUUGG-UC-UG-UUC-GACC-UU-UAAUU-
UCUU-ACAU--------------[-????]
Episynlestes_cristatus_SYN_ZEC -UGUCUUCUUGAUU----UAUAUUGGAAGUC--UAGCCUGCCC-AGUGAUUAGA-GACAAUUAACGGC-CGCGGUAUC-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAUGGUUU-AACGAGGUGCUAACUGUCUCUU-UUAAUAUU-UUGUUAAAAUUUAAUU UUUUAGUUAAAAAGCU---
---GAAA-----UGGUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUAUACA--GAAUG-AUUAUGU-AUU-UGAUU--UAAGAUUUUUAU-- UAUUCUUUG--UAUUAUUUU-
GUUGGGGUGACA--AGAAUAUAUAAUUAACUUUU-UUAUUUAU----UUUACAUUAA-UUUAUG----UUUAAUUA--GAUCCAUUU-UU-AGUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCGAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-UUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAUU-
UCUU-ACAU--------------[-????]
Episynlestes_albicaudus_BEA -?????????????----?????????????--??????????-??????????-?????????????-CGCGGUAUC-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGCAUG-AAUGGUUU-AACGAGGUGCUAACUGUCUCUU-UUAAUAUU-UUGUUAAAAUUUAAUU UUUUAGUUAAAAAGCU---
---AAGA-----UGGUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUAUAAA--CUAUA-AUUAUAU-AUU-UGGUU--UAAAAUUCUUAU-- UAUUUUUUG--UAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUAU----CUUACAUUAA-UUUAUG----UUUAAUUA--GAUCCACUU-UU-AGUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAGUAUA-UUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAUU-
UCUU-ACAU--------------[-????]
Megalestes_micans_ZMMc -UGUCUUCUUGUUU----AUUAUAAGAAGUC--UGACCUGCCC-AGUGAAUAG----UUUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGUAUG-AAUGGUUU-GACGAGGUGCUGACUGUCUCAU-UUAAUAUU-UUAUUAAAAUUUAACU UUUUAGUCAAAAGGCU-
-----AAAA-----UUUUCUUGGUAGACGA--GAAGACCCUAUAGAGCUUUAUAAUGUACU---AAUU-AAUUUUA-UUU-GGCUU--UAUUAUUUUAAU--

UAAUAUUUUA-CAUUAUUCU-GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UAAUUUAU----AAAACAUUAA-UUUAUG----AUUUAUUA--GAUCCAUUU-CU-UAUGAUU-
GAUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-
AUAGG-UC-UG-UUC-GACC-UU-UAAUU-UCUU-ACAU--------------[-????]
Megalestes_kurahashii -?????????????---??????????????--??????????-?????????---????????????-?????????-
???????????????-??????????-?????????????????????????????-????????-????????????????????????-??????-????????????????
????????????????------????-----????????????????--??????????????????????????????--?????-???????-???-?????--????????????--
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?????????????????????????????????-???????????-????????????-?????????--????????????-??-????????????????????-?????????-???-????-??-??
?-??????-??-??-???-????-??-?????-????-????--------------[-????]
Orolestes_octomaculatus_ZOO -UGUCUUCUUGAUG----AAGAUGGGAAGUC--UGACCUGCCC-AGUGAAUAA------UUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAAAAGGCUGGCAUG-AAUGGUUU-GACGAGGUGCUAACUGUCUCAU-UUAAUUUU-UAUU-AGAAUUUAACU UUUUAGUUAAAAGGCU---
---AAAA-----UACUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUAUACU---GAAU-AACCAUA-UUU-AGUUU--AAUUUUUUUGUU-- UAUUUUGUU--UAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUAU----UUUACAUUAA-UGUAUG----AAUUAUUA--GAUCCAUUU-UU-AAUGAUU- GUUAGAUCAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUGGGUGC-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAUU-
UCUU-ACAU--------------[-????]
Austrolestes_annulosus_BAA -?????????????----?????????????--??????????-??????????---???????????-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGCAUG-AAUGGUUU-GACGAGGUGCUGACUGUCUCAU-UUAAUUUU-UUAUUAGAAUUUAACU UUUUAGUCAAAAGGCU---
---AAAA-----UAUAUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUACUUA---UAUU-AAUCAGA-UUU-AGUUU--AAUUUCUUUGGU-- UAUUAUUCU--UAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAACUAACUUUU-UUAUUUAU----AUUACAUUAA-UUUAUG----AAUUAUAG--GAUCCAUUA-UU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAUU-
UCUU-ACAU--------------[-????]
Sympecma_paedisca_BSP -?????????????----?????????????--??????????-??????????---???????????-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGCAUG-AAUGGUUU-GACGAGGUGCUGACUGUCUCAU-UUAAUUUU-UUAUUAGAACUUAACU UUUUAGUUAAAAGGCU---
---CAAA-----UGUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUAAAAU---AACU-GGUCAUA-UUU-AGUUU--AAUUUAUUUGGU-- CAUUUGUUU--UAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUAAACUUUU-UUAUUUAU----UUUACAUUAA-UUUAUG----AAUUAUAA--GAUCCAUUU-UU-AGUGAUU- GUUAGAUCAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGC-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAUU-
UCUU-ACAU--------------[-????]
ZSF_Sympecma_fusca -UGUCUUCUUGGUU----UUUAUAGGAAGUC--UGACCUGCCC-AGUGAAGUAA---UUUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGCAUG-AAUGGUUU-GACGAGGUGCUGACUGUCUCAU-UUAAUUUU-UUAUUAGAAUUUAACU UUUUAGUUAAAAGGCU---
---CAAA-----UGUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUAAAAU---GAUU-UGUCAUA-UUU-CGUUU--GAUUUCUUUGGC-- CAUUUGUUU--UAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUAU----UUUACAUUAA-UAUAUG----AAUUAUAG--GAUCCAUUU-UU-AAUGAUU- AUUAGAUCAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGC-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAUU-
UCUU-ACAU--------------[-????]
Austrolestes_analis_OAAn -UGUCUUCUUGCUA----UGCAUAAGAAGUC--UGACCUGCCC-AGUGA-GUAA-G-UUUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGCAUG-AAUGGUUU-GACGAGGUGCUGACUGUCUCAU-UUAAUUUU-UUAUUAGAAUUUAACU UUUUAGUCAAAAGGCU---
---AAAA-----UACAUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUACAUA---UGGU-ACUCAUA-UUU-AGCUU--AAUUUCUUUGAC-- UACUCUAUU--UAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUAU----UUUACAUUAA-UUUAUG----AAUUAUCG--GAUCCAUUC-UU-AGUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAUU-
UCUU-ACAU--------------[-????]
Indolestes_pergrinus_LES_OIP -UGUCUUCUUGUUA----UUUAUAGGAAGUC--UGACCUGCCC-AGUGA-GUAA---UUUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGCAUG-AAUGGUUU-GACGAGGUGCUGACUGUCUCAC-UUGAUUUU-UUAUUAUAAUUUAACU UUUUAGUCAAAAGGCU---
---AAAA-----UAUAUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUAUUUU---GAUU-AAUCAUA-UUU-AGUUU--AAUUUUUUUGGU-- UAUUUAUCU--UAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUAU----UUUACAUUAA-UUUAUG----AACAACCG--GAUCCAUUC-UU-AGUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGC-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAUU-
UCUU-ACAU--------------[-????]
Indolestes_cyaneus -?gucuucuugcua----aucauaggaaguc--uaaccugccc-aguga-auga---uuuuuaacggc-cgcgguauu-uugaccgug caaagg-
uagcauaauc-auuagucuuuuaauagaaggcuggcaug-aaugguuu-gacgaggugcugacugucucau-uuaauuuu--uauuagaacuuaacuuuuuaguuaaaaggcu-----
-aaaa-----uguuuuuggaagacga--gaagacccuauagagcuuuauaauauauu---aauu-agucaua-uuc-aguuu--aauuuuuuuggu--uauuuaagc--uauuauuuu- guuggggugaca--
aaaauauauauuuaacuuuu-uuauuuau----uuuacauuaa-uuuaug----aaucaucg--gauccauuc-uu-auugauu-auuagacuaaguuaccuuagggauaacag c-guaaucuucuu-
ucagaguucaaa-uuuacaaga--aggcuugcgacc-uc-gauguuggauuaagauuaua-auuaggugc-agc-cgcu-ua-auuu-auggg-uc-ug-uuc-gacc-uu- uaauu-ucuu----------
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Chalcolestes_viridis_LES_ZCV -UGUCUUCUUGUUG----AUUAUAAGAAGUC--UGACCUGCCC-AGUUA-AUAA---UCUCUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAAAAGGCUGGCAUG-AAUGGUUU-GACGAGGUGCUGACUGUCUCAU-UUAAUUUU--UAUUAGAAUUUAACU UUUGAGUUAAAAGGCU---
---AGAA-----UACUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUAGUUU---AAUU-AACCAUA-UUU-AGUUU--AAUUUUUUUGUU-- UAUUUAACU--UAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUAU----UUUACAUUAA-UGUAUG----AUUUAUCA--AAUCCAUUU-UU-AGUGAUU- ACUAAAACAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAAA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAAAUUAUA-GUUAGGUGC-AGC-AGCU-UA-AC UU-AUAGG-UC-UG-UUC-GACC-UU-UAAUU-
UCUU-ACAU---------------[-????]
Archilestes_grandis_OAG_BAG -UGUCUUCCUGUUA---UGUUAUAGGAAGUC--UGACCUGCCC-AGGAA-GUAG-A--UUUUAACGGC-CGCGGUA-U-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGCAUG-AAUGGUUU-GACGAGGUGCUGACUGUCUCAU-UUAAUUUU-AAAUUAUAAUUUAACU UUUUAGUUAAAAGGCU---
---GAAA-----UUCUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUGAUAGUAAUUU---GAUU-AAUUAGA-UUU-GGUUU--UAUCUCUUUUUU-- UAUUCUUUU--UAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAACUAACUUUU-UUAUUUAU----AUAACAUUGA-UAUAUG----AAUUAUAG--GAUCCAUUU-UU-AGUGAUU- AAUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-ACUAGGUGC-AGC-CGCU-UA-GU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAUU-
UCUU-ACAU---------------[-????]
Lestes_rectangularis_OLR -UGUCUUCUUGAUU----UUUAUAGGAAGUC--UGACCUGCCC-AGGAA-GUAG-A---UUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGCAUG-AAUGGUUU-GACGAGGUGCUGACUGUCUCAU-UUAAUUUU-UUAUUAGAAUUUAACU UUUUAGUUAAAAGGCU---
---AAAA-----UUCAUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUAUUUU--UAGUU-AAUCAUA-UUU-AGAUU--AAUUUCUUUGUU-- UAUCUAUUC--UAUUAUUCU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUAU----AUAACAUUAA-UUUAUG----AUUUAUAG--GAUCCAUUU-UU-AGUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGC-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAUU-
UCUU-ACAU---------------[-????]
Lestes_eurinus_LES_OLE -UGUCUUCUUGAUU----AACAUAGGAAGUC--UGACCUGCCC-AGGAA-GUAG-A---UUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGCAUG-AAUGGUUU-GACGAGGUGCUGACUGUCUCAU-UUAAUUUU-UUAUUAGAAUUUAACU UUUUAGUUAAAAGGCU---
---AAAA-----UUUUUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUAAUUU--UGAUU-AAUCAUA-UUU-AGCUU--AAUUUCUUUGCU-- UAUUCAUCU--UAUUAUUCU-
GUUGGGGUGACA--AAAACAUAUAAUUAACUUUU-UUAUUUAU----UUUACAUUAA-UUUAUG----AUUUAUCA--GAUCCAUUU-UU-AGUGAUU- UUUAGAACAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCGGAGUUCAAA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-GUUAGGUGU-AGC-CGCU-UA-AU GU-AUAGG-UC-UG-UUC-GACC-UU-UAAUU-
UCUU-ACAU---------------[-????]
Hemiphlebia_mirabilis_OHM -?????????????---??????????????--??????????-?????????---????????????-?????????-
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?-??????-??-??-???-????-??-?????-????-????---------------[-????]
Unaligned ---- ------4444444444444--------------------------5555555555-----------------------
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Epiophlebia_superstes_OES -UGUCUUCUUGU-----AUAUUUAGGAAGUC--UGACCUGCCC-AGUGAAAUUAA----UUUAACGGC-CGCGGUAUU-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAGGGUUU-GACGAGGUGUUGACUGUCUCAU-UUAAUUUG-AAUUUAGAAUUUAACU UUUUAGUCAAAAGGCU---
---GAAA-----UAGUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUACUUU---UAUU-AAUAAAU-UUU-GGUAAA--UGAUUAUUU-AU- UAUUAUAAUC-UAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUGAACUUUU-UUAUUUA-U---UUAACAUUGA-UUUAUG----AUUUAUUA--GAUCCAAUU-UU-AUUGAUU- AUUAGAACAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCUU-UCAGAGUUCAUA-UUUACAAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUGAUA-AUUAGGUGU-AGC-UGCU-UA-AU GGUAUAGG-UC-UGGUUCCGACC-UU-UAAAU-
CCUU-ACAU---------------[-????]
Epiophlebia_laidlawi -?????????????---??????????????--??????????-?????????---????????????-?????????-
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?-??????-??-??-???-????-??-?????-????-????---------------[-????]
Unaligned_Aeshnoidea ---- ---55555555-----------------------

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Archipetalia_auriculata_AAAu -????????????-????UUGAAGGGUUUGG--GCCCCUGCCC-AGUGAAAAUU---AUUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUGACUGUCUCAU-UUAAUUUG-UAUUUAGAAAUUAAUU UUUCAGUUAAAAAGCU---
---GAAA-----UAAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAGUUUAAU---UAUU-AAUUUAU-UUU-UGUUUA--UUAUUAUUU-AU-UAUUAAU- UU-AACUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUAC-A---UAAACAUUGA-UAUAUG----AUUUAUUA--GAUCCAGUU-UU-ACUGAUU- GAUAGAACAAGUUACCUUAGGGAUAACAGC-
GUAAUCUCCCU-CCAGAGUUCUUA-UUUACAGGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-AU AA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Austropetalia_victoria_AAV -UGUCUUCUUGUUA---AUAUUUAGGAAGUG--UAACCUGCCC--GNGAAAAUU---AUUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUGACUGUCUCAU-UUAAUUUG-UAUUUAGAAAUUAAUU UUUCAGUUAAAAAGCU---
---GAAA-----UAAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAGUUUAAU---UAUU-AAUUUAU-UUU-UGUUUA--UUAUUAUUU-AU-UAUUAAU- UU-AACUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUAC-G---UAAACAUUGA-UAUAUG----AUUUAUUA--GAUCCAGUC-UU-ACUGAUU- GAUAGAACAAGUUACCUUAGGGAUAACAGC-
GUAAUCUCCCU-CCAGAGUUCUUA-UUUACAGGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-GUUAGGUGU-AGC-CGCU-UA-AU AA-AUAGG-UC-UG-UUC-GGCC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Hypopetalia_pestilens_OHPe -UGUCUUCUUGUUA---AUAUUUAGGAAGUC--UAGCCUGCC--AGUGAAAAUU---AUUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUGACUGUCUCAU-UUAAUUUG-AAUUUAGAAAUUAAUU UUUCAGUUAAAAAGCU---
---GAAA-----UAAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAGUUGAGU---UAUU-AAUUUAU-UUU-UGUUUA--UUAUUAUUU-AU-UAUUA- UAUU-AACUAUUUU-
GUUGGGGUGACA--AAAAUAUACAAUUAACUUUU-UUAUUAU-U---UAAACAUUGA-UAUAUG----AUUUAUUA--GAUCCAAUC-UU-AUUGAUU- GAUAGAACAAGUUACCUUAGGGAUAACAGC-
GUAAUCUCCCU-CCAGAGUUCUUA-UUUACAGGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-AU AA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Rheopetalia_Phyllopetalia_apicalis -UGUCUUCUUGUUA---AUAUUUAGGAAGUC--UAACCUGCCC-GGUGAAAAUU---AUUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUGACUGUCUCAU-UUAAUUUG-AUUUUAGAAAUUAAUU UUUCAGUUAAAAAGCU---
---GAAA-----UAAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAGUUGAUU---UAUU-AAUUUAU-UUU-UGUUUA--UUAUUAUUU-AU-UAUUA- UAUU-AACUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUAA-A---UGAACAUUGA-UAUAUG----AUUUAUUA--GAUCCAAUC-UU-AUUGAUU- GAUAGAACAAGUUACCUUAGGGAUAACAGC-
GUAAUCUCCCU-CCAGAGUUCUUA-UUUACAGGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-AU AA-AUAG--UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
EU055033_130_Rheopetalia_apollo -NNNNNNNNNNNNN---NNNNNNNNNNNN----NNNNNNNNNN-NNNNNN-------N-NNNAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUGACUGUCUCAU-UUAAUUUG-AUUUUAGAAAUUAAUU UUUCAGUUAAAAAGCU---
---GAAA-----UAAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAGUUGAGU---UAUU-AAUUUAU-UUU-UGUUUG--UUCUUAUUU-AU-UAUUA- UAUU-AACUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUAA-A---UUAACAUUGA-UAUAUG----AUUUAUUA--GAUCCAAUC-UU-AUUGAUU- GAUAGAACAAGUUACCUUAGGGAUAACAGC-
GUAAUCUCCCU-CCAGAGUUCUUA-UUUACAGGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-AU AA-AUAGG-UC-UG-UUC-GAC-------------
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Eurypetalia_altarensis_OEA_AUS ---- ---------------------------------CCUGCCC-AGUGAAAAUU---AUUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUGACUGUCUCAU-UUAAUUUG-AUUUUAGAAAUUAAUU UUUCAGUUAAAAAGCU---
---GAAA-----UAAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAGUUAAUU---UAUU-AAUUUAU-UUU-UGUUUA--UUAUUAUUU-AU-UAUUA- UAUU-AACUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUAA-A---UAAACAUUGA-UAUAUG----AUUUAUUA--GAUCCAAUC-UU-AUUGAUU- GAUAGAACAAGUUACCUUAGGGAUAACAGC-
GUAAUCUCCCU-CCAGAGUUCUUA-UUUACAGGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-AU AA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Ophiopetalia_diana_OOD -UGUCUUCUUGUUA---AUAUUUAGGAAGUC--UAACCUGCCC-??????????---?-???????????????????-
????????????????-??????????-?????????????????????????????-????????-??????????????????????-????????-????????????????
????????????????------?????----????????????????--?????????????????????????????---????-???????-???-???????-?????????-??-?????-
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???????????????????????????????-???????????-????????????-?????????--????????????-??-????????????????????-?????????-???-????-??-??
??-?????-??-??-???-????-??-?????-????-???????????--------[-????]
Gomphaeschna_furcillata_OGF -UGUCUUCUUGUUA----UAUUUAAGAAGUC--UGGCCUGCCC-AGUGAAAAU-------UUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-AACGAGGUGUUGACUGUCUCAU-UUAAUUUG-GAUUUAGAAUUUAAUU UUUUAGUUAAAAAGCU---
---GAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAUAU---UAUU-AAUUAGG-AGU-UGUUUAA-UUAUUACUU-AU- UAUUAAUAUU-AAGUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-G---UUAACAUUGA-UUUAUG----AA-UAGUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUCCU-CCAGAGUUCAUA-UUUACAGGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUGAUA-AUUAGGUGU-AGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]

AF266043_Oligoaeshna_pryeri -UGUCUUCUUGU-A---AUGUUUAGGAAGUC--UGGCCUGCCC-AGUGAAAAU----AUUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-AACGAGGUGUUGACUGUCUCAU-UUAAUUUG-GAUUUAGAAUUUAAUU UUUUAGUUAAAAAGCU---
---AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAUAU---UAUU-AAUUGGG-GGU-UGAUUA--UUAUUACUU-AU- UAUUAAUAUU-AAAUAUUUU-
GUUGGGGUGACA--AGAAUAUAUAAUUAACUUUU-UUAUUUA-G---UUAACAUUGA-UUUAUG----AA-UAGUG--GAUCCAAUC-UU-AUUGAUU- GAUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUCCU-UCAGAGUUCAUA-UUUACAGGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUGAUA-AUUAGGUGU-AGC-CGCU-UA-AU UA-AUAAG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Austroaeschna_parvistigma_AAPs -UGUCUUCUUGUUA----UAUUUAGGAAGUC--UGGCCUGCCC-AGUGAAAA------AUAUAACGGC-CGCGGUAUA-
UUGACCGUGCAA-GG-CAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-AACGAGGUGUUAACUGUCUCAU-UUAAUUUG-UAUUUAGAAUUUAAUU UUUCAGUUAAAAAGCU---
---GAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUUAU---UAUU-AAUUUAU-UAU-AGUUUA--UUAUUAUUU-AU- UAUUAAUAUU-AAGUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAACAACUUUU-UUAUUAU-A---UUUACAUUAA-UAUAUG----AA-UAUUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCCUCU-CCAGAGUUCAUA-UUUACAGAG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGC-CGCU-UA-AN UA-AUAGG-UC-UG-UCC-GACC-UU-AAA??-
????-????--------------[-????]
Telephlebia_tillyardi_ATT -UGUCUUCUUGUUA----UAUUUAGGAAGUC--UGACCUGCCC-AGUGAAAAUUA---UUUUAACGGC-CGCGGUAUU-UUGACCGUG CAAAGG-
UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUGACUGUCUCAU-UUAAUUUG--UGUUAGAAUUUAAUUUUUCAGUUAAAAAGCU-----
-GAAA-----UAGUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUUAU---UAUU-AAUUUAU-UAU-AGAUUA--UUAUUAUUU-AU-UAUUAAUAAU-GAUUAUUUU- GUUGGGGUGACA--
AAAAUAUAUGAAUAACUUUU-UUAUUUU-A---UUUACAUUGA-UAUAUG----AA-UAUUA--GAUCCAAUU-UU-AUUGAUU-GUUAGAUUAAGUUACCUUAGGGAUAACAG C-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGC-AGC-CACU-UA-AUU-AAUAGG-UC-UG-UUC-GACC-UU- UAAAU-UCUU-ACAU-----
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Boyeria_vinosa_OBV -UGUCUUCUUGUUA----UAUUUAGGAAGUC--UGGCCUGCCC-AGUGAAUAUAA----UUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-AACGAGGUGUUAACUGUCUCAU-UUAAUUUG-UAUUUAGAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UAUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUUAU---UAUU-AAUUUAA-UAU-AGAUUA--UUAUUAUUU-AU-UAUUAAUU- A-AAAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAAUAACUUUU-UUAUUUU-A---UUUACAUUGA-UAUAUG----AU-UAUUA--GAUCCAAUU-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCCUCU-
CCAGAGUUCAUA-UUUACAGAG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-GU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAau-ucuu-
acaugaucugaguucagac
EU477640_Boyeria_irene -UGUCUUCUUGUUA----UAUUUAGGAAGUC--UGGCCUGCCC-AGUGAAAAAUA---AUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGC
UGGUAUG-AAGGGUUU-AACGAGGUGUUAACUGUCUCAU-UUAAUUUG-UAUUUAGAACUUAAUUUUUUAGUUAAAAAGCU------AAAA-----UAUUAUUGGAAGACGA--GAAGAC
CCUAUAGAGCUUUAUAUUUUUAU---UAUU-AAUUUAU-UAU-AGAUUA--UUAUUAUUU-AU-UAUUAAUAGA-AAGUAUUUU-GUUGGGGUGACA--AAAAUAUAUAAAUAACUUUU-UUAUUUU- A---
UUUACAUUGA-UAUAUG----AU-UAUUA--GAUCCAAUC-UU-AUUGAUU-GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCCCCU-CCAGAGUUCAUA-UUUACAGGG-- GGGCUUGCGACC-
UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGC-CGCU-UA-AUUA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU--------------[-????]
Brachytron_pratense_AES -UGUCUUCUUGUUA----UAUUUAGGAAGUC--UGGCCUGCCC-AGUGAAAAUAA----UUUAACGGC-CGCGGUAUC-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-AACGAGGUGUUGACUGUCUCAU-UUAAUUUG-CAUUUAGAAUUUAAUU UUUUAGUUAAAAAGCU---
---AAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUUAU---UAUU-AAUUUAU-UAU-AGAUUA--UUAUUAUUU-AU- UAUUAAUAG--AAGUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAAUAACUUUU-UUAUUUU-A---UUUACAUUGA-UAUAUG----AA-UAUUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCCUCU-CCAGAGUUCAUA-UUUACAGAG--GGGCUUGCGACCCUC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Epiaeschna_heros_OEH -UGUCUUCUUGUUA----UAUUUAGGAAGUC--UGGCCUGCCC-AGUGAAAAUAA----UUUAACGGC-CGCGGUAUC-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-AACGAGGUGUUGACUGUCUCAU-UUAAUUUG-UGUUUAGAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUUAU---UAUU-AAUUUAU-UAU-AGCUUA--UUAAUGUUU-AU-UAUUAAUA- A-AAGUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAAUAACUUUU-UUAUUUU-A---UUUACAUUGA-UAUAUG----AA-UAUUA--GAUCCAAUU-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCCUCU-
CCAGAGUUCAUA-UUUACAGAG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGC-CGCU-UA-AU UA-RUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU-----
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EU477639_Caliaeschna_microstigma -UGUCUUCUUGUUA----UAUUUAGGAAGUC--UGGCCUGCCC-AGUGAAAUUAA----UUUAACGGC-CGCGGUAUU-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-AACGAGGUGUUAACUGUCUCAU-UUAAUUCG-AAUUUAGAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUUAU---UAUU-AAUUUAU-UAU-AGAUUA--UUAUUAUUU-AU-UAUUAAUA- A-AAAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAAUAACUUUU-UUAUUUU-A---UUUACAUUGA-UAUAUG----AA-UAUUA--GAUCCAAUC-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAUAU-UCUU-ACAU-----
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EU477649_Anaciaeschna_isoceles -UGUCUUCUUGUUA----UAUUUAGGAAGUC--UGGCCUGCCC-AGUGAAAAUAA----UUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-AACGAGGUGUUGACUGUCUCAU-UUAAUUUG-AUAUUAGAAUUUAAUU UUUUAGUUAAAAAGCU-
-----AAAA-----UACUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUUAC---UAUU-AAUUUAU-UUU-AGGUAA--UUAUUAUUUUAU-

UAUUAGUAGA-AAAUAUUUU-GUUGGGGUGACA--AAAAUAUAUAAUAAACUUUU-UUAUUUU-A---UUUACAUUGA-UAUAUG----AG-UAUUA--GAUCCAAUC-UU-AUUGAUU-
GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCCUCU-CCAGAGUUCAUA-UUUACAGAG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGC-CGCU-UA-AU UA-
AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU---------------[-????]
GQ118252_82_Oplonaeschna_sp -?????????????---??????????????--??????????-?????????---????????????-?????????-
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?-??????-??-??-???-????-??-?????-????-????--------------[-????]
Aeschna_canadensis_OAC -UGUCUUCUUGUUA----UAWUUAGGAAGUC--UGGCCUGCCC-AGUGAAAAUAA----UUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-AACGAGGUGUUGACUGUCUCAU-UUAAUUUG-AAUUUAGAAUUUAAUU UUUUAGUUAAAAAGCU---
---AAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUUAC---UAUU-AAUUUAU-UAU-AGAUUA--UUAUUAUUU-AU- UAUUGGUAUA-AAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAAUAACUUUU-UUAUUUC-A---UUUACAUUGA-UAUAUG----AA-UAUUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCCUCU-CCAGAGUUCAUA-UUUACAGAG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
EU054953_5053_Aeshna_Rhionaeschna_multicolor -NNNNNNNNNNNNN----NNNNNNNNNNNN---NNNNNNNNNN-NNNNN-----N----NNNAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-AACGAGGUGUUGACUGUCUCAU-UUAAUUUG-AAUUUAGAAUUUAAUU UUUUAGUUAAAAAGCU---
---GAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUUGU---UAUU-AAUUUAU-UAU-AGAUUA--UUAUUAUUU-AU- UAUUAACAGG-AAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAAUAACUUUU-UUAUUUU-A---UUUACAUUGA-UAUAUG----AA-UAUUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCCUCU-CCAGAGUUCAUA-UUUACAGAG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUC-GAC-------------
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AF268609_Aeshna_cyanea --GU CUUCUUGUUA----UAUUUAGGAAGUC--UGGCCUGCCC-AGUGAAAAUA---U-UUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-AACGAGGUGUUGACUGUCUCAU-UUAAUUUG-AAUUUAGAAUUUAAUU UUUUAGUUAAAAAGCU---
---AAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUUAU---UAUU-AAUUUAU-UAU-AGUUUA--UUAUCAUUU-AU- UAUUAAUAGA-AAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAAUAACUUUU-UUAUUUU-A---ACUACAUUGA-UAUAUG----AA-UAUUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCCUCU-CCAGAGUUCAUA-UUUACAGAG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
EU477645_Aeshna_grandis -UGUCUUCUUGUUA----UAUUUAGGAAGUC--UGGCCUGCCC-AGUGAAAAUAA----UUUAACGGCCCGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-AACGAGGUGUUGACUGUCUCAU-UUAAUUUG-AAUUUAGAAUUUAAUU UUUUAGUUAAAAAGCU---
---AAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUUAC---UAUU-AAUUUAU-UAU-AGAUUA--UUAUUAUUU-AU- UAUUGGUAUA-AAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAAUAACUUUU-UUAUUUC-A---UUUACAUUGA-UAUAUG----AA-UAUUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCCUCU-CCAGAGUUCAUA-UUUACAGAG--G-GCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
EU477643_Gynacantha_japonica -UGUCUUCUUGUUA----UAUUUAGGAAGUC--UGGCCUGCCC-AGUGAAAAUAA----UUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUNNCCU---

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Austrogynacantha_heterogena_AAH -???????????----???????????????--??????????-??????????---?-???????????????????-
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??-?????-??-??-???-????-??-?????-????-????????????-------[-????]
EU477650_Hemianax_ephippiger -UGUCUUCUUGUUA----UAUGUAGGAAGUC--UGGCCUGCCC-AGUGAAAAUAA----UUUAACGGC-CGCGGUAUA-
CUGACCGUUCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-AACGAGGUGUUGACUGUCUCAU-UUAAUUUG-AAUUUAGAAUUUAAUU UUUUAGUUAAAAAGCU---
---AAAA-----UACUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUUAU---CAAU-AAUUUAU-UAU-AGUUUA--UUAUUAUUU-AU- UAUUGAUAUG-AAGUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAAUAACUUUU-UCAUUUA-U---UUUACAUUGA-UAUAUG----AA-UAUUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCCUCU-CCAGAGUUCAUA-UUUACAGAG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]

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Anax_junius_OAJ                                  -UGUNNNNNNNN----NNNNNNNNNNNNNNN--NNNNCUGNNN-AGUGAAAAUAA----UUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-AACGAGGUGUUGACUGUCUCAU-UUAAUUUG-GAUUUAGAAUUUAAUU UUUUAGUUAAAAAGCU---
---AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUUAU---UAUU-AAUUUAU-UUU-AGUUUA--UUAUUAUUU-AU- UAUUAAUAGG-AAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAAUAACUUUU-UCAUUUA-U---UUUACAUUGA-UAUAUG----AA-UAUUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCCUCU-CCAGAGUUCAUA-UUUACAGAG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
EU477652_Anax_imperator                          -UGUCUUCUUGCUA-----AUUUAGGAAGUC--UGGCCUGCCC-AGUGAAAAUAA----UUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-AACGAGGUGUUGACUGUCUCAU-UUAAUUUG-AAUUUAGAAUUUAAUU UUUUAGUUAAAAAGCU---
---AAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUUAU---UAUU-AAUUUAU-UUU-AGUUUA--UUAUUAUUU-AU- UAUUAAUAGA-AAGUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAAUAACUUUU-UCAUUUA-U---UUUACAUUGA-UAUAUG----AA-UAUUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAUUAAGUGACCUUAGGGAUAACAGC-
GUAAUCCCUCU-CCAGAGUUCAUA-UUUACAGAG--GGGCUUGCGACC-UC-GAAGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCCU-ACAU--------------[-????]
Unaligned_Gomphidae                              ---- ------4444444444444--------------------------5555555555-----------------------
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Sinogomphidia_kruegeri_ASK                       -UGUCUUCCUGU-----UUGAAUAGGAAGUC--AGACCUGCCC-GGUGAA????-???-UUUAACGGC-
CGCGGUAUUUUUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAUGGUUU-GACGAGGAGUUAACUGUCUCAU-UUAAUUUU-UUUUUAGAAUUUAACC
UUUCAGUUAAAAGGCU------GAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGUUUAAUAUUUAUUU---UUGU-AAAUAUA-AAU-AAAAUA-------UAGUUU-ACGUUAUC- U-
AAAUAUUUU-GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUCUU-U---UUAUCAUUGA-UAUAUG----UA-UAUUA--GAUCCAACC-UU-AUUGAUU-
GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUUUC-UUGGAGUUCUUA-UCUACGAAA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGC-AGU-AGCU-UA-AU GU-
AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU--------------[-????]
EU054969_5066_Ictinogomphus_australis            -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNNN-----NNN-NNNAACGGC-
CGCGGUAUUUUUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAGGGUUU-GACGAGGAGUUGACUGUCUCAU-UUGAUUUU-GUUGUAGAAUUUAACU
UUUCAGUUAAAAGGCU------GAAA-----UUUCAUUGGAAGACGA--GAAGACCCUAUAGAGUUUAAUAAUUAAUU---UUAU-AAUUAUG-UAU-AAUAUU-------UAAUAU-AUGGGAU-- U-
AAUUAUUUU-GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---UUGUCAUUGA-UAUAUG----UA-UUUAA--GAUCCAAUC-UU-AUUGAUU-
GUUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUUCU-UUGGAGUUCUUA-UUUAUAGAA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAACA-GUUAGGUGU-AGC-CGCU-UA-AU GU-
GUAGG-UC-UG-UUC-GAC-----------------------------------[-????]
Ictinogomphus_sp                                 ---- ------------------------------------------------------------------------------
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EU477674_Lindenia_tetraphylla                    -UGUCUUCUUGU----AUUGAAUAAGAAGUC--UGACCUGCCC-GGUGAAAUUAUU---UUUAACGGC-
CGCGGUAUUUUUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAGGGUUU-GACGAGGAGUUGACUGUCUCAU-UUAAUUUU-AUAAUAGAAUUUAACU
UUUCAGUUAAAAGGCU------GAAA-----UAUAGUUGGAAGACGA--GAAGACCCUAUAGAGUUUAAUAUUUAAAA---AUAU-AUUUAUA-UAU-AAGAUU-------UAAUUU-AUAUAUU-- U-
AAAUAUUUU-GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---UUAUCAUUGA-UUUAUG----UA-UAUUA--GAUCCAAUC-UU-AUUGAUU-
GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCCC-UUGGAGUUCUUA-UCUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGC-AGU-AGCU-UA-AU GU-
AUAGG-UC-UG-UUC-GACC-UU-UAAAU-CCUU-ACAU--------------[-????]
Phyllogomphoides_stigmatus_GOM                   -UGUCUUCUUGU----UAUAAAUAGGAAGuc--ugaccuGCCC-AGUGA--UUA-UUAUUUUAACGGC-
CGCGGUAUUUUUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAAGGUUU-GACGAAGUGUUAACUGUCUCAA-UUAAUUUA-AUAUUAAAAUUUAACU
UUUUAGUUAAAAGGCU------AAAA-----UUUGGUUGAAAGACGA--GAAGACCCUAUAGAGUUUAAUAUUUAUUUU--AUAU-AUUGUUAUUAU-AAUUUU---------CAUU--UUAUGG--
AAUAAAUAUUUU-GUUGGGGUGACA--AGAAUAUAAAAAUAACUUUU-UUAUUUA-U---AAGUCAUUGA-UUUAUG----UA-UAUUA--GAUCCAAUC-UU-AUUGAUU-
GUUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCCC-UUGGAGUUCUUA-UUUGCGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUCAGGUGC-AGC-AGCU-UG-AU AU-
AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU--------------[-????]
AF266080_Progomphus_obscurus                     -U-UCUUUGAGAU---AUAAAUAAAGAGGUU--UGACCUGCCCCAGUGGAAUU--AUU-UUUAACGGC-
CGCGGUAUUCUUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGUAUG-AAAGGUUU-GACGAAGUGUUAGCUGUCUCAU-UUAAUUUA-AUAUUAGAAUUUAAUU
UUUUAGUCAGAAAGCU------AAAAA----UUUUGUUGGUAGACGA--GAAGACCCUAUAGAGUUUUAUAAUUUAUU---UUAU-AUAUUUC-AUA-UAAUUU-------UUUAUA-UAAUCU---
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A-UAUUAUUUU-GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---CUAUCAUUGA-UUUAUG----UA-UACUA--GAUCCAGUC-UU-AUUGAUU-
GUUAGAACAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCCU-UGGGAGCUCUUA-UUUGCAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGCCAGUAAGCU-UAAAU
GUUAUAGG-UC-UG-UUCCAACC-UU-UAAAU-UCUU-ACAU---------------[-????]
EU054982_5078_Progomphus_borealis                    -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNNN-----NNN-NNNAACGGC-
CGCGGUAUUCUUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGUAUG-AAAGGUUU-GACGAAGAGUUGACUGUCUCAU-UUAAUUUU-UUAUUAAAAUUUAAUU
UUUUAGUUAGAAAGCU------AAAAA----UUUUGUUGGUAGACGA--GAAGACCCUAUAGAGUUUUAUAGUUUAUU---UCAU-AUAUGUC-AUA-UAAUUU-------UGUGUA-UGUUUU--- A-
UACUAUUUU-GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-A---UUAUCAUUGA-UUUAUG----UA-UAUUA--GAUCCAAUC-UU-AUUGAUU-
AUUAGUACAAAUUACCUUAGGGAUAACAGC-GUAAUCUUCCU-UAGGAGCUCUCA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGC-AGU-AGCU-UA-AU UU-
AUAGG-UC-UG-UUC-GAC-----------------------------------[-????]
EU477667_Hagenius_brevistylus                        -UGGCCUCUUGU----UAUGUAUAUGAGGUC--AGACCUGCCC-GGUGAAUGUG---U-UUUAACGGC-CGCGGUAUA-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAGGGUUU-AACGAGGUGUUGACUGUCUCAU-UUAAUUUA-AUAUUAAAAUUUAACU UUUCAGUCAAAAGGCU---
---GAAA-----UAUUAUUGGGGGACGA--GAAGACCCUAUAGAGCUUUAUAGCUUAUG---UUAU-AAUUAAU-UUU-GGAUAU---AUAAUUGUUAU- UUAUGGCUUU-GGCUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UGAUUUA-U---AUAACAUUGA-UUUAUG----UU-UAUUA--GAUCCAUUCAUU-AUUGAUU- GUUAAAACAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CUAGAGUUCAUA-UUCACGGGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AUC-CGCU-UA-AU GG-NUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Lanthus_vernalis_OLV                                 -UCUCCUCUUGU-----UUAUAUAUGAGGUC--UGACCUGCCC-GGUGAAAUGUUCAU-UUAAACGGC-
CGCGG?????????????????????-??????????-?????????????????????????????-????????-??????????????????????-????????-????????????????
????????????????------?????----????????????????--?????????????????????????????---????-???????-???-???????-????????????-
??????????-?????????-????????????--????????????????????-???????-?---??????????-??????----????????--????????????-??-????-
???????????????????????????????-???????????-????????????-?????????--????????????-??-????????????????????-?????????-???-????-??-??
??-?????-??-??-???-????-??-?????-????-?????????????------[-????]
EU477668_Davidius_nanus                              -NNNNNNNNNNN-----NNNNNNNNNNNNNN--NNNNNNNNNN-NNNNAAUUUU--AU-UUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGAAUG-AAGGGUUU-GACGAGGUGUUGACUGUCUCAU-UUAAUUUG-AAAUUAAAAUUUAACU UUUCAGUUAAAAGGCU---
---GAAA-----UUAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAGUUACAG---UUUU-AAUUAAU-UAU-UGUUU---AAUCAUUAUUUU- UUAUAAUUAU-ACCUAUUUU-
GUUGGGGUGACA--AAAAUAUAAAAGUAACUUUU-UUAUUUA-G---UGUUCAUUGA-UUUAUG----AA-CUUUA--GAUCCAAUU-UU-AUUGAUU- GUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UCAGAGUUCAUA-UUUACAGGA--AGGAUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UN-AUAGN-UC-UG---------------------
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EU477680_Neogomphus_edenticulatus                    -UGUCUUCUUGU-----UUAUAUGGGAAGUC--UGACCUGCCC-GGUGAAAUUA---U-UUUAACGGC-
CGCGGUAUUCUUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAGGGUUU-GACGAAGUAUUAUCUGUCUCAU-UUAAUUUA-AUAGUAGAAUUUAAUU
UUUCAGUUAAAAAGCU------GAAA-----UAAUGUUGGAAGACGA--GAAGACCCUAUAGAGUUUUAUAAUUUAAU---UA---UUAUUUU-AUU-UAAUU------AUUAAUAAU- UUAUUAAUUU-
AAUUAUUUU-GUUGGGGUGACA--AAAAUAUAUAUUUAACUUUU-UUAUUUA-U---UUAUCAUUGA-UUUAUG----UU-UAUUA--GAUCCAAUC-UU-AUUGAUU-
GAUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUUCU-UUGGAGUUCUUA-UUUACGGAA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGC-AGU-AGCU-UA-AU GU-
AUAGG-UC-UG-UUC-GACC-UU-UAAAUUUCUU-ACAU---------------[-????]
Armagomphus_armiger_AAAr                             -???????????----?????????GAGGUU--UGCCCUGCCC-AGUGAAA---AUUU-UUAAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AACGGCCU-GACGAGGUGUUGACUGUCUCAU-UUAAUUU---UAUUAGAAUUUAACU UUUUAGUGAGAAGGCU---
---AAAA-----UGUAAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUCAAA---U------GAAUU-AUA-AUUAU------UAUGAUUAU- AUUUUAGGUG-AAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---AUAGCAUUGA-UUUAUG----UU-UAUUA--GAUCCAAUC-CU-AUUGAUU- GAUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUUCU-UGGGAGUUCUUA-UCUACAGAA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGCGC-AGU-AGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Hemigomphus_comitans_AHC                             -???????????----???????????????--??????????-?????????-AUUA-AUUAAAAGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAGGGUUU-GACGAAGUGCUAACUGUCUCAU-UUAAUUUU-AUAUUAGAAUUUAACU UUUCAGUGAAAAGGCU---
---GAAA-----UAUGAUUGGAAGACGA--GAAGACCCUAUAGAGUUUUAUAACUUUAA---U-----UAUUAU-UUA-UUUAU------GAGUCAUUU-UUAAUUU- UUAGGUUAUUUU-
GUUGGGGUGACA--GGAAUAUAUAUUCAACUUUU-UUAUUUU-U---UUAUCAUUGA-UUUAUG----UU-UAUUG--GAUCCAAUC-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUUCU-UGAGAGCCCGUA-UCUACAGAA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUG-AUUAGGAGC-AGC-GUCU-UA-AU AC-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
EU477683_Hemigomphus_heteroclytus                    -UGUCUUCUUGC---UUUAUAAUAGGAAGUC--UGACCUGCCC-AGUGAUUAUUA----UUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGCAUG-AAGGGUUU-GACGAAGUGCUAACUGUCUCAU-UUAAUUUU-AUAUUAGAAUUUAACU UUUCAGUGAAAAGGCU---
---GAAA-----UGUAAUUGGAAGACGA--GAAGACCCUAUAGAGUUUUAUAGCUUUAA---U-----UUUUAU-UUA-UUUAU------UAAUCAUUU- UUAAUUUUUA-GGUUAUUUU-
GUUGGGGUGACA--AGAAUAUAUAUUUAACUUUU-CUAUUUA-U---UUAUCAUUGA-UUUAUG----UU-UAUUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUUCU-UGAGAGCUCAUA-UCUACAGAA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUG-GUUAGGAGC-AGC-GUCU-UA-AU AC-AUAGG-UC-UG-UUC-GACC-UU-U-------
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EU054939_5039_Hemigomphus_magela -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNNN-----NNN-NNNAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGCAUG-AAGGGUUU-GACGAAGUGCUAACUGUCUCAU-UUAAUUUU-AUAUUAGAAUUUAACU UUUCAGUGAAAAGGCU---
---GAAA-----UGUAAUUGGAAGACGA--GAAGACCCUAUAGAGUUUUAUAACUUUAA---U-----UUUUAU-UUA-UUUAU------UAGUCAUUU- UUAAUUUUUA-GGUUAUUUU-
GUUGGGGUGACA--AGAAUAUAAGUUCAACUUUU-CUAUUUA-U---UUAUCAUUGA-UUUAUG----UU-UGUUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUUCU-UGAGAGCUCAUA-UCUACAGAA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUG-GUUAGGAGC-AGC-GUCU-UA-AU AC-AUAGG-UC-UG-UUC-GAC------------
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AB707833_Trigomphus_interruptus --GUCCUCUUGU----UUUACAUAUGAGGUC--UGACCUGCCC-AGUGAGAAUUA---UUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGAAUG-AAGGGUUU-GACGAGGUAUUGACUGUCUCAU-UUAAUUUG-AAAUUAAAAUUUAACU UUUCAGUUAAAAGGCU----
--GAAA-----UUGUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAAAA---U--UAAUAAUAAAUUUUU-GUU---- UAUUAUUAUUUCUUAUUAUUUU-AAUUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAAUAACUUUU-UUAUUUA-A---AUAACAUUGA-UUUAUG----AU-UAUUA--GAUCCAGUC-UU-AUUG AUU-GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCCU-
UCAGAGUUCAUA-UUUACAGGA--AGGAUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-
UA-AUAU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-------------------[-]
EU477665_Stylogomphus_albistylus -UGGCCUCCUGU-----AUGUAUAGGAGGUC--UGACCUGCCC-AGUGAAUA---AAGGUUUAACGGC-CGCGGUAUC-
UUGACCGUGCAAAGG-UAGCAUAAUC-NUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-GACGAAGUUCUGACUGUCUCAU-UUAAUUUG-AGGUUAGAAUUUAACU UUUCAGUCAAAAGGCU---
---GAAA-----UAGUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAUGG---UU---UUAAUUAGGUUUUGUUUA-----UUAU- UAUUAUUUACGGUCAUAAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUCAACUUUU-UGAUUAA-A---UUUACAUUGA-UUUAUG----AA-UUUAA--GAUCCAAUC-UU-AUUGAUU- GCUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAUA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAAAAUA-AUUGGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
EU477679_Stylogomphus_shirizui -UGUCCUCUUGU-----UUGUAUAGGAGGUC--UGACCUGCCC-GGUGAAUA----GAUUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-GACGAGGUUCUAGCUGUCUCAU-UUAAUUUG-AGAUUAGAAUUUAACU UUUCAGUCAAAAGGCU---
---GAGA-----UGAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAGCUGUGG---ACUA-UAGUUAG-UUU-UUGU--U-UAUGAUUACUAA- UUAUAGUCCU-AGCUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUCAACUUUU-UUAUUAA-U---UUUACAUUGA-UGUAUG----AG-UUUAG--GAUCCAAUC-UU-AUUGAUU- ACUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UCAGAGUUCAUA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAAAAUA-AUUAGGUGU-AGC-CGCUGUA-AU GU-AUAGGAUCUUG-UUC-GACC-UU-
UUAAUUCCUU-ACNU---------------[-????]
EU054997_5093_Davidioides_martini -NNNNNNNNNNN-----NNNNNNNNNNNNNN--NNNNNNNNNN-NNNNNN-----NNNNNNNAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAGGGCUU-GACGAGGUGUUUACUGUCUCAU-UCAAUUUG-AAAUUAAAAUUUAACU UUUCAGUUAAAAGGCU---
---GAAA-----UUUUUUUGGAAGACGA--GAAGACCCUAUAGAGUUUUAUAAUUAAUA---UGUA-AAUGAGA-GUU-UGAU----UAUACUUUCUUG- UUAAUGUAUU-ACUUAUUUU-
GUUGGGGUGAUA--AAAAUAUAUAGUUAACUUUU-UUAUUUA-U---AGAACAUUGA-UUUAUG----AU-UUUUA--GAUCCAAUU-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UCGGAGUUCAUA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAACA-GUUAGGUGU-AGC-CGCU-UA-AU AU-GUAGG-UC-UG-UUC-GAC------------
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Burmagomphus_collaris_ABC -UGGCCUCUUGU-----UUGUAUAUGAGGUC--UGACCUGCCC-GGUGAAAA---UUAUUUUAACGGC-CGCGGUAUA-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUAACUGUCUCAU-UUAAUUUG-UGUUUAAAAUUUAACU UUUCAGUUAAAAGGCU---
---GAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAGUUGUAA---UUUU-AAUAAUA-UAU-UUUUUUGUCUCACUUAUUAA- UUAUUGUUUA-AACUAUUUU-
GUUGGGGUGACAAAAAAAUAUAUAUUAAACUUUU-UUCUUUU-A---UACCCAUUGA-UGGGUG----CG-UAUUA--GAUCCAAUC-AU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAUA-UUUCCGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-KKS-GRCC-UU-UAAAU-
UCUU-????---------------[-????]
EU054996_5092_Cyclogomphus_heterostylus -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNNN-----NNNNNNNAACGGC-CGCAGUAUU-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGAAUG-AAGGGUUU-GACGAGGUGUUAACUGUCUCAU-UUAAUUUG-UUUUUAAAAUUUAACU UUUCAGUUAAAAGGCU---
---GAAA-----UAAUAUUGGAAGACGA--GAAGACCCUAUAGAGUUUUAUAAUUUAAA---UUUU-AAUUAUU-UUU-UGAUUAU----AAUGAAUAA- UUAAGGUUUA-AAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUCAACUUUU-UUAUUUC-U---UUAACACUGA-UUAGUG----AU-UACUA--GAUCCAGUC-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AC GU-AUAGG-UC-UG-UUC-GAC------------
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Anisogomphus_pinratanai ---- ---

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Dromogomphus_spinosus_GOM -UGGCCUCUUGU-----UUAUAUAUGAGGUC--UGACCUGCCC-GGUGAAAA-U--UAUUUUAACGGC-CGCAGUAUU-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUGACUGUCUCAU-UUAAUUUG-UAUUUAGAAUUUAACU UUUCAGUCAAAAGGCU-
-----GAAA-----UUAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUGAUG---CAUU-AAUUAUU-UUU-UGUU---AUAUCAUUUAUUA-

UUAUUGUUUU-AAUUAUUUU-GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUAAA---UUAACAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU-
GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCCU-CCAGAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU AU-
AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU--------------[-????]
Arigomphus_villosipes_OAV -UGUCCUCUUGG-----UGGAAUAUGAGGUC--UGACCUGCCC-GGUGAAA???-????UUUAACGGC-CGCAGUAUU-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUGGCUGUCUCAU-UUAAUUUG-UAUUUAGAAUUUAACU UUUCAGUCAAAAGGCU---
---GAAA-----UUAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUGAUA---UUCU-AAUAAGG-UUU-UGUU---AUAUGAACUAUUA- UUAUUCUAUU-AAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-A---UUAACAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU GC-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Arigomphus_cornutus -UGUCCUCUUGG-----UUGAAUAUGAGGUC--UGACCUGCCC-GGUGAAAAA---UAUUUUAACGGC-CGCAGUAUU-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUGGCUGUCUCAU-UUAAUUUG-UAUUUAGAAUUUAACU UUUCAGUCAAAAGGCU---
---GAAA-----UUAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUAAUA---UUUU-AAUAAGG-UUU-UGUU---AUAUAAAUUAUUA- UUAUUCUAUU-AAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-A---UUAACAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Stylurus_intricatus_GOM -UGUCCUCUUGU-----UUAUAUAUGAGGUC--UGACCUGCCC-GGUGAAAU----UAUUUUAACGGC-CGCAGUAUU-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGAAUG-AAGGGUUU-GACGAGGUGUUAACUGUCUCAU-UAAAUUUG-UUAUUAAAAUUUAACU UUUCAGUCAAAAGGCU---
---GAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAGCUGAAA---GUUU-AAUUAUU-AUU-UGUU---UAUUAUUUU-UUA- UUAUUCUUUU-AGUUAUUUU-
GUUGGGGUGACA--AAAAUAUAAAAUUAACUUUU-UUAUUUA-A---UUAACAUUGA-UUAAUG----AA-UAUUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UCAGAGUUCAUA-UUUACGGGA--AGGAUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU AU-AUAAG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Stylurus_amnicola -UGUCCUCUUGU-----UUAUAUAUGAGGUU--UGACCUGCCC-GGUGAAA--U--UAUUUUAACGGC-CGCAGUAUU-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGAAUG-AAGGGUUU-GACGAGGUGUUAACUGUCUCAU-UAAAUUUA-UUAUUAAAAUUUAACU UUUCAGUCAAAAGGCU---
---GAAA-----UUAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUUAAA---GUUU-AAUUAUU-AUU-UGUU---UAUUAUUUU-UUA- UUAUUCUUUU-AAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAAAAUUAACUUUU-UUAUUUA-A---UCAACAUUGA-UUAAUG----AA-UAUUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UCAGAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU AU-AUAAG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
EU477659_Stylurus_nagoyanus -UGGCCUCUUGU-----UUAUAUAUGAGGUC--UGACCUGCCC-GGUGAAAUU----AUUUUAACGGC-CGCAGUAUU-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGAAUG-AAGGGUUU-GACGAGGUGUUAACUGUCUCAU-UAAAUUUG-UUAUUAAAAUUURACU UUUCAGUUAAAAGGCU---
---GAAA-----UUWUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUGAAG---RUUU-AAUUAUU-AUU-UGUU---UAUUAUUUU-UUA- UUAUUUCUUU-AAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-A---UYAACAUUGA-UUAAUG----AA-UAUUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UCAGAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-RUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UACK-A-----------------[-????]
Gomphurus_Gomphus_externus -UGUCCUCUUGU-----UUAUAUAUGAGGUC--UGACCUGCCC-GGUGAAAGU---UAUUUUAACGGC-CGCAGUAUU-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUAACUGUCUCAU-UUAAUUUG-UAUUUAGAAUUUAACU UUUCAGUUAAAAGGCU---
---GAAA-----UUGUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUAGUA---UUUU-AAUUGUU-UUU-UGUA---AUAUAAAUUAUGA- UUAUAAUUUU-AAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAUUUAACUUUU-UUAUUUA-A---UUGACAUUGA-UUUAUG----AA-UGUUA--GAUCCAGUC-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUAAGUUAGGUGU-AGC-CGCU-UA-AU GU-AUAAG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
EU477664_Asiagomphus_melaenops -NNNNNNNNNNN-----NNNNNNNNNNNNNN--NNNNNNNNNN-NNNNAAAAUU--UGUUUUAACGGC-CGCAGUAUU-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUUACUGUCUCAU-UUAAUUUG-UAUUUAGAAUUUAACU UUUCAGUUAAAAGGCU---
---GAAA-----UUGUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUGAAA---UUUU-AAUUAUU-UUU-UGUU---UAUUAUUU-UUUA- UUAUUAUUUU-AAUUAUUUU-
GUUGGGGUGACA--AGAAUAUAUAAUUAACUUUU-UUAUUUA-A---UUAACAUUGA-UUUAUG----AU-UAUUA--GAUCCAUUA-UU-AAUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UCAGAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-GU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-U-
----------------------[-????]
Gomphus_Phanogomphus_exilis -UGUCCUCUUGC-----UUAUAUAUGAGGUC--UGACCUGCCC-GGUGAAAAU---UAUUUUAACGGC-CGCAGUAUU-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUAGCUGUCUCAU-UUAAUUUG-UAGUUAGAAU
UUAACUUUUCAGUUAAAAGGCU------GAAA-----UAUUAUUGGAAGACGA--UAAGACCCUAUAGAGCUUUAUAAUUAAUG---UUUU-AAUUGUU-UUU-UGUU---UAUUAUUU-ACUA-
UUAUUACUUU-AAUUAUUUU-GUUGGGGUGACA--AAAAUAUAUAGUUAACUUUU-UUAUUUAUA---UUAACAUUGA-UUAAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU-
GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCCU-UCAGAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU GU-
AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU--------------[-????]

Gomphus_Gomphus_graslini -UGUCCUCUUGU-----UUGUAUAUGAGGUC--UGACCUGCCC-AGUGAAAUUU--UAUUUUAACGGC-CGCAGUAUU-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUAACUGUCUCAU-UUAAUUUG-UAUUUAAAAUUUAACU UUUCAGUUAAAAGGCU---
---GAAA-----UUAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUAUGA---UUUU-AAUUAUU-UUU-UGUU---UAUCAUUU-UUUA- UUAUUAUUUU-AAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAAUAACUUUU-UUAUUUA-A---GUAACAUUGA-UUUAUG----AA-UACUA--GAUCCAUUA-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAAAAUA-AUUAGGUGU-AGC-CGCU-UA-AU GU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Gomphus_Hylogomphus_adelphus_OGA -UGUCCUCUUGU-----UUGUAUAUGAGGUC--UGACCUGCCC-GGUGAAA???--UUUUUUAACGGC-CGCAGUAUA-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUAACUGUCUCAU-UUGAUUUG-UAUUUAGAAUUUAACU UUUCAGUUAAAAGGCU---
---GAAA-----UUGUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUAAUG---UUUU-AAUUAUU-UUU-UGUA---UAUUAUUU-UUUA- UUAUUACUUU-AAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUAUA-G---UUAACAUUGA-UAUAUG----AA-UAUUA--GAUCCAUUA-AU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU GU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Gomphus_Gomphus_vulgatissimus -UGUCCUCUUGU-----UUUUAUAUGAGGUC--UGACCUGCCC-AGUGAAAUU---AAAUUUAACGGC-CGCAGUAUU-
UGGACUGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUGACUGUCUCAU-UUAAUUUG-UAUUUAAAAUUUAACU UUUCAGUUAAAAGGCU---
---GAAA-----UUAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUAUGA---UUUU-AAUUAUU-UUU-UGGU---UAUUAUUU-UUUA- UUAUGAUUUU-AAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAAUAACUUUU-UUAUUUA-A---GUAACAUUGA-UUUAUG----AC-CAUUA--GAUCCAUUA-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAAAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAAAAUA-AUUAAGUUU-UAC-CGCC-UA-AU GU-UUAAG-UU-CG-UUC-CAAC-UU-UAAAU-
UCCU-ACCU---------------[-????]
Megalogomphus_sp ---- ---

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Onychogomphus_Onychogomphus_uncatus -UGUCUUCUUGCU-----UAUAUAUGAAGUC--UGACCUGCCC-AGUGAUA--A--AUUUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGUAUG-AAGGGUUU-GACGAAUUGUUAGCUGUCUCAU-UCAAUUUG-UAAUUAAAAUUUAACU UUUCAGUUAAAAUGCU---
---GAAA-----UUAAUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAAUAUAA---UUUUUAUUUAAA-UUUUUGUA---UAAUUAAAUUUAU- UUAUUGUUUU-AUUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---AUAACAUUGA-UUUAUG----AA-UUUUA--GAUCCAGUU-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UCAGAGUUCAUA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGAAUUAAGAUAAUA-AUUAGGUGU-AGU-CGCU-UA-AU GU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Onychogomphus_Onychogomphus_forcipatus -U-UCUUUUUGU-----UAAUAUAUGAGUUC--UGACCUGCCC-AGUGAAA-----AUUUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGUAUG-AAGGGUUU-GACGAAUUGUUAACUGUCUCAU-UCAAUUUG-UAAUUAAAAUUUAACU UUUCAGUUAAAAUGCU---
---GAAA-----UUUAUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUCCUGA---UUCU-AUUUAAA-UUUUUGUU---UAAUCAAAUUUAU- UUAUUAUUUG-GUUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---AUAACAUUGA-UUUAUG----AG-UAAUA--GAUCCAAUC-AU-AUUGAUU- GCUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUCCCU-UCAGAGUUCACA-UUUACGGGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-UAC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-CAAC-UU-UAAAU-
UCCU-ACAU---------------[-????]
EU477672_Onychogomphus_sp -N----UCUUGC-----UUAUAUAUGAGGUC--UGACCUGCCC-AGUGAAAA----AUUUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGUAUG-AAGGGUUU-GACGAAUUGUUAACUGUCUCAU-UCAAUUUG-UAAUUAAAAUUUAACU UUUCAGUUAAAAUGCU---
---GAAA-----UUUAUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUCCUGA---UUCU-AUUUAAA-UUUUUGUU---UAAUCAAAUUUAU- UUAUUAUUUG-GUUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---AUAACAUUGA-UUUAUG----AA-UAAUA--GAUCCAAUC-AU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUCCCU-UCAGAGUUCACA-UUUACGGGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-A-------------
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Ophiogomphus_Ophionurus_carolus_OOC -NNNNNNNNNNN-----------------------------cc-agugaaaaa---aguuuuaaCGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAGGGUUU-GACGAGUUGUUAGCUGUCUCAU-UCAAUUUG-AAAUUAAAAUUUAACU UUUCAGUUAAAAGGCU---
---GAAA-----UUAAUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAACAAAU--AUUUUUAUUUAAG-UUUUUGAU---UAUUAUACUU-AU- UUAUUGUUUU-GUUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---AUAACAUUGA-UUUAUG----AA-UUUUA--GAUCCAGUC-AU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUCCCU-UCAGAGUUCACA-UUUACAGGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU GU-AUAGG-UC-UG-Uuc-gacc-uu-uaaau-
ucuu-acaugaucugguucccgga
Ophiogomphus_severus_GOM -UGUCCUCUUGU-----UUAUAUAUGAGGUC--UGACCUGCCC-AGUGAAA-----AGUUUCAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAGGGUUU-GACGAAUUGUUAACUGUCUCAU-UCAAUUUG-AAAUUAAAAUUUAACU UUUCAGUUAAAAGGCU-
-----GAAA-----UUAAUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAACAAUA---UUUUUAUUUAA--AUUUUUGA--UUUAUUAUAUUUAU-

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UUAUUAUUUU-GUUUAUUUU-GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---AUAACAUUGA-UUUAUG----AA-UAUUA--GAUCCAGUC-AU-AUUGAUU-
GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCUCCCU-UCAGAGUUCACA-UUUACAGGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU AU-
AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU---------------[-????]
Ophiogomphus_caecilia                            ---- ------------------------------------------------------------------------------
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Leptogomphus_elegans_GOM_OLEg                    -UGUCUUCUUGU----UUUUAUAUGAAGUU--UGACCUGCCC-GGUGAUUU-----AUUUAAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGACUGGAAUG-AAGGGUUU-GACGAACUGUUAGCUGUCUCAU-UAAUUUUA-AAAUUAAAAUUUAAUU UUUCAGUCAGAAAGCU---
---GAAA-----UUUGGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUUGUGG---UACAUACAAAGGUGAUAUUAUGA----CUGAGUUU--GUAAUU-- AUUAAUUAUUUU-
AUUGGGGUGAUA--GGAAAAUAUAUUGAACUUUU-UUAUUUA-U---AAAACAUUGA-UUUAUG----AAUUAUUA--GAUCCAAUC-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUUAUCUUCUC-UUGGAGUUCUUA-UUUACGAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUGGGUGC-AGU-AGCC-UG-AU GU-AUAAG-UC-UG-UUC-GACU-UU-UAAAU-
UCUU-ACAU---------------[-????]
EU477681_Leptogomphus_sauteri                    -UGUCUUCUUGU----UUUUAUAUGAAGUC--UUGCCUGCCC-GGUGAUUA-------UUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGACUGGAAUG-AAGGGUUU-GACGAACUGUUAGCUGUCUCAU-UUAUUUUU-AAAUUAAAAUUUAAUU UUUCAGUCAGAAAGCU---
---GAAA-----UUUAGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUUGUG---AUGU-AUAUGAA-GGU-GAU---GUUAUGACUAAAUU- UAUAAUCAUU-GAUUAUUUU-
AUUGGGGUGAUG--AGAAAAUAUAAUAAACUUUU-CUAUUUG-U---AAAACAUUGA-UUUAUG----AUUUAUUA--GAUCCAGUC-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUUAUCUUCUC-UUGGAGUUCUUA-UUUACGAGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGC-AGC-AGCC-UA-AU GU-AUAAG-UC-UG-UUC-GACU-UUUUAAAU-
UCUU-ACAU---------------[-????]
Epigomphus_compactus_AEC                         -UGUCCUCUUGA------UGUAUAUGAGGUC--UGGCCUGCCC-AGUGAAU--A-UAUUUUAAACGGC-CGCGGUAUA-
UUAACCGUGCAAAGG-UAGCAUAAUC-AUUAGUUCUUUAAUAGGGGGCUGGUAUG-AAGGGUUU-GACGAAAUGUUGACUGUCUCAU-UUAAUUUG-UAAUUAAAAUUUAAUU UUUCAGUUAAAAAGCU---
---GAAA-----UUUAAUUAGAAGACGA--GAAGACCCUAUAGAGCUUGAUAGUUUUAAU--UAUG-AUUAGUU--AU-UGU-AAAUA-AUUGCUGUU--UAUAUU-- UAAAAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-A---UUAACAUUAA-UUUAUG----AA-UAAAA--GAUCCAAUC-UU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUUUUCCU-UCAGAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAAAAUA-GUUAGGUGU-AGC-AGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
EU477678_Microgomphus_chelifer                   -UGUCCUCUUGG-UAUAAUGUAUAUGAGGUC--UGACCUGCCC-GGUGAAGAAU-A--UUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGUAUG-AAGGGUUU-AACGAGCUAUUGGCUGUCUCAU-UUAAUUUG-GUAUUAAAAUUUAACC UUUCAGUUAAAAGGCU---
---GAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUUGUUAGGA---UUUC-AAUAUUA-UUU-UGU---UUAUUAUUA-UUUU- UUGGAGUUUA-AACAAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUU-A---UUAACAUUGA-UUUAUG----AU-UUUUA--GAUCCAUUC-UU-AUUGAUU- GUUAGAUCAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCC-UUGGAGUUCUUA-UUUACGGGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUA-GA-------------
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EU477666_Heliogomphus_retroflexus                -UGUCCUCUUGA----UUUGUGUAUGAGGUC--UGACCUGCCC-GGUGAAUUGU----UUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAGGGUUU-GACGAGCUGUUGGCUGUCUCAU-UUAAUUUG-AUGUUAAAAUUUAACU UUUCAGUCAAAAGGCU---
---GAAC-----UUAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUGAAA---UCUC-GAUUAAU-CUU-UGU---UUAUUAAUA-UUUU- UUGGGGUUUA-AAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUCAACUUUU-UUAUUUA-G---GUAACAUUGA-UUUAUG----GU-UUAUA--GAUCCAAUC-UU-AUUGAUU- GUUAGUUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCC-UAGGAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Macrogomphus_parallelogramma                     ---- ------------------------------------------------------------------------------
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Ceratogomphus_pictus_OCH                         ???- ???????????????????????????--???CCUGCCC-AGUGAAAAA----UUUUUAACGGC-CGCGGUAUU-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAGGGUUU-GACGAGCUGUUAGCUGUCUCAU-UUAAUUUG-AUAUUAAAAUUUAACU UUUCAGUUAAAAGGCU---
---GAAA-----UUAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUAUUU---UUAU-AAUUGAU-UGU-UGA---UUAUUAUUU-UCUU- UUAUAUUAUU-AAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUGAAUAACUUUU-UUAUUUU-C---AUAACAUUGA-UUUAUG----AU-UAUUA--GAUCCAAUC-UU-AUUGAUU- GAUAGAACAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU AA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
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Lestinogomphus_angustus_GOM_ALA -UGUCCUuuuga-----uuuuauaauagguc--agaCCUGCCC-AGUGAA-----UAAUUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUC-GACGAACUAAUAACUGUCUCAU-UUGAUUUG-AUAUUAAAAUUUAACU UUUCAGUUAAAAGGCU---
---GAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUUUAU--UUUUUUACUUUUUUGU-UUAUU-----AUAUUGUAU-- GAUAAUAAAA--UUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAAUAACUUUU-UUAUUUA-G---AUAACAUUGA-UUUAUG----AUUUAUUA--GAUCCAAUU-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUUUUCCU-UUGGAGUUCUUA-UUUACAGGA--AAGAUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUGGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Austrogomphus_guerini_AAG ???- ???????????????????????????--???CCUGCCC---UGAAAA----UUUUUAAACGGC-CGCGGUAUU-
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---GAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAAUUGAAUU---GAU-UAAUUAA-UUUUUGC-UUAUUACUGUU--UUU-- CAUAAAUUU-AAUUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAAUAACUUUU-UUAUUUU-U---AUAACACUGA-UUUAAG----AC-UUCUA--GAUCCAAUC-AU-AUUGAUU- GAUAGCUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUUCU-CUAGAGUUCACA-UUCACAGAA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
EU054978_5074_Austrogomphus_amphiclitus NNN- NNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNNN-----NNNNNNNAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGUAUG-AAGGGUUU-GACGAGCUGUUGACUGUCUCAU-UUAAUUUG-AAUUUAAAAUUUAACU UUUCAGUUAAAAGGCU---
---GAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAAUUAAAU---UAAU-UAAUUAA-UUU-UUG-UUAAUUGUGAU--UUU- UUAUAAAUUU-AAUUAUUUU-
GUUGGGGUGACA--GAAAUAUAUAAUUAACUUUU-UUAUUUA-U---AUAACAUUGA-UAAAUG----AU-UUUUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUUCU-UUAGAGUUCACA-UUCACAGAA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAAAAUA-AUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GAC-------------
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EU054972_5068_Antipodogomphus_acolythus NNN-NNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNNN-----NNNNNNNAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGUAUG-AAGGGUUU-AACGAGCUGUUAGCUGUCUCAU-UUAAUUUG-AGCUUAAAAUUUAACU UUUCAGUCAAAAGGCU---
---GAAA-----UAUUAUUAGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAACU---UUUU-GAAUAAU-UGU-UGU-UUAAUUAUUAU--UAU- UUAUGAAUUU-AAGUAUUUU-
AUUGGGGUGAUA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---AUAACAUUGA-UUUAUG----AU-UUUUA--GAUCCAAUC-UU-AUUGAUU- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAUA-UUUACAGGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU GU-AUAGG-UC-UG-UUC-GAC-------------
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Unaligned_Petaluridae ---- ------4444444444444-------------------------5555555555-----------------------
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Tanypteryx_hageni_OTH -UGUCUUCUUGA--AUGGAAUAUAAGAAGUC--UGAccugccc-ag-gaaaa----aua-uuAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAAGGUUU-GACGAGGUGCUGACUGUCUCAU-UUAAUUUG-AAAUUAAAAUUUAACU UUUCAGUCAAAAGGCU---
---GAAA-----UAAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAUCU---UAUU-AAUAAUU-UUU-UGU--UUAUUAUUUU-UCAU-UAUUA- UUAU-AAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAAAAUUAACUUUU-UUAUCUA-U---UAAACAUUAA-UUUAUG----AU-UAUUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAUA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GAC-------------
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Tanypteryx_sp ---- ---

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Tanypteryx_pryeri_PET -UGUCUUCUUGA--CUGGAUAAUAAGAAGUC--UGACCUGCCC-AGUGAAAAA---UUAUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAAGGUUU-GACGAGGUGCUGACUGUCUCAU-UUAAUUUG-AAAUUAAAAUUUAACU UUUCAGUCAAAAGGCU---
---GAAA-----UAAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAAUU--UUAUU-AAUAAUU-UUU-UGA--AUAUUAAUUU-UUAU-UAUUA- AUUU-AGGUAUUUU-
GUUGGGGUGACA--AAAAUAUAAAAUUAACUUUU-UUAUCUA-U---UAAACAUUAA-UUUAUG----GU-UAUUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAUA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU--------------
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AF266081_Tachopteryx_thoreyi -UGUCUUCUUGA--UUUAAUUAUAGGAAGUC--UGACCUGCCC-AGUGGAAAA--AUUAUUCAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-GACGAGGUGCUGACUGUCUCAU-UUAAUUUG-AAAUUAAAAUUUAACU UUUCAGUCAAAAGGCU-
-----GAAA-----UAUAUUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUAUAUU---UAUU-AAUAGUU-UUU-UGUUAGUAUUAUUUU-CUAU-UAUUA-

AAUC-AAGUAUUUU-GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---UUUACAUUGA-UUUAUG----AU-UAUUA--GAUCCAAUC-UU-AUUGAUU-
GAUAGAACAAGUUACCUUAGGGAUAACAGC-GUAAUUUUUCU-UCAGAGUUCAUA-UUUACAGAG--AAGUUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGUGAGCCCGCU-UA-AU AU-
AUAGG-UC-UG-UUC-GACC-UU-UAAAA-UCUU-ACAU--------------[-????]
Phenes_raptor_PET -UGUCUUCUUGG-UUGAAUUUAUAAGAAGUC--UGGCCUGCCC-AGUGAUAA----UUAUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUGACUGUCUCAU-UUAAUUUG-AAUUUAGAAUUUACCU UUUUAGUCAAAGGCU---
---AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAUUU---UAUU-AAUUAUU-UUUUUGU--UUAUAUUUAU-UUAU-UAUUA- AAUA-AAAUAUUGU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-A---AUUACAUUAA-UAUAUG----UA-UAAUA--GAUCCAAUU-UU-AUUGAUU- GUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAUA-UUUACAGGA--AGGCUUGCGACC-CC-GAUGUUGGAUUAAGAUGAUA-AUUAGGUGU-AGC-CGCU-UA-AU GU-AUAAG--C-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Phenes_centralis_OPR -???????????????????????????????--??????????-??????????--?????????????
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??-?????-??-??-???-????-??-?????-????-?????????????------[-????]
EU477633_Uropetala_carovei -UGUCUUCUUGA---UUAUAAUAAGAAAGUC--UGACCUGCCC-AGUGAAAA----UUAUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-GACGAGGUGUUGACUGUCUCAU-UUGAUUUG-GAUUUAGAAUUUACCU UUUUAGUUAAAAGGCU---
---AAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAUUU---UAUU-AAUUAAU-UCU-UGU--UUAUUAUUAU-UUAU-UAUUA- AAUA-AAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAGUAACUUUU-UUAUUUA-A---AUUACAUUGA-UUUAUG----AU-UAGUA--GAUCCAAUU-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUUCU-CCAGAGUUCAUA-UUUACAGGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-WUC-GACC-AU-UAAA--
UCUU-ACAU--------------[-????]
Petalura_hesperia_PET_APH -???????????????????????????????--??????????-??????????-???AUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAGGG-UAGCCUAACC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAGGGUUU-GACGAGGUUUUGACUGUCUCAU-UUAAUUUG-AAUUUAAAACUUAACU UUCCAGUCAAAGGCU---
---GAAA-----UUUAGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAUUU---UAAU-AAUAUGU-UUU-UGU--UUAGUCAUAU-UUAU- UAUUAAUUGU-AAGUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAWWWW-W---AACACAUUAA-UAUAUG----AU-UAGUA--GAUCCAAUC-UU-AUUGAUU- AUUAGAACAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUGAUA-AUUAGGUGU-AGC-CGCU-UA-AC GU-AUAGG-UC-UG-UCC-GACC--U-CAAAU-
UCU?-????--------------[-????]
EU054963_5061_Petalura_gigantea -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNNN---------NNNAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAUGGUUU-GACGAGGUGUUGACUGUCUCAU-UUAAUUUG-AAUUUAAAAUUUAACU UUUCAGUUAAAAGGCU---
---GAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAUUU---UAUU-AAUUUAU-UUU-UGU--UUAUUAUUAU-UUAU-UAUUA- UUGU-AAGUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUAUG-G---AAAACAUUGA-UAUAUG----GU-UAAUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAGUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAUA-UCUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GAC------------
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Petalura_litolae_PET_OPG2 -uguccucuugc---auauuuauaagaaguc--ugaccugccc-agugaugua----ua-unnnnnnn-CGCGGUAUU-
UUGACCGUGCCAAGG-UAGCAUACUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAUGGUUU-GACGAGGUGUUGACUGUCUCAU-UUAAUUUG-AAUUUAAAAUUUAACU UUUCAGUUAAAAGGCU---
---GAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAUUU---UAUU-AAUUUAU-UUU-UGU--UUAUUAUUAU-UUAU-UAUUA- UUGU-AAGUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUAUG-G---AAAACAUUGA-UAUAUG----GU-UAAUA--GAUCCAAUC-UU-AUUGAUU- GUUAGAGUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAUA-UCUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCG-GA-AU AU-AUAGG-UC-UG--UC-GAC--UU-UAAAU-
UCUU-ACAU--------------[-????]
Petalura_ingentissima_API -UGUCUUCUUGG---GCAAUUAUAGGAAGUC--UGACCUGCCC--NNNNNNNNN-NNNnn-nnnCGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAUGGUUU-GACGAGGUGUUGACUGUCUCAU-UUAAUUUG-AAUUUAAAAUUUAACU UUUCAGUUAAAAGGCU---
---GAAA-----UUUCAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAUUU---UAUU-AAUUUAU-UUU-UGU--UGAUUGUUAU-UUAU-UAUUA- UUGU-GAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAGUUAACUUUU-UUAUUUU-G---CAAACAUUAA-UAUAUG----GU-UAUUA--GAUCCAAUC-UU-AUUGAUU- AGUAGAGUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAUA-UUUACGGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU GU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]

Zoraena_bilineata_OZB -???????????????????????????????--??????????-??????????--?????????????
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Taeniogaster_obliqua_OTO -UGUCUUCUUGA-----UAGAAUAGGAAGUC--UGACCUGCCC-AGUGAG????--??UUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAGGGUUU-AACGAAGUACUUACUGUCUCAU-UUAAUUUG-AUAUUAAAAUUUACUU UUUCAGUCAAAAAGCU---
---GAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAAUU---AUCU-AAUAAAU-UUU-UGA--AAAUAUUAUUGUUUA- UUAUUUAAUA-AAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---AUAACAUUGA-UAUAUG----AA-AAAUA--GAUCCAGUU-UU-ACUGAUU- ACUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UUAGAGUUCAUA-UUCACAGGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-AA AA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Kaliptogaster_erronea_OKE -UGUCUUCUUGA-----UAAAAUAGGAAGUC--UGACCUGCCC-AGUGAAAAUA----UUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAGGGUUU-AACGAAGUACUUACUGUCUCAU-UUAAUUUG-AUAUUAAAAUUUACUU UUUCAGUCAAAAAGCU---
---GAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAUUU---AUUU-AAUAAAU-UUU-UGA--UAAGAUUAUUAUUUA- UUAUUUAAUA-AAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---AUAACAUUGA-UAUAUG----AA-AAAUA--GAUCCAGUU-UU-ACUGAUU- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UUAGAGUUCAUA-UUCACAGGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-AA AA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
Pangaeagaster_Cordulegaster_maculata -???????????????????????????????--??????????-??????????--?????????????CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAGGGUUU-AACGAAGUACUUACUGUCUCAU-UUAAUUUG-AUAUUAAAAUUUACUU UUUCAGUCAAAAAGCU---
---GAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAAUU---AUUU-AAUAAAU-UUU-UGA--UAAUAUUAUUAUUUA- UUAUUUAAUA-AAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---AUAACAUUGA-UAUAUG----AA-AAAUA--GAUCCAGUU-UU-ACUGAUU- AUUAGAACAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UUAGAGUUCAUA-UUCACAGGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-AA AA-AUAGG-UCCUG-UUC-GACC-UU-UAAAU-
UCUUUACA---------------[-????]
EU054988_5084_Cordulegaster_dorsalis -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNNN------NNNNNNAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAGGGUUU-AACGAAGUACUUACUGUCUCAU-UUAAUUUG-AUAUUAAAAUUUACUU UUUCAGUCAAAAAGCU---
---GAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAAUU---AUUU-AAUAAAU-UUU-UGU--UAAAAUUAUUAUUUA- UUAUUUAAUA-AAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---AUAACAUUGA-UAUAUG----AA-AAAUA--GAUCCAGUU-UU-ACUGAUU- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UUAGAGUUCAUA-UUCACAGGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-AA AA-AUAGG-UC-UG-UUC-GAC------------
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EU477688_Cordulegaster_boltonii -UGUCUUCUUGG-----AAGAAUAAGAAGUC--UGACCUGCCC-AGUGAAAUA-----UUUUAACGGC-CGCGGUAUA-
UUGGCCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAGGGUUU-AACGAAGUACUUACUGUCUCAU-UUAAUUUG-AUAUUAAAAUUUACUU UUUCAGUCAAAAAGCU---
---GAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUGAUU---AUUU-AAUAAAU-UCU-UGA--UAA-AUUAUUAUUUA- UUAUUUAAUA-AAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---AUAACAUUGA-UAUAUG----AA-AAAUA--GAUCCAGUU-UU-ACUGAUU- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UUAGAGUUCAUA-UUCACAGGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-AA AA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
EU477685_Cordulegaster_picta -UGUCUUCUUGA-----UAGAAUAAGAAGUC--UGACCUGCCC-AGUGAAAUA-----UUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAGGGUUU-AACGAAGUACUUACUGUCUCAU-UUAAUUUG-AUGUUAAAAUUUACUU UUUCAGUCAAAAAGCU---
---GAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAAUU---AUUU-AAUAAAU-UUU-UGA--GAA-AUUAUUAUUUA- UUAUUUAAUA-AAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-G---AUAACAUUGA-UAUAUG----UA-AAAUA--GAUCCAGUU-UU-ACUGAUU- AAUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UUAGAGUUCAUA-UUCACAGGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-AA AA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
EU477686_Anotogaster_sieboldii -UGUCUUCUUGA-----UAAAAUAAGAAGUC--UGACCUGCCC-AGUGAAAUA-----UUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAGGGUUU-AACGAAGUACUUACUGUCUCAU-UUAAUUUG-GUGUUAAAAUUUACUU UUUCAGUCAAAAAGCU---
---GAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAAUU---AUUU-AAUAAAU-UUU-UGA-UGUA-AUUAUUAUUUA- UUAUUUAAUA-AAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---AUAACAUUGA-UAUAUG----AG-AAAUA--GAUCCAGUU-UU-ACUGAUU- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-UUAGAGUUCAUA-UUCACAGGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-AA AA-AUAAG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
AF266085_Neopetalia_punctata -UGUCUUCUUGU----UUUGUUUAAGAAGUC--UGACCUGCCC-AGUGAAUU-----AUUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGAAUG-AAGGGUUU-GACGAGGUGUUUACUGUCUCAU-UUUAUUUG-AUCUUAAAAUUUAACU UUACAGUCAAAAGGCU---
---GUAA-----UAAUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAAUU---AUUU-AUUAUAU-UAU-UGU---UA-AUUAAAUUAUA- UUACUUAAUU-AAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUGAACUUUU-UUAUUUA-U---UAAACGUUGA-UAAAUG----AU-UAGGA--GAUCCAAUC-UU-AUUGAUU- GUUAGAACAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUUCU-UCAGAGUUCAUA-UUUACAGAA--AGGCUUGCGACC-UC-NNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNN-NNNN-NN-NN NN-NNNNN-NN-NN-NNN-NNNN-NN-NNNNN-
NNNN-NNNNNNNNN----------[-????]

Chloropetalia_soarer_OCSr -??????????-????????UUAGAGGUUUCGGCCCCCUGC-C-AGUGAAAUAA--GUAUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAGGGUUU-GACGAAAUGCCUACUGUCUCAU-UUAAUUUG-AAAUUUGAAAUUGACU UUUUAGUUAAAAGGCU---
---AAAC-----UGUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUACUUAAAA---AUUU-AAGAAAU-UUU-UGG--UUA-AUUAUUAUUUU- UUAAAUUGGG-GAGUAUUUU-
GUUGGGGUGACG--AAAAUAUAUAAUAAACUUUU-UUAUUUA-A---AUAACAUUGA-UAUAUG----AA-UAUUA--GAUCCAUUA-UU-AGUGAUU- GUUAGAGAAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAAA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-YU-UAAAU-
UCUU-ACAU---------------[-????]
Sinorogomphus_nasutus_OSN -UGUCUUCUUGA-----UUUUAUAGGAAGUC--UGACCUGCCC-RGUGAA????---????????????
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EU477691_Chlorogomphus_brunneus -UGUCUUCUUGA-----AUGUAUAGGAAGUC--UGACCUGCCC-GGUGAAUAA---GUAUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAGGGUUU-GACGAAAUGCUUACUGUCUCAU-UUAAUUUG-AAAUUUGAAUUUGACU UUUUAGUUAAAAGGCU---
---AAAU-----UGUUGUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUAAA---AUUU-AAAAGAU-UUU-UGU--UUA-AUUAUUAUUUU- UUAAAUGGAA-AAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAGAAUAAACUUUU-UUAUUUA-U---UUAACAUUGA-UAUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- GUUAGAGAAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUCCU-CCAGAGUUCAAA-UUUACAGGA--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGC-CGCU-UA-AU UA-AUAGG--C-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
Chlorogomphus_sp ---- ---

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Synthemis_eustalacta_OSE -UGGCCUCUUGA----UACAAAUAGGAGGUC--UGACCUGCCC-AGUGAUUU------AUUCAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUANUC-AUUAGUCUUUNAANAGAGGNCUGNNAUG-ANNGGUUN-NACNAGGUGUUGACUGUCUCAU-UUNAUNUA-NUUUUAGAAUUNANCU UUNNAGUCAAANGGCU----
--CAA-?----UU???????????????--??????????????????????????????---????-???????-??--????????????????????-????????-
?-?????????-????????????-?????????????????--------UUAU-A---GNAAUAAUGG-UACAUA----AU-UAUUA--GAUCCANNNNNU-UC-UNUN-
NAUUGAUACAGUUACCUUAGANAUANCAGC-AUAUUCUCCCN-CNAGAGUNCAUA-UNUACAGGU--AGGCUNGCNACC-UC-GAUGNUGNNUAUACAUAAUA-NCUAGGUGU-???-????-??-??
??-?????-??-??-???-????-??-?????-????-??????????--------[-????]
EU055067_Synthemis_marcrostigma -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNN-NNN-NNNNNN-------NNNNNAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAAAGAGGGCUGGAAUG-AAGGGUUU-GACGAGGUGUUAACUGUCUCAU-UUUAUUUG-AUUUUAGAAUUUAACU UUUUAGUCAAAAGGCU----
--UAAA-----UUUGAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUAUUUC---UUAU-AUAAUUU-U-----AUAUAAAU--UAUUUU---UAUUGAGA- U-UAAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUUAAAAACUUUU-UUAUUUA-U---AAAACAUUGA-UAUAUG----AA-UUUUA--GAUCCAUUA-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCC-
CCAGAGUUCAUA-UUUACGGGU-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-CUUAGGUGU-AGC-CGCU-UA-AG GU-AUAGG-UC-UG-UUC-GAC---------------------------
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EF631516_Synthemis_leachii -UGGCCUCUUGA----GGAGAAUAGGAGGUC--UCACCNCCCC-AGUGAUUUAU---UAUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAAAGAGGGCUGGAAUG-AAUGGUUCCGACGAGGUGUUAACUGUCNCAU-CUUAUAUG-AUUGUAGAAUUUAACU UUUUNGUCAAAAGGCU----
--UAAA-----UUUGAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUAUUUC---UUC--AUAAUUU-U-----AUAUAAAU--UAUUUU---UAUUGAGA- U-UAAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUUAAAAACUUUU-UUAUAUG-U---AAAACAUUGA-UAUAUG----AA-UUUUA--GAUCCAUUU-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCC-
CCAGAGUUCAUA-UUUACGGGU-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-CUUGGGUGU-AGC-CGCU-UCCAG GG-A---
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Eusynthemis_brevistyla_OEB -???????????---?????UUGAGGUU-UCGGCCCCCUGCC--AGUGAUAUUA----UUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAAAGAGGGCUGGAAUG-AAAGGUUU-GACGAGGUGUUAACUGUCUCAU-UUUAUUUG-AUUUUAAAAUUUAACU UUUUAGUCAAAAGGCU----
--AAAA-----UUUAAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUUUU---CUUU-UAAUAAU-U---UUAUAUAAUU--UAUUAU---UAUGGGAA- U-UAGUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUAAACUUUU-UUAUUUA-C---UUAACAUUGA-UAUAUG----AA-UAUUA--GAUCCUUUA-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCC-
CCAGAGUUCAUA-UUUACGGGU-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-CUUAGGUGU-AGC-CGCU-UA-AG GU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EU477692_Eusynthemis_guttata -UGUCCUCUUGG----GAAAAAUAGGAGGUC--UGACCUGCCC-AGUGAUAUUA----UUUUAACGGC-CGCGGUAUA-
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--AAAA-----UUUAAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUUUU---UUCU-UAAUAAU-U---UUAUAUAAUU--UAUUAU---UAUGGGAA-

U-CAGUAUUUU-GUUGGGGUGACA--AGAAUAUAUAAUAAACUUUU-UUAUUUA-U---AUAACAUUGA-UAUAUG----AG-UAUUA--GAUCCAUUA-UU-AUUGAUU-
AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCC-CCAGAGUUCAUA-UUUACGGGU-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-CUUAGGUGU-AGC-CGCU-UA-AG GU-
AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU--------------[-????]
EU054973_5069_Eusynthemis_nigra -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNNN------NNNNNNAACGGC-CGCGGUAUA-
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---AAAA-----UUUAAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAUUU---UUUU-GA-UAAU-U---UUAUAUAAUU--UAUUAU--- UAUGAGAAUA-UAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUAAACUUUU-UUAUUUA-U---AUAACAUUGA-UAUAUG----AU-UAUUA--GAUCCAUUA-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUCCC-CCAGAGUUCAUA-UUUACGGGU-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-CUUAGGUGU-AGC-CGCU-UA-AG GU-AUAGG-UC-UG-UUC-GAC------------
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EU054974_5070_Choristhemis_flavoterminata -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNNN------NNNNNNAACGGC-CGCGGUAUA-
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---AAAA-----UUUAAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAUUU---UUUU-GA-UAAU-U---UUAUAUAAUU--UAUUAU--- UAUAGGAAUA-UAAUAUUUU-
GUUGGGGUGACA--AAAAUAUAUAAUAAACUUUU-UUAUUUA-U---AUAACAUUGA-UAUAUG----AU-UAUUA--GAUCCAUUA-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUCCC-CCAGAGUUCAUA-UUUACGGGU-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-CUUAGGUGU-AGC-CGCU-UA-AG GU-AUAGG-UC-UG-UUC-GAC------------
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Synthemiopsis_gomphomacromioides_ASG -UGGCCUCUUGA----UGGAAUAGGAGGUC---UGACCUGCCC-AGUNNNNNNN--NNAUUAAACGGC-CGCGGUAUA-
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CCAGAGUUCAUA-UUUACGGGU-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-CUUAGGUGU-AGC-CGCU-UA-AG GU-AUAGG-UC-UG-UUC-GACC-UU-UAAUU-UCUU-ACAU-----
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Gomphomacromia_chilensis -UGGCCUCUUGAAAUUUUGGAUAGGAGGUC---UGACCUGCCC-AGUGAUAAU---UAUUUUAACGGC-CGCGGUAUA-
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CNAGAGUNCAUA-UNUACAGNN-A-GGCUUGCGACC-UC-GAUGNUGNNNAUAGAUANUA-UU-AGNUGU-AGCN-GCU-NN-AG
U--AUAGN-UC-UG-U-C-GACC-UU--AA-U--CU--ACAU--------------[-????]
Gomphomacromia_paradoxa -UGGCCUCUUGAAAUUUUGAAUAGGAGGUC---UGACCUGCCC-AGUGAUAA-U--UAUUUUAACGGC-CGCGGUAUG-
CUGACCGGNNNNNNN-NNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNN-NNN-NN--NNNNNNNNNNNNNNN NNNNNNNNNNNNNNNN---
-NNNNNNN----NNNNNNNNNNNNNNNN--NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN---NNNNNNNNNNNNNNNNNNN--NNNNNNNNNNNNN--NNNNNN-- NNNNNNNNNNN-
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NNNNNNNNNNN-NNNNNNNNNNN-NNNNNNNN---NNNNNNNNNNNN-NN-NNNNNNNNNNNNNNNNNNNN-NNNNNNNNN-NNN-NNNN-NN-NN N-NNNNNN-NN-NN-NNN-NNNN-NN-NNNNN-
NNNN-NNNN--------------[-????]
GQ329647_Syncordulia_serendipator -UGUCCUUNNNN----NNNNNNNNNGGUGUU--UGCCCUGCGC-NNNNNN---N-NNNNNNNNNNNNC-CGCGGNNNN-NN-
-CCGCGCAAAGG-UAGNANAAUC-AUUNGUNUUUNAAAAGGGGGNUGGAAUG-AAAGGUUN-GANGAGGUGCUAACUGUCUCAU-UUUAUUUG-NNNNNAAAAUUUAAUU UUUUAGUCAAAAAGCU------
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GAAAUAUNNNNNNNNNNNUUU-UUAUUUA-U---AUAACAUUAA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- AAUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCC-
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ACAUGAUCUGA--------[-????]
GQ329646_Syncordulia_venator -UGUCCUCNNNN----NNNNNNNNNGAGGUC--UGGCCUGCGG-NNNNNN---N-NNNNNNNNNNNNC-CGCGGNNNN-NN-
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AAAAUAUNNNNNNNNNNUUU-UUAUUUA-U---UUAACAUUGA-UUCAUG----AA-UAUUA--NAUCCAUUA-UU-AGUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCC-
CCAGAGUUCAUA-UUUAC----------UUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-
ACAUGAUCUGA--------[-????]
EU054998_5094_Idionyx_imbricata -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNNN---N-NNNNNNNAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAAAGAGGGCUAGAAUG-AAUGGUUU-GACGAAGUAUUGACUGUCUCAU-UUUAUUUG-AUGUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
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-GAAAUAUAAGUAUAACUUUU-UUAUUAA-U---GAUUCAUUAA-UUUAUG----UU-UAUUA--GAUCCUUUA-UU-AUUGAUU- GUUAGAGUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCUC-
CCAGAGUUCAUA-UUUACGGGU-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUCAGGUGU-AGC-CGCU-UG-AU UU-AUAGG-UC-UG-UUC-GAC-------------------------
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EF631588_Macromidia_rapida_OMR -UGUCCUCUUGAA--U-CUUUAUGGAAGGUU--GAGCCUGCCC-AGUGAAAA----UUAUUUAACGGC-CGCGGUAUU-
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GUUGGGGUGACA--AGAAUAUAUAAGAAACUUUUAUUAUUUU-U---AAUACAUUAA-UUUAUG----AA-AAUUU--GAUCCAUUA-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUCCU-CCAGAGUUCAUA-UUUACAGGU-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-UUUAGGUGC-AGU-CACU-UA-AA UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
EU477701_Oxygastra_curtisii -UGUCUUCUUGA--CUAUG-UAUAGGAAGUC--UGACCUGCCC-AGUGAUU----AAAUUUUAACGGC-CGCGGUAUA-
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CCAGAGUUCAUA-UUUACAGA--AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGG-UGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EU054955_5054_Cordulephya_pygmaea -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNNN---N-NNNNNNNAACGGC-CGCGGUAUA-
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-AAAAUAUAUGAUGAACUUUU-UUAUUUA-A---AUAACAUUGA-UUUAUG----AU-UAUUA--GAUCCAUUA-UU-AUUGAUU- GGUAGAUCAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCC-
CCAGAGUUCAUA-UUUACGGGU-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAAUAUA-GUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GAC-------------------------
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EF631566_Pseudocordulia_circularis -UGUCCUCUUGG-UCUAUUAUAUAAGAGGUC--UGGCCUGCCC-GGUGAUU------AAUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAAAGAGGGCUGGAAUG-AAAGGUUU-GACGAAGUGUUAACUGUCUCAU-CUUAUUUG-AAUGUAGAAUUUAACU UUUUAGUCAAAAGGCU----
--AAAA-----UUUAAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAUUU---GGUU-AAUUGUA-U----AUAUUAUUUAUGAUUAAUU-AGG------ U-UAAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAUUAAACUUUU-UUAUUUA-U---UUAACAUUGA-UAUAUG----AU-UGACU--GAUCCUUUA-UU-AUUGAUU- AAUAGAUCAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCC-
CCAGAGUUCAUA-UUUACGGGU-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUG-CUUAGGUGC-AGC-CACU-UA-AG UG-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-
ACAUGAUCUGAG-------[-????]
EU054968_5065_Hesperocordulia_berthoudi ---- --AACGGC-CGCGGUAUA-
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--AAAA-----UUUAAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUAUUU---AAUU-AAUUAUU-U----UUAGAUUAUUUAUGAUUAA-UUGAU---- U-UAAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---AUAACAUUAA-UUUAUG----AU-UAUAG--GAUCCUUUA-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCC-
CCAGAGUUCAUA-UUUACGGGU-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-UUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GAC-------------------------
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EF631556_Lathrocordulia_metallica -UGUCCUCUUGC-AUAAAUUAAUAGGAGGUU--UGGCCUGCCC-AGUGAUAAAAUAAUAUUUAACGGC-CGCGGUAUA-
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--AAAA-----UACAAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUAAAUU---GAAU-AAUAUUA-U----UUAUAUUAUUUGGAUUAUU-UAUG----- C-UAGUAUUUU-GUUGGGGUGACN-
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CCAGAGUUCAUA-UUUACGGGU-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-
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EU054959_55057_Micromidia_convergens -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNN------NNNNNNNAACGGC-CGCGGUAUA-
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CCAGAGUUCUUA-UUAACGGGU-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-UUUAGGUGU-AGC-CGCU-UA-AU AU-AUGGG-UC-UG-UUC-GAC-------------------------
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EF631557_Micromidia_atrifrons -UGUCCUCUUGU---AUUUUAAUAAGAGGUU--UGGCCUGCCC-GGUGAUA----AAAUUUUAACGGC-CGCGGUAUA-
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Austrophya_mystica                                   ---- ------------------------------------------------------------------------------------
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EF631559_Austrocordulia_refracta                     -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNN-----NNNNNNNNNNNNN-NNNNNNNNN-
NNNNNNNNNNNNNNN-NNNNNNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN-NNNNGUUN-CACGAGGUGUCGNCNGNCCCCC-UUUAUUUG-AUUUAAAAAUUNAACU UUUGGGUNAANAGGCU----
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CCANAGUUCAUA-UUUACGGGU-AGGGCUUGCGACC-UC-NANGUUGGAUUAAGAUNAUA-CUUAGGUGU-AGC-CGCU-UA-AG GU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCNG-
ACAUGAUCUGAG-------[-????]
EF631580_Archaeophya_magnifica                       UGGGCCUCUUGG-CAUAUUAAAUAGGAGGUC--GGACCUGCCCCAGUGAAAAU--UAAAUUUAACGGC-CGCGGUAAA-
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--GAAA-----UUUAAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUUUUCU---UUUU-AAUGUGU-A-----CCUAUAUUAUUUAUAUUU-AUCUGGA-- A-AGGUAUUGU-GUUGGGGUGACA-
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CCAGAGUUNAUA-UUUACGGGU-AGGGCUUGCGACC-UC-NNUGUUGGNUUAAGANAAUA-CUUNNGUGU-ANC-CGNU-NN-NN NN-N-AGG-UC-UG-UUC-GACC-UU-UAAAU-UC------------
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EF032715_Epophthalmia_elegans                        -UGUCCUCUUGC---UAUAUUAUGAGAGGUC--UGACCUGCCC-AGUGAUUUAU-----UUUAACGGC-CGCGGUAUU-
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-AAA-UAUAUAAUUAACUUUU-UUAUUUU-U---AUUACAUUGA-UUUAUG----UA-UAAUA--GAUCCAUUA-UU-AUUGAUU- GAUAGAUUAAGUUACCUUAGGGAUAACAGC-G--------------
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EF631549_Didymops_transversa                         -UGUCCUCUUGG----GUUUAAUAAGAGGUU--UGACCUGCCC-GGUGAAA-------AUUUAACGGC-CGCGGUACU-
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CCAGAGUUCAUA-UUUACGGAA--GGGCUUGCGACC-UC-NAUGNNGGAUUAAGAUAACA-------------
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EU477697_Macromia_illinoiensis                       -UGGCCUCUUGU---CUAUUAAUAAGAGGUU--GGACCUGCCC-AGUGAAA------UAUUUAACGGC-CGCGGUACU-
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CCAGAGUUCAUA-UUUACGGGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-UUUAGGUGU-AGC-CGCU-UA-AG UG-AUAGG-UC-UG-------------------------------------
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Macromia_amphigena_MAC                               -UGGCCUCUUGA--UUUAUUAAUAAGAGGUU--UGACCUGCCC-AGUGAA-------UAUUUAACGGC-CGCGGUACU-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAAAGGAGGCUGGAAUG-AAGGGUUU-GACGAGGAAUUAACUGUCUCAU-UUUUUUUG-GAUUUAAAAUUUAACU UUUUAGUCAAAAGGCU----
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-AAAAUAUAUAAUUAACUUUU-UUAUUUU-A---AUUACAUUGA-UUUAUG----AA-UAUGA--GAUCCAUUA-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCUU-
CCAGAGUUCAUA-UUUACGGGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-UUUAGGUGU-AGC-CGCU-UA-AG UA-AUAAG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EU055001_97_Macromia_eurynome                        -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNNN---------NNAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAAAGGAGGCUGGAAUG-AAUGGUUU-GACGAAUAACUGACUGUCUCAU-UUUUUGUU-UAAUUAAAAUUUAACU UUUUAGUCAAAAGGCU----
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CCAGAGUUCAUA-UUUACGGGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-UUUAGGUGU-AGC-CGCU-UA-AU AA-AUAGG-UC-UG-UUC-GAC----------------------------
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EF640463_Macromia_magnifica -UGGCCUCUUGU---AUUUUAAUAAGAGGUU--UGACCUGCCC-AGUGAA-------UAUUUAACGGC-CGCGGUACU-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAAAGGAGGCUGGAAUG-AAGGGUUU-GACGAGGAAUUAACUGUCUCAU-UUUUUUUG-AAUUUAAAAUUUAACU UUUUAGUCAAAAGGCU----
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CCAGAGUUCAUA-UUUACGGGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-UUUAGGUGU-AGC-CGCU-UA-AG UG-AUAGG-UC-UG-UUC-GACC-UU-UAAA----------------
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EU477696_Macromia_splendens -UGUCCUCUUGG---GUUAUAAUAAGAGGUU--UGACCUGCCC-AGUGAAU------AAUUUAACGGC-CGCGGUACU-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAAAGGAGGCUGGAAUG-AAGGGUUU-GACGAAGAAUUAACUGUCUCAU-UUUUUUUG-AAUUUAAAAUUUAACU UUUUAGUCAAAAGGCU----
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CCAGAGUUCAUA-UUUACGGGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-UUUAGGUGU-AGC-CGCU-UA-AA UG-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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Phyllomacromia_sp_JF912413 -UGGCCUCUUGA---AGUAUAAUAAGAGGUU--UGACCUGCCC-AGUGAUGAAU-----UUUAACGGC-CGCGGUAUU-
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CCAGAGAUCAAA-UUUACGGGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-UUUAGGUGU-AGC-CGCU-UA-AU AA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-
ACAUGAUCUGA--------[-????]
EU477694_Idomacromia_proavita -UGUCCUCUUGA-AGUGUAAAAUAGGAGGUU--UGACCUGCCC-AGUGAGUAGA-UAU-UUUAACGGC-CGCGG--------
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EF631540_Aeschnosoma_forcipula -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNN-NNN-NNNNNN-------NNNNNNNNN-NNNNNNNNN-
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CCAGAGUUCAUA-UUUACGGGC-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU GA-GUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-
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EF631528_Pentathemis_membranulata -NNNNNNNNNNN-----NNNNNNNNNAGCAA--NGGCCCCCCC-AGUGAUGAUA-----UUUAACGGC-CGCGGUCCA-
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CCAGAGUUCAUA-UUUACGGGU-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-
ACAUGAUCUGAG-------[-????]
EU477709_Tetragoneuria_cynosura -UGUCCUUUUGA---GUAUAAAUAAAAGGUC--UGACCUGCCC-AGUGAUUUAU-----UUUAACGGC-CGCGGUAUA-
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EU477713_Epitheca_costalis -UGUCCUUUUGA---AUAUGAAUAAAAGGUC--UGACCUGCCC-AGUGAUUUA-----UUUUAACGGC-CGCGGUAUA-
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-AGAAAAUAAAAAUAACUUUU-UUAAUUA-U---UUAACAUUAA-UAUAUG----AU-UAUUU--GAUCCAAUA-UU-AUUGAUU- AAUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCC-
CCAGAGUUCAUA-UUUACGGGU-A-GGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EU477712_Epitheca_canis -UGUCCUUUUGA---AUAUGAAUAAAAGGUC--UGACCUGCCC-AGUGAUUUA-----UUUUAACGGC-CGCGGUAUA-
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U-UAGUAUUUU-GUUGGGGUGACA--AAAAAAUAAAAAUAACUUUU-UUAAUUA-U---UUAACAUUAA-UAUAUG----AU-UAUUU--GAUCCAAUA-UU-AUUGAUU-
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AUAGG-UC-UGUCUC-GACC-UU-UAAAU-UCUU-ACAU--------------[-????]
EU477710_Epitheca_princeps -UGUCCUUUUGA---AUAUAGAUAAAAGGUC--UGACCUGCCC-AGUGAUCAGU-----UUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAAAGAGGGCUGGAAUG-AAAGGUUU-GACGAAGUAUUGACUGUCUCAU-UUUAUUUG-UAAUUAAAAUUUAACU UUUUAGUCAAAAGGCU----
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CCAGAGUUCAUA-UUUACGGGU-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG--C-UG----------------------------------
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EU477711_Epitheca_marginata ---- --

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EU477708_Epitheca_bimaculata -UGUCCUUUUUGA---AAGAAUAUAAAAAGUC--UGACCUGCCC-AGUGAUUUAU-----UUUAACGGC-CGCGGUAUA-
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CCAGAGUUCAUA-UUUACGGGU-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EF631590_Rialla_villosa -NNNNNNNNNNN---NNNNNNNNNNNNNN----NNNNNN-NNN-NNNNNN--------NNNNNNNNNN-NNNNNNNNN-
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CCAGAGUUCAUA-UUUACGGGU-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGGGGUA-AU
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EU477707_Cordulia_aenea -UGUCCUUUUGA---AUAUUAAUAGAAGGUC--UGACCUGCCC-AGUGAUUUAU-----UUUAACGGC-CGCGGUAUA-
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-AGAAAAUAUAAUAAACUUUU-UUAAUUA-U---UUAACAUUAA-UAUAUG----AU-UAUUU--GAUCCAUUA-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCC-
CCAGAGUUCAUA-UUUACGGGU-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACCG------
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EU477705_Cordulia_shurtleffii -UGUCCUUUUGA---AUAUUAAUAAAAGGUC--UGACCUGCCC-AGUGAUUUAU-----UUUAACGGC-CGCGGUAUA-
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CCAGAGUUCAUA-UUUACGGGU-AGGGCUUGCGACC-UC-GAUGUUGGCKUAASAUAAUA-GUUAGGU----------------
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EU477700_Somatochlora_alpestris -UGUCCUUUUGA-----UUUUAUAGAAGGUC--UGACCUGCCC-AGUGAUUUAU-----UUUAACGGC-CGCGGUAUA-
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CCAGAGUUCAUA-UUUACGAGU-GGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EU477704_Somatochlora_flavomaculata -UGUCCUUUUGA-----GUGUAUAUAAGGUC--UGACCUGCCC-AGUGAUUUAU-----UUUAACGGC-CGCGGUAUA-
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CCAGAGUUCAUA-UUUACGAGU-GGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UC-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UACG-MACAU-----
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Somatochlora_metallica_CORD -UGUCCUUUUGA-----GUGUAUAUAAGUUC--UGACCUGCCC-AGUGAUUUAU-----UUUAACGGC-CGCGGUAUA-
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Somatochlora_tenebrosa_OSTn -UGUCCUUUUGA-----GUGUAUAUAAGGUC--UGACCUGCCC-AGUGAGUUA------UUUAACGGC-CGCGGUAUA-
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EU477714_Hemicordulia_mindana_nipponica -UGUCUUUUUGA---AAUUUAAUAGAAAGUC--UGACCUGCCC-AGUGAUUAA------UUUAACGGC-CGCGGUAUA-
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EU054977_5073_Hemicordulia_australiae -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNNN--------NNNNAACGGC-CGCGGUAUA-
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EU054965_5062_Procordulia_jacksoniensis -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNNN--------NNNNAACGGC-CGCGGUAUA-
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--UAGA-----UUUAAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUAUAUA---UUUU-AGUUAUU-U----AUAUAUAAUUUUUAAUUAA-A-AUAU--- U-UAUUAUUUU-GUUGGGGUGACA-
-GAAGAAUAAGAUUAACUUUU-UUAUUUA-G---UUAACAUUAA-UAUAUG----AA-UAAUU--GAUCCAUUA-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCC-
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DQ021431_Notiothemis_robertsi -UGUCCUUUUGG----UUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUUA------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUACCUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUCUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUUAUUUU---GUUU-AAUUUUC-U----UUAUAUAAAUAUAUUUAUA---UAAA--- A-UUUUAUUUU-GUUGGGGUGACA-
-AAAAUAUAGUAUUAACUUUU-UUAUUUA-U---AUAACAUUGA-UUUAUG----AU-UAUUA--GAUCCAAUAUUU-AUUGAUU- AUUAGAACAAGUUACCUUAGGGAUAACAGCUGUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUGAUA-AUUAGGUGU-AGC-UGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EU477726_Tetrathemis_irregularis -UGUCCUUUUGC----UUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUUA------AUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGGACUACCUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UCUGAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUUACUUU---AUUU-AAUUAUU-U----UUAUAUAAAUAAAUGUUUA-AAUAAU--- G-UUUUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UUAUUUA-G---AUAUCAUUGA-UAUAUG----UU-UAUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGAACAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAAAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-UGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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DQ021430_Tetrathemis_polleni -UGUCCUUUUGA----UUUUAAUAUAAGGUC--UGACCUGCCC-AGUGAUUAC-----AUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUACCUGUCUCAU-UUUAUUUG--GGUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUUUUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUUAUUUU---AUUU-AAUUUUU-U-----AUAUAUAAGUAUUUUUAA-A-UAAA---

A-UUUUAUUUU-GUUGGGGUGACA--AAAAUAUAUUAUUAACUUUU-UUAUUUA-U---CUAUCAUUGA-UUUAUG----AA-UUUUU--GAUCCAUUA-UU-AUUGAUU-
AUUAGAGUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-CCAGAGUUCAUA-UUUACGGGA-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-UGCU-UA-AU UA-
AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU--------------[-????]
EU477723_Urothemis_cf_signata -UGUCCUUUUGA-----UUUAAUAGAAGGUC--UGACCUGCCC-AGUGAUGAAG-----UUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-GACGAGGAACUGACUGUCUCAU-UUUAUUUG--GUUUAGAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAAUUA---CUUA-AUUAUUC-U----UUAUAUUAAUAUUUUAUGU--CAAU---- U-UUAUWUUUM-GUUGGGGUGACA-
-AGAAUAUAUAAAUAACUUUU-UUAUUUA-U---UAAACAUUGA-UUUAUG----AA-UAACA--GAUCCAUUA-UU-AGUGAUU- UUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCASAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GCUGGGUGU-AGC-CGCU-CA-GU UC-AUAGGGUC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EF640460_Urothemis_assignata -UGUCCUUUUGG-----UUUUAUUGAAGGUC--UGACCUGCCC-AGUGAUUAAA-G--UUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-GACGAGGAACUGACUGUCUCAC-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUGAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUACAUUUUA---UGUA-AUUGUUU-U----U-AUAUUAUUAUUUUAUAU--UAAA---- A-UUGUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UUAUCAU-C---AUUACAUUUA-UAUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCCU-
CCAGAGUUCAUA-UUUACAGGA-A-GGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-ACC-CGCU-UA-AU UC-AUGGG-UC-UG-UUC-GACC-UU-UAAAC--CUU-ACAAAA----
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Macrodiplax_cora -UGUCCUUUUGA----AAUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUU------UAUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-GACGAGGAAUCGACUGUCUCAA-UUUAUUUG--UUUUAUAAAUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UGGUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAUUCAA---UUUA-AUUAUUU-U-----UAUAUUAAUUUUUUAUAU-UGUU-----
--UUAUAUUUU-GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUU-U---UUCCCAUUGA-UUUAUG----AA-UAAUA--GAUCCAUUA-UU-AAUGAUU-
GAUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-CCAGAGUUCAUA-UUUACAGGA-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU GU-
AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU--------------[-????]
EF640459_Macrodiplax_balteata -UGUCCUUUUGU----AAUUGAUAGAAGGUC--UAACCUGCCC-AGUGAUUAAA-----UUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-GACGAGGAACUGACUGUCUCAU-UUUAUUUG--UAUUAAAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UGUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUUUA---UUUA-AUUAUUU-U-----UAUAUUAAUAUUUUUAUA-UUAA----- A-UUGUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAAUAACUUUU-UUAUUUA-U---UUACCAUUAG-UUUAUG----AA-UAAUA--GAUCCAUUA-UU-AGUGAUU- AAUAGUCUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAG-C-------------
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EF631568_Zyxomma_elgneri -UGUCCUUUUGN----GNNNAACUUAAGGUC--UGACCUGCCC-AGUGAUAAG-----UUUUAACGGC-CGCGGUAUC-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-GACGAAGAAUAAGCUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUCAAAAAGCU----
--GAAA-----UGAUGUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAAUAUUUU---AUUU-AAUUAUU-U-----UAUAUUAAUGCUAUUAU--UUAAA---- A-UUUUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUGUUUAACUUUU-UUAUUUA-U---GAUACAUUGA-UUAAUG----AU-UAUUU--GAUCCAUUA-UU-AGUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-GNAAUCCUCCU-
UUGAAGUUCUUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-GUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-NN-NN-NUC-GACC-UU-UAAAU-UCUU-
ACAUGAUCUGAG-------[-????]
AB708296_Zyxomma_petiolatum --GUCCUUUUGU----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUAA------UUUUAACGGC-CGCGGUAUC-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-GACGAGGAAUAAGCUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UGUUGUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAAUAUUUU---GUUU-AAUUAUU-U-----UAUAUUAAUACUUUUAU--UUGAA---- A-UUUUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAACUAACUUUU-UUAUUUA-U---UAGACAUUGA-UUAAUG----AU-UAUUU--GAUCCAUUA-UU-AGUGAUU- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
UUGAAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-----------
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EU477724_Zygonyx_torrida -UGUCCUUUUGA----GUUUUAUUGAAGGUC--UGACCUGCCC-AGUGAUGA------UUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGAAUG-AAGGGUUU-AACGAGGAAUUGACUGUCUCAU-UUUAUAUG--AAUUAGAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUCAUAAUUUUUG---CUUA-UAUAAUA-U-----UAUAUUAAUUUUGUUAGG-UUAAU---- A-AAUUAUUUU-GUUGGGGUGACA-
-AAAAUAUAAAUUUAACUUUU-UUAUUUA-A---AUAUCAUUGA-UUUAUG----UA-UAUUA--GAUCCAUUA-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGAAUGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAGUAUA-AUUAGGUGU-AGC-UGCU-UA-AA GU-GUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EU054944_5044_Nannophlebia_sp -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNNN------NNNNNNAACGGC-CGCGGUAUA-
CUGACCGUGUGAAGG-UAGCAUAAUA-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAAGGUUU-GACGAGGAAUUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUUUAUUU---AAUU-AAUUUAA-U------UAUAUAAUAUUUUUAAU-UAUUA---- U-AAAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAAAAUUAACUUUU-UUAUUAU-U---CUUACAUUAA-UAUAUG----AU-AAUUA--GAUCCAGUA-UU-AUUGAUU- UUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGAUGU-AGC-UGUU-UA-AU AU-AUAGG-UC-UG-UUC-GAC-------------------------
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DQ021432_Bironides_sp -UGUCCUUUUGA----AUUUAAUUUAAGGUC--UGACCUGCCC-GGUGAAU-------UUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUUGUAUG-AAAGGUUU-GACGAGGAAUUAACUGUCUCAC-UUUAUUUG--UUUUAGAAUUUGAUU UUUUAGUAAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUGUU---A-A--AUUAAAC-C---CUUAUAUAAUUA-GUUUAAC-UUAAU---- A-UGAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAAAUUUAACUUUU-UUAUUUA-U---AAUACAUUGA-UAUAUG----AA-UAUUA--GAUCCAAUA-UU-AUUGAUU- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUGGGUGU-AGC-CGCU-UA-AU UG-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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DQ021429_Huonia_epinephela -UGUCCUUUAGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAGUA------UUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUUGUAUG-AAAGGUUU-GACGAGAAAUUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UGAUGUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAUUUUU---UUAU-AAAUAAA-U-----UUAGAUGAAUAAUUUUAU-AAAAU---- U-UUAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUGAAAAACUUUU-UUAUUUA-U---UAUACAUUGA-UAUAUG----AU-UAUUA--GAUCCUUUA-UU-AUUGAUU- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCC-
UCAGAGUUCAUA-UUUACGGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-UGCU-UA-AU UG-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EF631587_Huonia_oreophila -UGUCCUCUUGA----AWUUAAUUUGAGGYC--UGACCUGCCC-AGUGAAAU-------UUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUUGUAUG-AAAGGUUU-GACGAGGAAUUAACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUGUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUUUAGUUU---AAUU-AAUUGGA-C-----UUAUAUCAUAUAUAUAAG-UUGAA---- C-UUUUAUUUU-GUUGGGGUGACA-
-AAAAUAUAAAAAUAACUUUU-UUAUUAA-U---AUUACAUUGA-UAUAUG----AU-UAUUA--GAUCCUUUA-AU-AAGGAUU- GAUAGAGUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-UGCU-UA-AU UU-AYAGG-UGCUG-YUC-GACC-UU-UAAAU-UCUU-
ACAUGAUCUGAG-------[-????]
EF640408_Onychothemis_testacea -UGUCCUUUUGU----GAUUUAUUGAAGGUC--UGACCUGCCC-AGUGAUAA------UUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAGGGUUU-GACGAGGAAUUUACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUUAUGAU---AUUA-AAUAUUU-U-----UAUAUUAAUGUAUUUAAG-AUUUU---- G-UUUUAUUGU-GUUGGGGUGACA-
-AAAAUAUAUAUAUAACUUUU-UUAUUUA-U---UAACCAUUGA-UUUAUG----AU-UAUUA--GAUCCAUUA-UU-AUUGAUU- ACUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUUUUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGAGUUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUGGG-UC-UG-UUC-GACC-UU-UAAAC-UCUU-ACA-------
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EF640451_Rhyothemis_variegata -UGUCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUUA------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-GACGAGGAAUUGACUGUCUCAU-UUUAUUUG--UUUUAGAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUAAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUUUU---AUUU-AAUUAUU-U--AAAUAUUAAUAUGUUUAAAUU-AUUA-----
--UUAUAUUUU-GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---UUACCAUUGA-UAAAUG----AA-UAUUA--GAUCCAUUC-GU-AAUGAUU-
GUUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-CCAGAGUUCGUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-
AUAGG-UC-UG-U-C-GACC-UU-UAACC-------------------------[-????]
EU477719_Rhyothemis_fuliginosa -UGUCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUUA------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-GACGAGGAAUUGACUGUCUCAU-UUUAUUUG--UUUUAGAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UGUAGUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUGUU---AUUU-AAUUAUU-U----UAAUAUUAAUA-UAUUUAA-AUUAUG--- A-UUAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UUAUCUA-U---UUACCAUUGA-UAAAUG----UA-UACUA--GAUCCAUUC-AU-AGUGAUU- GAUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EF640449_Miathyria_marcella -UGUCCUUUUGU----GAUUAAUUUAAGGUC--UGACCUGCCC-GGUGAUUA------AUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAGGGUUU-AACGAGGAAUUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUGGUUAAAAAGCU----
--AAAA-----UAAUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUAAU---AAAU-AACUAUU----AUUAUAUUUAUUUAGUUAU-UUACUG-----
--UUAUAUUUU-GUUGGGGUGACA--AAAAUAUAUAAUAAACUUUU-UUAUUUU-A---UUAACAUUAA-UUUAUG----AA-UAAUA--GAUCCAUUA-AU-AGUGAUU-
AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-UGCU-UA-AU AU-
AUAGG-UC-UG-UUC-GACC-UU-UAAAC-UUUUAACAA--------------[-????]
Miathyria_simplex -?????????????---???????????????--??????????-?????????---????????????-?????????-
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?-??????-??-??-???-????-??-?????-????-????---------------[-????]
DQ021423_Tholymis_citrina -UGUCCUUUUGA----AUUUAAUUUAAGGUC--UGACCUGCCC-GGUGAUUUA------UUUAACGGC-CGCGGUAUC-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-GACGAAGGAUAGACUGUCUCAU-UUUAUUUG--UAUUAAAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUUACUUU---AUUU-AUAAAUU-U----UUAUAUAAAUA-UUUAUAU-UUUUA----

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G-UUUUAUUUU-GUUGGGGUGACA--AAAAUAUAUGAUUAACUUUU-UUAUUUA-A---UUUACAUUGA-UUAGUG----AU-UAUUU--GAUCCAUUA-UU-AGUGAUU-
AUUAGAACAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-UUGAAGUUCUUA-UUUACAGGA-UGGGCU---------------------------------------------------------
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EF640452_Tholymis_tillarga                       -UGGCCUUUUGU----AUUUAAUUGAAGGUC--UGACCUGCCC-GGUGAUUU------AUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-GACGAAGGAUAGUCUGUCUCAU-UUUAUUUG--UGUUAAAACUUAAUU UUUUAGUAAAAAAGCU----
--AAAA-----UGCUGUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAAUUU---AUGU-AAUUAUU-U----AUAUAUUAAUA-UGAUUAC-AUUAA---- U-UUUUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---AAUACAUUGA-UUAGUG----UU-UAAUU--GAUCCAUUA-UU-AUUGAUU- AUUAGAACAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
UGGAAGUUCUUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-GUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAACC-CUA-----------
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EF640450_Pantala_flavescens                      -UGGCCUUUUGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUA------AUUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-CACGAGGAACUAGCUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UGCAAUUGGUAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUUUU---AAAU-ACUUAUU-U----AUAUAUUAAUA-UUUUUAU-UUAAA---- A-UUGUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UUAUUUA-C---AUAACAUUGA-UAUAUG----AA-UAUUA--GAUCCAUUA-UU-AGUGAUU- GAUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-UCCU-UCA-------
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AF266099_Tramea_lacerata                         -UGUCCUUUUGA----GUUUUAUAAAAGGUC--UGACCUGCCC-AGUGAUA------AUUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUC UUUUAGUCAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAGUAAGUU---AUUU-AUUUGUU-U----UUAUAUUAAUU-UAUUUAA-UUGGC---- U-UUCUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAGAAACUCUU-UUAUUUA-U---UUAACAUUAA-UUUAUG----AU-UAUUA--GAUCCAUUA-UU-AGUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAA-UCUU-ACAU------
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Tramea_calverti                                  -UGUCCUUUUGA----AUUUUAUAGAAGGUC--UGACCUGCCC-AGUGAUA------AUUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAAUUGACUGUCUCAU-UUUAUUUG--UUUUAGAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UCUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAAAAUUUU---AUUU-AAUUAUU-U----UUAUAUUAAUU-UAUUUAA-AUGAU---- U-UUUUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAUAAAACUUUU-UUAUUUA-U---UUAACAUUAA-UUUAUG----AU-UAUUA--GAUCCAUUA-UU-AGUGAUU- GAUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUGAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-UCUU-ACAU------
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Sympetrum_Kalosympetrum_janeae_OSJ               -UGGCCUUUUGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAGG------AAUUAUACGGC-
C????????????????????????-??????????-??????????????????????????????-????????-???????????????????????-?????????-????????????????
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??????????????????????????????-???????????-????????????-?????????--????????????-??-???????????????????-?????????-???-????-??-??
??-?????-??-??-???-????-??-?????-????-?????????????------[-????]
EF640443_Sympetrum_Kalosympetrum_obtrusum        -UGGCCUUUUGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUAA------AUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AACGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAACUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UAAUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUUUU---UUGU-AAUUACU-U----UAAUAUUAACA-UGAUUAU-UUAAAA--- G-UUAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUCAACUUUU-UCAUUUA-U---UUACCAUUGA-UAUAUG----AA-UAUUA--GAUCCAUUA-UU-AGUGAUU- GUUAGUUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-UCCUUACA-------
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EU477739_Sympetrum_vulgatum                      -UGUCCUUUUGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUGA------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AACGGUUU-CACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAACUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUCAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUGAAGUU---UUGU-AUUUAUU-U----AUAUAUUAACA-UAAUUAC-AAUAAA--- U-UUAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UCAUUUA-U---UUACCAUUGA-UAUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- GUUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA--GGGCUUGCGACC-UCCGAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EF640444_Sympetrum_Sympetrum_pedemontanum        -UGUCCUUUAGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUAA------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AACGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUCAUAUAAUUUU---UUAU-AUUUACU-U----AUAUAUUAAUA-UAAGUAU-AAUAAA--- A-UUGUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UCAUUUA-U---UUACCAUUGA-UAUAUG----AU-UUUUA--GAUCCACUA-UU-AGUGAUU- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU GU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-UCUU-ACA-------
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EF640429_Sympetrum_Nesogonia_blackburni -UGGCCUUUUGU----GAUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUAA------AUUUAACGGC-CGCGGUAUC-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGAAUG-AAUGGUUU-AACGAGGAAUUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUUUU---UUGU-AAUCCUC-U----AUAUAUUAACA-UGAUUAU-AUUAAA--- A-UUUUAUUUU-GUUGGGGUGAUA-
-AAAAUAUACAAAUAACUUUU-UUAUUUA-U---AUUCCAUUGA-UAUAUG----AG-UUUUA--GAUCCAUUA-UU-AGUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
UCAGAGUUCAUA-UUUACAGGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-UGCU-UA-AU GU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-UUUU-ACAA------
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EU477743_Sympetrum_Sympetrum_sanguineum -UGUCCUUUUGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUAA------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AACGGUUU-CACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAGUUUU---AUUU-AUCUAUA-A----UUCUAU---------UUAU-AAUAAA--- A-UUAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUCAACUUUU-UUAUUUA-U---UUACCAUUGA-UAUAUG----AA-UAUUG--GAUCCAUUA-AU-AGUGAUU- GAUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCCCCCU-
CCAGAGUUCAUA-UUUACAGGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU GU-AUAGG-UC-UG-UUC-GACC-UU-UAAAUUACUU-ACAU------
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EF640439_Sympetrum_Tarnetrum_corruptum -UGGCCUUUUGA----AUUUAGUAUAAGGUC--UGACCUGCCC-AGUGAAUAU-----AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAUGGUUU-AACGAGGAACUAACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAAAACUUU---UUGU-AGUUAUU-U----UUAUAUUAAUA-UAUUUAU-AAAAG---- C-UUUUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUGAUUAACUUUU-UUAUUUA-U---CUACCAUUGA-UAUAUG----AA-UAUUA--GAUCCAUUU-UU-AGUGAUU- GAUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCC-
CCAGAGUUCAUA-UUUACGGGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-U--------------------
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EF640440_Sympetrum_Tarnetrum_fonscolombii -UGUCCUUUUGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUAA------AUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAUGGUUU-AACGAGGAACUAACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUC UUUUAGUCAAAAGGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUUUU---AUUU-AAUUAUU-U----UUAUAUUAAUA-UAAUUAU-CUAAA---- A-UUUUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---UUACCAUAGA-UAUAUG----AA-UAUAA--GAUCCAUUA-UU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC----------------
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Sympetrum_Tarnetrum_illotum -UGUCCUUUUGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUUG-----AAUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAUGGUUU-AACGAGGAGAUAACUGUCUCAU-UUUAUUUG--UUUUAGAAUUUAAUU UUUUGGUUAAAAAGCU---
---AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUUUU---UGUA--UUUAUU-U----AUUUAUUAAUA-UAUUUAU-UAUAA--- UA-UUAUAUUUU-
GUUGGGGUGACA--AAAAUAUAUGAAAAACUUUU-UUAUUUA-U---UUACCAUUAA-UAUAUG----AC-UAUUA--GAUCCAUUA-UU-AGUGAUU- GCUAGAAUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCCCUU-CCAGAGUUCAUA-UUUACAAGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-A-C-CGCU-UA-AU UU-AUAGG-UC-UG-UGC-GACC-UU-UAAAC-
UCUU-ACAUA-------------[-????]
Sympetrum_Tarnetrum_infuscatum -UGGCCUUUUGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUGA------AUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AACGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAACUUAAUG UUUUAGUUAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUUUU---UUAU-AUUUAUU-U--------AUAAACA-UAAGUAU-AUAAA---- AAUUUUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUCAACUUUU-UUAUUUA-U---UUACCAUUGA-UUUAUG----AA-UAUUA--GAUCCACUA-UU-AGUGAUU- GUUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCUU-
CCAGAGUUCAUA-UUUACAGGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-UGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-CCUU-A---------
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Sympetrum_danae -UGGCCUUUUGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUUA------AUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAUGGUUU-AACGAGGAACUAGCUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UCUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUUUU---UUGU-AAGCAUU-U----UUAUAUUAAUA-UAAUUAC-AUUAAA--- A-UUAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAAUAACUUUU-UCAUUUA-U---UUACCAUUGA-UAUAUG----AA-UAUUA--GAUCCAUUA-UU-AGUGAUU- GUUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU GU-AUAGG-WC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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Sympetrum_meridionale -UGUCCUUUUGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAAA-------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAUGGUUU-CACGAGGAAUUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUCCAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUGUAGAUUU---UUAU-UUAUUUA-U----UUAUUAACAUA-ACUAUAA-UAAAU---- C--UAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUAAACUUUU-UCAUUUA-U---UUGCCAUUGA-UAUAUG----AU-UAUGU--GAUCCAUUA-UU-AGUGAUU- AAUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUCCAUA-UUUACAGGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EU477752_Leucorrhinia_pectoralis -UGUCCUUUUGA----AAUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUGA------AUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAUGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAAUUC---UUGU-AAUUAUU-U----CUAGAUUAAUA-UGAUUAU-AUUAA----

U-UUAUAUUUU-GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---UUACCAUUGA-UAUAUG----AA-UAUUU--GAUCCAUUA-UU-AGUGAUU-
GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-CCAGAGUUCAUA-UUUACAGGA-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-
AUAGG-UC-UG-UUC-GACC-UU-UAAAC-UCUU-ACAU--------------[-????]
EF640394_Leucorrhinia_glacialis -UGUCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUGA------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAUGGUUU-AACGAGGAACUGACUGUCUCAC-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UUCUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUCUG---UUAU-AAUUAUU-U----UUAUAUUAAUA-UAAUUAU-AUUAA---- U-UUGUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAACUAACUUUU-CUAUUUA-U---UUACCAUUGA-UAUAUG----AA-UAUUA--GAUCCAUUA-CU-AGUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUU--------------------
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DQ021425_Celithemis_elisa -UGUCCUUUCGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUAA------GUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAUGGUUU-AACGAGGAAUUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUGAUUUA---UUUA-AUUAUUU-U-----UAUAUUAAUA-UAUUUAU-GAUAAU--- A-UCUUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAAUAACUUUU-UUAUUUA-U---UAAACAU
UGA-UAUAUG----AU-UAUUA--GAUCCUUUA-UU-AAGGAUU-AUUAGAACAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-
UC-GAUGUUGGAUUAAGAUUAUA-ACUAGGUGU-AGC-CGCU-UA-GUUU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU------------------------[-????]
EF640393_Celithemis_eponina -UGUCCUUUUGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUUAAG----AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGAAUG-AAUGGUUU-AACGAGGAAUUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUUGUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUUUA---UUUA-AUUAUUU-A-----UAUAUUAAUA-UAAUUAU-AAUAAA--- C-UUUUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAAUAACUUUU-UUAUUUA-U---UAAACAUUGA-UAUAUG----AA-UAUUA--GAUCCUUUA-UU-AAGGAUU- AAUAGAACAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-UCUU----------
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EF640392_Brachymesia_gravida -UGUCCUUUUGA----AUUUAAUAAUAGGUC--UGGCCUGCCC-AGUGAUGA------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAAUUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUGUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUUAU---AAUU-AAUUAAU-A----UUAUAUUAAUA-UAUUAUU-UAUU----- A-UUAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---UAAACAUUGA-UUUAUG----AA-UUAUA--GAUCCAUUA-UU-AGUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCUU-
CCAGAGUUCAUA-UUUACAGGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAC---------------
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Brachymesia_herbida -??????????????---???????????????--???????????-?????????---????????????-?????????-
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?-??????-??-??-???-????-??-?????-????-????--------------[-????]
EF640412_Brachythemis_leucosticta -UGUCCUUUUGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUUA------UUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-CACGAGGAAUAGACUGUCUCAU-UUUAUUUG--UAUUAAAAUUUAAUU UUUUGGUUAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAAUUU---AUAU-AAUUAUU-A----UUAUAUUAGUA-UAAUUAU-AUACU---- U-UUAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAAAAACUUUU-UUAUUUA-A---UUAACACUGA-UUAGUG----AA-UUAUA--GAUCCAUUA-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCCCCU-
UCAGAGUUCAUA-UUUACAGGG-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGA-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-U-------------
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EF640411_Brachythemis_contaminata -UGUCCUUUUGU----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUUUU----AUUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAAUAAGCUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UCUUAGUUAAAAAGCU----
--AAGA-----UAAUGUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUUUU---UUUA-AUUUAAA-A----UUAUAUUAUUU-UAAUUAU-AUAUU---- A-UUAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAAUAACUUUU-UUAUUUC-A---AAAACAUUGA-UUAAUG----AU-UAAAU--GAUCCAAUA-AU-AUUGAUU- ACUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
UGGAAGUUCUUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GCUAGGUGU-AGC-CGCU-UA-GU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-UCUU-ACAA------
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EF640417_Deielia_phaon -UGUCCUUUUGU----GUUUAAUUUAAGGUC--UUACCUGCCC-AGUGAUUU------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAAUAUACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUGGUUAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUUAU---UUUU-AAUUUAU-U---UUUAUAAUAUUU-UAAUUAU-UAGUG---- A-UUAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAAAUAUAACUUUU-UUAUUUA-A---AUAACAUUGA-UUAAUG----AU-UGAAU--GAUCCAUUA-UU-AGUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
UUGGAGUUCUUA-UUUGCAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-AAAAC-U-------------
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EF640433_Pachydiplax_longipennis -UGUCCUUUUGA---UUUAGUAUUUAAGGUC--UGACCUGCCC-AGUGAUUA------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAAUUGACUGUCUCAU-AUUAUUUA--UUUUGAAAUUUAAUG UUUUAGUUCAAAAGCU----
--AAAA-----UACCGUUGGAAGCCGA--GAAAACCCUAUAGAUCUUUAGUAUUUAAG---GUCU-UGACCUG-U---CCAGUGAUAAUUGUAUUUUA-AUAAC---- A-UUAUAUUUU-GUUGGUGUGACA-
-GAAAUAUACAUUUAACUUUU-UUAUUUA-C---AUAACAUUGA-UUUAUG----AU-UAUUA--GAUCCAUUA-UU-AGUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-UCUU-AUA-------
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EF640422_Erythemis_collocata -UGGCCUUUUGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUU--------UUCAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAAUCGACUGUCUCAC-CUUAUAUG--UAUUAAAACUUAAUU UUUCAGUCAAAAAGCU----
--GAAA-----UUAUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUACC---A-AC-AUAAUAU-U---AUUAUAUUAAUG-AAUUUUG-UUGGU---- U-UUGUAUUUA-GUUGGGGUGACA-
-AAAAUAUACAAUUAACUUUU-UUAUAAU-U---UAAACAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUC- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCUU-
CCAGAGUUCAUA-UUUACAAGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GCUAGGUGC-AGC-CGCU-UA-GC UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-C--------------
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EU477753_Acisoma_panorpoides -UGUCCUUUUGA----GUUUAAUAUAAGGUC--UGACCUGCCC-AGUGAUUA------AUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UAUUAAAAAUUAAUC UUUUAGUCAAAAAGCU----
--AAAA-----UACAAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAUUCUU---UAUU-AAUAAUU-A-----UUAUAUUAAUAUAAUUUUAA-UAAAA---- A-AUAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UUAUAAU-U---UAUACAUUGA-UUUAUG----AU-UAUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUUCU-
CCAGAGUUCAUA-UUUACAGAA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EU054950_5050_Erythrodiplax_minuscula -NNNNNNNNNNN----NNNNNNNNNNNNNNN---NNNNNNNNNN-NNNNNN-------NNNNNAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGAAUG-AAAGGUUU-AACGAGGAAUUGGCUGUCUCAC-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--GAAA-----UCAUAUUGGUAGACGA--GAAGACCCUAUAGAUCUUUAUAUACCUUU---AUAU-AGAGAAU-AU-----ACUAUUAAUAGUUUUAU-UUAAA---- G-GUGUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UUAUUAA-A---UUAACAUUGA-UUUAUG----AU-UAUUG--GAUCCAUUA-UU-AGUGAUU- GGUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCUU-
CCAGAGUUCAUA-UUUACGAGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU GU-AUAGG-UC-UG-UUC-GAC-------------------------
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EF640423_Erythrodiplax_basalis -UGUCCUUUUGC----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUUA------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAAUUAGCUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUAUAUUGGUAGACGA--GAAGACCCUAUAGAUCUUUAUAUAUUUUU---AAUU-AAUUGUU-A----UUUUAUUAGAA-CUUUUGA-UUAAU---- A-AUGUAUUUU-GUUGGGGCGACA-
-AAAAUAUAUAAAUAACUUUU-UUAUAAA-A---UUAACAUUGA-UUUAUG----AG-UAUUA--GAUCCAUUA-UU-AUUGAUU- GAUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCUU-
CCAGAGUUCAUA-UUUACGAGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC---------------
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EF640416_Crocothemis_servilia -UGUCCUUUAGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUUA------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAAUUGACUGUCUCAU-CUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--GAAA-----UUUUAUUGGUAGACGA--GAAGACCCUAUAGAUCUUUAUAAAUAAUU---GUGU-AAUUAUU-U----UUAUAUUAACA-CUUUUAU-UCAAU---- U-AUUUAUUUU-GUUGGGGUGACA-
-AAAACAUAUAAAUAACUUUU-UUAUUUA-C---AAAACAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCUU-
CCAGAGUUCAUA-UUUACGAGG--GGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC---------------
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AF266100_Crocothemis_erythrea -UGUCCUUUAGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUUA------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAAUUGACUGUCUCAU-CUUAUUUG--UUUUAGAAUUUAAUU UUUUAGUUAAAAAGCU----
--UAAA-----UUUUAUUGGUAGACGA--GAAGACCCUAUAGAUCUUUAUAUAUAAUU---GUGU-AAUUAUU-U----UUAUAUUAGUA-UUUUUAU-UCAAU---- U-AUAUAUUUU-GUUGGGGUGACA-
-AAAACACAUAAAUAACUUUU-UUAUUUA-U---AAAACAUUGA-UUUAUG----AU-UAUUA--GAUCCAUUA-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCCCUC-
CCAGAGUUCACA-UUUACGAGG--GGGUUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EU477744_Rhodothemis_rufa -UGUCCUUUUGA----AUUUAAUAUAAGGUC--UGACCUGCCC-AGUGAUUGU-----AUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGMUU-AACGAGGAAUCGACUGUCUCAU-UUUAUUUG-UAUUAAAAAUUUAAUU UUUUGGUCAAAAAGUU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUGUAAUU---UCUG-AUUUAUU-A----UUAAAAAAAAA--UUUUUA-UUAAU---- N-ANAAAUUUU-GGUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UUAUAGA-U---UAAACAUUGA-UUUAUG----AU-UAUUG--GAUCCAUUA-UU-AGUGAUU- GUUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUUCU-
CCAGAGUUCAUA-UUUACAGAA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-G---------------------------
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EF640430_Neurothemis_fulvia -UGUCCUUUAGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUUA------AUUUAACGGC-CGCGGUACA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUUGU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UAAUAUUGGUAGACGA--GAAGACCCUAUAGAUCUUUAUAUGUUUUUA--UUUG-AUUAUA--U----UUAUAUUAGUG-UAUUUAU-UUAAG----

U-ACAUAUUAU-GUUGGGGUGACA--AGAAUAUAUAAUUAACUUUU-UUAUUUU-A---UUAACAUUGAU-UUAUG----AA-UUUAU--GAUCCGGUA-UU-ACUGAUU-
ACUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUUUUCUC-CCAGAGUUCAUA-UUUACGAGA--AAGUUUGCGACC-UC-GAUGUUGGAUUAAGAUGAUA-GUUAGGUGU-AGCCCGCU-UA-AU UU-
AUAGG-UC-UG-U-C-GACC-UU-UAACC------------------------[-????]
AB708064_Neurothemis_ramburii --GUCCUUUAGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAAUA------AUUUAACGGC-CGCGGUACA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUUAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UAAAAUUGGUAGACGA--GAAGACCCUAUAGAUCUUUAUAUAUUAUUA---UUU-AAUUA------UUUUUAUGUUAAUAUUUUUAU-AUAGU---- A-AUAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUGAACUUUU-UUAUUUU-A---UUAACAUUGA-UUUAUG----AA-UAUAU--GAUCCAGUA-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUUUUCUU-
CCAGAGUUCAUA-UUUACGAGA--AAGUUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGU-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-----------
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EF640419_Diplacodes_lefebvrei -UGUCCUUUUGA----UUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUGA------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGGAUUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UAGAAUUGGUAGACGA--GAAGACCCUAUAGAUCUUCAUAUGUAUUA---GGUU-AACCAUU-C---UUAUAUCAGUAUGUAUAAUUUAAUA-----
--U-GUAUUUU-GUUGGGGUGACG--AAAAUAUAUAAUUAACUUUU-UUAUUUA-C---UUAACAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU-
GCUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCUU-CCAGAGUUCAUA-UUUACGAGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AC AU-
AUAGG-UC-UG-UUC-GACC-UU-UAAAC-UCU---------------------[-????]
EF64042_Diplacodes_trivialis -UGUCCUUUUGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUUU------AUUUAACGGC-UGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAAUUAGCUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UAAUAUUGGUAGACGA--GAAGACCCUAUAGAUCUUUAUACAUAUUC---AUUU-AAUUAUU-U---UUAUAUUAA-UGUUUUUAUU-UGAU----- A-UUGUAUUUU-GUUGGGGUGACA-
-AAAAUAUAAAAACAACUUUU-UUAUUUU-C---AUAACAUUGA-UAUAUG----AU-UAUUU--GAUCCAUUC-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCCCUU-
CCAGAGUUCAUA-UUUACAAGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAACC-CCUU-ACA-------
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EF640414_Bradinopyga_strachani -UGUCCUUUUGG----GUUGAAUGAAAGGUC--UGACCUGCCC-AGUGAUGA------UUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAAGGUUU-CACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAACUUAAUA UUUUAGUUAAAAAGCU----
--GAAA-----UUUAUUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUUUAUUU---AAAU-ACUCAUU-U----UUAUAUUAAUA-UUAUUAU-UUAAA---- U-AAUUAUUUU-GUUGGGGUGACA-
-AAAAUAUAAAAUUAACUUUU-UUAUUUA-A---UUAACAUUGA-UUUAUG----AU-UAUUA--GAUCCACUA-UU-AUUGAUU- GCUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUUUC-
CCAGAGUUCAUA-UUUACGAAA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-U--------------
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EU054976_5075_Brachydiplax_denticauda -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNNN-----NNNNNNNAACGGC-CGCGGUAAA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGAAUG-AAAGGUUU-GACGAGGAAUUAACUGUCUCAC-CUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UUUUAUUGGUAGACGA--GAAGACCCUAUAGAUCUUUAUAAAAAUUU---AAAU-AUUUAUU-A----AUAUAUUAUUA-UAAUUAU-UUAAU---- A-UUUUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UUAUUUU-U---AAAACAUUAA-UUUAUG----AU-UAGUA--GAUCCGUAA-UU-UGCGAUU- AUUAGAACAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCUUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU GU-AUAGG-UC-UG-UUC-GAC--------------------------
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EU477717_Brachydiplax_chalybea_flavovittata -UGUCCUUUUGA----AUUUAAUAUAAGGUC--UGGCCUGCCC-GGUGAUAU-------UUUAACGGC-CGCGGUAAA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGAAUG-AAAGGUUU-AACGAGGAAUUAACUGUCUCAU-CUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UUUUAUUGGUAGACGA--GAAGACCCUAUAGAUCUUCAUAAGAUUUU---AUAU-AUUUAUU-A----AUAUAUUACUG-UAAUUAU-AUGAU---- A-UCUUAUUUU-GUUGGGGUGAUA-
-AAAAUAUAUAACUAACUUUU-UUAUUUU-U---CGAACAUUAA-UUUAUG----AU-UAAUA--GAUCCGUAA-UU-UACGAUU- AUUAGAACAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCUUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-AG-UUC-GAC--------------------------
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EU477716_Chalcostephia_flavifrons -UGUCCUUUUGA----GUUUAAUUUAAGGUC--UGACCUGCCC-GGUGAUUU------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGAAUG-AAAGGUUU-GACGAGGAAUUAACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--UAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAAAAAUUU---UUUU-AAUUAUU-U----AUAUAUUAAUG-UAAUUAA-UUUUA---- U-UUUUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAACAACUUUU-UUAUUUA-U---UUAACAUUAA-UUUAUG----GU-UAUAU--GAUCCGUUU-AU-UGCGAUU- GUUAGAGUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
UCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU
G---[-????]
EF631508_Micrathyria_aequalis -UGUCCUUUUGA----AAUUUAUAGAAGGUC--UGACCUGCCC-AGUGAUG------AAUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUC-AACGAGGAACUGACUGUCUCAU-AUUAUUUG--UUUUAGAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAGUAUU---AUUU-AUUUAUU-U----UUAAAUAAGUAUUUUUAAU-AUAAU---- A-CUUUAUUUU-GUUGGGGUGACA-
-AAAAUA-AUAAUUAACUUUU-UUAUUUA-U---UUAACAUUGA-UUUAUG----AU-UAUUA--GAUCCAUUU-UU-AGUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-
ACAUGAUCUGAG-------[-????]

EF640386_Micrathyria_atra -UGUCCUUUUGA----GGUUUAUAAAAGGUC--UGACCUGCCC-AGUGAUGA------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-AUUAUUUG--UUUUAGAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUUUU---AUUU-AUUCAUU-U----AUAUAUAAAUGUGGUUGAA-UUAUU---- A-UUGUAUUUU-GUUGGGGUGACA-
-AGAAUAUAUAAAUAACUUUU-UUAUUUA-U---UUAACAUUGA-UUUAUG----AU-UAUUA--GAUCCAUUA-UU-AGUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC---------------
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DQ021421_Micrathyria_didyma_G057 -UGUCCUUUUGA----GUUUUAUAGAAGGUC--UGACCUGCCC-AGUGAUAA---
---AUUUAACGGC-CGCGGUAUA-CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAAUUGACUGUCUCAU-AUUAUUUG--
UUUUAAAAAUUAAUUUUUUAGUUAAAAAGCU------AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAAUAUACU---AUUU-AUUUAUU------
UUUAUAUAAUUAUUUUUAA-AUUAUU---A-UUUUAUUUU-GUUGGGGUGACA--AAAAUAUAUGAAUAACUUUU-UUAUUUU-A---UUUACAUUGA-UUUAUG----AA-UAUUA--GAUC CAUUU-
UU-AGUGAUU-GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA- AUUAGGUGU-AGC-
CGCU-UA-AUUU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU--------------
AY274509_Uracis_imbuta -UGUCCUUUUGA---GUUUUAGUAUAAGGUC--UGACCUGCCC-AGUGAUUA-----UAUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGGCUGUCUCAU-UUCAUUUG--UUUUAAAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UAUGAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAUUUUU---AUUU-AAAGAUU-U----UUAUAUUAAUA-UUUUUAU-UUCAG---- A-AUAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUGAUAAACUUUU-UUAUUUU-U---AUAACAUUGA-UUUAUG----AG-UAUUA--GAUCCAUUA-AU-AGUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACGGGA---GGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGR-UC-UG-UUC-GACC-UU-UAAAU-UCUU-
ACAUGAUCUGAGUUCAA--[-????]
EF640391_Uracis_infumata -UGUCCUUUUGA----AUUUUAUAUAAGGUC--UGACCUGCCC-AGUGAUUAUA-----UUCAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-UACGAGGAACUGGCUGUCUCAU-UUCAUUUG--UUUUAAAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UUGUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAUUUUU---AUUU-AAAAUUU-A----UUAUAUUAAUA-CUUUUAC-UUAAA---- U-GUAUAUUUU-GUUGGGGUGACA-
-AAAAUACAUAAAUAACUUUU-UUAUAUU-U---AUAACAUUAA-UUUAUG----AG-UACUA--GAUCCAUUU-AU-AGUGAUU- ACUAGAAUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAA-C---------------
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DQ021420_Nannophya_pygmaea -UGUCCUUUUGA----AUUUAAUUUAAGGUC--UGGCCUGCCC-AGUGAUUA------AUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UAUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUAAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUGGUUUA---UUAA-AUUUG-U-A----ACAUAUUAAUA-CAUUUUA-UGAAA---- G-CUGUAUUUU-GUUGGGGUGACA-
-AAAAUAUAAAACUAACUUUU-UUAUUAA-U---UAACCAUUAA-UUUAUG----AA-AAUUA--GAUCCACUU-UU-AGUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCCCUU-
CCAGAGUUCAUA-UUUACAAGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EF640388_Nannothemis_bella -UGUCCUUUUGA----AUUUAAUUUAAGGUC--UGGCCUGCCC-AGUGAAUUA-----UUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAAGAACUGACUGUCUCAU-UUUAUAUG--UAUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUACAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAUGUUU---UUUA-AAACUUA-U----UUUAUAUUAUU-AUAUUUU-ACUAA---- A-UUUAUAUUUGGUUGGGGUGACA-
-AAAAUAUACAAUUAACUUUU-UUAUUUU-U---UAAACAUUAA-UUUAUG----AU-UAUUU--GAUCCGUUA-UU-AGUGAUU- AAUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCUCCUU-
UCAGAGUUCAUA-UUUACAAGG--AGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-GU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-U-------------
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EF640455_Paltothemis_lineatipes -UGUCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUUA------AUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAUGGUUU-GACGAAGAAUUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UAAUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUACAUUUUG---UUUU-AUUU-AC-U----UAUAUAAAUUU-AUUUAAU-UUAA----- A-AUGUAUUUU-GUUGGGGUGACA-
-AAAAUAUAUGCAAAACUUUU-UUAUUUA-U---AUAACAUUGA-UUUAUG----AU-UAGAC--GAUCCAUUA-UU-AUUGAUU- AAUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCUU-
CCAGAGUUCAUA-UUUACAAGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGC-AGC-CACU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UA------------------
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EF640453_Brechmorhoga_mendax -UGUCCUUUAGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUUA------AUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAUGGUUU-GACGAAGAAUUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAAAUUUUA---GGUU-AAUUUUC----UUGAUAUAAAUUUAUUUAAGCUAAUA-----
--UU-UAUUUU-GUUGGGGUGACA--AAAAUAUAUAACAAACUUUU-UUAUUUA-U---AUUACAUUGA-UUUAUG----AU-UAGGA--GAUCCAUUA-UU-AUUGAUU-
AGUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCUU-CCAGAGUUCAUA-UUUACAAGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGC-AGU-UAUU-UA-AC UU-
AUAGG-UC-UG-UUC-G-CC-UU-UAAAC-U-----------------------[-????]
Brechmorhoga_praedatrix -?????????????---??????????????--??????????-?????????---????????????-?????????-
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EF640454_Dythemis_fugax -UGUCCUUUUGA----UUUUAAUAAAAGGUC--UGGCCUGCCC-AGUGAAUA------AUUCAACGGC-CGCGGUAAA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAAGGUUU-GACGAAGAAUUUUCUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UCUUAGUCAAAAGCU----
--AAGA-----UUAUGUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAUAAUU---AUAA-UAUU---------AAAUUUAAUA-UUAAUAU-UUAAU---- U-AUUUAUUUU-GUUGGGGUGACA-
-AAAAUAUACAAUUAACUUUU-UUAUUAA-U---UUUACAUUGA-UUUAUG----AA-UAAUU--GAUCCAUCC-UU-GAUGAUU- AAUAGAGUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUUCU-
CCAGAGUUCAUA-UUUACAGAA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGC-AGC-CACU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-UCUU-ACA-------
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EU477749_Trithemis_aurora -UGUCCUUUUGU----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAAUA------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUCAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAGAAAAAU---AAAU-AAUUAUU-A----AUAUAUAAAUA-UAAUUAU-UUAUU---- U-UUCUAUUUU-GUUGGGGUGACA-
-AAAAUAUAAAUCUAACUUUU-UUAUUUA-U---AUAACAUUGA-UUUAUG----AA-UAUAG--GAUCCAUUA-CU-AGUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUCAGGUGU-AGC-CGCU-UG-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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GU323157_Trithemis_africana_U_afrLibA -NNNNNNNNNNN----NNNNNNNNNNNNNNC--UGACCUGCCC-AGUGAUGA---
---AUUUAACGGC-CGCGGUAUA-UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAAGAAUUGACUGUCUCAU-UUUAUUUG--
UUUUAAAAUUUAAUUUUUUAGUUAAAAAGCU------AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAAAAUUAU---AUUU-AAUUAUU-A----UUAUAUAAAUA-
UAAUUAU-UUAUU----U-UUUUAUUUU-GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-C---AUAACAUUAA-UUUAUG----AU-UAUAU--GAUCCAUUA-UU-AUUG
AUU-AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUGAUA-AUUAGGUGU-AGC-CGCU- UA-
AUUU-AUAGG-UC-UG-UUC-GACC-UU-UAA---------------------------
EF640456_Trithemis_arteriosa -UGUCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUUA---
---AUUUAACGGC-CGCGGUAUA-CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--
UUUUAAAAUUUAAUUUUUUAGUUAAAAAGCU------AAAA-----UUUCAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAGAAAUAU---AUUU-AAUUAUU-A----UUAUAUAAAUA-
UAAUUAU-UUAUU----U-UUCUAUUUU-GUUGGGGUGACA--AAAAUAUAAAUAUAACUUUU-UUAUUUA-U---UUAACAUUGA-UUUAUG----AA-UAUAU--GAUCCAUUA-UU-AGUG
AUU-AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUCAGGUGU-AGC-CGCU- UG-
AUAU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-CUUU-AAAAA--------------
EF640409_Perithemis_tenera -UGUCCUUUUGA----GUUUAAUUUAAGGUC--UAGCCUGCCC-AGUGAUAUCA----UUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGAAUG-AAAGGUUU-GACGAGGAAUUGACUGUCUCAU-UUUAUUUG--UAUUAAAAUUUAAUU UUUUGGUCAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAGUUGA---AUUU-AAUCAGC-U----UUAUAUUAUUA-UGAUUAU-UGUUA---- G-CUGUAUUUU-AUUGGGGUGAUA-
-AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---UUUACAUUGA-UUUAUG----AA-UAUUA--GAUCUUUUA-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCUU-
CCAGAGUUCAUA-UUUACAAGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-UGCU-UA-AU UG-AUAGG-UC-UG-UUC-GACC-UU-UAACC-UCCUUACA-------
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EU054947_55047_Perithemis_intensa -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNNNNNN-NNNNNN-----NNNNNNNAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGAGGCUGGAAUG-AAAGGUUU-GACGAGGAAUUGACUGUCUCAU-UUUAUUUG--UAUUAAAAUUUAAUU UUUUGGUCAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAGUUGA---AUUU-AAUCAGU-U----UUAUAUUAUUA-UGAUUAU-UGUUG---- A-CUGUAUUUU-AUUGGGGUGAUA-
-AAAAUAUAUGAUUAACUUUU-UUAUUUA-U---UUUACAUUGA-UUUAUG----UA-UAUUA--GAUCUUUUA-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCUU-
CCAGAGUUCAUA-UUUACAAGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-UGCU-UA-AU UG-AUAGG-UC-UG-UUC-GAC--------------------------
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EF631577_Palpopleura_lucia -UGUCCUUUAGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUGA------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGGCUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUCAAAAAGCU----
--UAAA-----UAUAAUUGGAAGACGA--GAAGACCCUAUAGAUCNUUAUAUUUAAUU---AAUU-AUUUAUU-U----UUAUAUCAGUA-UUUUUAU-UUGAU---- U-AAUUAUUGU-GUUGGGGUGACN-
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CCAGAGUUCAUA-UUUACGAGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCN-UA-A-
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DQ021422_Perithemis_lais -UGUCCUUUUGG----UUUUAUUUUAAGGUC--UGGCCUGCCC-AGUGAAUA-------UUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUCUUAAUAGGAGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAA-UUUAUUUG--UAUUAAAAUUUAAUU UUUUGGUUAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAGUUUU---GUUU-AAAUGAU-U----UUAUAUUAAUG-CAUUUAA-UUUUU---- G-CUGUAUUUU-GUUGGGGUGACA-
-AAAAUAUAAGAUUAACUUUU-UUAUUUA-A---UUAACAUUGA-UUUAUG----AU-UAUUA--GAUCCAUUA-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCUU-
CCAGAGUUCAUA-UUUACAAGA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-UGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EU477757_Diastatops_pullata                         -UGUCCUUUAUG---AGUUUAAUUGAAGGUC--UGACCUGCCC-GGUGAUAGA-----GUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUAACUGUCUCAC-UUUAUUUG--UAUUAAAAUUUAAUU UUUUGGUUAAAAAGCU----
--AAAA-----UAAUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAGUUCU---ACAU-AAUUUUA------UUUAUAUUAUAAUAUUUAU-UUAAU---- G-CUAUAUUUC-GUUGGGGUGACG-
-AAAAUAUAUAAUUAACUUUU-UCAUUUA-U---AGAACAUUGA-UUUAUG----AU-UAUUA--GAUCCAUUA-UU-AUUGAUU- GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUUUUCCU-
CCAGAGCUCAUA-UUUACGGGA--AAGUUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-GAUAGGUGU-AGU-CGCU-UA-UU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EF631596_Zenithoptera_fasciata                      -NNNNNNNNNNN----NNNNNNNNNNNNNN---NNNNNN-NNN-NNNNNN-------U-UUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAAUU------------------------------------------------
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DQ021435_Neodythemis_afra                           -UGUCCUUUUGA----AAUUUAUUGAAGGUC--UGACCUGCCC-AGUGAAUA------AUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAGGGUUU-AACGAGGAACUAACUGUCUCAA-CUUAUAUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUACAUAUAUUU---AUUU-AACUAUU------UUUAUAUCAAUAUUGUUAU-AUUAG---- U-UUGUGUUAU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UUAUUUA-A---AGACCAUUAA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACGGGAUGGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUU-AUUAGGUGU-AGC-CGCU-UA-AU GU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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Selysiothemis_nigra                                 ---- -------------------------------------------------------------------------------
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EF640448_Trithetrum_navasi                          -UGUCCUUUAGA----UUAUAAUUGAAGGUC--UGACCUGCCC-AGUGAUAA------UUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAAUUAGCUGUCUCAU-UUUGUUUG--UUUUAAAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUUCU---AUUU-A-UUUGU-U---UAUAUAUUAAUA-UUAUUAU-UUGGA---- A-UUAUAUUUU-GUUGGGGUGACA-
-AGAAUAUAUGAUUAACUUUU-UUAUUUA-U---UUAACAUUGA-UAUAUG----AU-UUUUU--GAUCCUUUA-UU-AGUGAUU- AAUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUCAGGUGU-AGU-CGCU-UG-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-CCUU-ACA-------
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EF640389_Porpax_risi                                -UGGCCUUUUGG----GAUUAAUAUGAGGUC--UGACCUGCCC-AGUGAUUA------AUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAAUCGACUGUCUCAU-UUUAUUUG--UAUUAAAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAUUUAA---A-AU-AUAUUAU-U---AUUAUAUUAAUG-AUUUUUA-UUUUU---- U-AUAUAUUUU-GUUGGGGUGACA-
-AAAAUAUAAAAUUAACUUUU-UUAUUUA-C---AAAACAUUGA-UUUAUG----AU-UAUUA--GAUCCAUUA-UU-AUUGAU
U-GCUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUUCU-CCAGAGUUCAUA-UUUACGGAA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-
AUAU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-CUU-ACCA----------------[-????]
DQ021436_Micromacromia_camerunica                   -UGUCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGACGA------UUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAAUUAGCUGUCUCAC-UUUGUUUG--UUUUAAAAUUUAAUU UUUUAGUAAAAAGGCU----
--AAAA-----UAAUGUUGGAAGACGA--GAAGACCCUAUAGAUCUUUACAUAGUGUU---GUUU-AAACAUU-----UAUAUAUGUAUAUAGUUUAU-AUAAC---- U-UUAUGUUUU-GUUGGGGUGACA-
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CCAGAGAUCAUA-UUUACGGGA-UGAGUUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU AU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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DQ021434_Neodythemis_preussi                        -UGUCCUUUUGA----AUUUAAUAUAAGGUC--UGACCUGCCC-AGUGAUGAA-----AUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-GACGAGGAACUGACUGUCUCAA-UUUAUAUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUCUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUACAUAAUUUU---AUUU-AAUUUUU------UAUAUAUUAAUAUUAUUAA-AUGAU---- U-UUAUGUUGU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UUAUGUA-G---UUAACAUUGA-UUUAUG----AU-UAUUA--GAUCCAUUA-UU-AUUGAUU- AAUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCC-
CCAGAGUUCAUA-UUUACGGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUU-AUUAGGUGU-AGC-CGCU-UA-AU GU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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DQ021437_Neodythemis_klingi                         -UGUCCUUUUGU----AUUUAAUGGAAGGUC--UGACCUGCCC-AGUGAUGA------GUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-GACGAGGAACUAACUGUCUCAA-CUUAUAUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUCUAUUGGAAGACGA--GAAGACCCUAUAGAGCUUUAUAUAAAAUU---AUUU-AAUUGU----UUAUAUAUUAAUAA-UAUUAAAUAAUUUU---
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DQ021440_Hadrothemis_infesta -UGUCCUUUAGG---GUUAUAAUUUAAGGUC--UGACCUGCCC-AGUGAUAU-------UUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAUUCUUUUAAUAGAGGGCUGGAAUG-AAGGGUUU-AACAAGGAAUUGACUGUCUCAU-UUUAUUUG--UUUUAGAAUUUAAUU UUUGAGUUAAAAAGCU----
--UAAA-----UAUUAUUGGAAGACGA--AAAGACCCUAUAGAGCUUUACAUAAAACA---UUAU-UGAUUAU-----UUUUAUAUAAUUAUUUUUAA-UUUGU---- G-UUGUGUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAAUAACUUUU-UUAUUUA-A---AUAACAUUGA-UUUAUG----AA-UAUUG--GAUCCAUUA-UU-AUUGAUU- AAUAGAACAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
UCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAAAAUA-GUUAGGUGU-AGC-C---------
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DQ021438_Thermorthemis_madagascariensis -UGUCCUUUUGA--GAAAUUAAUUGAAGGUC--UGGCCUGCCC-GGUGAAUUA-----UUUUAACGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAAUUAACUGUCUCAU-AUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
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CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGACAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-UCUU-ACAU------
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DQ021439_Agrionoptera_insignis -UGUCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUAA------UUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUACAUAUUUUU---AUUU-AAAUAUU------UAUAUAUCAAUAUUUUUAU-UUUAA---- A-AUGUGUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UUAUUUA-C---AUAACAUUGA-UUUAUG----AU-UAUUA--GAUCCAAUC-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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DQ021441_Cratilla_metallica -UGUCCUUUUGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUAU------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUC-AACGAGGAAUUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UGUUAUUGGAAGACRA--GAAGACCCUAUAGAGCUUUACAUAAUUUU---AAUU-AGAUUUC-AU--AUAAAUAUAAAUAUCUCUAG-UUAUU---- A-UUAUGUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UUAUUUA-U---UUAACAUUAA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- ACUAGAUUAAGUUACCUUAGGGAUAACAGCUGUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EF640435_Pseudoleon_superbus -UGUCCUUU-GA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUUA------UUUCAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAAGGCUGGAAUG-AAAGGUUU-GACGAGGGACUGACUGUCUCAC-UUUAUUUG--UAUUAGAAUUUAAUU UUUUAGUCAAAAAGCU----
--AAAA-----UUUUGUUGGUAGACGA--GAAGACCCUAUAUAUCUUUAUACUUAAUU---UUAC-CAUUAUU-G---UUAUAUAAAUAC-UAUGGUUGGAUA-----
--AAGUAUUUU-GUUGGGGUGACA--AAAAUAUAUGAAUAACUUUU-UUAUUUA-C---AUAACAUUGA-UUUAUG----AU-UAUUA--GAUCCAUUA-UU-GUUGAUU-
AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCUU-UCAGAGUUCAUA-UCAAAAAGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUGGGUGU-AGC-CGCU-CA-AU GU-
AUAGG-UC-UG-UUC-GACC-UU-UAAC--------------------------[-????]
DQ021444_Orthemis_cultriformis -UGUCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUGA------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUACAUGUAUUU---AAUU-AGAUAUU------UUUAUAUUAAUAUUUUUAU-UUAAU---- U-UCGUGUUUU-GUUGGGGUGACA-
-AAAAUAUAUAUUUAACUUUU-UUAUUUA-U---UUAACAUUGA-UAUAUG----AU-UAUUA--GAUCCAUUA-UU-AGUGAUU- GCUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-NCUU-ACAU------
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EF640402_Orthemis_ferruginea -UGGCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUGA------AUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUACAUAUUUUU---AAUU-AAAUAUU------UUUAUAUUAAUAUUUUUAU-UUAAU---- A-UUAUGUUUU-GUUGGGGUGACA-
-AAAAUAUAAAUAUAACUUUU-UUAUUUA-U---UUAACAUUGA-UAUAUG----AU-UAUUA--GAUCCAUUC-UU-AUUGAUU- GUUAGAACAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-AGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UGCUG-UUC-GACC-UU-UA------------------
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DQ021413_Orthetrum_albistylum -UGGCCUUUUGA----AUUUAAUAUAAGGUC--UGACCUGCCC-AGUGAUAA------UUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUCUAUUGGUAGACGA--GAAGACCCUAUAGAGCUUUACAUUAAUUU---AUUU-UGAUAUU------UUUAUAUUAAUAUUUCUAA-UUAAA---- U-UUAUGUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUAUU-UUAUUUA-A---UUAACAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUCCU-
CCAGAGUUCAUA-UCUACAGGA-UGGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAA-UCUU-ACAU------
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EF640403_Orthetrum_pruinosum                     -UGGCCUUUUGA----AUUUAAUAUAAGGUC--UGACCUGCCC-AGUGAUGA------UUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-CACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUUAUUGGUAGACGA--GAAGACCCUAUAGAGCUUUACAUGAACUU---AAUU-AAAUAUU------UUUAUAUUAAUAUUUUUAU-UUAUC---- U-UUAUGUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UUAUUUA-C---UUUACAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUC-UU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-CCU------------
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DQ021445_Orthetrum_coerulescens                  -UGGCCUUUUGA----AUUUAAUAUAAGGUC--UGACCUGCCC-AGUGAUAA------UUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAGA-----UUUUAUUGGCAGACGA--GAAGACCCUAUAGAGCUUUACAUUUAAUU---AUGU-AAAUGUU------UUUAUAUUAAUAUUUUUAU-UUAA----- UUAUGUGUUUU-GUUGGGGUGACA-
-AGAAUAUAUAAGUAACUUUU-UUAUUUAAU---UAACCAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-CGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-UGCU-UA-AU UA-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-CA-------------
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DQ021442_Lyriothemis_elegantissima               -UGUCCUUUAGA----AAUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUGA------UUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAAGGUUU-GACGAGGAACUGACUGUCUCAU-UUUAUAUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UACUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAGAAGG---GUAU-GAAAAGG-------UAUAUAUUA-UAUUUUUA-UAUAU---- U-UCUAUAUUUAGUUGGGGUGACA-
-AAAAUAAAUAACUAACUUUU-UUAUUUA-U---UAACCAUUAA-UUUAUG----AA-UAUUA--GAUCCGCUA-UU-GGUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-SRCC-UU-UAAAU-UCUU-ACAU------
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EU477728_Ladona_fulva                            -UGUCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUGA------AUUUAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUAUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUACAUAUGUUA---GUUU-AAUUGUU-------UUUAUAUUAAUAUUUUAU-AUUAA---- C-UUAUGUUUU-GUUGGGGUGACA-
-AAAAUAUAAGUAUAACUUUU-UUAUUUA-U---UUAACAUUGA-UUUAUG----AA-UAACU--GAUCCAUUA-UU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU------
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EF631536_Ladona_julia_voucher_JW_DNA_OLJ         -UGUCCUUUUGA----AUUUAAUGGAAGGUC--UGGCCUGCCC-AGUGAUGA------AUUUAACGGC-CGCGGUAUA-
UUGCCCGUGCAAAGG-UAGCANACUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAAGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAACUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUACAUGUACUG---AUUU-AAAUAAA-------AUUAUAUUAGUAUUUUAU-AUUAG---- U-UUGUGUUUU-GUUGGGGUGACA-
-AAAAUAUAAGCAUAACUUUU-UUAUUUA-U---UAACCAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUNGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-GUUAGGUGU-AGC-CGCU------
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EU477730_Ladona_Platetrum_depressa               -UGUCCUUUUGA----AUUUAAUGGAAGGUC--UGACCUGCCC-AGUGAUGA------AUYUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUAGCUGYCUCAU-UUUAUUUG--UUWUAAAAUUKAAUU UUUUAKUCAWAAAGCU----
--AARA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUACAUAAAUUU---AUUU-AAAUGGU-------UUUAUAUUAUUAUUUUAU-AUUAA---- U-UUGUGUUUUGGUUGGGGUGACA-
-AAAAUAUAAAUAUAACUUUU-UUAUUUA-U---UUAACAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-UUUAGG-----------------
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EF640406_Plathemis_subornata                     -UGUCCUUUUGA----GUUUAAUUAAAGGUC--UGACCUGCCC-AGUGAUGA------UUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAGAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUGAAUUA---AUAU-AAUUAUU------UAUAUAUUAUUAUAUUUAU-AUUAA---- U-UUGUAUUUU-GUUGGGGUGACA-
-AAAAUAUAAAAUUAACUUUU-UUAUUUA-U---UUUACAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUUCU-
CCAGAGUUCAUA-UUUACAGAA--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUA-------------------
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EF631552_Plathemis_lydia_OPLd                    -UGUCCUUUUGA----GUUUAAUUAAAGGUC--UGACCUGCCC-AGUGAUGA------UUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAGAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAACUUA---AUAU-AAUUAUU------UAUAUAUUAUUAUAUUUAU-AUUAA---- U-UUGUAUUUU-GNUGGGGUGACA-
-AGAAUA-AAAAUUAACUUUU-UUAUUUA-U---UUUACAUUGA-UUUAUG----AA-UACUA--GAUCCAUUA-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUUCU-
CCAGAGUUCAUA-UUUACAGAA--GGGCUUGCGACC-UC-CAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-CGCU-UA-AU UU-AUAGG-UC-UG-UUC-GAC--UU-UAAAU-UCUU-ACAU-
GAUCUGAG------[-????]
DQ021418_Libellula_quadrimaculata                -UGUCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAGGA------GUUCAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUAACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUACAUGAAAUU---AUUU-AAAUAUU------UAUAUAUCAAUAUUUUUAG-GUUUU----
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U-UUGUGUUCU-GUUGGGGUGACA--AAAAUAUAUAUUUAACUUUU-UUAUUUA-C---AUAACAUUAA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU-
AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-CCAGAGUUCGUA-UUAACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-AGCU-UA-AU UU-
AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UACGGACAU---------------[-????]
Libellula_Syntetrum_angelina                    -UGUCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAGGA------GUUCAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGGGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUCUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUACAUGAAAUU---AUCU-AAAUAUU------UAUAUAUUAAUAUUUUUAG-AUUAU---- U-UUUUGUUUU-GUUGGGGUGACA-
-AAAAUAUAUAUUUAACUUUU-UUAUAUA-C---AUAACAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAA-----------
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Libellula_Eolibellula_semifasciata              -UGUCCUUUAGA----GUUAAAUUGAAGGUC--UGACCUGCCC-AGUGAGGA----AUCUUCAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUCUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUACACGAAAUU---ACUU-AAAUAUU------UAUAUAUCCUUAUUUUUAGGUUUAU---- U-UCGUGUUUU-GUUGGGGUGACA-
-AAAAUAUAUAUUUAACUUUU-UUAUUUA-U---AUAACAUUGA-UAUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAA-----------
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EF640401_Libellula_Belonia_saturata             -UGUCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAGGA------GUUCAACGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUACAUAAAAUU---UUAU-AAAUAUU------UAUAUAUUAAUAUUUUUAU-ACUUU---- U-UUAUGUUUU-GUUGGGGUGACA-
-AAAAUAUAUAAUUAACUUUU-UUAUUUA-A---AUUACAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-
CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-AUUAGGUGU-AGC-AGCU-UA-AU UU-AUAGG-UC-UG-UUC-GACC-UU-UAAAC-UCUU-ACAUA-----
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AF195727_Libellula_Eotainia_composita           -UGUCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAGGA------GUUCAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUCUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUACAUAAUAUU---AUAU-AAAUACU------UAUAUAUUAAUAUUUUUAU-AUUUG---- U-UUAUGUUUU-GUUGGGGUGACA-
-AAAAUAUAUAUUUAACUUUU-UUAUUUA-U---AUAACAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAA-----------
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Libellula_Neotetrum_pulchella_OLP               -UGUCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAGGA------GUUCAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUC-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUCUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUACAUAACUUU---AUUU-AAAUAUU------UAUAUAUUAAUAUUUUUAU-AUUCU---- U-UUGUGUUUU-GUUGGGGUGACA-
-AAAAUAUAUAUUUAACUUUU-UUAUUUG-C---AUAACAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAA-----------
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AF037182_Libellula_Holotania_comanche           -UGUCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAGGA------UUUUAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUCUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUACAUAAUUUU---AUUU-AAAUAUU------UAUAUAUUAAUAUUUUUAU-AUUUC---- U-UUGUGUUUU-GUUGGGGUGACA-
-AAAAUAUAUAUUUAACUUUU-UUAUUUA-G---AUAACAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAA-----------
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Libellula_Holotania_auripennis                  -UGUCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAGGA------UUUCAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUCUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUACAUAAUUUU---AUUU-AAAUAUU------UAUAUAUUAAUAUUUUUAU-AUUUC---- U-UUGUGUUUU-GUUGGGGUGACA-
-AAAAUAUAUAUUUAACUUUU-UUAUCUA-C---AUAACAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUA-CU-AUUGAUC- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAA-----------
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Libellula_Holotania_axilena                     -UGUCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAGGA------UUUCAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUCUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUACAUAAUUUU---AUUU-AAAUAUU------UAUAUAUUAAUAUUUUUAU-AUUUC---- U-UUGUGUUUU-GUUGGGGUGACA-
-AAAAUAUAUAUUUAACUUUU-UUAUCUA-C---AUAACAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUA-UU-AUUGAUU- AUUAGACUAAGUUACCUUAGGGAUAACAGC-GUAA-----------
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Libellula_Holotania_luctuosa   -UGUCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAGGA------UUUCAACGGC-CGCGGUAUA-
CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--UUUUAAAAUUUAAUU UUUUAGUUAAAAAGCU----
--AAAA-----UUCUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUACAUAAUUUU---AUUU-AAAUAUU------UAUAUAUUAAUAUUUUUAU-AUAUA---- U-UUGUGUUUU-GUUGGGGUGACA-
-AAAAUAUAUAUUUAACUUUU-UUAUUUA-C---AUAACAUUGA-UUUAUG----AA-UAUUA--GAUCCAUUA-CU-AUUGAUU- AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAA-----------
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EF631501_Aethriamanta_rezia_69   -UGUCCUUUUGA----AUUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUUU---
--AUUUUAACGGC-CGCGGUAUA-UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-GACGAGGAACUGCCUGUCUCAU-UUUAUUUG--
UUUUAAAAUUUAAUUUUUUAGUCAAAAAGCU------AAAA-----UAAUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUACAUG-UA---AUUU-AAUUAUU------
UUUAUAUUAAUAUUUUUAUGUUUGU----G-UUGUAUUUU-GUUGGGGUGACA--AGAAUAAUAAU-UAACUUUU-UUAUUUA-U---UUUACAUUGA-UUUAUG----AA-UAUUA--GAUC
CAUUU-UU-AUUGAUU-AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-CCAGAGUUCAUA-UUUACAGGA-UGGGCUNGCGACC-CC-GAUGN-GGA-UAAGA-------------
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Tetrathemis_corduliformis_   -?????????????---???????????????--??????????-?????????---????????????-?????????-?????????
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Diplacina_ismene_   -?????????????---???????????????--??????????-?????????---????????????-?????????-
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Erythemis_vesiculosa_   -?????????????---???????????????--??????????-?????????---????????????-?????????-?????????
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Nannophyopsis_clara_   -?????????????---???????????????--??????????-?????????---????????????-?????????-?????????
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Oligoclada_amphinome_   -?????????????---???????????????--??????????-?????????---????????????-?????????-?????????
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Idiataphe_sp_HOL_2010_   -?????????????---???????????????--??????????-?????????---????????????-?????????-?????????
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Atoconeura_sp_HOL_2010_   -?????????????---???????????????--??????????-?????????---????????????-?????????-?????????
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Elga_leptostyla_ -?????????????---??????????????--??????????-?????????---????????????-?????????-?????????
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Fylgia_amazonica_ -?????????????---??????????????--??????????-?????????---????????????-?????????-?????????
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EF631571_Hemistigma_albipunctatum_42 -UGUCCUUNAGA----AUUUAAUUUAAGGUC--UNACCUGCCC-AGUGAUGA---
---AUUUNACGGC-CGCGGUAUA-CUGACCGNGCAAAGG-UAGCAUANUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACGGGCUGUCUCAU-UUUAUUUG--
UUUNAAAAUUUAAUUUUUUAGUCAAAAAGCU------AAAA-----UUUAAUUGGAAGACGA--GAAGNCCCUAUAGAUCUUUAUAUUUAAUU---AAUU-AUUUAUU------
UUUAUAUCAGUAUUUAUAU-UUAAU----U-AACUAUUGU-GUUGGGGUGACA--AAAAUAUAUAAAUAAUUUUU-UUAUUUA-C---AUAACAUUGA-UUUAUG----AA-UAUCA--GAUC CAUUA-
UU-AUUGAUU-GUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCUC-CCAGAGUUCAUA-UUUACGAGG--GGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA- AUUAGGUGU-AGC-
CGCU-UA-CGGC-G---
Porpacithemis_sp_ -?????????????---??????????????--??????????-?????????---????????????-?????????-
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Thermochoria_equivocata_ -?????????????---??????????????--??????????-?????????---????????????-?????????-?????????
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DQ021433_Malgassophlebia_bispina_F110 -UGGCCUUUUGA---AAUUUUAUUGAAGGUC--UGGCCUGCCC-AGUGAUAA---
---UUUUAACGGC-CGCGGUAUA-UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUGACUGUCUCAU-UUUAUUUG--
UUUUAAAAUUUAAUUUUUUAGUUAAAAAGCU------AAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAUAAUUU----AUUU-AAUUGUU------
UUUAUAUUAAUGUGAUUAU-UUUAA----A-UUUUAUUAU-GUUGGGGUGACA--AAAAUAUAUAAAAAACUUUU-UGAUGUU-C---AUA-CAUUGA-UAUAUG----AU-UAUUA--GAUC CAUUC-
UU-AGUGAUU-GUUAGAUAAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUGAUA- AUUAGGUGU-AGC-
CGCU-UA-AUUU-AUAGG-UC-UG-UUC-GAC-----------------------------------
Micromacromia_zygoptera_ -?????????????---??????????????--??????????-?????????---????????????-?????????-
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Argyrothemis_argentea_ -?????????????---??????????????--??????????-?????????---????????????-?????????-?????????
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                              AB708163_Pseudothemis_zonata_RF1669              -NGUCCUUUUGA----AUUUAAUUUAAGGUC--UAGCCUGCCC-AGUGAAUA---
---UUUUAACGGC-CGCGGUAUA-CUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-CACGAGGAAUAAACUGUCUCAU-UUUAUUUG--
UUUUAAAAUUUAAUUUUUUAGUUAAAAAGCU------AAAA-----UAUUGUUGGAAGACGA--GAAGACCCUAUAGAUCUUUAUAGGGACUU---AUUU-AAAUAUU------
UAUAUAUUAAUGUAUUUAC-AUGAU----U-CUCUAUUUU-GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUA-A---UUAACAUUGA-UUAAUG----AA-UAUAU--GAUC CACUA-
UU-AGUGAUU-AUUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUAAUA-ACU AGGUGU-AGC-
CGCU-UA-GUUU-AUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-------------------
                              EU477755_Oxythemis_phoenicosceles_2              -UGGCCUUUUGG----AGUUAAUUGAAGGUC--UGACCUGCCC-AGUGAUGA---
---AUUUAACGGC-CGCGGUAUA-UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGAAUG-AAAGGUUU-AACGAGGAACUAACUGUCUCAU-UUUAUUUG--
UUUUAAAAUUUAAUUUUUUAGUUAAAAAGCU------AAAA-----UUUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUACAUGGGCUA---AAUU-AAAUAUU------UUUAUAUUAAUA-
GUUUAU-UUUUG----U-UUGUGUUUU-GUUGGGGUGACA--AAAAUAUAUAUAUAACUUUU-UUAAUUA-U---UUAACAUUGA-UUUAUG----AU-UAUUA--GAUCCAUUA-UU-AUUGAUU-
GAUAGAUUAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCC-CCAGAGUUCAUA-UUUACGGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAUUAUA-AUUAGGUGU-AGC-CGCU-UA-GU CA-
AUAGG-UC--------------------------------------------
Olpogastra_lugubris_                  -?????????????---??????????????--??????????-?????????---????????????-?????????-?????????
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                              EU477748_Misagria_parana                         -UGUCCUUUUGA----AUUUAAUUUAAGGUC--UGACCUGCCC-AGUGAUUA---
-UUUUUUAACGGC-CGCGGUAUA-UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUAGAGGGCUGGUAUG-AAAGGUUC-AACGAAGAACUGACUGUCUCAU-UUUAUUUG--
UUUUAAAAUUUAAUUUUUUGGUUAAAAAGCU------AAAA-----UAUUAUUGGAAGACGA--GAAGACCCUAUAGAUCUUUACAUAAUUGU---AUUU-AGUUAUU------
UAUAUAUUAAUAUGUCUAU-UUGAG----U-UUAUGUUUU-GUUGGGGUGACA--AAAAUAUAUAAUUAACUUUU-UUAUUUU-C---AUAACAUUGA-UUUAUG----AA-UAUUA--GAUC CUUUA-
UU-AUUGAUU-AUUAGAUCAAGUUACCUUAGGGAUAACAGC-GUAAUCCUCCU-CCAGAGUUCAUA-UUUACAGGA-UGGGCUUGCGACC-UC-GAUGUUGGAUUAAGAGAAUA- GUUAGGUGU-AGC-
CGCU-UA-AAUU-GUAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-ACAU--------------
Unaligned                                  ---- ------444444444444------------------------5555555555---------------------
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FJ443020_Ephemerella_sp                    ---- ------------------------GUC--UUACCUGCCC-ACUGAAAC------UUUUAAGGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGCCUCUUAAUUAGAGGCUGGGAUG-AAAGGUGG-GACGAGGUACAAACUGUCUCCA?????????????????????????? UUUUAGUUAAAAGGCU---
---AAAA-----UAAUAUUAAAGGACGA--GAAGACCCUAUAGAACUUUAUAAAUUAGGCUUAAGCCUUUAGGAAAA-UAUGUUACUU------------- AAAGCUAAAUUUUAUUAU-
GUUGGGGUGACG---GGGUAAUAAAUUAACUUACCUUAUG------UAAAACAUAAU--AAGUG----AA-UAAAG--GAUCCAUAA-AU-AAUGAAU- AAAAAAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUUUU-UGAGAGUUCAUA-UCGAUAAG-A-GGGGUUGCGACC-UC-GAUGUUGGAUUAAAGGUAA--UUUUAGGUGCAGCCGCUU-AG-AG UU--GGGG-UC-UG-UUC-GAC------------
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GQ118257_Paraleptophlebia_vaciva           --CGCCUUUAGA-----AUUUAUAUAAGGUA--UAACCUGCCC-ACUGAUGA------AUUGAAGGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUCUAAUUAAAGGCUGGCAUG-AAUGGUUG-GAUGAGGUACUGACUGUCUCAG?????????????????????????? UUUUAGUCAAAAGGCU---
---AAAA-----UAUAAUUAAAGGACGA--GAAGACCCUAUAGAGCUUUAUAAAUUUAUACAAGUAAAAUUAGAUGUUGAUUGUUAU--------------- UGGUAGUAAUUUAUUUU-
GUUGGGGUGACA---AAGAAAUAAAAAAACUUUCUUUUUUAA---AAACAAUAAUGAUUGAUUA---------AAG--GAUCCGUUU-UU-AGCGAUU- AAAAGAUUAAGUUACCUUAGGGAUAACAGC-
AUAAUCUUCUU-UGAGAGUUCUAA-UCGACAAG-A-AGGGUUGUGACC-UC-GAUGUUGGAUUAAGAUUAA--UUUAAAAUGCAGACGUUU-UA-AA GU--UGGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU--------------[-????]
AY749766_Anthopotamus_sp_EP022_16S         -UCGCCUUCUGA-----AUAAAUAAAAGGUC--UAGCCUGCCC-ACUGAUAU------GUUGAAGGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUCUAAUUAAAGGCUGGUAUG-AAAGGUUG-AACGAGGUAUAAGCUGUCUCAU?????????????????????????? UUUUAGUGAAAAGGCU---
---GAAA-----UAUUAUUAUAGGACGA--GAAGACCCUAUAGAGCUUAAUAAUUAUUUUAAAUAAGAGUAUAGGAGAAGUUUAAUU-------------- AUUUAAAUAAAUUAUUUU-
GUUGGGGUGACA---AGAAAAUAAUUUAACUUUUCUUAAAUA-AAAUCAUAAAUUUA-UGAAUU---------UAU--GAUCCAUUA-UU-AAUGAUU- AAAAGAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUUUU-UAAGAGUUCUAA-UCGAUAAA-A-AGGGUUGCGACC-UC-GAUGUUGGACUAAGGGUAA--UUUUAGGUGUAGAUGUUU-AA-AA UU--UAGG-UC-UG-UUC-GACCCUU-UAAGA-
ACCC-UUAC-C-------------[-????]
AY749763_AY749641_Caenis_sp                -UAGCUUUUUGGU-----UUUNUAGAAGGUA--UAGCCUGCCC-ACUGAAAA------UUUGAAGGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AGUAGUCUUUUAAUUGGAGGCUGGCAUG-AAGGGUUG-CACAUAACUGGAGCUGUCUCAU?????????????????????????? UUUAGGUGAAAAGGCC-
-----UAAA-----UAUAGUAGGGGGACGA--GAAGACCCUAUAGAGCUUUACUAAUGGUGUUGUUAGGCCUUUAGAAGAAUUUUAG--------------
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UUUAACAAUCGGUUAGUUAA-AUUGGGGUGAUU----GGAAAAUAAUAAACUUUUCUUAAAAU----AACAAUUAUUU-UUGGAAUUAU----------GAUCCUUUA-UU-AUGGAUU-
UUAAGAUCAAGUUACCUUAGGGAUAACAGC-GUAAUUCUUUU-GGAGAGUUCUUA-UCGAUAAA-A-GAGUUUGCGACC-UC-GAUGUUGGACUAAGAAUAGU-AUUAGGGGCAGCCCCUUA-AA-AA AC--
UAGG-UC-UG-UUC-GACC-UU-UAAAU-UCUU-AC-----------------[-????]
Ephemera_orientalis_genome -UCGUCUUUUGU-----GUAUAUAGAAGAUA--UAACCUGCCC-ACUGAAGA----AGGUUGAAGGGC-CGCGGUAUU-
GUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUCUAAUUAAAGGCUGGCAUG-AAUGGUUG-GACGAGGUAAAAGCUGUCUCAU?????????????????????????? UUUUAGUGAAAAGGCU---
---AAAA-----UGAAGUUGUAGGACGA--GAAGACCCUAUAGAGCUUAAUAAUGUAAUUAAUAUGAAAUUUAGUAAAGGUUUUAU--------------- UAUUAAUAAAGUUAUUUU-
GUUGGGGUGACA---GGAAAAUAAGUAAACUUUUCUAUAAAA-----GUGACACUAA-UGAGUGAAAAUAU-------GAUCCAUUA-UU-AAUGAUU- AUAAGAUCAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUUUU-UGAGAGUUCUUA-UCGACAAA-A-GGGUUUGCGACC-UC-GAUGUUGGACUAAGAAAAU--AUUUGGGUGUAGAUGUUC-AA-AU GU--UAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU-GAUCUGAGUUCAG-[-????]
AY749764_GQ118253_Callibaetis_sp ---GCUCAAAGC-----AUGCUUUUUGAGUA--CCGCCUGCCC-AGUGAUCA------AUUUAACGGC-CGCAGUAUA-
CUGACUGUGCAAAGG-UAGCAUAAUA-ACUUGUCUUUUAAUUGAAGGCUGGCAUG-AAUGGCAC-CACGUAGUAAUCCCUGUCUCUU?????????????????????????? UUUAAGUUAAAAAGCU---
---UAAA-----UUUACACGCAGGACGA--GAAGACCCCGUAGAUCUUUAUAUCAAAAGUUUAUUUAUAUAGAGGCUAAAAAUUUA--------------- AAUCGUUACCGAUAUUUU-
AUUGGGGUGAUA---AGAAGUCUUAAACACUUCUUGAAUAAA----CAAUUAUAGUA-GGCUAUUU-----------GAUCCGG-U-U--ACCGAUU- AAAAAAAUAAGUUACCUUGGGGAUAACAGC-
GUAAUCUACCC-UUAGAGUUCUUA-UCAAAAGG-U-AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUACC--UUUAGUGAGUAGUAAUAC-UA-GA AG--GGGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]
HM003975_Callibaetis_ferrugineus_hageni -UCGCUCAAAGC-----AUGCUUUUUGAGUA--CCGCCUGCCC-AGUGAUCA------AUUUAACGGC-CGCAGUAUA-
CUGACUGUGCAAAGG-UAGCAUAAUA-ACUUGUCUUUUAAUUGAAGGCUGGCAUG-AAUGGCAC-CACGUAGUAAUCCCUGUCUCUU?????????????????????????? UUUAAGUUAAAAAGCU---
---UAAA-----UUUACACGCAGGACGA--GAAGACCCCAUAGAUCUUUAUAUCAAAAGUUUAUUUAUAUAGAGGCUAAAAAUUUAA--------------- AUCGUUACCGAUAUUUU-
AUUGGGGUGAUA---AGAAGUCUUAAACACUUCUUGAAUAAA----CAAUUAUAGUA-GGCUAAUU-----------GAUCCGG-U-U--ACCGAUU- AAAAAAAUAAGUUACCUUGGGGAUAACAGC-
GUAAUCUACCC-UUAGAGUUCUUA-UCAAAAGG-U-AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUACC--UUUAGUGAGUAGUAAUAC-UA-GA AG--GGGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU-GAUCUGAGUUCAA-[-????]
Baetis_sp_PC2010_genome -UCGCCCGCGGC----AUAUUCUUGUGGGUA--CGGCCUGCCC-AUUGAUUA------UUUUAACGGC-CGCAGUAUU-
UUGACUGUGCAAAGG-UAGCAUAAUC-ACUUGUCCCCUAAUUAGGGGCUGGAAUG-AAUGGACU-GACGAGGUGGGAGCUGUAUCAG?????????????????????????? UUUAAGUCAAAAAGCU---
---UAAA-----UUUUACCGCAGGACGA--GAAGACCCCAUAGAUCUUAAUAUAGUAUACUAUACAUAAUUUAGAAGCCGCACAAGUG--------------- UAAUAUUAAUAUAUU-
UAGUUGGGGUGACA---CGAAGUCGUAAACACUUCUUUAAAAAC----AAAAAUUUAAG-GACAAAU-------------GACCCGG-C-CA-GCCGAUC- AAAAAAUCAAGUUACCUUGGGGAUAACAGC-
GUAAUCUGUCU-UAAGAGUCCUUA-UCAAAUGA-C-AGGUUUGCGACC-UC-GAUGUUGGAUUAAGAUUCC--CCACAUGAGCAGCCCCAU-GA-UG GG--GAGG-UC-UG-UUC-GACC-UA-CAAAU-
UCUU-ACAU-GAUCUGAGUUCAA-[-????]
GQ118286_GQ118255_Hexagenia_sp -UCGCCUUUUGA-----UUAUAUAUAAGGUU--UAACCUGCCC-ACUGAAUA---GUUAUUGAAGGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUUAAAGGCUGGAAUG-AAUGGUUG-GACGAGGUGUUAACUGUCUCAU?????????????????????????? UCUUAGUGAAAAGGCU---
---GAGA-----UUAUAUUGGAGGACGA--GAAGACCCUAUAGAGCUUGACAAGGAGUCCUAAAAAUUAUUUAGCAGUAUGUAAAUU-------------- UUUAUGUAUAACUUGUUUU-
GUUGGGGUGACA---GGAAAAUAAAGAAACUUUUCUUAAUUU-----AAAUCACUGA-UGAGUGAAUAGUA-------GAUCCAUUA-AU-AAUGAUU- AUAAAAUUAAGUUACCUUAGGGAUAACAGC-
GUAAUCCUUCU-UGAGAGUUCUAA-UCGACAGA-A-GGGUUUGCGACC-UC-GAUGUUGGACUAAGGGAAA--UUUUGGGUGUAGAUGUUC-AA-AG UU--UAGG-UC-UG-UUC-GACC-UU-UAAAA-
CCUU-ACAU---------------[-????]
AJ971773_AJ969725_Cloeon_dipterum -UCGCCUGGGGC-----UAGAAUCCUAGGUA--UUGCCUGCCC-AAUGAUAG-------UUGAAUGGC-CGCAGUAUU-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUUGUCUUUUAAUUGAAGGCUAGUAUG-AAUGGCGU-GACGUAAGGUUUACUGUA-CAU?????????????????????????? UGUAAGUCAAAAAGCU---
---UACA-----UAAUACCGCAGGACGA--GAAGACCCCGUAGAUCUUAAUAAUAAACCCGCUAUCUAAUUUGGAAUUUUAAUUAC------------- UUAUUAAGGUUAAGUUAUU-
UGGUUGGGGCGACG--AGAAGUUAAUUAACGCUUCAAAUUUAAA------CAACAGUGUAAGGUUGAA-----------UGACCCGG-A-GU--CCGAUU- AUAAAUACAAGUUACCUCGGGGAUAACAGC-
GUAAUCUAUUU-UUAGAGUUCUUA-UCAACAAA-U-AGGGUUGCGACC-UC-GAUGUUGGAUUAGGAGACGG-UUCAAAUGC-AGCAAUUU-GA-UA CC--GGGG-UC-UG-UUC-GACC-UU-UAAAU-
UCCU-ACAU-GAUCU---------[-????]
Leucrocuta_maculipennis_AY749959 ---- ---

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AY749649_Centroptilum_luteolum_12S -GCGCUUGAGGC-----UUUGAUCUUAAGUA--UUGUCUGCCC-AAUGAAUU--------UCAAUGGC-CGCAGUAUU-
UUGACUGUGCAAAGG-UAGCAUAAUC-AUUUGUCUUUUAAUUGAAGGCUUGUAUG-AAUGGCGU-GACGUAGGGGUAGCUUUCCCUU?????????????????????????? UGUAAGUCAAAAAGCU---
---UACU-----UAAUAGCGCAGGACGA--GAAGACCCCGUAGAUCUUUAUAAUAUGUGGUGAGAAGUACGUUAGGUGUUUAAUAA------------- CCCUCGCACUCUAAUUAUU-
UGGUUGGGGUGACA--UGAAUUGAAUCAACAAUUUUUACUAUUA------CCUAAAUUAGUGGUUUUG-----------UGACCCGG-U-AC--CCGAGU- AAAAGACUAAGUUACCUCGGGGAUAACAGC-
GUAAUCUACUU-UUAGAGCCCUAA-UCAAAGAG-U-AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAUACAU-UUUAAACGC-AGCCGUUU-AA-UU AU--GGGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU---------------[-????]

AY749769_Y749645_Stenonema_sp ---CUCUCGAA------GUUUAUGGGAGGUC--UAGCCUGCCC-ACUGAAGG-----AUAUAAAGGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUCUAAUUAAAGGCUGGAAUG-AAUGGCUG-GACGAGGUAUUAGCUGUCUCUU????????????????????????? UUCUAGUGAAAAGGCU---
---GGAA-----UGAAAUUGGAGGACGA--GAAGACCCUAUAGAGCUUUACACUUUCCUGUAUCUCAAUUCGUUUAGUAGGAGUUA----------- AUUUUUGUGGAGGGAGUGUUUC-
GUUGGGGUGACG--AGAAGAUAGAAGAAACUCUUCUUUAAAU-----AAGACACAAC-UAAGUGAUUAAUU-------GAUCCAUUU-UU-AAUGAUU- AAAAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUUUU-UGAGAGUUCUAA-UCGACAAA-A-AGGGUUGCGACC-UC-GAUGUUGGACUAAGGAUUAU-UCUUGGGUGCAGAAGUUC-AA-GG UU--UAGG-UC-UG-UUC-GACC-UU-UGAAU-
CCUU-ACAU-GAUCUGAGUUCAA-[-????]
Trigoniopthalmus_altern ---- ---

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AF370870_Allomachilis_froggarti_16S --GGCCUUUAGU-----UUGAAUUUAAGGUC--UGAUCUGCCC-ACUGAAAU----UAUUUAAAGGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUUGUCUUUUAAUUGAAGGCUGGUAUG-AAGGGUUG-GACGAAGAAUAAGCUGUCUCUA????????????????????????? UUUUAGUGAAAAGGCU---
---AAAA-----UUAUUUUGUUGGACGA--UAAGACCCUGUAGAUCUUAAUAUAAUAUUAUCUUUUUUAUUUUAGGUGUUAGAACU------------ UUGAAGAUAUAAUUGUAUUUU-
GUUGGGGCGACA--UUUAGACUAUAAACUCUUUAUUUUUAUU----AUAUUAAUUUA--UAUAACAUUUAUU------GAUCCUGAA-GU-UAGGAUU- AAAAGACUAAGUUACCUCAGGGAUAACAGC-
GUAAUCUCUUU-UAAGAGUUCAAA-UCGACAAA-G-GGGGUUGUGACC---
---[-????]
EF199981_Machilis_hrabei ---- ---

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AF370871_AF252403_Dilta_italica -GGGCCUUUUGA---UAGUUAAUAUAAGGUC--AGGCCUGCCC-CCUGAUGU----AUGUUUAAUGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUA-AUUUGUCUUUUAAUUAAAGGCUGGAAUG-AAUGGUCU-UACGAGAGAAAAACUGUCUCCU?????????????????????????
UUUUAGUGAAAAAGCU?????????????????????????????????--AAAGACCCUAUAGAUCUU-AUAUAAAAAUUAAUAUAUCUUAUAUUAGUAAUAAAGU----------
UUUUGUAAUAUUAUUUUUUAUUUU-GUUGGGGCGACG--GUAAGAUAAAAUAACCUCUUAUUAAUUA----AAUUACACUGA-UAUGUGUAACAGUUGUUGUUGAUCCGAAA-AU-UUCGAUU-
AUAAGUUUAAGUUACCUUAGGGAUAACAGC-GUAAUCUUUUU-UGAGAGUUCUUA-UCGACAAG-A-AGGGUUGCGACC-UC-GAUGUUGGAUUAAAGUAUCC-UUAAAUAUGGUGUAGCAGCUAUAA AG--
GAGGGUC-UG-UUC-GACC-UU-UAAAA-UUUU-ACA----------------[-????]
CTXMTRRSSA_Ctenolepisma_longicaudata ---- ---

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AY555557_Lepisma_sp --GUCCUUUUGU-----UAAAAUAAAAGGUC--UGACCUGCCC-AGUGAGGU------UUUAAACGGC-CGCGGUAUU-
UUGACCGUGCGAAGG-UAGCAUAAUC-AUUAGUCCUUUAAUUGUGGGCUUGUAUG-AAAGGUUG-GACGAGUGGAAGACUGUCUUUA????????????????????????? UUUGAGUGAAAAGGCU---
---UAAA-----UGAUUUAGGAGGACGA--UAAGACCCUGUAGAUCUUUAUAUUUAAAUAUUAAUUUUUGUAGUUGGUAAUGAAUAAA------------ UUUGCUAUUUGACUAUUGC-
GUUGGGGCGACG--AGAAGGUAAAAUAAACUCUUCUUAAUAU----AAUUACUUU-----UAAGUAUUUCUGU-----GAUCCUUUA-UU-AAUGAUU- AAUAGACUAAGUUACCUCAGGGAUAACAGC-
GUAAUUUUUUU-UGAGAGUUCAUA-UCGACAAG-A-GAGAUUGCGACC-UC-GAUGUUGGAUUAAGAUUUU--GU----------------------
---[-????]
EU376048_Lepisma_saccharina ---- ---

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Thermobia_domestica_genome -UGUCCUUUUGU-----UAAAAUAAAAGGUC--UGACCUGCCC-AGUGAGGU------UUUAAACGGC-CGCGGUAUU-
UUGACCGUGCGAAGG-UAGCAUAAUC-AUUAGUCCUUUAAUUGUGGGCUUGUAUG-AAAGGUUG-GACGAGUGGAAGACUGUCUUUA????????????????????????? UUUGAGUGAAAAGGCU-
-----UAAA-----UGAUUUAGGAGGACGA--UAAGACCCUGUAGAUCUUUAUAUUUAAAUAUUAAUUUUUGUAGUUGGUAAUGAAUAAA-------------

UUUGCUAUUUGACUAUUGC-GUUGGGGCGACG--AGAAGGUAAAAUAAACUCUUCUUAAUAU----AAUUACUUU-----UAAGUAUUUCUGU-----GAUCCUUUA-UU-AAUGAUU-
AAUAGACUAAGUUACCUCAGGGAUAACAGC-GUAAUUUUUUUUUGAGAGUUCAUA-UCGACAAG-A-GAGAUUGCGACC-UC-GAUGUUGGAUUAAGAUUUU--GUCUAGGUGCAGA-AGCU-UA-GU AC-
AUAGG-UC-UG-UUC-GACC-UU-UAAAA-UCUU-ACAU-GAUCUGAGUUCAG-[-????]
Tricholepidion_gertschi_genome   -UGUCUUACUGA-----AUAUAUAUUAGGUC--UGACCUGCCC-AAUGAUUU----AUAUUUAAUGGC-CGCGGUAUA-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUUGUAGGCUGGAAUG-AACGGUUG-GACGAGGAGAAAUCUGUCUCUU?????????????????????????? UUUAGGUGAAAAGGCU---
---UAAA-----UGACUUUGUAGGACGA--UAAGACCCUAUAGAUCUUAACAUUUUGUUAAGUUGUUAUAAUUUGUUAAGUUGAAUUAC--------------- UUAUUUUUAAUGUUUC-
GUUGGGGCGACG--GUGAGAAAUAAAGAUCUCUCAUUUGUUA-----AUUACAUUUA-UAUAUGGUUGUUU-------GAUCCGUUA-UU-UGCGAUU- AUAAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUUUU-AGAGAGUUCUUA-UUGAUAAU-A-AGGGUUGCGACC-UC-GAUGUUGGAUUAAGAGAUAAGGUUUGGUGCAAAA--GCUGAA-AU GA-UUAGG-UC-UG-UUC-GACC-UU-UAAUU-
UCUU-ACAU-GAUCUGAGUUCAA-[-????]
EF623126_EF623280_Gromphadorhina_portentosa   -UCUCUUCUUGA----AUUAUUUAGGAAGUA--UGACCUGCCC-AAUGAUUA-----UAUUUAAUGGC-CGCGGUACC-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUUGGAGGCUGGAAUG-AAUGGUUG-GACGAGAUAAGUACUUUCUUAU?????????????????????????? AUUGAGUUAAAAAGCU---
---UAAA-----UUUUUUUAUGGGACGA--GAAGACCCUAUAGAGUUUAAUAAUUAUAAAUUGAUAAUAAUAUGUAGUGG------------------ AAUUUUAAUUAGUAAUUAUUUU-
GUUGGGGUGAUG--AAAAGAUAAAUAUAACUCUUUUUUAUUG-----UUAAUAUUGA-UUUAUAGGCUUU------U-GAUCCAUUA-UU-AAUGAUU- AGAAGACUAAAUUACCUUAGGGAUAACAGC-
GUAAUCUUUUC-UGAGAGUUCUAA-UCGAAGAU-A-AGGAUUGCGACC-UC-GAUGUUGGAUUAAAGAUUAG-AACUAGGUGUAGCAGCUUAAG-UU CU---AGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU-GAUCUGAGUUCAA-[-????]
EF623206_EF623373_Isoperla_davisi   -UGUCCUCAUGU----UAAUAAUUUGAGGUC--UGACCUGCCC-ACUGAAUUGUUAGAUUUGAAGGGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUUUUAAUUGAAGGCUGGAAUG-AAUGGUUG-GACGAGGCAUUGACUGUCUCAU?????????????????????????? UUUAGGUCAAAAGGCU---
---UAGA-----UGUAUUUAAAGGACGA--GAAGACCCUAUAGAGCUUUAUAUUGAAUAAUUAUCUUUAAUUUAGAUGGGUU------------- UUAGUGGUAGUUAAUGAAAUAUUUU-
GUUGGGGUGACA--GGAAGAUAGAAUAAACUCUUUUUAAGUU-----UAAACAUUAA-UGUAUGAAUAAUU-------GAUCCAUUA-UU-AGUGAUU- AUAAGACUAAGUUACCUUAGGGAUAACAGC-
GUAAUCUUUUU-UGAGAGUUCAUA-UCGACAAA-A-AGGGUUGCGACC-UC-GAUGUUGGAUUAAGGGUAAU-UUUGGGUGU-AGA-UGUU-CA-AA GU-UUAGG-UC-UG-UUC-GACC-UU-UAGAU-
CCUU-ACAU-GAUCUGAGUUCAA-[-????]
EU414717_Isoperla_sp   ---- --

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Gomphocerus_sibiricus_tibetanus_genome   -UGUCCUCUUGA----UAAUGUUUUGAGGUC--UGGCCUGCUC-ACUGAAAU-----UUUUAAAGAGC-CGCGGUAUU-
UUGACCGUGCAAAGG-UAGCAUAAUC-AUUAGUCUCUUAAUUAGAGGCUGGAAUG-AAUGGUUU-GACGAGAAAUUAACUGUCUCUU?????????????????????????? UUUGAGUUAAAAGGCU---
---UAAA-----UUUUUCUUUAGGACGA--GAAGACCCUAUAGAGCUUAACAUUUAAGUUAGAUAUUUUUUUAAGAUGGUCUUUU------------- UAUAUUUAAUGGUAAUGUUUU-
GUUGGGGUGACA--UGAAGAAUUAAUAAACUCUUUAUUAUAA------AAUCAUUGA-UUUAUGUUUAUUUU------GAUCCAUAA-UU-UAUGAUC- AUAAGAUCAAGUUACCUUAGGGAUAACAGC-
GUAAUUGUUUU-UUAGAGCUCAUA-UUGACAAA-G-CAGAUUGCGACC-UC-GAUGUUGGAUUAAGAAAAAU-UUUGGGUGC-AGU-AGCU-CA-AU AA-UUAGG-UC-UG-UUC-GACC-UU-UAAAU-
UCUU-ACAU-GAUCUGAGUUCAG-[-????]

[EF1a]
Unaligned___________________---

UnalignedZygoptera   ---

Protosticta_sp_A_ZPA________---

ZPCs_Protosticta_curiosa____---

Protosticta_sanguinostigm---

ZSOg_Sinosticta_ogatai______---

-------ZPP_Palaemnema_paulicoba
UUCAAGUAUGCGUGGGUGUUGGACAAACUAAAGGCAGAACGUGAGCGUGGUAUCACCAUUGACAUCGCCCUGUGGAAGUUCGAGACUGCUAAGUAUUACAUUACCAUCAUUGACGCGCCCGGACACAGGGAUUU
CAUCAAGAACAUGAUUACUGGAACCUCUCAGGCAGAUUGUGCUGUGCUCAUCGUUGCUGCCGGUACUGGAGAAUUCGAAGCCGGUAUUUCUAAAAAUGGACAAACCAGGGAACACGCACUUCUUGCUUUCACUC
UUGGAGUCAAGCAGCUUAUAGUGGGUGUGAACAAAAUGGACUCGACUGAACCCCCAUACAGUGAAGCCCGUUUCGAGGAAAUUAAGAAAGAAGUGGGCAAUUAUAUCAAGAAGAUUGGGUACAACCCUGCCGCG
GUUGCUUUUGUCCCGAUCUCCGGCUGGCACGGAGACAAUAUGCUUGAGGCGUCCGAUAAAAUGCCGUGGUUCAAGGGGUGGAAGGUGGAGCGUAAGGAUGGCAAUGCUGACGGAAAAUGCCUGAUUGAGGCUCU
GGACGCCAUUCUUCCCCCUAGCCGCCCGACCGAGAAACCUCUUCGACUUCCUCUUCAGGAUGUUUACAAAAUUGGUGGUAUCGGGACCGUGCCCGUUGGACGUGUUGAGACCGGAGUGAUGAAGCCAGGCAUGC
UGGUUACCUUUGCCCCCGCAAACCUUACCACUGAAGUCAAA---

Palaemnema_domina_ZPDm______---


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Palaemnema_melanostigma_6----------------------------------------------------------------------------------------------------------
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Isosticta_robustior_666_____----------------------------------------------------------------------------------------------------------
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ZRS_Radinosticta_simplex     ----------------------------------------------------------------------------------------------------------
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GGAGAGUUUGAAGCUGGUAUCUCUAAGAAUGGACAAACCAGGGAACACGCACUUCUUGCCUUUACUCUUGGAGUGAAGCAGCUCAUCGUGGGUGUUAACAAAAUGGACUCAACUGAGCCUCCUUACAGUGAAGC
CCGUUUCGAGGAAAUCAAGAAGGAAGUCGGAAACUAUAUCAAGAAAAUAGGAUACAAUCCUGCUGCUGUUGCUUUCGUCCCAAUCUCCGGCUGGCACGGAGACAACAUGCUUGAGGCGUCCGACAAAAUGCCGU
GGUUCAAGGGAUGGAAGGUGGAG
CGCAAGGAAGGCAAUGCCGAUGGAAAGUGCCUCAUUGAGGCCCUGGACGCCAUUCUUCCACCUAGCCGGCCUACCGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUUUACAAAAUUGGUGGUAUCGGUACAGU
GCCAGUCGGUCGUGUUGAAACUGGUGUCAUGAAGCCGGGAAUGUUGGUUACCUUUGCUCCCGCAAACCUCACUACUGAAGUCAAGUCCGUGGAA----------------------------------------
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AmphistiCuA_silvArum_ZAS     ----------------------------------------------------------------------------------------------------------
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GGAGAGUUUGAAGCUGGUAUCUCCAAGAAUGGACAAACCAGGGAACACGCACUUCUUGCCUUUACUCUUGGAGUGAAGCAGCUCAUCGUUGGUGUUAACAAAAUGGACUCAACUGAGCCCCCGUACAGUGAAGC
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GGUUCAAGGGAUGGAAGGUGGAGCGCAAGGAAGGCAAUGCUGACGGAAAGUGCCUCAUUGAGGCCCUGGACGCCAUACUUCCACCUAGCCGACCUACCGAGAAACCACUUAGGCUUCCCCUUCAGGAUGUCUAC
AAAAUUGGUGGUAUCGGUACAGUGCCCGUUGGUCGUGUUGAGACCGGUGUCAUGAAGCCGGGAAUGUUGGUUACCUUCGCUCCCGCCAACCUCACCACUGAAGUCAAAUCCGUUGAAA----------------
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---------------------------------------------[520]
LAbidiostiCuA_vAllisi_OLVA   ----------------------------------------------------------------------------------------------------------
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GGAGAGUUUGAAGCUGGUAUCUCCAAGAAUGGACAAACCAGGGAACACGCACUUCUUGCCUUUACUCUUGGAGUGAAGCAGCUCAUCGUUGGUGUUAACAAAAUGGACUCAACUGAGCCCCCAUAUAGUGAAGC
CCGUUUCGAGGAAAUCAAGAAGGAAGUCGGAAACUAUAUCAAGAAAAUAGGAUACAACCCUGCUGCUGUUGCUUUCGUCCCAAUCUCCGGCUGGCACGGAGACAAUAUGCUUGAGGCGUCCGAUAAAAUGCCGU
GGUUCAAGGGAUGGAAGGUGGAGCGCAAGGAAGGCAAUGCUGACGGAAAGUGCCUCAUUGAGGCCCUGGACGCCAUUCUUCCACCUAGCCGACCUACCGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUAC
AAAAUUGGUGGUAUCGGUACAGUGCCAGUUGGUCGUGUUGAGACUGGUGUCAUGAAGCCGGGAAUGUUGGUUACCUUCGCUCCCGCUAACCUCACCACUGAAGUAAAGUCCGUGGAAAUGCACCACGAAGCUUU
GCAAGAGGCCCUCCCUGGUGACAACGUUGGCUUCAACGUGAAGAACGUUUCUGUGAAGGAAUUGCGUCGUGGAUAUGUCUGUGGUGAUAGCAAGUCGAAUCCACCUAAGGCAGCAUCCGACUUCACUGCUCAGG
UCAUCGUGCUCAACCACCCUGGCCAGAUUGCAAACGGUUACACGCCUGUGCUUGAUUGCCAUACUGCUCACAUUGCCUGCAAGUUCGCCGAGAUCAAGGAGAAGUGCGACCGUCGUACCGGCAAGACCACCGAG
GAGAACCCUAAGUCUAUCAAAUCUGGCGAUGCGGCUAUCGUCAAC[849]
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OrostiCuA_filiCiolA_ZOF   ---

GGAGAGUUUGAAGCUGGUAUCUCCAAGAAUGGACAAACCAGGGAACACGCACUUCUUGCCUUUACUCUUGGAGUGAAGCAGCUCAUCGUUGGUGUUAACAAAAUGGACUCAACUGAGCCCCCUUAUAGUGAAGC
CCGUUUCGAGGAAAUCAAGAAGGAAGUCGGAAACUAUAUCAAGAAAAUAGGAUACAACCCUGCUGCUGUUGCUUUCGUCCCAAUCUCCGGCUGGCACGGAGACAAUAUGCUUGAGGCGUCCGAUAAAAUGCCGU
GGUUCAAGGGAUGGAAGGUGGAGCGCAAGGAAGGCAAUGCUGACGGAAAGUGCCUCAUUGAGGCCCUGGACGCCAUUCUUCCACCUAGCCGACCUACCGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUAC
AAAAUUGGUGGUAUCGGUACAGUGCCAGUUGGUCGUGUUGAGACCGGUGUCAUGAAGCCGGGAAUGUUGGUUACCUUUGCUCCCGCUAAUCUCACCACUGAAGUCAAGUCCGUUGAA-----------------
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---[519]
Platycnemis_pennipes________---

CoperA_AnnulAtA_OCAn   --

GGAGAGUUUGAAGCUGGUAUCUCUAAGAAUGGACAAACUAGGGAGCACGCUCUUCUUGCUUUCACCCUUGGAGUGAAGCAGCUCAUCGUUGGUGUUAAUAAAAUGGACUCGACUGAGCCUCCCUACAGCGAAGC
CCGUUUUGAGGAAAUCAAGAAGGAAGUCGGGAACUAUAUUAAGAAAAUUGGAUACAAUCCUGCUGCGGUUGCUUUCGUACCCAUCUCCGGCUGGCACGGAGACAAUAUGCUUGAACCGUCCGACAAGAUGCCAU
GGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAUGGCAAUGCUGAUGGAAAAUGUCUCAUUGAGGCCCUGGACGCAAUUCUGCCACCCAGCCGACCUACCGAGAAACCCCUUAGGCUUCCUCUACAGGAUGUCUAC
AAAAUUGGUGGUAUCGGUACAGUGCCAGUUGGUCGUGUGGAGACUGGUGUUAUGAAGCCGGGGAUGUUGGUCACUUUCGCCCCCGCUAACCUUACUACUGAAGUAAAGUCCGUGGAAAUGCACCACGAAGCUUU
GCAGGAAGCUCUGCCCGGCGACAACGUCGGUUUUAACGUGAAGAACGUUUCAGUGAAGGAAUUGCGUCGUGGCUAUGUUUGCGGCGACAGCAAAACGAACCCGCCUAAGGCAGCAUCAGACUUCACUGCUCAGG
UCAUCGUGCUCAACCACCCUGGCCAGAUUGCGAAUGGUUACACGCCCGUGCUUGAUUGCCACACUGCUCACAUCGCUUGCAAGUUUGCUGAGAUCAAGGAGAAGUGCGACCGUCGUACUGGAAAGACCACCGAA
GAGAACCCGAAGUCCAUCAAGUCAGGCGAUGCGGCUAUCGUCAAC[849]
Copera_vittata_6585198______---

CoperA_mArsouipes_ZCM   --

GGAGAGUUUGAAGCUGGUAUCUCUAAGAAUGGACAAACUAGGGAGCACGCACUUCUUGCUUUCACCCUGGGAGUGAAGCAGCUCAUCGUUGGUGUUAAUAAAAUGGCCUCGAUUGAGCCUCCCUACAGCGAAGC
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GGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAUGGCAAUGCUGAUGGAAAAUGUCUCAUUGAGGCCCUGGAUGCAAUUCUGCCACCCAGCCGACCUACCGAGAAGCCCCUUAGGCUUCCCCUUCAGGAUGUCUAC
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GCAGGAGGCUCUCCCUGGUGACAACGUUGGUUUAAACGUGAAGAACGUGUCUGUGAAGGAAUUGCGACGUGGCUAUGUUUGUGGCGACAGCAAAACGAACCCCCCUAAAGCAGCAUCAGAGUUCACUGCUCAGG
UCAUCGUGCUCAACCACCCUGGCCAGAUUGCGAACGGUUACACGCCUGUGCUUGAUUGCCACACUGCUCACAUCGCCUGCAAAUUUGCCGAGAUCAAGGAGAAGUGCGAUCGUCGUACUGGAAAGACCACCGAA
GAGAACCCCAAGUCUAUCAAGUCGGGCGAUGCGGCUAUCGUCAAC[849]
Coeliccia_albicauda_________---

Coeliccia_cy   ---

Calicnemia_miles____________---

ProdAsineurA_vitAttA_OPV   ---

GGAGAGUUUGAAGCUGGUAUCUCUAAGAAUGGACAAACCAGGGAACACGCACUCCUUGCCUUCACCCUUGGAGUGAAGCAGCUCAUCGUUGGUGUUAAUAAAAUGGACUCGACUGAGCCUCCAUACAGCGAAGC
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GGUUCAAGGGGUGGAAGGUGGAACGCAAGGAUGGCAAUGCUGACGGAAAAUGUCUCAUUGAGGCUCUGGACGCCAUUCUUCCACCCAGCCGACCCACGGAGAAACCUCUUAGGCUUCCCCUUCAGGAUGUCUAC
AAAAUUGGCGGUAUCGGUACAGUGCCAGUAGGUCGCGUCGAGACUGGUGUUAUGAAGCCGGGGAUGUUGGUCAC---
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--[476]
ChloroCnemis_Abboti_ZCAb   ---

GGAGAGUUUGAAGCUGGUAUCUCUAAGAAUGGACAAACCAGGGAACACGCACUCCUUGCCUUCACUCUUGGAGUGAAGCAGCUCAUCGUUGGUGUUAAUAAAAUGGACUCAACCGAGCCUCCAUACAGCGAAGC
CCGUUUCGAGGAAAUCAAGAAAGAAGUCGGAAAUUACAUCAAGAAAAUUGGAUACAACCCUGCCGCGGUUGCUUUCGUACCAAUCUCCGGCUGGCACGGAGAUAACAUGCUUGAACCGUCCGAUAAGAUGCCCU
GGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAUGGCAAUGCUGACGGAAAAUGUCUCAUUGAGGCUCUGGACGCCAUUCUUCCACCCAGCCGACCCACGGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUAC
AAAAUUGGUGGUAUCGGUACAGUGCCAGUAGGUCGUGUCGAGACUGGUGUUAUGAAGCCGGGAAUG---
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--[468]
Nososticta_solida_61451---

Phylloneura_westermanni_6---

Onychargia_atrocyana_ZOA____--

-------ArGiA_moestA_COEN
UUCAAGUAUGCUUGGGUUUUGGAUAAGCUCAAGGCCGAACGUGAGCGUGGUAUUACCAUUGACAUCGCCCUGUGGAAGUUCGAAACCUCCAAGUAUUAUAUUACCAUUAUUGAUGCACCCGGACACAGAGAUUU
CAUCAAGAACAUGAUCACCGGAACGUCACAGGCUGAUUGUGCCGUGCUCAUCGUUGCUGCUGGUACCGGAGAGUUUGAGGCAGGUAUCUCCAAGAACGGCCAAACUAGAGAACACGCUCUCCUUGCUUUCACUC
UUGGAGUGAAACAGCUCAUCGUUGGUGUGAAUAAAAUGGAUUCCACWGAGCCCCCCUAUAGUGAAGCCCGAUUUGAGGAAAUCAAGAAGGAAGUCGGAAACUAUAUUAAGAAAAUUGGAUACAACCCUGCCGCG
GUUGCUUUCGUACCUAUCUCCGGCUGGCACGGAGACAACAUGCUUGAACCGUCCGACAAGAUGCCGUGGUUCAAGGGGUGGAAGGUUGAACGCAAGGAUGGAAAUGCUGACGGAAAGUGCCUCAUUGAGGCUCU
GGAUGCCAUCCUUCCUCCCAGCCGACCUACUGAGAAGCCUCUCAGACUUCCUCUUCAGGAUGUNUACAAAAUUGGUGGUAUCGGAACAGUGCCAGUUGGCCGUGUGGAGACUUGUGUUAUGAAGCCCGGANNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNCAGUUNAACGUGAAGAACGUCUCAGUGAAGGAGUUGCGU
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UCACAUUGCCUGCAAGUUUGCCGAGAUCAAAGAGAAGUGCGACCGUCGUACCGGAAAGACAACCGAAGAAAAUCCCAAGUCAAUCAAAUCUGGCGAUGCGGCUAUCGUCAAC[1053]
Argia_nahuana_6815221_______--

Argiocnemis_rubescens_ZAR--

Mortonagrion_binocellata____--

AGrioCnemis_pyGmAeA_OAP ---

AUUGGUGGUAUUGGAACGGUGCCCGUCGGCCGUGUGGAAACUGGUGUUAUGAAGCCAGGAAUGUUGGUCACCUUCGCCCCCGCUAACCUCACUACUGAAGUUAAGUCCGUAGAAAUGCACCACGAAGCUCUGCA
GGAGGCCUUGCCCGGCGACAACGUUGGCUUCAACGUGAAGAACGUGUCGGUGAAGGAAUUGCGCCGAGGAUAUGUCUGUGGUGAUAGCAAGACGAACCCNCCCAAGGCUGCAUCAGACUUCACUGCUCAGGUCA
UCGUGCUCAACCACCCUGGCCAGAUUGCCAACGGCUACACCCCCGUGCUUGAUUGCCACACUGCUCACAUCGCCUGCAAGUUCGCUGAGAUCAAGGAAAAGUGCGACCGUCGUACGGGCAAAACCACUGAGGAG
AACCCUAAGUCGAUCAAGUCAGGUGAUGCGGCUAUCGUCAAC[444]
AustroAGrion_wAtsoni_COEN
????????????????GUUUGGAUAAGCUGAAGGCCGAACGUGAGCGUGGUAUCACCAUUGACAUCGCCCUGUGGAAGUUCGAAACCUCCAAGUAUUACAUUACCAUUAUUGAUGCUCCUGGACA
CAGAGAUUUCAUCAAGAACAUGAUCACCGGAACGUCACAGGCUGAUUGUGCUGUGCUCAUCGUUGCUGCAGGUACCGGAGAGUUCGAAGCCGGUAUCUCCAAGAAUGGACAAACCAGAGAACACGCACUUCUAG
CUUUCACUCUUGGAGUGAAGCAGCUUAUCGUUGGUGUUAACAAAAUGGACUCGACGGAACCCCCAUACAGCGAAGCCCGUUUCGAAGAAAUCAAGAAGGAAGUCGGAAAUUACAUUAAGAAAAUUGGUUACAAC
CCGGCUGCUGUUGCUUUUGUCCCAAUCUCCGGCUGGCACGGAGACAACAUGCUUGAACCGUCCGACAAGAUGCCGUGGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAUGGAAAUGCUGACGGAAAGUGCCUCAU
UGAGGCUCUGGAUGCCAUUCUUCCGCCAAGCCGACCUACUGAGAAACCCCUUAGGCUUCCUCUUCAGGACGUCUACAAAAUUGGUGGUAUUGGAACGGUGCCCGUUGGACGUGUGGAAACUGGUGUUAUGAAGC
CCGGAAUGUUGGUCACCUUUGCCCCCGCUAACCUCACUACUGAAGUUAAGUCAGUGGAAAUGCACCACGAAGCUCUCCAGGAGGCUCUCCCUGGUGACAACGU----------------------------
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--[1053]
Archibasis_viola_ZAV______ ---

Coenagrion_puella_AJ488546__________ --

JQ966629_Coenagrion_resolutum ---

ACGUCUACAAAAUUGGUGGUAUCGGAACGGUGCCCGUCGGUCGUGUGGAAACUGGUGUUAUGAAGCCGGGAAUGUUGGUCACCUUCGCCCCCGCUAACAUCACUACUGAAGUUAAGUCCGUAGAAAUGCACCAC
GAAGCUCUCCAGGAGGCUCUACCCGGCGACAACGUUGGCUUCAACGUCAAGAACGUCUCUGUGAAGGAAUUGCGUCGAGGAUAUGUGUGUGGUGAUAGCAAGACGAACCCACCUAAGGCAGCAUCCGACUUCAC
UGCUCAGGU---

PseudAGrion_CinGillum_OAAL
UUCAAGUAUGCGUGGGUUUUGGAUAAGCUGAAGGCUGAACGUGAGCGAGGUAUCACCAUUGACAUCGCCCUGUGGAAGUUUGAAACCGCUAAGUAUUACAUUACCAUUAUUGAUGCUCCUGGGCA
CAGAGAUUUCAUCAAAAACAUGAUCACCGGAACGUCACAGGCCGAUUGCGCUGUGCUUAUCGUUGCUGCAGGUACCGGAGAGUUCGAAGCCGGUAUCUCCAAGAAUGGACAAACUAGAGAACACGCGCUUCUUG
CUUUCACACUUGGAGUGAAGCAGCUUAUCGUUGGCGUUAACAAAAUGGACUCAACGGAACCUCCAUACAGCGAGGCCCGUUUCGAAGAAAUCAAGAAGGAAGUCGGAAACUACAUCAAGAAGAUCGGUUACAAU
CCGGCCGCUGUUGCUUUUGUCCCAAUCUCCGGCUGGCACGGAGACAACAUGCUUGAAUCGUCCGACAAGAUGCCGUGGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAUGGAAAUGCUGACGGAAAGUGCCUCAU
AGAGGCCCUGGAUGCCAUUCUUCCGCCCAGCCGACCUACUGAGAAACCCCUUAGGCUUCCUCUUCAGGAUGUCUACAAAAUUGGUGGUAUCGGAACGGUGCCCGUCGGUCGUGUGGAAACUGGUGUUAUGAAGC

CCGGAAUGUUGGUCACCUUUGCUCCUGCUAAUCUCACCACUGAAGUUAAGUCAGUG---

--[1053]
Pseudagrion_aureofrons_61--

-------PseudoAGrion_iGnifer_Opi
UUCAAGUAUGCGUGGGUUUUGGAUAAGCUUAAGGCAGAACGUGAGCGUGGUAUUACCAUUGACAUCGCCCUUUGGAAAUUCGAAACUGCCAAGUACUACAUCACCAUUAUUGACGCACCCGGACACAGGGAUUU
CAUCAAGAACAUGAUCACUGGAACUUCACAGGCUGAUUGUGCUGUGCUUAUUGUCGCAGCUGGUACCGGAGAAUUUGAAGCCGGCAUCUCUAAAAAUGGACAAACCAGGGAACAUGCUCUUCUUGCUUUCACUC
UUGGUGUCAAGCAGCUCAUUGUUGGUGUGAACAAAAUGGAUUCCACUGAGCCCCCCUACAGUGUA--
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--[780]
Erythromma_najas_1238_______--

Cercion_plagiosum_AJ488552--

Cercion_lindenii_AJ488550--

Paracercion_calamorum[different]--

Acanthagrion_quadratum______---

ZLV_Leptobasis_vacillans____---

AmphiAGrion_sAuCium_OAS   --

GGAGAGUUUGAAGCUGGUAUCUCCAAAAAUGGACAAACUAGGGAACACGCACUUCUUGCUUUCACUCUUGGGGUGAAGCAGCUCAUCGUUGGUGUUAACAAAAUGGACUCAACGGAACCCCCAUACAGCGAAUC
CCGAUUCGAAGAAAUCAAGAAGGAAGUCGGAAACUACAUUAAGAAAAUUGGUUACAACCCGGCCGCUGUUGCUUUUGUCCCAAUCUCCGGCUGGCACGGAGACAACAUGCUUGAAUCGUCCGACAAGAUGCCGU
GGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAUGGAAAUGCUGACGGAAAGUGUCUCAUUGAGGCCCUAGAUGCCAUUCUUCCGCCUAGCCGACCUACUGAGAAGCCCCUCCGACUUCCUCUACAGGAUGUCUAC
AAAAUUGGUGGUAUCGGGACGGUGCCAGUCGGUCGUGUUGAAACUGGUGUUAUGAAGCCUGGAAUGUUGGUCACUUUCGCCCCCGCUAACCUUACCACUGAAGUAAAGUCCGUAGAAAUGCACCACGAAGCUCU
GCAGGAGGCUCUUCCCGGAGAUAACGUUGGCUUCAACGUCAAGAACGUUUCGGUGAAGGAAUUGCGCCGAGGAUAUGUUUGUGGUGAUAGCAAGACGAACCCACCCAAGGCUGCAUCAGACUUCACCGCUCAGG
UCAUCGUGCUUAACCACCCUGGCCAGAUUGCAAACGGAUACACCCCCGUGCUUGAUUGUCACACUGCUCACAUUGCCUGCAAGUUUGCUGAGAUCAAGGAGAAGUGCGACCGUCGUACGGGAAAAACUACUGAG
GAGAACCCCAAGUCAAUCAAGUCAGGUGAUGCGGCUAUCGUCAAC[849]
Amphiagrion_abbreviatum_6---

Xiphiagrion_cyanomelas_ZXC---

Hesperagrion_sp_AY749911____---

IsChnurA_eleGAns_1239
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???????????????????????????--
GCCGAUUGUGCUGUGCUCAUCGUUGCUGCAGGUACUGGAGAGUUCGAAGCGGGUAUCUCCAAGAAUGGACAAACCAGGGAACACGCACUUCUUGCUUUCACUCUUGGAGUGAAGCAGCUGAUCGUUGGUGUUAA
CAAAAUGGACUCAACGGAACCUCCGUACAGCGAAGCCCGUUUUGAAGAAAUUAAGAAGGAAGUCGGUAACUACAUUAAGAAAAUUGGUUACAACCCGGCCGCAGUUGCUUUUGUACCAAUCUCCGGCUGGCACG
GAGACAACAUGCUUGAACCGUCCGAUAAGAUGCCGUGGUUCAAGGGGUGGAAGGUGGAGCGCAAGGACGGCAAUGCCGAUGGAAAGUGCCUCAUUGAGGCCCUGGACGCNAUUCUGCCACCUAGCCGACCUACU
GAGAAACCCCUUAGGCUUCCUCUUCAGGACGUCUACAAAAUUGGUGGUAUUGGUACAGUGCCCGUCGGUCGUGUGGAAACUGGUGUUAUGAAGCCGGGAAUGUUAGUCACCUUUGCCCCCGCUAAUAUUACUAC
UGAAGUGAAGUCCGUAGAAAUGCACCACGAAGCUCUGCAGGAGGCUCUGCCCGGCGACAAUGUUGGUUUCAACGUCAAGAACGUGUCGGUGAAGGAAUUGCGCCGAGGAUAUGUUUGUGGNGAUAGCAAGACGA
ACCCACCCAAAGCGGCAUCCGACUUCACCGCUCAGGU???
???[1050]
Ishnura_barberi_5965136---

Ischnura_graellsi_AJ488545---

AnomAlAGrion_hAstAtum_OAH---

GGAGAGUUUGAAGCUGGUAUCUCCAAGAAUGGACAAACCAGAGAACACGCACUUCUUGCUUUCACUCUUGGAGUGAAGCAGCUCAUCGUUGGUGUUAACAAAAUGGACUCAACAGAACCCCCAUACAGCGAAGC
CCGUUUUGAAGAAAUCAAGAAGGAAGUCGGUAACUACAUUAAGAAAAUUGGUUACAACCCGGCCGCUGUUGCUUUUGUACCAAUCUCCGGCUGGCACGGAGACAACAUGCUUGAACCGUCCGACAAGAUGCCGU
GGUUCAAGGGGUGGAAGGUUGAGCGCAAGGAUGGAAAUGCUGAUGGAAAGUGCCUCAUUGAGGCCCUGGAUGCCAUUCUUCCACCUAGCCGACCUACUGAGAAGCCCCUUAGGCUUCCUCUUCAGGACGUUUAC
AAAAUUGGUGGUAUUGGAACAGUGCCCGUCGGUCGUGUGGAAACUGGUGUUAUGAAGCCGGGAAUGUUGGUCACCUUUGCCCCCGCUAACCUCACUACUGAAGUUAAGUCCGUAGAAAUGCACCACGAAGCCCU
GCAGGAGGCUCUGCCCGGCGACAACGUUGGUUUCAACGUCAAGAACGUGUCUGUGAAGGAAUUGCGCCGAGGAUAUGUUUGUGGCGAUAGCAAGACGAACCCACCCAAAGCAGCAUCUGACUUCACCGCUCAGG
UCAUCGUGCUCAACCACCCUGGCCAGAUUUCAAACGGCUACACCCCCGUGCUGGAUUGUCACACUGCUCACAUUGCCUGCAAGUUCGCCGAGAUCAAGGAGAAGUGCGACCGUCGUACGGGAAAAACUACUGAG
GAGAACCCCAAGUCGAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[849]
Enallagma_parvum_AJ420939---

Enallagma_granti_AJ420937--

E_nigridorsumAJ420938_______--

EnAllAGmA_CyAthiGerum_0110
UUCAAGUAUGCUUGGGUUUUGGAUAAGCUGAAGGCCGAACGUGAGCGUGGUAUCACUAUUGACAUCGCCCUGUGGAAGUUCGAAACCGCUAAGUAUUACAUCACUAUUAUUGACGCCCCUGGACACAGAGAUUU
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UUGGAGUGAAGCAGCUCAUCGUUGGCGUCAACAAAAUGGACUCGACGGAACCCCCAUACAGCGAAGCCCGUUUUGAAGAAAUCAAGAAGGAAGUGGGUAACUACAUCAAGAAAAUUGGUUACAACCCCGCCGCU
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GGAUGCCAUUCUUCCACCUAGCAGACCUACUGAGAAACCCCUUAGGCUUCCUCUUCAGGACGUCUAUAAAAUUGGUGGUAUUGGAACAGUGCCCGUUGGUCGUGUGGAGACGGGUGUUAUGAAGCCGGGAAUGU
UGGUCACCUUUGCCCCCGCUAACCUUACUACUGAAGUUAAGUCCGUAGAAAUGCACCACGAAGCUCUGCAGGAGGCUCUGCCCGGCGACAACGUUGGCUUCAACGUCAAGAACGUGUCUGUGAAGGAAUUGCGC
CGAGGUUAUGUUUGUGGCGAUAGCAAGACGAGCCCACCUAAGGCCGCAUCAGACUUCACCGCUCAGGUAAUCGUGCUCAACCACCCAGGCCAGAUAGCAAACGGCUACACCCCUGUGCUUGAUUGCCACACUGC
UCACAUUGCCUGCAAGUUCGCUGAGAUCAAGGAGAAGUGUGACCGUCGUACGGGAAAAACUACCGAGGAGAACCCCAAGUCUGUCAAGUCUGGCGAUGCGGCUGUCGUCAAC[1050]
Enallagma_sp_6005140________--

EnAllAGmA_Aspersum_AY580211
UUCAAGUAUGCUUGGGUUUUGGAUAAGCUGAAGGCCGAACGUGAGCGUGGUAUCACUAUUGACAUCGCCCUGUGGAAGUUCGAAACCGCUAAGUAUUACAUCACUAUUAUUGACGCCCCUGGACACAGAGAUUU
CAUCAAAAACAUGAUUACUGGAACGUCACAGGCCGAUUGUGCUGUGCUCAUCGUUGCUGCAGGUACCGGAGAGUUCGAAGCCGGUAUCUCCAAGAAUGGACAAACCAGAGAACACGCACUUCUUGCUUUCACUC
UUGGAGUGAAGCAGCUCAUCGUUGGCGUCAACAAAAUGGACUCGACGGAACCCCCAUACAGCGAAGCCCGUUUUGAAGAAAUCAAGAAGGAAGUGGGUAACUACAUCAAGAAAAUUGGUUACAACCCCGCCGCU
GUUGCUUUUGUACCCAUCUCCGGCUGGCACGGAGACAACAUGCUUGAAUCGUCCGACAAGAUGCCGUGGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAUGGAAAUGCUGACGGAAAAUGCCUCAUUGAGGCCUG
GGAUGCCAUUCUUCCACCUAGCAGACCUACUGAGAAACCCCUUAGGCUUCCUCUUCAGGACGUCUAUAAAAUUGGUGGUAUUGGAACAGUGCCCGUUGGUCGUGUGGAGACGGGUGUUAUGAAGCCGGGAAUGU
UGGUCACCUUUGCCCCCGCUAACCUUACUACUGAAGUUAAGUCCGUAGAAAUGCACCACGAAGCUCUGCAGGAGGCUCUGCCCGGCGACAACGUUGGCUUCAACGUCAAGAACGUGUCUGUGAAGGAAUUGCGC
CGAGGUUAUGUUUGUGGCGAUAGCAAGACGAGCCCACCUAAGGCCGCAUCAGACUUCACCGCUCAGGUAAUCGUGCUCAACCACCCAGGCCAGAUAGCAAACGGCUACACCCCUGUGCUUGAUUGCCACACUGC
UCACAUUGCCUGCAAGUUCGCUGAGAUCAAGGAGAAGUGUGACCGUCGUACGGGAAAAACUACCGAGGAGAACCCCAAGUCUGUCAAGUCUGGCGAUGCGGCUGUCGUCAAC[1050]
Aciagrion   ---

Aciagrion   --

Protoneura_capillaris_644---

Protoneura_cara_ZPC_________---

FN356189_Psaironeura_remis---

Elattoneura_analis__________---


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NeoneurA_AAroni_ONA     --------------------------------------------------------------------------------------------------------------
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GGAGAGUUUGAAGCUGGUAUUUCCAAGAAUGGACAAACCAGAGAACACGCACUUCUUGCUUUCACCCUUGGUGUGAAGCAGCUCAUCGUUGGUGUGAACAAAAUGGACUCAACUGAGCCCCCCUACAGUGAAGC
UCGUUUUGAGGAAAUCAAGAAGGAAGUCGGGAACUAUAUUAAGAAAAUUGGAUACAACCCUGCCGCGGUUGCUUUUGUACCAAUCUCCGGCUGGCACGGAGACAACAUGCUUGAACCGUCCGACAAGAUGCCGU
GGUUCAAGGGAUGGAAGGUGGAGCGCAAGGAUGGUAAUGCGGACGGAAAGUGCCUCAUUGAGGCUCUUGAUGCCAUCCUUCCUCCAAGCCGACCAACUGAGAAACCUCUCAGGCUUCCUCUUCAGGAUGUAUAC
AAAAUUGGUGGAAUUGGAACAGUGCCCGUUGGUCGUGUGGAGACUGGUGUCAUGAAGCCGGGAAUGUUGGUGACUUUUGCCCCCGCUAACCUCACCACUGAAGUCAAGUCCGUUGAAA----------------
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---------------------------------------------[520]
Neaneura_amelia_ZNA_________---------------------------------------------------------------------------------------------------------
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Neoneura_maria_6425182______---------------------------------------------------------------------------------------------------------
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CeriAGrion_AeruGinosum_ZCAe----------------------------------------------------------------------------------------------------------
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GGAGAGUUUGAAGCUGGUAUCUCGAAGAAUGGACAAACCAGAGAACACGCACUUCUUGCUUUCACUCUUGGAGUGAAGCAGCUCAUUGUUGGUGUUAACAAAAUGGACUCAACGGAGCCCCCCUACAGUGAAGC
CCGUUUUGAGGAAAUCAAGAAGGAAGUCGGAAACUAUAUUAAGAAAAUUGGAUACAACCCUGCCGCGGUUGCUUUUGUACCAAUCUCCGGCUGGCACGGAGACAACAUGCUUGAACCGUCCGACAAGAUGCCGU
GGUUCAAGGGGUGGAAGGUGGAACGCAAGGAUGGCAAUGCUGACGGAAAGUGUCUCAUUGAGGCUCUGGAUGCCAUCCUUCCUCCUAGCCGACCCACUGAGAAACCUCUUAGGCUCCCUCUUCAGGAUGUCUAC
AAAAUUGGUGGUAUCGGAACAGUGCCCGUCGGUCGUGUGGAGACUGGUGUCAUGAAGCCGGGAAUGUUGGUCACCUUCGCCCCCGCUAAUAUCACCACUGAAGUCAAGUCAGUUGAAAUGCACCACGAAGCUCU
CCAGGAGGCUCUGCCUGGUGAUAACGUUGGUUUCAACGUGAAGGACGUUUCCGUUAAGGAAUUGCGUCGUGGCUAUGUCUGCGGUGAUAGCAAGACGAAUCCACCCAAGGCAGCAUCAGACUUCACUGCUCAGG
UCAUCGUGCUCAACCACCCUGGCCAGAUCGCCAACGGUUAUACGCCCGUGCUUGAUUGCCACACUGCUCACAUUGCCUGCAAGUUCGCUGAGAUCAAGGAGAAGUGCGACCGUCGUACCGGUAAAACUACCGAA
GAAAAUCCCAAGUCAAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[849]
Uelebasis_salva_6325172---------------------------------------------------------------------------------------------------------
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Leptagrion_elongatum________---------------------------------------------------------------------------------------------------------
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Leptagrion_sp   --

Metaleptobasis_manicaria____--

ZDA_Diceratobasis_sp   --

UUGGAGAGUUUGAnGCUGGUAUCUCCAAGAAUGGACAAACCAGAGAACACGCACUUCUUGCUUUUACUCUUGGAGUGAAGCAGCUCAUCGUUGGUGUUAACAAAAUGGACUCAACGGAGCCCCCCUACAGUGAA
GGCCGUUUCGAAGAAAUCAAGAAGGAAGUCGGAAACUAUAUUAAGAAAAUUGGAUACAACCCUGCGGCGGUUGCUUUUGUACCCAUCUCCGGCUGGCACGGAGACAACAUGCUUGAACCGUCCGACAAGAUGCC
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Pyrrhosoma_nymphula_1202____--

ChromAGrion_Conditum_OCCn   --

GGAGAGUUUGAAGCUGGUAUUUCCAAGAAUGGACAAACCAGAGAACACGCACUUCUUGCUUUCACUCUUGGAGUGAAACAGCUCAUCGUUGGUGUUAAUAAAAUGGACUCAACGGAACCACCAUACAGUGAAUC
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AAAAUUGGUGGUAUCGGAACAGUGCCCGUCGGUCGUGUGGAGACUGGUGUUAUGAAGCCAGGAAUGUUGGUCACCUUCGCCCCCGCUAAUAUCACCACUGAAGUCAAGUCAGUUGAAAUGCACCACGAAGCUCU
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UCAUCGUGCUCAACCACCCUGGGCAGAUUGCCAACGGUUACACGCCCGUGCUAGAUUGUCACACUGCUCACAUUGCCUGCAAGUUUGCCGAGAUCAAGGAGAAGUGCGACCGUCGUACCGGAAAGACCACUGAG
GAGAACCCCAAGUCAAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[849]
Ueinobasis_alluaudi_________--

Nehalenia_gracilis___________--

CoryphAGrion_GrAndisDQ642969--

GUGGUUCAAGGGGUGGAAGGUGGAACGCAAGGAUGGCAAUGCUGAUGGAAAGUGCCUCAUUGAGGCUCUGGAUGCCAUCCUUCCUCCGAGCCGACCUACCGAGAAACCUCUUAGGCUCCCUCUCCAGGAUGUCU
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CUGCAGGAGGCCCUCCCCGGCGACAACGUUGGUUUCAACGUGAAGAACGUCUCUGUGAAGGAAUUGCGUCGUGGCUAUGUCUGCGGUGAUAGCAAGACGAACCCACCGAAGGCCGCAUCAGACUUCACUGCACA
GG--
---[404]
MiCrostiGmA_rouundA_OMRU   ---

GGAGAGUUUGAAGCUGGUAUCUCUAAGAAUGGACAAACUAGAGAACACGCACUUCUUGCUUUCACUCUUGGAGUGAAGCAGCUCAUCGUUGGUGUUAACAAAAUGGACUCAACGGAGCCCCCCUACAGUGAAGC
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GGUUCAAGGGGUGGAAGGUGGAACGCAAGGAUGGCAAUGCUGACGGAAAAUGUCUCAUUGAGGCUCUGGAUGCCAUUCUUCCUCCAAGCCGACCCACUGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUAC
AAAAUUGGUGGUAUCGGAACAGUGCCCGUCGGUCGUGUGGAGACUGGUGUUAUGAAGCCGGGAAUGUUGGUCACCUUCGCUCCCGCUAACAUCACCACUGAAGUCAAAUCCGUUGAAA----------------
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---[520]
Microstigma_anomalum_672____--

MeCistoGAster_ornA_DQ642972--

GUGGUUCAAGGGGUGGAAGGUGGAACGCAAGGAUGGCAAUGCUGAUGGAAAGUGUCUCAUUGAGGCCCUGGAUGCCAUUCUUCCUCCAAGCCGACCAACUGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUAU
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CUGCAGGAGGCCCUCCCCGGUGACAACGUUGGUUUCAACGUGAAGAACGUCUCUGUGAAGGAAUUGCGUCGUGGCUACGUUUGCGGUGAUAGCAAGACGAACCCACCCAAGGCAGCGUCAGACUUCACUGCUCA
GG--
---[404]

MeCistoGAster_line_DQ642974--

GUGGUUCAAGGGGUGGAAGGUGGAACGCAAGGAUGGCAAUGCUGAUGGAAAGUGUCUCAUUGAGGCUCUGGAUGCCAUUCUUCCUCCAAGCCGACCAACUGAGAAACCUCUUAGGCUUCCCCUUCAGGAUGUAU
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CUGCAGGAAGCCCUCCCCGGUGACAACGUUGGUUUCAACGUGAAGAACGUCUCUGUGAAGGAAUUGCGUCGUGGCUACGUUUGCGGUGAUAGCAAGACGAACCCACCCAAGGCAGCGUCCGACUUCACUGCUCA
GG--
---[404]
MeGAloprepus_CAerul_DQ642973---

GUGGUUCAAGGGGUGGAAGGUGGAACGCAAGGAUGGCAAUGCUGACGGAAAAUGUCUCAUUGAGGCUCUGGAUGCCAUUCUUCCUCCAAGCCGACCCACUGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCU
ACAAAAUUGGUGGUAUCGGAACAGUGCCCGUCGGUCGUGUGGAGACUGGUGUUAUGAAGCCGGGAAUGUUGGUCACCUUCGCUCCCGCCAACAUCACCACUGAGGUUAAGUCCGUUGAAAUGCACCACGAAGCU
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GG--
---[404]
Haplostigma_modesta_ZHM_____---

PseudostiGmA_Aber_DQ642975--

UGGUUCAAGGGGUGGACGGUGGAACGCAAGGAUGGCAAUGCUGAUGGAAAGUGUCUCAUUGAAGCUCUGGAUGCCAUUCUUCCUCCAAGCCGACCCACUGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUA
CAAAAUUGGUGGUAUCGGAACAGUGCCCGUCGGUCGUGUGGAGACUGGUGUUAUGAAGCCGGGAAUGUUGGUCACCUUCGCCCCCGCUAACCUCACCACUGAAGUUAAGUCCGUUGAAAUGCACCACGAAGCUC
UGCAGGAGGCCCUCCCCGGUGACAACGUUGGUUUCAACGUGAAGAACGUCUCUGUGAAGGAAUUGCGUCGUGGCUAUGUUUGCGGUGAUAGCAAGACCAACCCACCCAAGGCAGCGUCAGACUUCACUGCUCAG
G---
--[403]
Rhinagrion_mima_____________---

Sciotropis_cyclanthorum_6---

Heteragrion_mitratum________--

HeterAGrion_sp_DQ642971   ---

AAGGAAGGCAAUGCUGACGGAAAAUGCCUCAUUGAGGCUUUGGAUGCCAUUCUUCCACCAAGCCGACCGACCGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUACAAAAUUGGUGGAAUCGGUACGGUGCC
AGUUGGUCGUGUAGAGACUGGCGUCAUGAAGCCAGGCAUGUUGGUAACCUUUGCCCCUGCCAACCUCACCACUGAAGUAAAGUCUGUGGAAAUGCACCACGAAGCUCUUCAAGAGGCCCUACCCGGUGACAACG
UUGGUUUCAACGUGAAGAACGUCUCCGUAAAGGAGUUGCGUCGUGGAUAUGUGUGUGGUGAUAGCAAGUCAAACCCACCAAAAGCGGCGUCUGACUUCACUGCUCAGG---------------------------
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--------------------[376]
Oxystigma_cyanifrons_ZOC____--

ZDP_Dimeragrion_percubital--

Tatocnemis_malgassica_ZUMa--

Philogenia_cassandra________--

ZPU_Philogenia_terraba______---

ZPBn_Philogenia_bernice_____---

Teinopodagrion_venale_676---

Teinopodagrion_lepidum_ZUL---

AmAnipodAGrion_Gil_DQ642977--

GUGGUUCAAGGGAUGGAAGGUGGAACGUAAGGAUGGCAACGCUGACGGAAAGUGCCUCAUUGAGGCCCUGGACGCCAUUCUUCCACCCAGCCGACCUACCGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCU
AUAAAAUUGGUGGUAUCGGAACAGUGCCAGUUGGUCGUGUUGAGACUGGUGUUAUGAAGCCGGGAAUGUUGGUUACCUUUGCCCCCGCCAAUCUUACCACUGAAGUCAAGUCUGUGGAAAUGCACCACGAAGCC
CUGCAGGAGGCCCUCCCCGGCGACAACGUUGGUUUCAACGUGAAGAACGUCUCGGUGAAGGAAUUGCGUCGUGGCUAUGUUUGCGGAGAUAGCAAAUCGAACCCGCCCAAGGCAGCCUCCGACUUCACUGCUCA
GG--
---[404]

Nesolestes_elizabethae_ZNE---

Protolestes_kerckhoffaeZPK---

Argiolestes_ochrostomasZAO---

Argiolestes_sidonia_605_____---

Caledopteryx_maculata_669---

Urineuragroin_percostale____---

Caledargiolestes_uniserie---

Podopteryx_roseonotata_ZPR---

AustroArGiolestes_iCteromel
????????????UGGGUGUUGGACAAACUAAAGGCUGAACGUGAGCGUGGUAUUACCAUUGACAUUGCCCUGUGGAAGUUCGAAACCGCUAAGUACUACAUUACCAUUAUUGACGCACCCGGACACAGAGAUUU
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GUUGCUUUUGUCCCAAUCUCUGGCUGGCACGGAGACAACAUGCUCGAGUCGUCCGAUAAAAUGCCAUGGUUCAAGGGAUGGAAGGUGGAACGUAAGGAGGGCAAUGCUGACGGGAAGUGCCUCAUUGAGGCCCU
GGAUGCUAUUCUCCCACCUAGCCGACCUACCGAGAAACCCCUUAGGCUUCCUCUUCAGGAUGUCUACAAAAUUGGCGGUAUCGGAACAGUGCCAGUCGGUCGUGUUGAGACUGGCGUUAUGAAGCCAGGAAUGU
UGGUCACCUUUGCCCCUGCCAAUCUUACCACUGAAGUUAAGUCAGUGGAAAUGCACCACGAGGCUCUCCAGGAGGCUCUCCCUGGUGACAACGUCGGUUUCAACGUUAAGAACGUCUCUGUGAAGGAAUUGCGC
CGAGGUUAUGUGUGCGGAGACAGUAAGACCAACCCACCGAAGGCUGCAUCCGACUUCACUGCACA---
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Griseargiolestes_albescens---

Griseagriolestes_eboracus---

Miniargiolestes_minimusZMM---

Lestomima_flavostigma_OPB---

DQ642976_Rhipidolestes_hiraoi_ORH   --

GUGGUUCAAGGGAUGGAAAGUGGAACGCAAGGAUGGCAACGCUGAUGGAAAGUGCCUCAUUGAGGCCCUGGACGCCAUCCUCCCACCUAGCAGACCGACCGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCU
AUAAAAUUGGUGGUAUCGGAACAGUGCCAGUUGGUCGUGUUGAGACUGGCGUUAUGAAGCCGGGAAUGUUGGUUACCUUUGCCCCCGCCAACCUUACCACCGAAGUCAAGUCCGUGGAAAUGCACCACGAAGCU
CUACAAGAGGCCCUCCCCGGCGACAACGUUGGUUUCAACGUGAAGAACGUCUCAGUGAAGGAAUUGCGUCGUGGAUAUGUCUGCGGAGAUAGCAAAUCGAACCCACCCAAGGCAGCAUCCGACUUCACUGCUCA
GGUAAUCGUGCUUAACCACCCUGGCCAGAUUGCAAACGGUUACACGCCCGUGCUUGAUUGCCACACUGCUCACAUUGCCUGCAAGUUUGCGGAGAUCAAGGAAAAGUGCGACCGUCGUACCGGCAAGACAACUG
AGGAGAACCCCAAGUCUAUCAAAUCUGGCGAUGCGGCUAUCGUCAAC[448]
Rhipidolestes_aculeata_63---

PArAphlebiA_zoe_OPZ   --

GGAGAGUUUGAAGCUGGUAUCUCUAAGAAUGGACAAACCAGGGAACACGCACUUCUUGCUUUCACUCUUGGAGUUAAGCAGCUCAUCGUUGGUGUAAACAAAAUGGACUCAACUGAGCCCCCGUACAGUGAAGC
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AAAAUUGGUGGUAUCGGAACAGUGCCAGUUGGUCGUGUUGAGACUGGAGUUAUGAAGCCGGGAAUGUUAGUUACCUUUGCCCCUGCCAACCUUACCACUGAAGUCAAGUCCGUGGAAAUGCACCACGAAGCUCU
GCAAGAGGCCCUCCCCGGCGACAACGUUGGUUUCAACGUGAAGAACGUCUCAGUGAAGGAGUUGCGUCGUGGGUAUGUCUGCGGAGAUAGCAAAUCGAACCCACCCAAGGCUGCAUCCGACUUCACUGCUCAGG
UCAUCGUGCUCAACCACCCUGGCCAGAUUGCAAACGGUUACACGCCCGUGCUUGAUUGCCACACUGCUCACAUUGCCUGCAAGUUUGCGGAGAUCAAGGAAAAGUGCGACCGUCGUACCGGAAAGACGACUGAG
GAGAACCCUAAGUCUAUCAAAUCUGGCGAUGCGGCUAUCGUCAAC[849]
Thaumatoneura_inopinata_____---

Hypolestes_ClArA_AMP
UUCAAGUAUGCUUGGGUGUUGGACAAAUUGAAGGCCGAACGUGAGCGUGGUAUUACUAUUGACAUUGCCCUGUGGAAGUUCGAAACCGCUAAGUACUACAUUACCAUUAUUGACGCACCCGGACACAGAGAUUU
CAUCAAGAACAUGAUUACUGGAACCUCACAGGCGGAUUGUGCCGUGCUCAUCGUUGCCGCUGGUACCGGAGAGUUUGAAGCCGGUAUUUCUAAGAAUGGACAAACCAGGGAACACGCACUUCUUGCUUUCACUC
UUGGAGUCAAGCAACUUAUCGUUGGUGUGAACAAAAUGGACUCAACUGAGCCCCCUUACAGUGAAGCCCGUUUCGAGGAAAUCAAGAAGGAAGUCGGAAACUAUAUCAAGAAAAUUGGGUACAACCCAGCCGCG
GUUGCUUUUGUCCCYAUCUCCGGCUGGCACGGAGACAACAUGCUUGAGCAGUCCGAUAAGAUGCCGUGGUUCAAGGGAUGGAAGGUGGAACGUAAGGAUGGCAAUGCUGACGGGAAGUGUCUCAUCGAGGCUCU
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CGUGGAUACGUCUGCGGAGAUAGCAAAUCGAAUCCACCCAAGGCAGCAUCUGACUUCACUGCUCAGGUCAUCGUGCUCAACCACCCUGGCCAGAUUGCAAACGGUUACACCCCUGUGCUUGAUUGCCACACCGC
UCACAUUGCCUGCAAGUUUGCCGAGAUCAAGGAGAAGUGCGAUCGUCGUACCGGAAAGACAACCGAGGAGAACCCGAAAUCUAUCAANUCCGGCGAUGCGGCUAUCGUCAAC[1053]
Hypolestes_sp_EU055183______--

Agriomorpha_fusca_ZAF6______--

Sinocnemis_yangbingi_ZSY____--

Miocora_peraltica_ZMP_______--

OCMr_Cora_marina
???????????GUGGGUGUUGGACAAACUGAAGGCAGAACGUGAGCGUGGUAUUACCAUUGACAUUGCCCUGUGGAAGUUCGAAACGGCCAAGUACUACAUUACCAUUAUUGACGCACCCGGACACAGAGAUUU
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GUUGCUUUUGUCCCUAUCUCCGGCUGGCACGGAGACAACAUGCUUGAGGCGUCCGAUAAAAUGCCGUGGUUCAAGGGAUGGAAGGUGGAACGCAAGGAUGGCAAUGCUGACGGAAAGUGCCUCAUUGAGGCCUU
GGACGCCAUUCUUCCACCUAGCCGACCUACCGAGAAACCUCUUAGGCUUCCUCUUCAGnnnnnnnnnAAAAUUGGCGGUAUCGGAACAGUGCCAGUUGGUCGUGUUGAGACCGGCGUUAUGAAGCCCGGAAUGU

UGGUUACCUUUGCCCCCGCCAACCUUACCACUGAAGUCAAGUCCGUGGAAAUGCACCACGAAGCUCUUCAAGAGGGCUUACCUGGGGACAACGUUGGUUUCAACGUGAAGAACGUAUCAGUCAAGGAAUUGCGU
CGUGGUUACGUUUGUGGAGACAGCAAGUCCAAUCCCCCUAAGGCAGCUUCAGACUUCACUGCUCAGGUCAUCGUGCUUAACCACCCUGGCCAGAUCGCCAACGGUUACACACCAGUGCUUGAUUGCCAUACUGC
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Cora_cyane_677__5217________---

Polythore_sp_685_____--

Polythore_boliviana_BPB_____---

Euthore_fasciata_678521---

RimAnellA_ArCAnA_ORA   ---

GGAGAGUUUGAAGCUGGUAUCUCUAAGAAUGGACAAACCAGGGAACACGCACUUCUUGCUUUCACUCUUGGAGUCAAGCAGCUUAUCGUUGGUGUAAACAAAAUGGACUCAACUGAACCCCCUUACAGUGAAGC
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GCAGGAGGCCCUCCCCGGUGACAACGUUGGUUUCAACGUGAAGAACGUCUCUGUGAAGGAAUUGCGUCGUGGCUAUGUUUGCGGAGAUAGCAAAUCGAACCCACCCAAAGCAGCAUCCGACUUCACUGCUCAGG
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GAAAAUCCCAAGUCUAUCAAAUCAGGCGAUGCGGCUAUCGUCAAC[849]
PentAphlebiA_stAli_OPSu   --

GGAGAGUUUGAAGCUGGUAUCUCUAAGAAUGGACAAACCAGGGAACACGCACUUCUUGCUUUCACUCUUGGAGUGAAGCAGCUCAUCGUUGGUGUAAACAAAAUGGACUCAACUGAGCCCCCAUACAGUGAAGC
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GGUUCAAGGGAUGGAAGGUGGAGCGCAAGGAUGGUAAUGCUGACGGAAAGUGCCUCAUCGAGGCCCUGGACGCCAUUCUUCCGCCUAGCCGACCGACCGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUAU
AAAAUUGGUGGUAUCGGUACAGUGCCAGUCGGUCGUGUUGAGACCGGCGUUAUGAAGCCUGGAAUGUUGGUUACCUUUGCCCCCGCCAACCUUACCACUGAAGUCAAAUCCGUUGAA-----------------
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---[519]
Devadatta_podolestoides_6---

Amphipteryx_longicaudata____---

Pseudolestes_mirabilis_68---

Philoganga_vetusta__________---

Philoganga_robusta_PGN______---

LestoideA_ConjunCtA_ZLC   ---

GGAGAGUUUGAAGCUGGUAUCUCUAAGAAUGGACAAACCAGGGAGCACGCACUUCUUGCUUUCACUCUCGGAGUCAAGCAGCUCAUCGUUGGUGUAAACAAAAUGGACUCAACUGAGCCCCCUUACAGCGAACC
CCGUUUCGAGGAAAUCAAGAAGGAAGUAGGAAACUAUAUCAAGAAAAUUGGAUACAAUCCUGCCGCAGUUGCUUUUGUCCCUAUCUCCGGCUGGCACGGAGAUAACAUGCUUGAGGCGUCCGAUAAAAUGCCUU
GGUUCAAGGGAUGGAAGGUGGAGCGCAAGGAUGGCAAUGCUGACGGAAAGUGCCUCAUCGAGGCCCUGGACGCCAUUCUUCCACCUAGCCGACCGACCGAGAAACCUCUUAGGCUUCCUCUUCAGGACGUCUAU
AAAAUUGGCGGUAUCGGAACAGUACCAGUUGGACGUGUCGAGACUGGCGUUAUGAAGCCGGGAAUGCUGGUUACCUUUGCCCCUGCCAACCUUACCACUGAAGUUAAGUCAGUGGAAAUGCACCACGAAGCACU
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GAGAACCCCAAGUCCAUUAAGUCAGGCGAUGCGGCUAUCGUCA--[847]
DiphlebiA_lestoides_ZDL   ---

NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNUGCUUUUGUCCCAAUCUCCGGCUGGCACGGAGAUAACAUGCUUGAGGCGUCCGAUAAGAUGCCGU
GGUUCAAGGGAUGGAAGGUGGAGCGUAAGGAUGGUAAUGCUGAUGGAAAGUGCCUCAUUGAGGCCCUGGAUGCCAUUCUUCCACCUAGCCGACCGACCGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUAU
AAAAUUGGUGGUAUCGGAACAGUGCCAGUUGGUCGUGUCGAGACUGGCGUUAUGAAGCCGGGAAUGCUGGUUACCUUUGCCC--
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---[484]
DiphlebiA_CAerlesAens_ODC---

GGAGAGUUUGAAGCUGGUAUCUCUAAGAAUGGACAAACCAGGGAGCACGCACUUCUUGCUUUCACUCUCGGAGUCAAGCAGCUCAUCGUUGGUGUAAACAAAAUGGACUCAACAGAGCCCCCAUACAGCGAAGC
CCGUUUCGAAGAAAUCAAGAAGGAAGUAGGAAACUAUAUCAAGAAAAUUGGAUACAACCCUGCCGCGGUUGCUUUUGUCCCAAUCUCCGGCUGGCACGGAGAUAACAUGCUUGAGGCGUCCGAUAAGAUGCCGU
GGUUCAAGGGAUGGAAGGUGGAGCGCAAGGAUGGUAAUGCUGAUGGAAAGUGCCUCAUUGAGGCCCUGGAUGCCAUUCUUCCACCUAGCCGACCGACCGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUAU
AAAAUUGGUGGUAUCGGAACAGUGCCAGUUGGUCGUGUCGAGACUGGCGUUAUGAAGCCGGGAAUGCUGGUUACCUUUGCCCCUGCCAACCUUACCACUGAAGUCAAG--------------------------
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---[510]
Bayadera_melanopteryx_______---

Bayadera_brevicauda_638_____---

DisphAeA_GloriosA_EUP   ---

UACUGGAGAGUUCGAAGCUGGUAUCUCUAAGAAUGGGCAAACCAGAGAGCACGCACUUCUUGCUUUCACCCUCGGAGUCAAGCAGCUCAUCGUUGGUGUAAACAAAAUGGACUCAACUGAGCCUCCAUACAGCG
AGGCCCGUUUCGAAGAAAUCAAGAAGGAAGUAGGAAACUAUAUCAAGAAAAUUGGAUACAACCCUACCGCGGUUGCUUUUGUCCCAAUCUCCGGCUGGCACGGAGAUAACAUGCUUGAGGCGUCUGAUAAAAUG
CCUUGGUUUAAGGGAUGGAAGGUGGAGCGUAAGGAUGGUAAUGCUGACGGAAAAUGCCUCAUCGAGGCUCUGGAUGCCAUUCUUCCACCUAGCCGACCAACCGAGAAACCUCUUAGGCUUCCUCUUCAGGGAGU
CUACAAAAUUGGUGGCAUCGGAACAGUGCCAGUUGGUCGUGUCGAGACUGGUGUAAUGAAGCCUGGAAUGCUGGUUACCUUUGCCCCUGCCAACCUAACUACUGAAGUAAAGUCUGUGGAAAUGCACCACGAAG

CUCUGCAAGAGGCCCUCCCCGGUGAUAACGUUGGUUUCAACGUGAAGAACGUCUCCGUGAAGGAAUUGCGUCGUGGAUACGUCUGCGGAGACAGCAAAUCAAACCCACCUAAGGCAGCAUCAGACUUCACUGCU
CAGGUCAUCGUGCUCAACCACCCUGGUCAGAUUGCCAACGGUUACACGCCUGUGCUUGAUUGCCACACUGCUCACAUUGCCUGCAAAUUUGCGGAGAUAAAGGAAAAGUGCGACCGUCGUACCGGUAAGACAAC
CGAGGAGAAUCCAAAAUCCAUCAAGUCAGGCGAUGCGGCUAUCGUCAAU[1053]
JN389967_Euphaea_formosa   ---

CGGACACAGGGAUUUCAUCAAGAACAUGAUUACUGGAACUUCACAGGCCGAUUGUGCCGUGCUCAUCGUUGCUGCCGGUACCGGAGAGUUUGAAGCCGGUAUUUCUAAGAAUGGUCAAACCAGGGAGCACGCAC
UUCUUGCUUUCACUCUCGGAGUCAAGCAGCUCAUCGUUGGCGUUAACAAAAUGGACUCAACUGAGCCUCCUUACAGCGAAGCCCGUUUCGAAGAAAUCAAGAAGGAAGUAGGAAACUAUAUCAAGAAAAUUGGA
UACAACCCUGCCGCGGUUGCUUUUGUCCCCAUCUCCGGCUGGCACGGAGAUAACAUGCUUGAGGCGUCCGAUAAAAUGCCGUGGUUCAAGGGAUGGAAGGUGGAGCGUAAGGAUGGCAAUGCUGACGGAAAGUG
CCUCAUCGAGGCUCUGGAUGCCAUUCUUCCACCUAGCCGACCUACCGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUACAAAAUUGGUGGUAUCGGAACAGUGCCAGUUGGUCGUGUUGAGACUGGUGUGA
UGAAGCCUGGAAUGCUGGUUACCUUUGCCCCUGCCAACCUUACCACUGAAGUAAAGUCAGUGGAAAUGCACCAUGAAGCUCUGCAAGAGGCCCUCCCCGGCGACAACGUUGGUUUCAACGUGAAGAACGUCUCC
GUGAAGGAAUUGCGUCGUGGAUACGUCUGCGGAGACAGCAAAUCGAACCCACCCAAGGCAGCAUCAGACUUCACUGCUCAGGUCAUCGUGCUCAACCACCCUGG------------------------------
----
JN390007_Euphaea_decorata   ---

CGGACACAGGGAUUUCAUCAAGAACAUGAUUACUGGAACUUCACAGGCCGAUUGUGCCGUGCUCAUCGUUGCUGCCGGUACCGGAGAGUUUGAAGCUGGUAUUUCUAAGAAUGGACAAACCAGGGAGCACGCAC
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UACAACCCUGCCGCGGUUGCUUUUGUCCCCAUCUCCGGCUGGCACGGAGAUAACAUGCUUGAGGCGUCCGAUAAAAUGCCGUGGUUCAAGGGAUGGAAGGUGGAGCGUAAGGAUGGCAAUGCUGACGGAAAGUG
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UGAAGCCUGGAAUGCUGGUUACCUUUGCCCCUGCCAACCUUACCACUGAAGUAAAGUCAGUGGAAAUGCACCAUGAAGCUCUGCAAGAGGCCCUCCCCGGCGACAACGUUGGUUUCAACGUGAAGAACGUCUCC
GUGAAGGAAUUGCGUCGUGGAUACGUCUGUGGAGACAGCAAAUCGAACCCACCCAAGGCAGCAUCAGACUUCACUGCUCAGGUCAUCGUGCUCAACCACCCUGG------------------------------
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Anisopleura_sp_A____________---

Disparocypha_biedermanni---

Libellago_semiopaca_657---

Heliocypha_biseriata_650---

PlAtyCyphA_CAliGAtA_OPC   --

GGAGAGUUUGAAGCUGGUAUCUCUAAGAAUGGACAAACCAGGGAACACGCUCUUCUUGCUUUCACUCUUGGUGUAAAGCAGCUCAUUGUCGGUGUAAACAAAAUGGACUCAACUGAGCCCCCUUACAGUGAAGC
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---[519]
Chlorocypha_curta_CHL_______---

Sundacypha_petiolata_CHL____---

RhynoCyphA_fenstrAtA_CHL   ----------------
?GUUGGACAAACUGAAGGCUGAACGUGAGCGUGGUAUUACCAUUGACAUCGCCCUGUGGAAGUUCGAAACCGCUAAGUACUAUAUUACCAUUAUUGACGCCCCCGGACACAGAGAUUUCAUCAAGAACAUGAUU
ACCGGAACCUCGCAGUCUGAUUGUGCCGUGCUCAUCGUAGCUGCUGGUACUGGAGAGUUUGAAGCCGGUAUUUCUAAGAAUGGACAAACCAGGGAACACGCUCUUCUUGCUUUCACUCUUGGUGUAAAGCAGCU
CAUUGUUGGUGUAAACAAAAUGGACUCAACUGAGCCCCCAUACAGUGAAGCCCGUUUCGAGGAAAUCAAGAAGGAAGUUG????????????????????????UACAACCCUGCAGCAGUCGCUUUUGUCCCAA
UCUCCGGCUGGCACGGAGACAACAUGUUGGAGGCUUCCGAUAAGAUGCCGUGGUUCAAGGGAUGGAAAGUGGAACGCAAGGAGGGCAAUGCUGACGGAAAGUGCCUCAUUGAGGCAUUGGACGCCAUUCUUCCA
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AGCCAAUCUUACCACUGAGGUGAAGUCCGUGGAAAUGCACCACGAAGCCCUGCAAGAGGCCCUGCCCGGCGACAACGUUGGUUUCAACGUGAAGAACGUCUCUGUGAAGGAAUUGCGUCGUGGAUACGUUUGCG
GAGAUAGCAAGUCCAAUCCACCCAAGGCAGCAUCCGAUUUCACUGCUCAGGUCAUUGUGCUCAACCAUCCUGGCCAGAUUGCGAACGGUUACACGCCCGUGCUUGAUUGUCACACGGCUCACAUUGCCUGCAAG
UUUGCCGAGAUUAAGGAGAAGUGCGACCGACGUACCGGAAAGACAACUGAAGAGAACCCCAAGUCUAUUAAGUCUGGCGAUGCGGCUAUCGUCAAU[1037]
Rhinocypha_tincta_60351---

Heliocharis_amazona_________---

HetAerinA_AmeriCAnA_OHA2   --

AUUGGUGGUAUUGGAACGGUGCCCGUUGGCCGUGUUGAGACAGGUGUCAUGAAGCCGGGAAUGUUGGUCACUUUUGCCCCCGCCAACCUUACCACUGAAGUUAAGAGGGUGGAAAUGCACCACGAAGCGCUGCA
GGAAGCCCUCCCUGGUGACAACGUGGGUUUCAACGUAAAGAACGUGUCCGUUAAGGAAUUGCGUCGUGGAUACGUCUGUGGAGACAGCAAAGCGAACCCACCCAAGGCAGCAUCAGACCUCACCGCCCAGGUCA
UCGUGCUAAAUCACCCUGGCCAAAUCGCCAACGGUUACACACCAGUGCUUGAUUGCCACACUGCUCACAUUGCUUGCAAGUUCGCAGAGAUCAAGGAGAAGUGCGACCGUCGUACCGGUAAGACAACUGAAGAG
AACCCCAAGUCUAUUAAGUCUGGCGAUGCGGCUAUCGUCAAC[444]
CAliphAeA_ConfusA_ZCC   --

GGAGAGUUCGAAGCUGGUAUCUCUAAAAAUGGGCAAACCAGAGAACACGCACUUCUUGCUUUCACUCUAGGAGUAAAGCAGCUUAUCGUUGGUGUAAACAAAAUGGACUCAACCGAGCCCCCUUACAGUGAAAC
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GGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAUGGCAAUGCUGACGGAAAGUGCCUCAUUGAGGCCCUGGACGCCAUCCUUCCACCUAGCCGACCAACCGAGAAAGCUCUUAGGCUUCCUCUUCACGACGUCUAU
AAAAUUGGUGGAAUCGGAACAGUGCCAGUUGGACGUGUUGAGACUGGAAUCAUGAAGC---
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--[460]
Noguchiphaea_yoshikoae______---

Vestalis_beryllae_66252---

Matrona_basilaris_64151---

Atrocalopteryx_atrata   ---

Echo_modesta_6545194________--

Neurobasis_ianthinipennis---

SApho_oriChAlCeA_OSO   ---

AUUGGUGGUAUUGGAACGGUGCCAGUUGGACGAGUUGAGACUGGCGUUAUGAAACCAGGAAUGUUGGUCACUUUUGCCCCAGCCAACCUUACCACUGAAGUUAAGUCUGUGGAGAUGCACCACGAAGCUUUACA
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UUGUGCUUAACCAUCCUGGCCAGAUAGCAAAUGGUUACACACCCGUGCUUGAUUGCCACACUGCUCACAUUGCCUGUAAGUUCGCCGAGAUCAAGGAAAAGUGCGAUCGUCGUACCGGAAAGACAACUGAAGAG
AACCCCAAGUCUAUAAAGUCUGGCGAUGCGGCUAUCGUCAAC[444]
CAlopteryx_AmAtA_CALL
UUCAAGUAUGCUUGGGUGUUGGACAAACUGAAGGCUGAACGUGAGCGUGGUAUUACUAUUGACAUUGCCCUGUGGAAGUUCGAAACCGCCAAGUACUACAUUACCAUUAUUGACGCGCCCGGCCACAGAGAUUU
CAUCAAGAACAUGAUUACCGGAACCUCGCAGGCCGAUUGUGCUGUGCUCAUCGUUGCUGCUGGUACCGGAGAGUUCGAAGCCGGUAUUUCUAAGAAUGGACAAACCAGAGAACAUGCACUUCUUGCUUUCACUC
UUGGAGUAAAGCAGCUUAUCGUUGGUGUUAACAAAAUGGACUCCACUGAGCCCCCUUACAGUGAAUCCCGUUUCGAAGAAAUCAAGAAGGAAGUCGGAAAUUAUAUCAAGAAAAUUGGAUACAACCCUGCCGCA
GUUGCUUUUGUCCCGAUCUCCGGCUGGCACGGAGACAACAUGCUUGAGCAGUCCGAUAAAAUGCCGUGGUUCAAGGGAUGGAAGGUGGAGCGCAAGGAUGGCAAUGCUGACGGAAAGUGCCUCAUUGAGGCCCU
GGAUGCUAUUCUUCCACCCAGCCGACCAACCGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUAUAAAAUUGGUGGUAUCGGAACAGUGCCAGUUGGACGAGUUGAGACUGGCGUUAUGAAGCCAGGAAUGU
UGGUCACUUUUGCCCCCGCCAACCUUACCACUGAAGUCAAGAGUGUGGAAAUGCACCACGAAGCUCUUCAAGAGGCCCUCCCUGGUGAUAACGUUGGUUUCAACGUGAAGAACGUGUCUGUUAAGGAAUUGCGU
CGUGGAUACGUCUGCGGAGACAGCAAAUCGAACCCACCCAAGGCAGCAUCAGACUUCACCGCUCAGGUCAUCGUGCUUAACCACCCUGGCCAGAUUGCAAAUGGUUACACGCCCGUGCUUGAUUGCCACACUGC
UCACAUUGCCUGUAAGUUCGCCGAGAUCAAGGAAAAGUGCGACCGUCGUACCGGAAAGACAACUGAAGAGAACCCCAAGUCUAUUAAAUCUGGCGAUGCGGCUAUCGUCAAC[1053]
CAlopteryx_splende_DQ642970---

GUGGUUCAAGGGAUGGAAGGUGGAGCGCAAGGAUGGUAAUGCUGACGGAAAGUGCCUCAUUGAGGCUCUGGAUGCUAUUCUUCCACCUAGCCGACCAACCGAGAAGCCUCUUAGGCUUCCUCUUCAGGAUGUCU
AUAAAAUUGGUGGUAUCGGAACAGUGCCAGUUGGACGAGUUGAGACUGGCGUUAUGAAGCCUGGAAUGCUGGUCACUUUUGCCCCCGCCAACCUUACCACUGAAGUUAAGUCUGUGGAAAUGCACCACGAAGCU
CUUCAAGAGGCCCUUCCUGGUGAUAACGUUGGUUUCAACGUGAAGAACGUGUCUGUUAAGGAGUUGCGUCGUGGAUACGUCUGUGGAGACAGCAAAUCGAACCCACCCAAGGCAGCAUCUGACUUCACCGCUCA
GG--
---[404]
Calopteryx_aequabilis_______---

Iridictyon____________---

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Iridictyon____________---

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Unaligned_lestoids   ---

Nubiolestes_diotima_________---

Perilestes_kahli_683522---

Perissolestes_remotus_682---

Perissolestes_magellenae____---

Chlorolestes_umbrAtA_OCU   ---

UGGAGAGUUUGAAGCUGGUAUUUCUAAAAAUGGACAAACCAGGGAACAUGCUCUUCUUGCUUUCACUCUCGGUGUCAAGCAGCUCAUUGUUGGUGUUAACAAAAUGGACUCAACUGAGCCCCCAUACAGUGAAU
CCCGUUUCGAGGAAAUUAAGAAAGAAGUUGGUAACUACAUUAAGAAGAUCGGAUACAAUCCAGCAGCCGUCGCUUUCGUGCCAAUCUCCGGCUGGCACGGAGAUAACAUGCUCGAGGCCUCCGACAAGAUGCCA
UGGUUCAAGGGGUGGAAGGUGGAGCGAAAGGACGGAAAUGCUGACGGAAAGUGCCUCAUCGAGGCUCUGGACGCUAUUCUCUCACAUAGUCGCCCAGCCGAGACACCUCUUAGGCUUCCUCUUCAGGAUGUCUA
CAAAAUUGGUGGUAUUGGAACAGUGCCCGUUGGUCGUGUUGAGACUGGAGUGAUGAAACCAGGUAUGCUGGUUACAUUCGCCCCUGCCAACCUUACCACUGAAGUCAAAUCCGUUGAA----------------
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--[520]
EuChlorolestes_tessellA_OEU--

AUUGGUGGUAUUNGAACGGUGCCCGUUGGUCGUGUGGAGACUGGAGUGAUGAAACCAGGUAUGCUGGUAACAUUCGCCCCUGCCAACAUUACCACUGAAGUUAAGUCUGUUGAAAUGCACCACGAAGCUCUUCA
GGAAGCAUACCCAGGCGAUAACGUUGGUUUCAACGUGAAGAACGUGUCCGUCAAGGAAUUGCGUCGUGGCUACGUUUGCGGAGACAGCAAGUCUAACCCCCCGAAGGCAGCCUCAGACUUCACUGCUCAGGUCA
UCGUGCUUAACCACCCUGGCCAGAUCGCUAAUGGUUACACACCAGUGCUUGAUUGCCAUACUGCCCAUAUUGCCUGCAAGUUCGCAGAGAUCAAGGAGAAGUGCGACCGUCGUACCGGAAAGACCACCGAGGAG
AACCCCAAGUCCAUCAAAUCUGGCGAUGCGGCUAUCGUCAAC[444]
Phylolestes_ethelae_________---

Synlestes_weyersii_SLE
??????UA?GCGUGGGUUUUGGACAAGCUGAAGGCAGAACGUGAGCGUGGUAUUACCAUUGACAUCGCCCUUUGGAAAUUCGAAACCGCCAAGUACUACAUCACCAUUAUUGACGCACCCGGACACAGGGAUUU
CAUUAAGAACAUGAUCACUGGAACGUCUCAGGCCGAUUGUGCUGUGCUUAUCGUCGCCGCCGGUACUGGAGAAUUUGAAGCCGGUAUCUCUAAAAAUGGACAAACCAGGGAACAUGCUCUUCUUGCAUUCACUC
UUGGUGUCAAGCAGCUCAUUGUUGGUGUUAACAAAAUGGACUCAACUGAGCCCCCAUACAGUGAACCCCGUUUCGAGGAAAUUAAGAAAGAAGUUGGUAACUACAUUAAGAAGAUUGGAUACAAUCCCGCAGCC
GUCGCAUUCGUGCCAAUUUCCGGCUGGCACGGAGAUAACAUGCUCGAGGCCUCCGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAGCGAAAGGACGGAAACGCUGACGGAAAGUGCCUCAUCGAGGCCCU
GGACGCUAUUCUCCCACCUAGUCGCCCAACCGAGAAACCUCUUAGGCUCCCUCUUCAGGAUGUCUACAAAAUUGGAGGUAUUGGAACAGUGCCCGUUGGUCGUGUUGAGACUGGUGUGAUGAAGCCAGGCAUGC
UGGUCACCUUUGCUCCUGCAAACAUUACCACUGAAGUUAAGUCCGUGGAAAUGCACCACGAAGCUCUACAGGAGGCCUUCCCUGGCGACAACGUUGGUUUCAACGUGAAGAACGUGUCUGUCAAGGAAUUGCGU
CGUGGUUAUGUUUGCGGAGACAGCAAGUCGAACCCCCCGAAGGCAGCCUCAGACUUCACUGCUCAGGUCAUUGUGCUUAACCACCCUGGCCAGAUCGCUAAUGGUUAUACACCAGUGCUUGAUUGCCAUACUGC
CCAUAUUGCCUGCAAGUUCGCAGAGAUCAAGGAGAAGUGCGACCGUCGUACCGGAAAGACAACUGAGGAAAACCCAAAGUCGAUCAAAUCUGGCGAUGCGGCUAUCGUCAAC[1050]
Synlestes_tropiCus_ZSU   ---

UGGAGAGUUUGAAGCUGGUAUUUCUAAAAAUGGACAAACCAGGGAACAUGCUCUUCUUGCUUUCACUCUUGGUGUCAAGCAGCUCAUUGUUGGUGUUAACAAAAUGGACUCAACUGAGCCCCAUACAGUGAAC
CCCGUUUCGAGGAAAUUAAGAAAGAAGUUGGUAACUACAUUAAGAAGAUCGGAUACAAUCCCGCAGCCGUCGCAUUCGUGCCAAUUUCCGGCUGGCACGGAGAUAACAUGCUCGAGGCCUCCGACAAGAUGCCA
UGGUUCAAGGGGUGGAAGGUGGAGCGAAAGGACGGAAACGCUGACGGAAAGUGCCUCAUCGAGGCCCUGGACGCUAUUCUCCCACCUAGUCGCCCAACCGAGAAACCUCUUAGGCUCCCUCUUCAGGAUGUCUA
CAAAAUUGGAGGUAUUGGAACAGUGCCCGUUGGUCGUGUUGAGACUGGUGUGAUGAAGCCAGGCAUGCUGGUCAC--
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--[477]
ChorismAGrion_risi_ZCRi   ---

AUUGGUGGUAUUGGAACGGUGCCCGUUGGUCGUGUUGAAACUGGAGUGAUGAAGCCAGGUAUGCUAGUUACCUUCGCCCCUGCCAACAUUACCACUGAAGUUAAGUCCGUUGAAAUGCACCACGAAGCUCUUCA
GGAAGCAUACCCCGGCGACAACGUUGGAUUCAACGUGAAGAACGUGUCCGUCAAGGAAUUGCGUCGUGGCUAUGUUUGCGGAGACAGCAAGUCGAACCCCCCGAAGGCAGCUUCAGAUUUCACUGCUCAGGUCA
UCGUGCUUAACCACCCUGGCCAGAUCGCCAAUGGUUACACACCAGUGCUUGAUUGCCAUACUGCCCAUAUUGCCUGCAAGUUCGCAGAGAUCAAGGAGAAGUGCGACCGUCGUACCGGAAAGACAACUGAGGAG
AACCCUAAGUCUAUCAAAUCUGGCGAUGCGGCUAUCGUCAAC[444]
Episynlestes_CristAtus_ZEC--

UGGAGAGUUUGAAGCUGGUAUCUCUAAAAAUGGACAAACCAGGGAACAUGCUCUUCUUGCUUUCACUCUUGGUGUCAAGCAGCUCAUUGUUGGUGUUAACAAAAUGGACUCAACUGAGCCCCAUACAGUGAAC
CCCGUUUCGAGGAAAUUAAGAAAGAAGUCGGUAACUACAUUAAGAAGAUUGGAUACAAUCCUGCAGCCGUCGCUUUCGUGCCCAUCUCCGGCUGGCACGGAGAUAACAUGCUCGAGGCCUCCGACAAGAUGCCA
UGGUUCAAGGGGUGGAAGGUGGAGCGAAAGGACGGAAACGCUGACGGAAAGUGCCUCAUCGAGGCUCUGGACGCCAUUCUCCCACCUAGUCGCCCAACCGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUA
CAAAAUUGGUGGUAUUGGAACAGUGCCCGUUGGUCGUGUUGAGACUGGAGUGAUGAAACCAGGUAUGCUCGUUAC--
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--[477]
Episynlestes_albicauda_61---

MeGAlestes_miCAns_ZMMC   ---

UGGAGGUAUUGGAACGGUGCCCGUUGGUCGUGUUGAGACUGGUGUGAUGAAACCUGGUAUGCUUGUUACCUUCGCCCCUGCCAACAUUACCACUGAAGUGAAGUCUGUUGAAAUGCACCACGAAGCUCUUCAGG
AAGCCUACCCCGGCGACAACGUUGGUUUCAACGUGAAGAACGUGUCCGUCAAGGAAUUGCGUCGUGGCUACGUUUGCGGGGACAGCAAGUCUAAUCCCCCCAAGGCAGCUUCCGACUUCACUGCUCAGGUCAUC
GUGCUUAACCAUCCCGGCCAGAUCGCCAAUGGUUACACACCAGUGCUUGAUUGCCAUACUGCCCAUAUUGCCUGCAAGUUUGCAGAGAUCAAGGAGAAGUGCGACCGUCGUACCGGCAAGACAACUGAGGAAAA
CCCCAAGUCUAUCAAAUCUGGCGAUGCGGCUAUCGUCAAC[442]
Megalestes_kurahashii   --

UGGAGGUAUUGGAACGGUGCCCGUUGGUCGUGUUGAGACUGGUGUGAUGAAACCUGGUAUGCUUGUUACCUUCGCCCCUGCCAACAUUACCACUGAAGUGAAGUCUGUUGAAAUGCACCACGAAGCUCUUCAGG
AAGCCUACCCCGGCGACAACGUUGGUUUCAACGUGAAGAACGUGUCCGUCAAGGAAUUGCGUCGUGGCUACGUUUGCGGGGACAGCAAGUCUAAUCCCCCCAAGGCAGCUUCCGACUUCACUGCUCAGGUCAUC
GUGCUUAACCAUCCCGGCCAGAUCGCCAAUGGUUACACACCAGUGCUUGAUUGCCAUACUGCCCAUAUUGCCUGCAAGUUUGCAGAGAUCAAGGAGAAGUGCGACCGUCGUACCGGCAAGACAACUGAGGAAAA
CCCCAAGUCUAUCAAAUCUGGCGAUGCGGCUAUCGUCAAC[442]
Orolestes_oCuomACulAtus_ZOO
UUCAAGUAUGCGUGGGUUUUGGACAAGCUGAAGGCAGAACGUGAGCGUGGUAUUACCAUUGACAUCGCCCUUUGGAAAUUCGAAACCGCUAAGUACUACAUCACUAUCAUUGAUGCUCCUGGACACAGAGAUUU
CAUCAAGAACAUGAUCACCGGAACUUCACAGGCUGAUUGCGCUGUGCUGAUUGUCGCUGCCGGUACCGGAGAAUUUGAAGCCGGUAUCUCCAAAAAUGGACAAACAAGAGAACAUGCUCUUCUUGCUUUCACUC
UUGGUGUUAAGCAGCUCAUUGUUGGUGUUAACAAAAUGGACUCAACUGAGCCCCCAUACAGUGAAGCCCGUUUCGAAGAAAUCAAGAAGGAAGUAGGUAACUACAUUAAGAAGAUUGGAUACACCCCUGCUGCC
GUUGCUUUCGUGCCAAUCUCUGGCUGGCAUGGAGAUAACAUGCUCGAGUCCUCCGACAAGAUGCCGUGGUUCAAGGGAUGGAAGGUGGAGCGCAAGGACGGAAACGCUGAUGGAAAGUGCCUCAUCGAGGCUUU
GGACGCUAUUCUCCCACCUAGUCGCCCAACCGAGAAACCUCUUAGGCUCCCUCUUCAGGAUGUCUACAAAAUUGGUGGUAUUGGAACAGUGCCSKYSGKYSKKKUKRRRMYKGKKKKRWKRARSCMRGKWWKSY
KGKYMMCUUC-
GCCCCUGCUAACAUUACCACUGAAGUCAAGUCCGUGGAAAUGCACCACGAAGCUCUUCAGGAGGCCUACCCUGGCGACAACGUUGGUUUCAACGUGAAGAACGUGUCCGUCAAGGAAUUGCGUCGUGGCUACGU
UUGUGGAGACAGCAAGUCUAACCCCCCUAAGGCAGCCUCAGACUUCACUGCUCAGGUCAUCGUGCUUAACCACCCUGGCCAGAUUGCCAAUGGUUAUACGCCAGUGCUUGAUUGCCAUACUGCCCAUAUCGCUU
GCAAGUUCGCAGAAAUCAAAGAGAAGUGCGACCGUCGUACCGGUAAGACCACUGAAGAGAACCCCAAGUCUAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[1052]
EU055157_Austrolestes_annul---

Sympecma_paedisca_65151---

Sympecma_fusca______________---

Austrolestes_analis_LES
????????????UGGGUUUUGGACAAGCUGAAGGCCGAACGUGAGCGUGGUAUUACCAUCGACAUCGCCCUUUGGAAAUUCGAAACCGCUAAGUACUACAUCACCAUUAUUGAUGCACCUGGACACAGAGAUUU
CAUCAAGAACAUGAUCACCGGAACCUCACAGGCUGAUUGCGCUGUGCUGAUUGUCGCUGCCGGUACCGGAGAAUUUGAAGCCGGUAUCUCCAAAAAUGGACAAACCAGAGAACACGCUCUUCUUGCUUUCACUC
UUGGUGUCAAGCAGCUCAUUGUUGGUGUUAACAAAAUGGACUCAACUGAGCCCCCAUACAGUGAA---
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---[1053]
Indolestes_perGrinus_OIP ---

GGAGAGUUUGGAGCUGGUAUCUCCAAAAAUGGACAAACCAGAGAACACGCUCUUCUUGCUUUCACUCUUGGUGUCAAGCAGCUCAUUGUUGGUGUUAACAAAAUGGACUCAACUGAGCCCCCAUACAGUGAAGC
CCGUUUCGAGGAAAUCAAGAAGGAAGUCGGUAACUACAUUAAGAAGAUAGGAUACACUCCUGCUGCCGUUGCUUUCGUGCCAAUCUCCGGCUGGCAUGGAGAUAACAUGCUCGAGGCCUCCGACAAGAUGCCAU
GGUUCAAGGGAUGGAAGGUGGAGCGCAAGGACGGAAACGCUGACGGAAAGUGCCUCAUCGAGGCUUUGGACGCCAUUCUCCCACCUAGUCGCCCAACAGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUAC
AAAAUUGGUGGAAUUGGAACAGUGCCCGUUGGUCGUGUUGAGACUGGUGUGAUGAAGCCAGGUAUGCUGGUUACCUUCGCCCCCGCUAACAUUACCACUGAAGUCAAGUCCGUGGAAAUGCACCACGAAGCUCU
UCAGGAGGCCUACCCCGGCGACAACGUUGGUUUCAACGUGAAGAACGUGUCCGUCAAGGAAUUGCGUCGUGGCUAUGUCUGUGGAGACAGCAAUUCCAAUCCCCCUAAGGCAGCCUCAGAAUUCACAGCUCAGG
GCAUCGUGCUUAACCACCCUGGUCAAAUUGCCAAUGGUUACACCCCAGUGCUUGAUUGCC--
--[730]
Indolestes ---

Chalcolestes_viridis_______---

ArChilestes_GrAndis_LES ----------------
UGUUGGACAAGCUGAAGGCUGAACGUGAGCGUGGUAUCACCAUUGACAUCGCCCUCUGGAAAUUCGAAACCGCCAAGUACUACAUCACCAUCAUUGAUGCACCUGGACACAGGGAUUUCAUCAAGAACAUGAUC
ACUGGAACAUCACAGGCUGAUUGCGCUGUGCUGAUUGUCGCUGCCGGUACCGGUGAAUUUGAAGCCGGUAUCUCCAAAAAUGGACAAACGAGAGAACAUGCUCUUCUUGCAUUCACCCUUGGUGUUAAGCAGCU
CAUUGUUGGUGUUAACAAAAUGGACUCUACUGAGCCCCCAUACAGUGAAGCCCGUUUCGAGGAAAUCAAGAAGGAAGUCGGUA??????????????????????CAACCCUGCUGCCGUUGCUUUCGUGCCCA
UCUCCGGCUGGCAUGGAGAUAACAUGCUCGAGGCCUCCGACAAGAUGCCGUGGUUCAAGGGGUGGAAGGUGGAGCGUAAGGACGGAAACGCCGAUGGAAAGUGCCUCAUCGAGGCUUUGGACGCCAUUCUCCCA
CCCAGUCGCCCAACCGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUACAAAAUUGGUGGUAUUGGAACAGUGCCCGUUGGUCGUGUUGAGACUGGUGUGAUGAAGCCAGGUAUGCUGGUCACUUUCGCCCC
CGCUAACAUUACCACUGAAGUCAAGUCCGUUGAAAUGCACCACGAAGCUCUUCAGGAGGCUUACCCUGGCGACAACGUUGGUUUCAACGUGAAGAACGUAUCAGUCAAGGAAUUGCGUCGUGGUUACGUUUGUG
GAGACAGCAAGUCCAAUCCCCCUAAGGCAGCCUCAGACUUCACUGCUCAGGUCAUCGUGCUUAACCACCCUGGCCAGAUCGCCAAUGGUUACACACCAGUGCUUGAUUGCCAUACUGCCCAUAUCGCCUGCAAG
UUCGCAGAAAUCAAGGAGAAGUGCGACCGUCGUACCGGUAAGACCACUGAAGAGAACCCCAAGUCCAUUAAGUCCGGAGAUGCUGCCAUCGUCAAC[1037]
Lestes_reCtAnGulAris_LES
UUCAAGUACGCUUGGGUGUUGGAUAAGCUGAAGGCAGAACGUGAGCGUGGUAUCACCAUUGAUAUCGCCCUCUGGAAGUUCGAAACCGCUAAGUACUACAUCACCAUCAUUGAUGCACCUGGACACAGGGAUUU
CAUCAAGAACAUGAUCACCGGAACUUCACAGGCUGAUUGCGCUGUGCUGAUUGUCGCUGCCGGUACCGGAGAAUUUGAAGCCGGUAUCUCCAAAAAUGGACAAACAAGAGAACAUGCUCUUCUUGCAUUCACCC
UUGGUGUUAAGCAGCUCAUUGUUGGUGUUAACAAAAUGGACUCAACUGAGCCCCCAUACAGUGAAGCCCGUUUCGAGGAAAUCAAGAAGGAAGUCGGUAACUACAUUAAGAAGAUUGGAUACACCCCAGCUGCC

GUUGCUUUCGUGCCCAUCUCCGGCUGGCAUGGAGAUAACAUGCUCGAGGCUUCCGACAAGAUGCCAUGGUUCAAGGGAUGGAAGGUUGAGCGCAAGGACGGAAACGCCGAUGGAAAGUGCCUCAUCGAGGCUUU
GGACGCCAUUCUCCCACCCAGUCGACCAACCGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUACAAAAUUGGUGGUAUUGGAACAGUGCCCGUUGGUCGUGUUGAGACUGGUGUUAUGAAGCCAGGUAUGC
UGGUCACUUUCGCCCCCGCUAACAUUACCACUGAAGUCAAGUCUGUUGAAAUGCACCACGAAGCUCUUCAGGAGGCUUACCCUGGCGACAACGUUGGUUUCAACGUGAAGAACGUAUCCGUCAAGGAGUUGCGU
CGUGGUUACGUUUGUGGAGACAGCAAGUCUAAUCCCCCCAAGGCAGCCUCAGACUUCACUGCUCAGGUCAUCGUGCUUAACCACCCUGGCCAGAUCGCCAAUGGUUACACACCAGUGCUCGAUUGCCAUACUGC
CCAUAUCGCCUGCAAGUUCGCAGAAAUCAAGGAGAAGUGCGACCGUCGUACCGGUAAGACCACUGAGGAGAACCCCAAGUCCAUCAAGUCCGGUGAUGCUGCCAUCGUCAAC[1053]
ZLE_Lestes_eurinus --

GAACCUCACAGGCUGAUUGCGCUGUGCUGAUUGUCGCUGCCGGUACCGGAGAAUUUGAAGCCGGUAUCUCCAAAAAUGGACAAACCAGAGAACAUGCUCUUCUUGCAUUCACCCUUGGUGUUAAGCAGCUCAUU
GUUGGUGUUAACAAAAUGGACUCAACUGAGCCCCCAUACAGUGAAGCCCGUUUCGAGGAAAUCAAGAAGGAAGUCGGUAACUACAUUAAGAAGAUUGGAUACACCCCUGCUGCCGUUGCUUUCGUGCCCAUCUC
CGGCUGGCAUGGAGAUAACAUGCUCGAGGCUUCCGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAGCGCAAGGACGGAAACGCCGAUGGAAAGUGCCUCAUCGAGGCUUUGGACGCCAUUCUCCCACCCA
GUCGCCCAACCGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUACAAAAUUGGUGGUAUUGGAACAGUGCCCGUUGGUCGUGUUGAGACUGGUGUGAUGAAGCCAGGUAUGCUGGUCACUUUCGCCCCCGCU
AACAUUACCACUGAAGUCAAGUCUGUUGAAAUGCACCACGAAGCUCUUCAGGAGGCUUACCCUGGCGAUAACGUUGGUUUCAACGUGAAGAACGUAUCCGUCAAGGAAUUGCGUCGUGGUUACGUUUGUGGAGA
CAGCAAGUCUAAUCCCCCUAAGGCAGCCUCAGACUUCACUGCUCAGGUCAUCGUGCUUAACCACCCUGGCCAGAUCGCCAAUGGUUACACACCAGUGCUCGAUUGCCAUACUGCCCAUAUCGCCUGCAAGUUCG
CAGAAAUCAAGGAGAAGUGCGACCGUCGUACCGGUAAGACCACCGAGGAGAACCCUAAGUCCAUAAAGUCCGGUGAUGCUGCCAUCGUUAAC
Hemiphlebia_mirabilis_OHM --

GGUGAAUUUGAAGCCGGUAUCUCCAAAAAUGGACAAACGAGAGAACAUGCUCUUCUUGCAUUCACCCUUGGUGUUAAGCAGCUCAUUGUUGGUGUUAACAAAAUGGACUCUACUGAGCCCCCAUACAGUGAAGC
CCGUUUUGAAGAAAUAAAGAAGGAAGUCGGUAACUACAUCAAGAAGAUCGGCUACAAUCCUGCAGCCGUCGCUUUCGUACCAAUCUCCGGCUGGCACGGAGAUAACAUGCUCGAAGCUUCCGACAAGAUGCCAU
GGUUCAAGGGAUGGAAGGUGGAGCGCAAGGAAGGAAAUGCUGACGGAAAGUGCCUGAUCGAGGCUCUUGAUGCUAUUCUUCCACCUUUCCGCCCAACAGAGAAGGCACUUAGGCUUCCCCUACAGGACGUCUAC
AAAAUUGGUGGUAUUGGAACAGUGCCAGUGGGUCGUGUUGAGACCGGUGUUAUGAAGCCCGGUAUGUUGGUCACCUUUGCCCCUGCUAAUCUCACCACUGAAGUUAAGUCAGUGGAA-----------------
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UnalignedAnisoptera --

EpiophlebiA_superst
es_EPI
GUCAAGUAUGCGUGGGUAUUGGACAAGCUCAAGGCAGAACGCGAGCGUGGUAUUACCAUUGACAUUGCCCUGUGGAAGUUCGAAACUGCUAAAUACUACAUCACCAUUAUUGAUGCUCCUGGACACAGAGAUUU
CAUCAAGAACAUGAUUACUGGAACAUCCCAGGCUGAUUGUGCUGUUCUUAUCGUCGCUGCCGGUACUGGAGAGUUUGAAGCCGGCAUCUCCAAAAAUGGACAAACCAGGGAACAUGCACUUCUUGCUUUCACUC
UUGGAGUGAAGCAACUCAUUGUUGGUGUUAAUAAAAUGGACUCGACUGAGCCCCCAUACAGUGAACCCCGUUUUGAGGAAAUCAAGAAGGAAGUAGGUAACUACAUUAAGAAGAUCGGAUACAAUCCCGCUGCC
GUUGCUUUUGUUCCGAUCUCCGGCUGGCACGGAGACAACAUGCUCGAGGCCUCAGACAAGAUGCCGUGGUUCAAGGGGUGGAAGGUGGAGCGUAAGGAGGGAAAUGCUGAUGGAAAGUGCCUUAUUGAGGCUCU
GGAUGCCAUCCUUCCUCCUAGCCGCCCAACUGAGAAACCUCUUAGGCUUCCUCUCCAGGAUGUCUACAAGAUCGGUGGUAUUGGAACAGUGCCAGUUGGUCGUGUUGAGACUGGUGUAAUGAAACCUGGAAUGU
UGGUCACUUUUGCCCCAGCCAACCUUACCACUGAAGUCAAAUCCGUGGAAAUGCACCACGAAGCACUCCAAGAAGCCCUCCCCGGUGAUAACGUAGGUUUCAACGUGAAGAACGUUUCCGUCAAGGAACUUCGU
CGUGGAUAUGUUUGCGGAGAUAGCAAGUCCAACCCCCCUAAGGCAGCAUCCGACUUCACUGCUCAGGUCAUUGUGCUCAACCACCCUGGCCAGAUUGCCAACGGCUACACACCUGUGCUUGAUUGUCACACUGC
UCACAUUGCCUGCAAGUUCGCAGAGAUAAAGGAGAAGUGCGACCGUCGUACCGGCAAAACUACAGAGGAGAACCCCAAGUCUAUCAAGUCCGGCGAUGCGGCUAUCGUCAAC[1053]
Epiophlebia_laidlawi ---

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UnalignedAeshnoids   ---

-----------------ArChipetAliA_AuriCulAt_AAAu
UCAAGUUAUGCGUGGGUUUUGGACAAGCUCAAGGCAGAGCGUGAGCGUGGUAUUACCAUUGAUAUUGCCCUGUGGAAGUUUGAAACUGCAAAGUACUACAUCACCAUUAUUGACGCCCCCGGACACAGAGAUUU
CAUUAAGAACAUGAUCACGGGAACAUCACAGGCCGAUUGUGCAGUUCUUAUCGUCGCUGCCGGUACGGGAGAAUUCGAGGCCGGUAUUUCCAAAAAUGGACAAACCAGGGAACAUGCACUUCUCGCUUUCACUC
UUGGAGUGAAGCAGCUCAUUGUUGGUGUUAAUAAAAUGGACUCAACUGAGCCACCAUACAGUGAAACCCGUUUCGAGGAAAUCAAGAAGGAAGUCGGUAACUACAUUAAGAAGAUCGGAUACAAUCCCGCUGCC
GUUGCUUUUGUACCGAUCUCCGGAUGGCACGGAGAUAACAUGCUCGAGGCCUCUGACAAGAUGCCGUGGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAAGGAAAUGGUGAUGGGAAGUGCCUCAUCGAGGCUCU
UGAUGCCAUCCUUCCACCCAGCCGCCCAACUGAAAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUACAAGAUCGGUGGUAUUGGAACAGUGCCAGUUGGUCGUGUUGAGACUGGUGUAAUGAAACCCGGUAUGU
UGGUCACUUUUGCUCCUGCAAACCUUACCACUGAAGUCAAGUCCGUGGAAAUGCACCACGAAGCUCUCCAGGAGGCCCUUCCUGGUGAUAACGUUGGUUUCAACGUGAAGAACGUUUCCGUCAAGGAGUUGCGU
CGUGGUUAUGUAUGCGGAGACAGCAAGAGUAACCCACCUAAGGCAGCAUCUGACUUCACUGCCCAGGUCAUUGUGCUCAACCACCCUGGCCAAAUCGCCAACGGCUACACGCCUGUUCUUGAUUGUCACACUGC
CCACAUUGCCUGCAAAUUUGCAGAAAUCAAGGAGAAGUGCGACCGUCGUACCGGCAAAACCACUGAAGAAAACCCCAAGUCUAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[1053]
AustropetAliA_viCtoriA_AAV
UCAAGUUAUGCGUGGGUUUUGGACAAGCUCAAGGCAGAGCGUGAGCGUGGUAUUACCAUUGAUAUUGCCCUGUGGAAGUUUGAAACUGCAAAGUACUACAUCACCAUUAUUGACGCCCCCGGACACAGAGAUUU
CAUUAAGAACAUGAUCACGGGAACAUCACAGGCCGAUUGUGCAGUUCUUAUCGUCGCUGCCGGUACGGGAGAAUUCGAGGCCGGUAUUUCCAAAAAUGGACAAACCAGGGAACAUGCACUUCUCGCUUUCACUC
UUGGAGUGAAGCAGCUCAUUGUUGGUGUUAAUAAAAUGGACUCAACUGAGCCACCAUACAGUGAAACCCGUUUCGAGGAAAUCAAGAAGGAAGUCGGUAACUACAUUAAGAAGAUCGGAUACAAUCCCGCUGCC
GUUGCUUUUGUACCGAUCUCCGGAUGGCACGGAGAUAACAUGCUCGAGGCCUCUGACAAGAUGCCGUGGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAAGGAAAUGGUGAUGGGAAGUGCCUCAUCGAGGCUCU
UGAUGCCAUCCUUCCUCCCAGCCGCCCAACUGAAAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUACAAGAUCGGUGGUAUUGGAACAGUGCCAGUUGGUCGUGUUGAGACUGGUGUAAUGAAACCCGGUAUGU
UGGUCACUUUUGCCCCUGCAAACCUUACCACUGAAGUCAAGUCCGUGGAAAUGCACCACGAAGCUCUCCAGGAGGCCCUUCCUGGUGAUAACGUUGGUUUCAACGUGAAGAACGUUUCCGUCAAGGAGUUGCGU
CGUGGUUAUGUAUGCGGAGACAGCAAGAGCAAUCCACCUAAGGCAGCAUCUGACUUCACUGCCCAGGUCAUUGUGCUCAACCACCCUGGCCAAAUCGCCAACGGCUACACGCCUGUUCUUGAUUGUCACACUGC
CCACAUUGCCUGCAAAUUUGCAGAAAUCAAGGAGAAGUGCGACCGUCGUACCGGCAAAACCACUGAAGAAAACCCCAAGUCUAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[1053]
HypopetAliA_pestilens_OHPe-----------------UUUGGACAAGCUUAAGGCAGAAUGC---
CGUGGUAUUGUCAUUGAUAUUGNCCUGUGGAAGUUUGAAACUGCAAAGUACUACAUCACCAUUAUUGACGCCCCCGGACACAGAGAUUUCAUUAAGAACAUGAUCACGGGAACAUCACAGGCCUAUUGUGCAGU
UCUUAUCGUCGCUGCCGGUACGGGAGAAUUCGAGGCCGGUAUUUCCAAAAAUGGACAAACCAGGGAACAGGCACUUCUUGCUUUCACUCUUGGAGUGAAGCAGCUCAUUGUUGGUGUUAAUAAAAUGGACUCAA
CUGAGCCACCAUACAGUGAAACCCGUUUCGAGGAAAUCAAGAAGGAAGUCGGUAACUACAUUAAGAAGAUCGGAUACAAUCCCGCUGCCGUUGCUUUUGUACCAAUCUCCGGAUGNCACGGAGAUAACAUGCUC
GAGGCCUCUGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAAGGAAAUGGUGAUGGGAAGUGCCUCAUGGCUUCUCUUGAUGCCAUCCUUCCACCCAGCCGCCCAACUGAAAAACCUCUUAG
GCUUCCUCUUCAGNAUGUCUACAAGAUCGGUGGUAUUGGAACAGUGCCAGUUGGUCGUGUUGAGACUGGUGUAAUGAAACCCGGAAUGUUGGUCACUUUUGCCCCUGCAAACCUUACCACUGAAGUCAAGUCCG
UGGAAAUGCACCAUGAAGCUCUCCAGGAGGCCCUUCCCGGUGAUAACGUUGGUUUCAACGUGAAGAACAUUUCAGUCAAGGAGUUGCGUCGUGGUUAUAUAUGCGGAGACAGCAAGAGCAACCCACCUAAGGCA
GCAUCUGACUUCACUGCCCAGGNCAUUGUGCUCAACCACCCUGGCCAAAUCGCCAACGGCUACACACCUGUUCUUGAUUGUCACACGGCCCACAUUGCCUGCAAAUUUGCAGAAAUCAAGGAGAAGUGCGACCG
UCGUACCGGCAAAACCACUGAAGAAAACCCCAAGUCUAUAAAGUCUGGCGAUGCGGCUAUCGUCAAC[1030]
FJ596639_Phyllopetalia_api---

Phyllopetalia_apollo_684____---


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Eurypetalia_altarensis______---------------------------------------------------------------------------------------------------------
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-------OphiopetAliA_diAnA_AUS
UUCAAGUAUGCAUGGGUUUUGGACAAGCUCAAGGCAGAGCGUGAGCGUGGUAUUACCAUUGAUAUUGCCCUGUGGAAGUUUGAAACUGCAAAGUACUACAUCACCAUUAUUGACGCCCCCGGACACAGAGAUUU
CAUUAAGAACAUGAUCACGGGAACAUCACAGGCCGAUUGUGCAGUUCUUAUCGUCGCUGCCGGUACGGGAGAAUUCGAGGCCGGUAUUUCCAAAAAUGGACAAACCAGGGAACAUGCACUUCUCGCGUUCACUC
UUGGAGUGAAGCAGCUCAUUGUUGGUGUUAAUAAAAUGGACUCAACUGAGCCACCGUAUAGUGAAAGCCGUUUCGAGGAAAUCAAGAAGGAAGUCGGUAACUACAUUAAGAAGAUCGGAUACAAUCCCGCUGCC
GUUGCUUUUGUACCGAUCUCCGGAUGGCACGGAGAUAACAUGCUCGAGGCCUCUGACAAGAUGCCGUGGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAAGGAAAUGGUGAUGGGAAGUGCCUCAUCGAGGCUCU
UGAUGCCAUCCUUCCACCCAGCCGCCCAACUGAAAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUACAAGAUCGGUGGUAUUGGAACAGUGCCAGUUGGUCGUGUUGAGACUGGUGUAAUGAAACCCGGUAUGU
UGGUCACUGUUGCCCCUGCAAACCUUACCACUGAAGUCAAGUCCGUGGAAAUGCAUCACGAAGCUCUCCAGGAGGCCCUUCCCGGUGAUAACGUUGGUUUCAACGUUAAGAACGUUUCCGUCAAGGAGUUGCGU
CGUGGUUAUGUAUGCGGAGACAGCAAGAGCAACCCACCCAAGGCAGCAUCUGACUUCACUGCCCAGGUCAUUGUGCUCAACCACCCUGGCCAAAUCGCCAACGGCUACACGCCUGUUCUUGAUUGUCACACUGC
CCACAUUGCCUGCAAAUUUGCAGAAAUCAAGGAGAAGUGCGACCGCCGUACCGGCAAAACCACUGAAGAAAACCCCAAGUCUAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[1053]
GomphAesChnA_furCilAtA_AES----------------
?GUUGGAUAAGCUGAAGGCAGAACGUGAGCGUGGUAUUACCAUCGAUAUUGCUCUGUGGAAGUUUGAGACUGCAAAGUACUACAUCACCAUUAUCGACGCCCCUGGACACAGAGAUUUCAUUAAGAACAUGAUC
ACUGGCACAUCACAGGCCGAUUGCGCGGUUCUUAUUGUUGCUGCCGGUACGGGAGAAUUUGAGGCCGGUAUUUCCAAAAAUGGACAAACCAGGGAACAUGCACUUCUUGCAUUCACUCUUGGAGUAAAGCAGCU
UAUUGUGGGUGUAAAUAAAAUGGACUCAACUGAGCCACCAUACAGUGAACCGCGUUUUGAGGAAAUCAAGAAGGAAGUUGG?????????????????????AUACAAUCCCGCCGCCGUUGCUUUCGUGCCAA
UCUCCGGCUGGCACGGAGAUAACAUGCUCGAGGCCUCUGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAGCGUAAGGAAGGAAAUGCUGAUGGAAAGUGUCUUAUCGAGGCUCUUGAUGCUAUCCUUCCA
CCUAGCCGCCCGACUGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUACAAAAUUGGUGGUAUUGGAACAGUGCCAGUUGGUCGUGUUGAGACCGGUGUUAUGAAGCCCGGUAUGUUGGUCACUUUUGCUCC
UGCUAACCUUACCACUGAAGUUAAGUCCGUGGAAAUGCACCACGAAGCUCUCCAGGAGGCCCUUCCCGGUGAUAACGUUGGUUUCAACGUGAAGAACGUUUCCGUCAAGGAGUUGCGUCGUGGUUAUGUAUGCG
GAGACAGCAAGUCCAAUCCACCCAAGGCAGCAUCAGACUUCACUGCUCAGGUCAUCGUGCUCAACCACCCUGGCCAGAUCGCCAACGGCUACACACCUGUGCUCGAUUGUCACACUGCCCAUAUUGCCUGCAAG
UUUGCUGAAAUCAAGGAGAAGUGCGACCGUCGUACUGGCAAAACCACUGAAGAGAACCCCAAGUCUAUCAAGUCCGGCGAUGCGGCUAUCGUCAAC[1037]
Oligoaeschna_pryeri_________---------------------------------------------------------------------------------------------------------
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-------AustroAesChnA_pArvistiG_AAPs
UCCAAGUAUGCGUGGGUUUUGGACAAGCUGAAGGCAGAACGUGAGCGUGGUAUUACCAUCGAUAUUGCCCUGUGGAAAUUUGAGACUGCUAAGUACUACAUUACCAUUAUUGACGCCCCUGGACACAGAGAUUU
CAUUAAGAACAUGAUCACGGGAACAUCACAGGCCGAUUGUGCUGUUCUUAUUGUUGCUGCCGGUACGGGAGAAUUUGAAGCCGGUAUUUCCAAAAAUGGACAAACCAGGGAACAUGCACUUCUUGCAUUCACUC
UUGGAGUUAAGCAGCUCAUUGUUGGUGUAAAUAAAAUGGACUCAACUGAGCCACCAUACAGUGAAACUCGUUUUGAGGAAAUCAAGAAGGAAGUCGGUAACUACAUUAAGAAGAUCGGAUAUAAUCCCGCUGCC
GUUGCUUUUGUACCAAUCUCCGGCUGGCACGGAGAUAACAUGCUCGAGGCCUCUGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUAGAGCGUAAGGAAGGAAAUGCUGAUGGAAAGUGUCUCAUCGAGGCUCU
UGAUGCUAUACUUCCUCCUAGCCGCCCCACUGAGAAACCUCUUAGGCUUCCACUUCAGGAUGUCUACAAGAUUGGAGGUAUUGGAACAGUGCCAGUCGGUCGUGUUGAGACUGGUGUUAUGAAGCCAGGUAUGC
UGGUCACCUUUGCCCCUGCUAACCUUACCACUGAAGUUAAGUCAGUGGAAAUGCACCACGAAGCUCUCCAGGAGGCUCUUCCCGGUGAUAACGUUGGUUUUAACGUGAAGAACGUUUCCGUCAAGGAGUUGCGU
CGUGGAUACGUAUGCGGAGACAGCAAGAGCAACCCACCCAAGGCAGCAUCAGACUUCACUGCUCAGGUCAUUGUGCUCAACCACCCUGGCCAGAUCGCCAACGGUUACACGCCUGUACUCGAUUGUCACACUGC
CCACAUUGCCUGCAAGUUCGCAGAGAUCAAGGAGAAGUGCGACCGUCGUACUGGCAAGACCACUGAAGAGAACCCUAAGUCUAUCAAGUCAGGCGAUGCGGCUAUCGUAAAC[1053]
UelephlebiA_tillyArdi_AUU-----------------------------------------------------------------------------------------------------------
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UAUCGGUGGUAUUGGAACGGUGCCAGUCGGUCGUGUUGAGACAGGUGUUAUGAAGCCAGGUAUGCUGGUCACCUUUGCCCCUGCUAACCUUACCACUGAAGUUAAGUCUGUGGAAAUGCACCACGAAGCUCUCC
AGGAGGCCCUUCCCGGUGAUAACGUUGGUUUUAACGUGAAGAACGUUUCCGUCAAGGAGUUGCGUCGUGGAUACGUAUGCGGAGACAGCAAGAGCAACCCACCCAAGGCAGCAUCAGACUUUACUGCUCAGGUU
AUUGUGCUCAACCACCCUGGCCAGAUCGCAAACGGUUACACGCCUGUGCUCGAUUGUCACACUGCCCACAUUGCCUGCAAGUUCGCAGAGAUUAAGGAAAAGUGCGACCGUCGUACUGGCAAGACCACUGAAGA
GAACCCAAAGUCGAUCAAGUCAGGCGAUGCGGCUAUCGUAAAC[445]
BoyeriA_vinosA_OBV   --------------------
GGACAAGCUAAAGGCAGAACGUGAGCGUGGUAUUACCAUCGAUAUUGCCCUGUGGAAGUUCGAGACUGCCAAGUACUACAUUACCAUUAUUGACGCCCCUGGACACAGAGAUUUCAUUAAGAACAUGAUCACGG
GAACAUCACAGGCCGAUUGUGCUGUUCUUAUUGUUGCUGCCGGUACGGGAGAAUUUGAAGCCGGUAUUUCCAAAAAUGGACAAACCAGGGAACAUGCACUUCUUGCAUUCACUCUUGGAGUUAAGCAGCUCAUU
GUUGGUGUAAAUAAAAUGGACUCAACUGAGCCACCAUACAGUGAAGCUCGUUUUGAGGAAAUCAAGAAGGAAGUCGGUAACUACAUUAAGAAGAUCGGAUAUAAUCCCGCUGCCGUUGCUUUUGUGCCAAUCUC
CGGCUGGCACGGAGAUAACAUGCUCGAGGCAUCUGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAGCGUAAGGAAGGAAAUGCUGAUGGGAAGUGUCUCAUCGAGNCUCUUGAUGCUAUACUUCCCCCUA
GCCGCCCCACCGAGAAACCUCUUAGGCUUCCUCUUCAGGAUGUCUACAAGAUUGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUUGAGACUGGUGUUAUGAAACCAGGUAUGCUGGUCACCUUUGCCCCUGCU
AACCUUACCACUGAAGUUAAGUCCGUGGAAAUGCACCACGAAGCUCUCCAGGAAGCCCUUCCCGGUGAUAACGUUGGUUUUAACGUGAAGAACGUUUCCGUCAAGGAGUUGCGUCGUGGAUACGUAUGUGGAGA
CAGCAAGAGCAAUCCACCCAAGGCAGCAUCUGACUUCACUGCUCAGGUCAUUGUGCUCAACCACCCUGGCCAGAUCGCCAACGGUUACACGCCUGUUCUCGAUUGUCACACUGCUCACAUUGCCUGCAAGUUCG
CAGAGAUCAAGGAGAAAUGCGACCGUCGUACUGGCAAGACCACCGAAGAGAACCCCAAGUCUAUCAAGUCCGGCGAUGCGGCUAUCGUCAAC[1033]
EU414704_2Boyeria_irene   --

UACAGUGAAGCUCGUUUUGAGGAAAUCAAGAAGGAAGUCGGUAACUACAUUAAGAAGAUCGGAUAUAAUCCCGCUGCCGUUGCUUUUGUACCAAUCUCCGGCUGGCACGGAGAUAACAUGCUCGAGGCAUCUGA
CAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAGCGUAAGGAAGGAAAUGCUGAUGGAAAGUGUCUCAUCGAGGCUCUUGAUGCUAUACUUCCCCCUAGCCGCCCCACCGAGAAACCUCUUAGGCUUCCACUUC
AGGAUGUCUACCA--

Brachytron_pratense_EU055--

EpiAesChnA_heros_OEH   -----------------
CUUGGACAAGCUGAAGGCAGAACGUGAGCGUGGUAUUACCAUCGAUAUUGCCCUGUGGAAGUUCGAGACUGCCAAGUACUACAUCACCAUUAUUGACGCCCCUGGACACAGAGAUUUCAUUAAGAACAUGAUCA
CGGGAACAUCACAGGCCGAUUGUGCUGUUCUUAUUGUUGCUGCCGGUACGGGAGAAUUUGAAGCCGGUAUUUCCAAAAAUGGACAAACCAGGGAACAUGCGCUUCUUGCUUUCACUCUUGGAGUUAAGCAGCUC
AUUGUUGGUGUAAAUAAAAUGGACUCAACUGAGCCACCAUACAGUGAAGCUCGUUUUGAGGAAAUCAAGAAGGAAGUUGGUAACUACAUUAAGAAGAUCGGAUAUAAUCCAGCUGCCGUUGCUUUUGUACCAAU
CUCCGGCUGGCACGGAGACAACAUGCUGGAGGCCUCUGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAGAGGAAGGAAGGAAAUGCUGAUGGAAAGUGUCUCAUCGAGGCUCUUGAUGCUAUACUUCCUC
CUAGCAGACCCACCGAAAAACCUCUUAGGCUUCCACUUCAGGAUGUCUACAAGAUUGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUUGAGACUGGUGUUAUGAAGCCAGGUAUGCUGGUCACCUUUGCUCCU
GCAAACCUUACCACUGAAGUAAAGUCGGUAGAAAUGCACCACGAAGCUCUGCAAGAGGCCCUUCCCGGUGAUAACGUCGGUUUUAACGUAAAGAACGUUUCCGUCAAGGAGUUACGUCGUGGAUACGUAUGUGG
AGACAGCAAGAGCAAUCCACCCAAGGCAGCAUCGACUUUCACUGCUCAGGUCAUUGUGCUCAACCACCCUGGCCAGAUCGCCAACGGUUACACGCCUGUGCUUGAUUGUCACACUGCUCACAUUGCCUGCAAGU
UCGCAGAGAUCAAGGAGAAGUGCGACCGUCGUACCGGCAAGACCACUGAAGAGAACCCAAAGUCUAUCAAGUCAGACGAUGCGGCUAUCGUUAAC[1036]
DQ008197_Caliaeschna_micro--

DQ008199_Anaciaeschna_iso---

GQ118262_Oplonaeschna_sp____---

-------Aeshna_canadensis_OAC_E1______
UUCAAGUAUGCGUGGGUUUUGGACAAGCUCAAGGCAGAACGUGAGCGUGGUAUUACCAUCGAUAUUGCCCUGUGGAAGUUCGAGCCUGCAAAGUACUACAUUACCAUUAUUGACGCCCCUGGACACAGAGAUUU
CAUUAAGAACAUGAUUACGGGAACAUCACAGGCCGAUUGUGCUGUUCUAAUUGUCGCUGCCGGUACGGGAGAAUUUGAAGCCGGUAUUUCCAAAAAUGGACAAACCAGGGAACAUGCACUUCUUGCAUUCACUC
UUGGAGUUAAGCAGCUCAUUGUUGGUGUAAAUAAAAUGGACUCAACUGAGCCUCCAUACAGUGAAGCUCGUUUUGAGGAAAUCAAGAAGGAAGUCGGUAACUACAUUAAGAAGAUCGGUUAUAACCCAGCUGCC
GUUGCUUUUGUACCAAUCUCCGGCUGGCACGGAGACAACAUGCUCGAAGCUUCUGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAGCGUAAGGAAGGAAAUGCUGAUGGAAAGUGCCUCAUUGAGGCUCU
UGAUGCUAUACUUCCUCCUAGCCGACCCACCGAGAAACCUCUUAGGCUUCCACUUCAGGAUGUCUACAAGAUUGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUUGAGACUGGUGUUAUGAAACCAGGUAUGC
UUGUCACCUUCGCCCCUGCUAACCUUACCACUGAAGUCAAGUCCGUGGAAAUGCACCACGAAGCUCUCCAAGAGGCCCUUCCCGGUGAUAACGUUGGUUUUAACGUGAAGAACGUUUCCGUCAAGGAGUUGCGC
CGUGGUUACGUAUGUGGCGACAGCAAGAGCAAUCCACCCAAGGCAGCAUCAGACUUUACUGCUCAGGUCAUCGUGCUAAACCACCCUGGCCAGAUCGCCAACGGUUACACGCCUGUGCUUGAUUGCCACACUGC
UCACAUUGCCUGCAAGUUCGCAGAGAUCAAGGAGAAGUGCGACCGUCGUACUGGCAAGACAACUGAAGAGAACCCUAAGUCUAUCAAGUCCGGCGAUGCGGCUAUCGUCAAC[1053]
EU055147_Rhionaeschna_mult---

Aeshna_cyanea_1203__________---

FJ596630_Aeshna_grandis_____---

FN356092_Gynacantha_bulla--

-------AustroGynACAnthA_heteroG_AAH
UUCAAGUUAAGGUGGGUUUUGGACAAGCUGAAGGCCGAACGUGAGCGUGGUAUUACCAUCGAUAUUGCCCUGUGGAAGUUUGAGACUGCCAAGUACUACAUUACCAUUAUUGACGCCCCUGGACACAGAGAUUU
CAUUAAGAACAUGAUCACGGGAACAUCACAGGCUGAUUGUGCUGUGCUUAUUGUGGCUGCCGGUACUGGAGAAUUCGAAGCCGGUAUUUCCAAAAAUGGACAAACCAGGGAACAUGCACUUCUUGCGUUUACUC
UUGGAGUUAAGCAGCUCAUUGUUGGUGUAAAUAAAAUGGACUCAACUGAGCCACCAUACAGUGAAGCUCGUUUUGAGGAAAUCAAGAAGGAAGUCGGUAACUACAUUAAGAAGAUCGGUUAUAAUCCAGCUGCC
GUUGCUUUUGUACCAAUCUCCGGCUGGCACGGAGACAACAUGCUCGAGGCUUCUGACAAGAUGCCGUGGUUCAAGGGGUGGAAGGUGGAGCGUAAGGAAGGAAAUGCUGACGGAAAGUGUCUCAUCGAGGCUCU
UGAUGCUAUACUUCCUCCUAGCCGACCCACUGAGAAACCUCUUAGGCUUCCACUUCAGGAUGUCUACAAGAUUGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUUGAGACUGGUGUUAUGAAACCAGGUAUGC
UUGUCACCUUCGCCCCUGCUAACAUUACCACUGAAGUAAAGUCUGUGGAAAUGCAUCACGAAGCUCUCCAAGAGGCCCUUCCCGGUGAUAACGUUGGUUUUAACGUGAAGAACGUUUCCGUCAAGGAGUUGCGC
CGUGGUUACGUAUGUGGCGACAGCAAGAGCAAUCCACCCAAGGCAGCAUCAGACUUUACUGCUCAGGUCAUCGUGCUAAACCACCCUGGCCAGAUCGCCAACGGUUACACGCCUGUGCUUGAUUGCCACACUGC
UCACAUUGCCUGCAAGUUCGCAGAGAUCAAGGAGAAGUGCGACCGUCGUACUGGCAAGACAACUGAAGAGAACCCUAAGUCUAUCAAGUCCGGCGAUGCGGCUAUCGUCAAC[1053]
FN356093_Hemianax_ephippig--

-------AnAx_junius_AES
UUCAAGUACGCAUGGGUGUUGGACAAGCUGAAGGCAGAACGUGAGCGUGGUAUUACCAUCGACAUUGCCCUGUGGAAGUUUGAGACUGCUAAGUACUACAUUACCAUUAUUGACGCCCCUGGACACAGAGAUUU
CAUCAAGAACAUGAUCACGGGAACAUCACAGGCCGAUUGUGCUGUGCUUAUCGUUGCUGCCGGUACGGGAGAAUUCGAAGCCGGUAUUUCCAAAAAUGGACAAACCAGGGAACAUGCACUUCUUGCGUUUACUC
UUGGAGUUAAGCAGCUCAUUGUUGGUGUAAAUAAAAUGGACUCAACUGAGCCACCAUACAGUGAAGCUCGUUUUGAGGAAAUCAAGAAGGAAGUCGGUAACUACAUUAAGAAGAUUGGUUAUAAUCCUGCUGCC
GUUGCUUUUGUACCAAUCUCCGGCUGGCACGGAGACAACAUGCUCGAGGCCUCUGACAAGAUGCCAUGGUUUAAGGGGUGGAAGGUGGAGCGUAAGGAAGGAAACGCUGAUGGAAAGUGUCUCAUUGAGGCUCU
UGAUGCUAUUCUUCCCCCUAGCCGACCCACCGAGAAACCUCUUAGGCUUCCACUUCAGGAUGUCUACAAGAUUGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUUGAGACUGGUGUUAUGAAACCAGGUAUGC
UCGUCACCUUCGCUCCUGCUAACCUUACCACUGAGGUAAAAUCAGUUGAAAUGCACCACGAAGCUCUGCAAGAGGCUCUUCCCGGCGAUAACGUUGGCUUUAACGUGAAGAACGUUUCUGUCAAGGAGUUGCGU
CGUGGUUACGUAUGUGGUGACAGCAAGAGCAAUCCACCCAAGGCAGCAUCUGAUUUCACUGCUCAGGUCAUUGUGCUCAACCAUCCUGGCCAGAUCGCUAAUGGUUACACGCCUGUGCUAGAUUGCCACACUGC
UCACAUUGCCUGCAAGUUCGCAGAGAUCAAGGAAAAGUGUGAUCGUCGUACCGGCAAGACCACUGAAGAAAACCCCAAGUCUAUCAAGUCGGGUGAUGCUGCUAUCGUUAAC[1053]
FN356035_Anax_imperator_____---

UnalignedGomphids   --

SinoGomphidiA_kruGeri_ASK--

UGGAGAGUUUGAAGCUGGUAUCUCCAAAAACGGACAAACCAGAGAACACGCGCUUCUUGCUUUCACCUUAGGAGUGAAGCAGCUCAUCGCUGGUGUUAAUAAAAUGGACUCAACUGAGCCGCCAUAUAGUGAGG
CCCGUUUUGAAGAAAUCAAGAAGGAAGUAGGUAAUUACAUCAAGAAGAUAGGAUAUAAUCCGGCAGCAGUUGCUCUUGUACCCAUCUCUGGCUGGCACGGAGAUAACAUGCUUGAGCCCUCUGACAAGAUGCCC
UGGUUCAAGGGGUGGAAGGUGGAGCGUAAGGAAGGAAAUGCUGAGGGAAAAUGUCUCAUCGAGGCUCUGGAUGCUAUAUUGCCUCCAAGUCGUCCAACUGAGAAACCCCUUAGGCUUCCUCUUCAGGAUGUCUA
CAAGAUCGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUCGAAACUGGUAUUAUGAAGCCUGGUAUGUUGGUCACCUUUGCCCCUGCCAACCUCACUACUGAAGUCAAGUCUGUAGAGAUGCAUCACGAAGCUC
UUCAGGAAGCUCUCCCAGGUGACAACGUCGGUUUCAACGUUAAGAACGUCUCCGUAAAAGAAUUGCGUCGAGGGUAUGUUUGUGGAGACAGCAAGACCAACCCACCAAAGGCUGCAUCUGACUUCACUGCACAA
GUCAUUGUGCUUAACCAUCCUGGCCAAAUCGCUAAUGGUUACACGCCUGUGCUCGAUUGCCACACCGCCCAUAUUGCCUGCAAAUUUGCUGAAAUUAAGGAGAAAUGCGACCGUCGUACUGGUAAAACCACUGA
GGAGAACCCGAAGUCGAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[850]
Ictinogomphus_australis_6--

Ictinogomphus_sp____________--

FN356120_Lindenia_tetraph--

PhylloGomphoides_stiGmAt_APS--

GGAACGGUGCCAGUCGGUCGUGUCGAAACUGGUAUUAUGAGGCCUGGUAUGUUGGUCACCUUUGCCCCUGCAAAUCUCACUACUGAAGUUAAGUCUGUGGAAAUGCAUCACGAGGCUCUUCAGGAGGCCCUCCC
AGGUGACAACGUUGGUUUCAACGUAAAGAACGUUUCUGUGAAAGAAUUGCGCCGAGGUUAUGUGUGUGGAGACAGCAAGUCCAACCCACCAAAGGCGGCAUCGGACUUCACUGCACAGGUCAUUGUGCUCAACC

ACCCCGGCCAAAUCGCUAAUGGCUACACGCCUGUGCUUGAUUGCCACACCGCCCAUAUUGCCUGCAAAUUCGCUGAAAUUAAGGAGAAGUGUGACCGUCGUACUGGCAAAACUACUGAGGAGAACCCUAAAUCC
AUUAAGUCUGGCGAUGCGGCUAUCGUCAAC[432]
ProGomphus_obsCurus_GOM   ---

ACUGGAGAGUUCGAAGCUGGUAUCUCUAAGAAUGGACAAACCAGAGAACACGCACUUCUUGCUUUCACCCUAGGAGUGAAGCAGCUUAUCGUUGGUGUAAAUAAAAUGGACUCAACUGAGCCACCAUACAGUGA
GGCCCGUUUUGAAGAAAUCAAGAAGGAAGUGGGUA--
UACANNN???????????UACAACCGGGCAGCAGUUGCUUUUGUACCCAUCUCCGGCUGGCACGGAGAUAACAUGCUUGAACCAUCUGACAAGAUGCCCUGGUUCAAGGGAUGGAAGGUUGAGCGUAAGGAAGG
UGGUGCUGAAGGAAAAUGUCUCAUCGAGGCUCUGGACGCUAUUUUGCCACCCAGUCGUCCAACUGAGAAACCCCUCAGGCUUCCUCUUCAGGAUGUCUACAAAAUUGGUGGUAUCGGAACAGUACCAGUUGGUC
GUGUGGAAACAGGUAUCAUGAAGCCUGGAAUGUUGGUCACCUUUGCCCCAGCUAAUCUCACCACUGAAGUCAAGUCUGUGGAAAUGCAUCACGAAGCUCUUCAAGAAGCUCUCCCAGGUGACAACGUUGGUUUC
AACGUUAAGAACGUAUCAGUGAAAGAAUUGCGUCGAGGUUACGUGUGUGGAGAUAGCAAGACCAAUCCACCAAAGGCUGCAUCCGACUUUACUGCACAGGUCAUUGUGCUUAACCACCCCGGCCAAAUCGCUAA
UGGCUACACGCCUGUGCUCGAUUGCCACACCGCCCACAUUGCCUGCAAAUUCGCAGAAAUUAAAGAGAAAUGCGACCGUCGUACCGGCAAGACAACUGAAGAGAACCCCAAAUCAAUCAAGUCCGGCGAUGCGG
CUAUCGUCAAC[1035]
Progomphus_borealis_633_____---

HAGenius_brevistylus_GOM   ----------------
?UUUGGGCAAGCUUAAGGCAGAGCGCGAGCGUGGUAUUACAAUCGAUAUUGCUCUGUGGAAAUUCGAAACUGCUAAGUACUAUAUUACUAUUAUUGACGCCCCCGGACAUAGAGAUUUCAUUAAGAACAUGAUC
ACUGGAACCUCACAGGCCGAUUGUGCAGUGCUUAUUGUUGCUGCUGGUACGGGAGAAUUUGAAGCUGGUAUCUCCAAAAACGGACAAACCAGAGAACACGCGCUUCUUGCAUUCACUCUAGGAGUGAAGCAGCU
CAUCGUUGGUGUUAAUAAAAUGGACUCAACUGAGCCCCCGUACAGUGAGGCCCGUUUCGAAGAAAUCAAGAAAGAAGUAGGU???????????????????AUAUACCGCAGCUGCUGUCGCUUUUGUGCCAA
UCUCCGGCUGGCACGGAGAUAACAUGCUUGAGGCCUCUGACAAGAUGCCCUGGUUCAAGGGGUGGAAGGUGGAGCGCAAAGAAGGAUAUGCCGAAGGAAAAUGUCUCAUUGAGGCUCUGGAUGCUAUUUUGCCU
CCUAGUCGCCCAACUGAGAAACCCCUUAGGCUGCCUCUUCAGGAUGUCUACAAAAUUGGUGGUAUUGGAACAGUGCCAGUGGGUCGUGUUGAAACCGGUAUUAUGAAGCCCGGUAUGUUGGUCACCUUUGCCCC
UGCCAAUCUCACCACUGAAGUUAAAUCAGUGGAAAUGCACCACGAAGCUCUCCAGGAGGCUCUCCCUGGUGACAAUGUCGGUUUCAACGUUAAGAACGUCUCUGUGAAGGAAUUGCGCCGAGGUUAUGUGUGCG
GAGACAGUAAGACCAACCCACCGAAGGCUGCAUCCGACUUCACUGCACAGGUAAUUGUGCUUAACCAUCCGGGCCAGAUCGCCAAUGGCUACACGCCUGUGCUCGAUUGCCACACCGCCCAUAUUGCCUGCAAA
UUCGCGGAAAUUAAGGAGAAGUGCGACCGUCGUACUGGUAAGACCACUGAAGAGAACCCCAAGUCGAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[1037]
LAnthus_vernAlus_GOM   ----------------
??UUGGGCAAGCUUAAGGCAGAGCGCGAGCGUGGUAUUACAAUCGAUAUUGCUCUGUGGAAAUUCGAAACUGCUAAGUACUAUAUUACUAUUAUUGACGCCCCCGGACAUAGAGAUUUCAUUAAGAACAUGAUC
ACCGGAACAUCACAGGCCGAUUGUGCAGUGCUUAUUGUUGCUGCCGGUACGGGAGAAUUUGAAGCUGGUAUCUCCAAAAACGGACAAACCAGAGAACACGCGCUUCUUGCAUUCACCCUAGGAGUGAAGCAGCU
CAUCGUUGGUGUUAAUAAAAUGGACUCAACUGAGCCCCCGUACAGUGAGAGCCGUUUCGAAGAAAUCAAGAAAGAAGUGG??????????????????????UACAAUCCAGCUGCUGUCGCUUUUGUGCCAA
UCUCCGGCUGGCACGGAGAUAACAUGCUCGAGUCCUCUGAAAAGAUGCCCUGGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAAGGAAAUGGUGAAGGAAAAUGUCUCAUCGAGGCUCUGGAUGCUAUUUUGCCA
CCCAGCCGCCCAACUGAGAAACCCCUUAGGCUGCCUCUUCAGGAUGUCUACAAAAUUGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUUGAAACCGGUAUUAUGAAGCCCGGUAUGUUGGUCACUUUUGCCCC
UGCCAAUCUCACCACUGAAGUUAAAUCAGUGGAAAUGCACCACGAAGCUCUCCAGGAGGCCCUCCCAGGUGACAACGUCGGUUUCAACGUUAAGAACGUCUCUGUGAAGGAAUUGCGCCGAGGUUAUGUGUGCG
GAGACAGCAAGUCCAACCCACCAAAGGCUGCAUCGGACUUCACUGCACAGGUCAUUGUGCUUAAUCAUCCUGGCCAGAUCGCUAAUGGCUACACGCCUGUGCUCGAUUGCCACACCGCCCAUAUUGCCUGCAAA
UUCGCAGAAAUUAAGGAGAAGUGCGACCGUCGUACUGGUAAGACCACUGAAGAGAACCCCAAGUCGAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[1037]
Davidius_nanus_DQ010047_____---

NeoGomphus_edentiCulAuus_ONE----------------------
GCAAGCUUAAGGCUGAGCGCGAGCGUGGUAUUACCAUGGAUAUUGCUCUGUGGAAAUUCGAAACUGCCAAGGAGUCUAUCACCAUCAUUGACGCCCCCGGACAUAGAGAUUUCAUUAAGAACAUGAUCACUGGA
ACUUCACAGGCCGAUUGUGCAGUACUCAUUGUUACAGCCGGUACGGGAGAGUUUGAAGCUGGUAUCUCCAAAAACGGACAAACCAGAGAACACGCGCUUCUUGCAUUCACCCUAGGAGUGAAGCAGCUCAUCGU

UGGUGUUAAUAAAAUGGACUCAACUGAGCCACCAUACAGUGAGAGCCGUUUCGAAGAAAUCAAGAAGGAAGUGGGUAACUACAUCAAGAAGAUNGGAUACAAUCCGGCUGCAGUUGCUUUUGUACCCAUCUCCG
GCUGGCACGGAGAUAACAUGCUCGAGGCCUCUGACAAGAUGCCCUGGUUCAAGGGAUGGAAGGUGGACCGCAAGGAAGGAAAUGCUGAAGGAAAAUGUCUCAUCGAGGCUCUGGAUGCCAUUCUACCACCCAGU
CGUCCAACUGAGAAACCCCUUAGGCUUCCUCUUCAGGAUGUCUACAAAAUUGGUGGUAUCGGAACAGUGCCAGUCGGUCGUGUCGAAACCGGUAUUAUGAAGCCUGGUAUGUUAGGCACUUUUGCCCCUGCCAA
UCUCACUACUGAAGUCAAGUCUGUGGAAAUGCAUCACGAGGCUCUCCAGGAGGCCCUCCCAGGUGACAACGUCGGUUUCAACGUGAAGAACGUCUCUGUAAAAGAAUUGCGUCGAGGUUAUGUGUGUGGAGACA
GCAAGUCCAACCCACCAAAGGCUGCAUCGGACUUUACUGCACAGGUCAUUGUGCUUAAUCACCCUGGCCAAAUCGCUAAUGGCUACACGCCUGUGCUCCAUUGCCACACCGCCCAUAUUGCCUGCAAAUUCGCG
GAAAUUAAGGAGAAAUGCGACCGUCGUACUGGCAAAACCACUGAGGAGAACCCCAAGUCGAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[1028]
ArmAGomphus_ArmiGer_AAAr
UCAAGUUAUGCGUGGGUUUUGGACAAGCUCAAGGCUGAGCGCGAGCGUGGUAUCACCAUCGAUAUUGCUCUCUGGAAAUUCGAAACUGCGAAGUACUAUAUCACCAUCAUUGACGCCCCCGGACAUAGAGAUUU
CAUUAAGAACAUGAUCACUGGAACUUCACAGGCCGAUUGUGCAGUACUCAUUGUUGCAGCCGGCACGGGAGAGUUUGAAGCUGGUAUCUCCAAAAACGGACAGACCAGGGAACACGCGCUUCUUGCGUUCACUC
UAGGAGUGAAGCAACUCAUCGUUGGUGUUAAUAAAAUGGACUCAACUGAGCCACCAUACAGUGAGGCCCGUUUUGAAGAAAUCAAGAAGGAAGUGGGUAAUUACAUCAAGAAGAUAGGAUACAAUCCGGCAGCA
GUAGCUUUUGUACCCAUCUCCGGCUGGCACGGAGAUAACAUGCUCGAGGCCUCUGACAAGAUGCCCUGGUUUAAGGGUUGGAAGGUGGAGCGUAAGGAAGGAAAUGCUGAAGGAAAAUGUCUCAUCGAGGCUCU
GGAUGCUAUUCUGCCCCCAAGUCGCCCAACUGAAAAACCCCUUCGGCUCCCCUCUUCAGGAUGUCUACAAAAUUGGCGGUAUCGGAACAGUGCCAGUCGGUCGUGUUGAAACCGGUAUUAUGAAGCCCGGUAUGU
UGGUCACCUUUGCCCCUGCCAAUCUCACCACUGAAGUUAAGUCUGUGGAAAUGCACCACGAGGCUCUCCAGGAGGCCCUCCCUGGUGACAACGUCGGUUUCAACGUUAAAAACGUCUCAGUAAAGGAAUUGCGU
CGUGGUUAUGUUUGUGGAGACAGCAAGUCUAACCCGCCAAAGGCUGCAUCGGACUUUACUGCACAGGUCAUUGUGCUUAAUCACCCUGGCCAAAUCGCUAAUGGCUACACGCCUGUGCUCGAUUGCCACACCGC
CCAUAUUGCUUGCAAAUUUGCUGAAAUUAAGGAGAAGUGCGACCGUCGUACUGGCAAAACCACCGAGGAGAACCCCAAGUCGAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[1053]
HemiGomphus_ComitAns_AHC
UCAAGUUAUGCGUGGGUUUUGGACAAGCUCAAGGCUGAGCGCGAGCGUGGUAUCACAAUCGAUAUUGCUCUGUGGAAAUUCGAAACUGCGAAGUACUAUAUCACCAUCAUUGACGCCCCCGGACAUAGAGAUUU
CAUUAAGAACAUGAUCACUGGAACUUCACAGGCCGAUUGUGCAGUACUCAUUGUUGCAGCCGGUACGGGAGAGUUUGAAGCUGGUAUCUCCAAAAACGGACAAACCAGGGAACACGCGCUUCUUGCUUUCACUC
UAGGAGUGAAGCAGCUCAUCGUUGGUGUUAAUAAAAUGGACUCAACUGAGCCACCAUACAGUGAAGCCCGUUUUGAAGAAAUCAAGAAGGAAGUGGGUAAUUACAUCAAGAAGAUAGGAUACAAUCCGGCAGCA
GUAGCUUUUGUACCCAUCUCCGGCUGGCACGGAGAUAACAUGCUCGAGGCCUCGGACAAGAUGCCGUGGUUCAAGGGUUGGAAGGUGGAGCGUAAGGAAGGAAAUGCUGAAGGAAAAUGUCUCAUCGAGGCUCU
GGAUGCUAUUCUUCCACCCAGUCGCCCAACUGAGAAACCCCUCAGGCUUCCUCUUCAGGAUGUCUACAAAAUUGGUGGUAUCGGGACAGUACCAGUCGGUCGUGUUGAAACCGGUAUUAUGAAGCCCGGUAUGU
UGGUCACCUUUGCCCCUGCCAAUCUCACCACUGAAGUUAAGUCUGUGGAAAUGCACCACGAGGCUCUCCAGGAGGCCCUCCCAGGUGACAACGUCGGUUUCAACGUUAAGAACGUCUCGGUAAAAGAAUUGCGU
CGAGGUUAUGUGUGUGGAGACAGCAAGUCCAACCCACCAAAGGCUGCAUCGGACUUUACUGCACAGGUCAUUGUGCUUAAUCACCCUGGCCAAAUCGCUAAUGGCUACACGCCUGUGCUCGAUUGCCACACCGC
CCAUAUUGCCUGCAAAUUCGCUGAAAUCAAGGAGAAAUGCGACCGUCGUACUGGCAAAACCACUGAGGAGAACCCCAAGUCGAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[1053]
FJ596622_Hemigomphus_heter---

Hemigomphus_magela_5935--

Trigomphus_sp_FN356176______---

FJ596615_Lanthus_albistylu---

FJ712325_Stylogomphus_shir---

Davidioides_martini_648_____---

BurmAGomphus_CollAris_ABC---

AUUGGUGGUAUUGGAACGGUGCCAGUCGGUCGUGUUGAAACUGGUAUUAUGAAGCCUGGUAUGUUGGUCACCUUCGCCCCGGCCAAUCUCACCACUGAAGUUAAGUCAGUGGAAAUGCACCACGAAGCUCUCCA
GGAGGCCCUUCCAGGUGACAACGUCGGUUUCAACGUUAAGAACGUCUCUGUGAAGGAAUUGCGCCGAGGUUAUGUGUGCGGAGACAGUAAGACCAAUCCACCCAAGGCUGCAUCUGACUUCACUGCACAGGUCA
UCGUGCUGAACCAUCCUGGCCAGAUCGCUAACGGCUACACGCCGGUGCUCGAUUGCCACACCGCCCAUAUUGCCUGCAAAUUCGCAGAAAUUAAGGAGAAGUGCGACCGUCGUACUGGUAAGACCACUGAAGAG
AACCCCAAGUCGAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[444]
Cyclogomphus_heterostylus---

Anisogomphus_pinr_FN356037---

Dromogomphus_spinosus_______---

-------AriGomphus_villoCepes_GOM
UUCAAGUAUGCGUGGGUUUUGGACAAGCUUAAGGCANAGCGAGCGUGGUAUUACAAUCGAUAUUGCUCUGUGGAAAUUCGAAACUGCUAAGUACUACAUUACUAUUAUUGACGCCCCAGGACAUAGAGAUUU
CAUUAAGAACAUGAUCACUGGAACAUCACAGGCCGAUUGUGCAGUGCUCAUUGUUGCUGCCGGUACUGGAGAAUUUGAAGCUGGUAUCUCCAAGAACGGACAAACUAGAGAACACGCGCUUCUUGCAUUCACCC
UAGGAGUGAAGCAGCUCAUCGUUGGUGUUAAUAAAAUGGAUUCAACUGAGCCCCAUACAGUGAGGCCCGUUUCGAAGAAAUCAAGAAAGAAGUGGGUAACUACAUUAAGAAGAUAGGAUACAAUCCCGCUGCU
GUCGCUUUUGUGCCAAUCUCCGGCUGGCACGGAGAUAACAUGCUUGAGGCCUCUGACAAGAUGCCCUGGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAAGGAAACGCCGAAGGAAAGUGCCUCAUUGAGGCUCU
GGAUGCAAUUCUGCCACCCAGUCGCCCAACUGAGAAACCCCUUAGGCUGCCGCUUCAGGAUGUCUACAAAAUUGGUGGUAUUGGAACAGUACCAGUUGGUCGUGUUGARACUNNUAUUAUGAAGCCUGGUAUGU
UGGUCACCUUCGCUCCGGCCAAUCUCACCACUGAAGUUAAAUCAGUGGAAAUGCACCACGAAGCUCUCCAGGAGGCCCUUCCAGGCGACAACGUCGGUUUCAACGUUAAGAACGUAUCUGUGAAGGAAUUGCGC
CGAGGUUAUGUGUGCGGGGACAGUAAGACCAACCCACCAAAGGCUGCAUCGGACUUCACUGCACAGGUCAUCGUGCUUAACCAUCCUGGCCAGAUCGCUAACGGCUACACGCCGGUGCUCGAUUGCCACACCGC
CCAUAUUGCCUGCAAAUUUGCAGAAAUUAAGGAGAAGUGCGACCGUCGUACUGGUAAGACCACUGAAGAGAACCCUAAGUCGAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[1053]
Arigomphus_cornutus   ---

FJ712319_Stylurus_intricat---

Stylurus_amnicola___________---

FJ596610_Stylurus_nagoyanu---

DQ008184_Gomphus_externus---

Asiagomphus_hainanensis_____---

DQ008187_Gomphus_exilis_____---

Gomphus_Phanogomphus_grasl---

-------Gomphus_Adelphus_GOM
UUCAAGAAUGCUUGGGUUUUCGACAAGCUUAAGGCAGAGCGCGAGCGUGGUAUUACAAUCGAUAUUGCUCUGUGGAAAUUCGAAACUGCUAAGUACUACAUUACUAUUAUUGACGCCCCAGGACAUAGAGAUUU
CAUUAAGAACAUGAUCACUGGAACAUCACAGGCCGACUGUGCAGUGCUCAUUGUUGCUGCCGGUACAGGAGAAUUUGAAGCUGGUAUCUCCAAGAAUGGGCAAACUAGAGAACACGCGCUUCUUGCAUUCACCC
UAGGAGUGAAGCAGCUCAUUGUUGGUGUUAAUAAAAUGGAUUCAACUGAGCCACCAUACAGUGAGGCCCGUUUCGAAGAAAUCAAGAAAGAAGUGGGUAACUACAUCAAGAAGAUAGGAUACAAUCCAGCUGCC
GUCGCUUUUGUGCCAAUCUCCGGCUGGCACGGAGAUAACAUGCUUGAGUCCUCUGACAAGAUGCCCUGGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAAGGAAACGCCGAAGGAAAGUGCCUCAUUGAGGCUCU
GGAUGCAAUUUUGCCACCCAGUCGCCCAACUGAGAAACCCCUUAGGCUGCCUCUUCAGGAUGUCUACAAAAUUGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUUGAAACUGGUAUUAUGAAGCCCGGUAUGU
UGGUCACCUUCGCCCCGGCCAAUCUCACCACUGAAGUUAAAUCAGUGGAAAUGCACCACGAAGCUCUCCAGGAGGCCCUUCCAGGUGACAACGUCGGUUUCAACGUUAAGAACGUCUCUGUGAAGGAAUUGCGC
CGAGGUUAUGUGUGCGGAGACAGUAAGACCAACCCACCAAAGGCUGCAUCGGACUUCACUGCACAGGUCAUCGUGCUUAACCAUCCUGGCCAGAUCGCUAACGGCUACACGCCGGUGCUAGAUUGCCACACCGC
CCAUAUUGCCUGCAAAUUUGCAGAAAUUAAGGAGAAGUGCGACCGUCGUACUGGUAAGACCACUGAAGAGAACCCCAAGUCGAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[1053]

FN356091_Gomphus_vulgatis---

FN356132_Megalogomphus_sp---

Onychogomphus_uncatus_______---

FN356138_Onychogomphus_for---

A_FJ712322_Onychogomphus_s---

-------OOC_Ophiogomphus_carolus
UUCAAGUACGCGUGGGUUUUGGAUAAGCUUAAGGCAGAGCGUGAGCGUGGUAUCACAAUCGAUAUCGCUCUGUGGAAAUUCGAAACUGCUAAGUACUAUAUUACCAUUAUUGACGCCCCAGGACACAGAGAUUU
CAUCAAGAACAUGAUCACCGGAACAUCACAGGCCGAUUGUGCAGUGCUUAUUGUCGCUGCCGGUACGGGAGAAUUCGAAGCUGGUAUCUCCAAAAAUGGACAAACCAGAGAACACGCGCUUCUUGCAUUCACCC
UAGGAGUGAAGCAGCUCAUCGUCGGUGUUAAUAAAAUGGACUCAACCGAGCCCCCAUAUAGCGAGAGCCGUUUCGAAGAAAUCAAGAAGGAAGUGGGUAAUUACAUCAAGAAGAUCGGUUACAAUCCAGCUGCU
GUCGCUUUUGUGCCAAUCUCCGGCUGGCACGGAGAUAACAUGCUUGAGCCCUCUGACAAGAUGCCCUGGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAAGGAAACGCCGAAGGCAAGUGCCUCAUCGAGGCUCU
GGAUGCCAUAUUGCCACCCAGUCGUCCAACCGAGAAACCCCUUAGGCUGCCUCUUCAGGAUGUUUACAAAAUUGGUGGUAUUGGAACAGUGCCUGUCGGUCGUGUUGAAACCGGUAUUAUGAAGCCUGGUAUGC

UGGUCGCCUUCGCUCCAGCUAAUAUCACCACUGAAGUCAAAUCAGUAGAAAUGCACCACGAAGCUCUUCAGGAAGCCCUCCCAGGUGACAACGUCGGUUUCAACGUUAAGAACGUCUCUGUGAAGGAAUUGCGC
CGAGGUUACGUGUGCGGAGACAGCAAGAGCAACCCACCAAAGGCUGCAUCGGACUUCACUGCACAGGUCAUCGUGCUUAACCAUCCUGGUCAGAUCGCUAACGGCUACACGCCUGUGCUCGAUUGCCACACCGC
CCAUAUUGCCUGCAAAUUUGCUGAAAUUAAGGAGAAGUGCGACCGUCGUACUGGUAAGACAACUGAAGAGAACCCCAAGUCGAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC
FJ596618_Ophiogomphus_sev--

FN356139_Ophiogomphus_caec--

Leptogomphus_elegans________--

FJ596609_Leptogomphus_saut--

EpiGomphus_CompACuus_AEC   CUUCAGUACGCGUGG---
UUCGACAAGCUUAAGGCAGAGCGCGAGCGUGGUAUCACAAUCGAUAUUGCUCUGGGGAAAUUCGAAACUGCUAAGUACUAUAUCACUAUUAUUGACGCCCCCGGACAUAGAGAUUUCAUCAAGAACAUGAUCAC
UGGAACAUCACAGGCCGAUUGUGCAGUGCUCAUUGUUGCGGCCGGUACGGGAGAAUUUGAAGCUGGUAUUUCCAAAAAUGGACAAACCAGAGAACACGCGCUACUUGCGUUCACCCUAGGAGUGAAGCAGCUCA
UCGUUGGUGUUAAUAAGAUGGACUCAACUGAGCCACCUUACAGUGAGGCCCGUUUCGAAGAAAUCAAGAAGGAAGUGGGUAACUACAUCAAGAAGAUCGGAUAUAAUCCAGCUGCUGUCGCUUUUGUGCCAAUC
UCCGGCUGGCACGGAGAUAACAUGCUUGAAGCCUCUGACAAGAUGCCCUGGUUCAAGGGGUGGAAAGUGGAGCGCAAGGAAGGAAAUUGCGAAGGAAAGUGUCUCAUCGAGGCUCUGGAUGCUAUUUUGCCACC
CAGUCGCCCAACUGAGAAACCUCUUAGGCUGCCUCUUCAGGAUGUCUACAAAAUUGGCGGUAUUGGUACAGUGCCAGUCGGUCGUGUUGAAACCGGUAUUAUGAAGCCUGGUAUGUUGGUCACCUUCGCCCCAG
CCAAUCUCACCACUGAAGUCAAGUCCGUUGAA---

--[720]
FJ712323_Microgomphus_chel--

Heliogomphus_retroflexus____---

FN356121_Macrogomphus_para---

Ceratogomphus_pictus_OCH------------------
UUGGAUAAGCUCAAGGCAGAGCGUGAACGUGGUAUCACAAUCGAUAUUGCUCUGUGGAAAUUCGAAACCGCCAAGUACUAUAUUACCAUUAUUGACGCCCCGGGACAUAGAGAUUUCAUUAAGAACAUGAUUAC
UGGAACAUCACAGGCCGAUUGUGCAGUGCUUAUUGUUGCUGCUGGUACGGGAGAAUUUGAAGCUGGUAUCUCCAAAAACGGUCAAACCAGAGAACACGCGCUGCUUGCGUUCACUCUUGGAGUGAAACAGCUCA
UCGUUGGUGUAAACAAAAUGGACUCAACUGAGCCCCCGUACAGUGAGGCCCGUUUCGAAGAAAUUAAGAAGGAAGUGGGUAACUACAUCAAGAAGAUAGGAUACAAUCCUGCUGCUGUCGCUUUUGUGCCAAUC
UCCGGCUGGCACGGAGAUAACAUGCUUGAACCCUCUGACAAGAUGCCCUGGUUCAAGGGGUGGAAGGUGGAACGCAAGGAAGGAAAUGCCGAAGGAAAGUGCCUCAUUGAGGCUCUGGAUGCUAUAUUGCCACC
CAGUCGCCCAACUGAGAAACCCCUUAGGCUGCCUCUUCAGGAUGUCUACAAAAUUGGUGGUAUCGGAACAGUGCCAGUCGGUCGUGUCGAAACCUGUAUUAUGAAGCCUGGUAUGUUGGUCACCUUUGCUCCUG
CUAAUCUCACUACUGAAGUAAAAUCUGUGGAAAUGCACCACGAAGCCCUUCAGGAGGCACUUCCAGGUGACAAUGUGGGUUUCAACGUGAAGAACGUAUCUGUGAAGGAAUUGCGCCGAGGUUAUGUGUGCGGA
GACAGUAAGACCAAUCCACCAAAGGCUGCAUCUGACUUCACUGCACAGGUCAUCGUGCUUAACCAUCCUGGCCAGAUCGCAAAUGGCUACACGCCUGUGCUCGAUUGCCACACCGCCCAUAUUGCCUGCAAGUU
CGCAGAGAUAAAGGAAAAAUGCGACCGCCGUACUGGUAAGACCACUGAAGAGAACCCCAAGUCGAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[1035]
Lestinogomphus_angustus_____---

-------AustroGomphus_Guerini_AAG
CAAGUUAACGCGUGGGUAUUGGACAAGCUUAAGGCAGAGCGUGAGCGUGGUAUUACAAUCGAUAUUGCUCUGUGGAAAUUCGAAACUGCUAAGUACUAUAUUACUAUUAUUGACGCCCCAGGACAUAGAGAUUU
CAUUAAGAACAUGAUUACUGGAACAUCACAGGCUGAUUGUGCAGUGCUUAUUGUUGCUGCUGGUACUGGAGAAUUUGAAGCUGGUAUCUCCAAAAAUGGACAAACCAGAGAACACGCGCUUCUUGCGUUCACCC
UAGGAGUGAAGCAGCUCAUCGUUGGUGUUAAUAAAAUGGACUCAACUGAGCCCCCAUACAGUGAGGCCCGUUUCGAAGAAAUCAAGAAGGAAGUGGGUAACUACAUCAAGAAGAUCGGG-A-
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
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AGCCUGGUAUGUUGGUCACAUUUGCCCCGGCCAAUCUUACUACUGAAGUAAAAUCGGUGGAGAUGCAUCACGAAGCUCUUCAAGAGGCACUUCCAGGUGACAAUGUCGGUUUCAACGUUAAGAACGUCUCUGUG
AAGGAAUUGCGCCGAGGUUAUGUGUGCGGAGACAGUAAGACCAACCCACCUAAGGCUGCAUCUGACUUCACUGCACAGGUCAUCGUGCUUAACCAUCCUGGCCAGAUCGCUAAUGGCUACACGCCUGUGCUCGA
UUGCCACACCGCCCAUAUUGCCUGCAAAUUUGCAGAGAUCAAGGAGAAGUGCGACCGUCGUACUGGUAAGACCACUGAAGAGAACCCCAAGUCGAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC [1051]

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FJ712330_Tanypteryx_pryeri---------------------------------------------------------------------------------------------------------
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-------TAChopteryx_thoreAi_PEU
UUCAAGUAUGCAUGGGUUUUGGAUAAGCUCAAGGCCGAGCGUGAGCGUGGUAUUACAAUCGACAUUGCCCUGUGGAAAUUCGAAACUGCUAAGUACUACAUUACCAUCAUUGACGCCCCUGGACACAGAGAUUU
CAUCAAGAACAUGAUUACGGGAACAUCACAGGCUGAUUGUGCCGUUCUUAUCGUCGCAGCUGGUACGGGAGAAUUCGAAGCUGGUAUUUCCAAGAAUGGACAGACCAGAGAACAUGCACUUCUUGCUUUCACUC
UUGGAGUGAAGCAGCUCAUUGUUGGUGUUAAUAAAAUGGACUCGACUGAGCCCCCGUACAGUGAAGCCCGUUUUGAGGAAAUCAAGAAGGAAGUCGGUAACUACAUUAAGAAGAUCGGAUACAAUCCCGCUGCU
GUUGCUUUUGUUCCGAUCUCCGGCUGGCACGGAGAUAACAUGCUCGAACCCUCUGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAGCGUAAGGAAGGAAACGCUGAUGGAAAGUGCCUCAUCGAGGCUCU
UGAUGCCAUCCUUCCACCUAGUCGCCCAACUGAGAAGCCUCUUAGGCUUCCUCUUCAGGAUGUCUACAAGAUUGGUGGUAUUGGAACANUGCCAGUCGGUCGUGUUGAGACUGGUAUCAUGAACCUGGCUAGGU
UGGUCACCUUUGCUCCUGCUAACCUUACCACUGAAGUUAAGUCUGUGGAAAUGCACCACGAAGCUCUCCAGGAGGCCCUUCCCGGUGAUAACGUUGGUUUCAACGUUAAGAACGUUUCCGUGAAGGAGUUGCGC
CGUGGAUAUGUAUGCGGCGACAGUAAGAGCAACCCACCAAAGGCAGCAUCUGACUUCACUGCACAGGUUAUUGUGCUCAACCACCCUGGCCAGAUUGCCAAUGGCUACACACCUGUGCUUGAUUGCCACACCGC
CCACAUUGCCUGCAAGUUCGCAGAAAUCAAGGAAAAGUGCGACCGUCGUACUGGUAAAACCACUGAGGAGAACCCCAAGUCGAUCAAGUCUGGCGAUGCGGCCAUCGUCAAC[1053]
Phenes_raptor --

Phenes_centralis_OPR
??????????????????UUGGACAAGCUCAAGGCCGAGCGUGAGCGUGGUAUUACCAUCGACAUUGCCCUGUGGAAAUUUGAGACUGCUAAAUACUACAUCACCAUCAUUGACGCUCCUGGACACAGAGAUUU
CAUUAAGAACAUGAUUACGGGAACAUCACAGGCUGAUUGUGCAGUCUUAAUUGUCGCUGCCGGUACGGGAGAAUUCGAAGCUGGUAUCUCCAAAAAUGGACAGACCCGUGAACACGCACUUCUUGCUUUCACUC
UUGGAGUGAAGCAGCUCAUUGUAGGUGUUAAUAAAAUGGACUCGACUGAGCCCCCGUACAGUGAACCCCGUUUUGAGGAAAUCAAGAAAGAAGUCGGUAACUACAUUAAGAAGAUCGGAUACAACCCUGCUGCU
GUUGCUUUUGUUCCGAUCUCCGGCUGGCACGGAGAUAACAUGCUCGAACCCUCUGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAGCGUAAGGAAGGAAACGGUGAUGGAAAGUGCCUCAUCGAGGCUCU
CGAUGCCAUCCUUCCACCCAGCCGCCCAACUGAGAAGCCAGUUAGGCUUCCUCUUCAGGAUGUCUACAAGAAUGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGAUGAGACUGGUAUCAUGAACCUGGCUAUGU
UGGUCACCUUUGCUCCUGCUAACCUUACCACUGAGGUUAAGUCAGUGGAAAUGCACCACGAGGCUCUCCAGGAGGCCCUUCCCGGUGAUAACGUUGGUUUCAACGUCAAGAACGUUUCCGUAAAGGAGUUGCGC
CGUGGUUAUGUAUGCGGUGACAGCAAAUCCAACCCACCUAAGGCAGCAUCAGACUUUACUGCACAGGUUAUUGUGCUCAACCACCCUGGUCAGAUUGCCAAUGGCUAUACUCCUGUGCUUGAUUGCCACACCGC
CCACAUUGCCUGCAAGUUCGCAGAAAUUAAUGAGAAGUGCUACCGCCGUACUGGUAAAACCACUGAGGAGAACCCUAAGUCGAUCAAGUCUGGCGAUGCGGCCAUCGUCAAC[1050]
Uropetalia_carvori_AUC_E1___
UUCAAGUAUGCGUGGGUUUUGGACAAGCUGAAGGCCGAACGUGAGCgUGGUAUUACCAUCGACAUUGCCCUGUGGAAAUUUGAGACUGCUAAAUACUACAUCACCAUAAUUGACGCCCCUGGACACAGAGAUUU
CAUUAAGAACAUGAUCACGGGAACAUCACAGGCUGAUUGUGCAGUCCUUAUUGUUGCUGCCGGUACGGGAGAAUUCGAAGCUGGUAUCUCCAAGAAUGGACAGACCCGAGAACACGCACUUCUUGCUUUCACUC
UUGGAGUGAAGCAGCUCAUUGUUGGUGUUAAUAAAAUGGACUCGACGGAGCCCCCGUACAGUGAACCCCGUUUUGAGGAAAUCAAGAAAGAAGUCGGUAACUACAUUAAGAAGAUCGGAUACAACCCCGCUGCA
GUUGCUUUUGUUCCGAUCUCCGGCUGGCACGGAGACAACAUGCUCGAACCCUCUGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAGCGUAAGGAAGGAAACGCUGAUGGAAAGUGCCUCAUCGAGGCUCU
CGAUGCCAUCCUUCCACCCAGCCGCCCAACUGAGAAGCCUCUUAGGCUUCCUCUUCAGGAUGUCUACAAGAUUGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUUGAGACUGGUAUCAUGAAACCGGGUAUGU
UGGUCACCUUUGCCCCUGCAAACCUAACUACUGAGGUUAAGUCUGUCGAAAUGCACCACGAAGCUCUCC
AGGAGGCCCUUCCCGGUGAUAACGUUGGUUUCAACGUGAAGAACGUUUCCGUGAAGGAGUUGCGCCGUGGUUAUGUCUGCGGUGACAGUAAGUCCAACCCGCCUAAGGCAGCAUCAGACUUUACUGCACAGGUU
AUCGUGCUCAACCACCCUGGCCAGAUUGCCAAUGGCUAUACGCCUGUGCUUGAUUGCCAUACCGCCCACAUUGCCUGCAAGUUUGCAGAAAUCAAGGAGAAGUGCGACCGUCGUACUGGUAAAACCACUGAGGA
GAACCCCAAGUCGAUCAAGUCUGGCGAUGCGGCCAUCGUCAAC[1050]
Petalura_hesperia__________--

PetAlurA_Gigantea ---

Petalura_litolae_OPG   ------------------
UUGGACAAGCUCAAGGCCGAGCGUGAGCGUGGUAUUACCAUCGACAUUGCCCUGUGGAAAUUCGAGACUGCUAAAUACUACAUCACCAUCAUUGACGCCCCUGGACACAGAGAUUUCAUUAAGAACAUGAUCAC
GGGAACAUCACAGGCUGAUUGUGCAGUUCUUAUUGUCGCUGCCGGUACGGGAGAAUUCGAAGCUGGUAUCUCAAAGAAUGGACAGACCCGAGAACACGCUCUUCUUGCUUUCACUCUUGGAGUGAAACAGCUCA
UUGUUGGUGUUAAUAAAAUGGACUCGACUGAGCCCCCGUACAGUGAACCCCGUUUUGAGGAAAUCAAGAAAGAAGUCGGUAACUACAUUAAGAAGAUnGGAUACAACCCCGCUGnUGUUGCU------------
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PetAlurA_inGentissimA_API--

UAUCGGUGGUAUUGGAACGGUGCCAGUUGGUCGUGUUGAGACUGGUAUCAUGAAACCGGGUAUGUUGGUCACAUUUGCUCCUGCUAAUCUUACCACUGAGGUUAAGUCUGUGGAAAUGCACCACGAGGCUCUUC
AGGAGGCCCUUCCCGGUGAUAACGUUGGUUUCAACGUUAAGAACGUUUCCGUGAAGGAGUUGCGCCGUGGUUAUGUAUGCGGUGACAGCAAGUCCAACCCACCUAAGGCAGCAUCAGACUUCACUGCACAGGUU
AUCGUGCUGAACCACCCUGGCCAGAUUGCCAAUGGCUAUACGCCUGUGCUUGAUUGCCACACCGCUCACAUUGCCUGCAAGUUCGCAGAAAUCAAGGAGAAGUGCGACCGUCGUACUGGUAAAACCACUGAAGA
GAACCCUAAGUCGAUCAAGUCUGGCGAUGCGGCCAUCGUGAAC[445]
ZorAenA_bilineAtA_OZD   ------------------
UUGGACAAGCUCAAGGCCGAGCGUGAGCGUGGUAUUACCAUUGACAUUGCCCUGUGGAAAUUCGAAACUGCUAAGUACUACAUCACUAUUAUUGAUGCCCCUGGACACAGAGAUUUCAUCAAGAACAUGAUCAC
GGGAACAUCACAGGCUGAUUGUGCAGUUCUCAUCGUGGCUGCCGGUACUGGAGAAUUUGAAGCUGGUAUCUCUAAAAAUGGACAGACCCGAGAGCACGCACUUCUUGCUUUCACUCUUGGAGUGAAGCAGCUCA
UUGUUGGUGUUAAUAAAAUGGACUCAACUGAGCCCCCGUACAGUGAAGCCCGUUUCGAGGAAAUCAAGAAGGAAGUCGGUAACUACAUUAAGAAGAUCGGAUACAAUCCUGCCGCAGUUGCUUUUGUACCGAUC
UCUGGCUGGCAUGGAGAUAACAUGCUCGAGGCCUCCGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAAGGAAAUGCUGAUGGAAAGUGUCUCAUCGAGGCCCUUGAUGCUAUUCUUCCUCC
UAGCCGCCCAACUGAGAAACCCCUUAGGCUUCCUCUUCAGGAUGUCUACAAAAUUGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUUGAGACUGGUAUCAUGAAACCCGGUAUGUUGGUCACUUUUGCCCCUG
CUAACCUUACGACUGAAGUUAAGUCUGUGGAAAUGCACCACGAAGCUCUACAGGAGGCUCUUCCCGGUGACAACGUUGGUUUCAACGUAAAGAACGUCUCUGUGAAAGAGUUGCGUCGUGGUUACGUCUGUGGU
GACAGCAAGUCCAACCCACCCAAGGCAGCAUCAGACUUCACUGCACAGGUCAUUGUGCUCAACCACCCUGGACAGAUCGCCAACGGCUACACGCCUGUGCUCGAUUGUCACACCGCCCACAUUGCCUGCAAGUU
CGCAGAGAUCAAGGAGAAGUGCGACCGUCGUACCGGUAAAACUACUGAAGAAAACCCCAAGUCUAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[1035]
Taeniogaster_obliqua________---

-------KAlyptoGAster_erroneA_CORDG
UUCAAGUACGCAUGGGUUUUGGACAAGCUCAAGGCCGAGCGUGAGCGUGGUAUUACCAUUGACAUUGCCCUGUGGAAAUUCGAAACUGCUAAGUACUACAUCACUAUUAUUGAUGCCCCUGGACACAGAGAUUU
CAUCAAGAACAUGAUCACGGGAACAUCACAGGCUGAUUGUGCCGUUCUCAUCGUUGCUGCCGGUACUGGAGAAUUUGAAGCUGGUAUCUCCAAAAAUGGACAGACCCGAGAGCACGCACUUCUUGCUUUCACUC
UUGGAGUGAAGCAGCUCAUUGUUGGUGUUAAUAAAAUGGACUCAACUGAGCCCCCGUACAGUGAAACCCGUUUCGAGGAAAUCAAGAAAGAAGUCGGUAACUACAUUAAGAAGAUCGGAUACAAUCCUGCCGCA
GUUGCUUUUGUACCGAUCUCCGGCUGGCAUGGAGAUAACAUGCUCGAGGCCUCCGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAAGGAAAUGCUGAUGGAAAGUGUCUCAUCGAGGCCCU
UGAUGCCAUUCUUCCUCCUAGCCGCCCAACUGAGAAACCCCUUAGGCUUCCUCUUCAGGAUGUCUACAAAAUUGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUUGAGACUGGUAUCAUGAAGCCCGGUAUGU
UGGUCACUUUUGCCCCUGCUAACCUUACGACUGAAGUUAAGUCUGUGGAAAUGCACCACGAAGCUCUACAGGAGGCUCUUCCCGGUGACAACGUUGGUUUCAACGUAAAGAACGUCUCUGUGAAGGAGUUGCGU

CGUGGUUACGUCUGUGGUGACAGCAAGUCCAACCCACCCAAGGCAGCAUCAGACUUCACUGCACAGGUCAUUGUGCUCAACCACCCUGGACAGAUCGCCAACGGCUACACGCCUGUGCUCGAUUGUCACACCGC
CCACAUUGCCUGCAAGUUCGCAGAGAUCAAGGAGAAGUGCGACCGUCGUACCGGUAAAACUACUGAAGAAAACCCCAAGUCUAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[1053]
FJ712317_Cordulegaster_mac---

EU055179_Cordulegaster_dor---

FN356072_Cordulegaster_bol---

DQ008198_Cordulegaster_pic---

FJ596638_Anotogaster_siebo---

-------NeopetAliA_puntAtA_NEO
UUCAAGUACGCAUGGGUUUUGGACAAGCUCAAGGCCGAGCGUGAGCGUGGUAUUACUAUUGACAUUGCCCUGUGGAAAUUCGAAACUGCAAAGUACUACAUCACCAUUAUUGACGCCCCUGGACACAGAGAUUU
CAUCAAGAACAUGAUCACGGGAACAUCACAGGCUGAUUGUGCUGUUCUUAUCGUCGCUGCCGGUACGGGAGAGUUCGAAGCUGGUAUCUCCAAAAAUGGACAGACCAGAGAACAUGCACUUCUUGCUUUCACUC
UUGGAGUGAAGCAGCUCAUUGUUGGUGUAAACAAAAUGGACUCGACUGAGCCCCCGUACAGUGAAACCCGUUUUGAGGAAAUCAAGAAGGAAGUAGGAAACUACAUUAAGAAGAUCGGAUACAAUCCCGCUGCU

GUUGCUUUUGUACCGAUCUCUGGCUGGCAUGGAGAUAACAUGCUCGAGUCCUCCGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAAGGAAACGGCGACGGAAAGUGCCUCAUCGAGGCUCU
UGACGCCAUCCUUCCCCCUAGCCGACCAACAGAGAAACCACUUAGGCUUCCCCUUCAGGAUGUCUACAAGAUCGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUGGAGACUGGUAUCAUGAAACCUGGUAUGU
UGGUCACCUUUGCCCCUGCUAACCUAACCACUGAGGUUAAAUCAGUUGAAAUGCACCACGAAGCUCUCCAGGAAGCUCUUCCCGGUGAUAACGUUGGUUUUNACGUGAAGAACGUNUCCGUUAAGGAGUUGCGU
CGUGGAUACGUCUGCGGUGACAGCAAGUCCAACCCACCCAAGGCAGCAUCAGACUUCACUGCACAGGUCAUUGUGCUCAACCAUCCUGGCCAGAUUGCCAACGGCUACACGCCUGUGCUAGAUUGUCACACCGC
CCACAUUGCCUGCAAGUUCGCAGAGAUCAAGGAGAAGUGCGACCGUCGUACCGGCAAAACCACUGAAGAGAACCCCAAGUCUAUUAAGUCUGGCGA????????????????[1053]
Chloropetalia_soarer________--

SinoroGomphus_nAsuuus_OSN--------------------
GGACAAGCUCAAGGCCGAGCGUGAGCGUGGUAUUACCAUCGAUAUCGCUCUGUGGAAAUUCGAAACUGCCAAGUACUACAUCACCAUUAUUGAUGCCCCUGGACAUAGAGAUUUCAUCAAGAACAUGAUCACUG
GAACGUCACAGGCUGACUGUGCAGUUCUAAUCGUGGCUGCCGGCACGGGAGAAUUCGAGGCUGGUAUCUCUAAAAAUGGACAGACCAGAGAGCAUGCACUUCUUGCUUUCACCCUUGGAGUGAAGCAGCUCAUU
GUAGGUGUUAAUAAAAUGGACUCGACCGAGCCCCGUACAGUGAAGCCCGUUUUGAGGAAAUCAAGAAAGAAGUCGGCAACUACAUUAAGAAGAUCGGAUACAACCCUGCUGCUGUUGCUUUUGUUCCGAUCUC
CGGCUGGCACGGAGAUAACAUGCUCGAGGCCUCCGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAGCGUAAGGAAGGAAAUGCGGACGGAAAGUGCCUCAUUGAGGCUCUUGAUGCCAUCCUUCCUCCCA
GUCGCCCAACUGAGAAACCACUUAGGCUUCCUCUUCAGGAUGUCUACAAGAUCGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUUGAGACUGGUAUCAUGAAACCUGGUAUGCUGGUCACCUUUGCCCCCGCU
AACCUCACCACUGAAGUUAAGUCUGUGGAAAUGCACCACGAAGCUUUACAGGAGGCUCUUCCCGGUGAUAACGUUGGUUUCAACGUGAAGAACGUUUCCGUUAAGGAGUUGCGUCGUGGAUAUGUCUGCGGUGA
CAGCAAGAGCAACCCACCUAAGGCAGCAUCAGACUUCACUGCACAGGUCAUUGUGCUCAACCACCCAGGCCAGAUCGCCAACGGAUAUACACCUGUGCUCGACUGUCACACAGCUCACAUUGCCUGCAAGUUUG
CAGAGAUCAAGGAGAAGUGCGACCGUCGUACCGGUAAAACUACAGAAGAGAACCCCAAAUCCAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[1033]
Chlorogomphus_brunneus_EU--

Chlorogomphus_sp   ---

Synthemis_eustAlACtA
????????????UGGGUACUGGACAAGCUCAAGGCCGAGCGUGAGCGUGGUAUUACUAUUGACAUUGCCCUAUGGAAAUUCGAGACUGCAAAGUACUACAUCACCAUCAUUGAUGCCCCUGGACACAGAGAUUU
CAUUAAGAACAUGAUUACGGGAACAUCACAGGCUGAUUGUGCCGUGCUCAUCGUCGCCGCUGGUACGGGAGAGUUCGAAGCUGGUAUCUCCAAAAACGGACAGACCAGAGAACAUGCACUUCUCGCUUUCACUC
UUGGAGUGAAGCAGCUCAUUGUUGGUGUUAACAAAAUGGACUCGACCGAGCCCCGUACAGUGAAACCCGUUUCGAAGAAAUCAAAAAGGAAGUAGGAAACUACAUUAAGAAGAUCGGAUACAAUCCCGCCGCA
GUUGCUUUUGUGCCAAUCUCCGGCUGGCACGGAGAUAACAUGCUCGAGGCCUCUGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAGCGCAAGGAAGGAAAUGCUGACGGAAAGUGCCUCAUUGAGGCCCU
CGAUGCCAUCCUUCCUCCUAGCCGCCCAACUGAGAAACCACUUAGGCUUCCUCUUCAGGAUGUCUACAAGAUAGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUGGAGACUGGUAUCAUGAAGCCGGGUAUGU
UGGUCACCUUUGCCCCAGCUAACCUUACUACUGAAGUUAAGUCUGUGGAAAUGCACCACGAAGCUCUUCAGGAGGCUCUUCCUGGUGACAAUGUUGGUUUCAACGUGAAGAACGUCUCUGUGAAGGAAUUGCGC
CGUGGUUAUGUGUGCGGAGACAGUAAGUCCAAUCCACCCAAGGCAGCAUCAGACUUCACUGCACAGGUCAUCGUGCUCAACCAUCCUGGUCAGAUUGCCAACGGCUACACCCCUGUGCUCGAUUGUCACACAGC
CCACAUUGCCUGCAAGUUUGCAGAGAUCAAGGAGAAGUGCGACCGUCGUACCGGUAAGACCACUGAAGAGAACCCCAAGUCCAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[1050]

Synthemis_marcrostigma_EU---

Archaeosynthemis_leachii____---

Eusynthemis_brevistyla______---

Eusynthemis_gutatta   ---

Eusynthemis_nig__--

Choristhemis_flavotermina---

-------Synthemiopsis_GomphomACromio
UUCAAGUAUGGGUGGGUCCUGGACAAACUCAAGGUUGAGCGUGAGCGUGGUAUAACUAUCGAUAUAGCUUUGUGGAAAUUCGAAACUGCUAAGUAUUACAUUACUAUCAUUGACGCCCCCGGACACAGAGAUUU
CAUUAAGAACAUGAUCACCGGAACUUCGCAGGCCGAUUGCGCAGUACUCAUUGUCGCAGCCGGCACAGGAGAGUUCGAAGCUGGUAUCUCCAAAAACGGUCAAACCAGAGAACAYGCRCUUCUYGCUUUCACYY
UKGGAGUGAAGCAGCUCAUUGUUGGUGUGAACAAAAUGGACUCGACCGAGCCCCCGUACAGUGAAACCCGUUUCGAAGAAAUCAAAAAGGAAGUAGGAAACUACAUUAAGAAGAUCGGAUACAAUCCCGCCGCA
GUUGCUUUUGUGCCGAUCUCCGGCUGGCACGGAGAUAACAUGCUCGAGGCCUCAGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAGCGUAAGGAAGGAAAUGGUGACGGAAAGUGCCUCAUUGAGGCCCU
CGAUGCCAUCCUUCCUCCCAGCCGCCCAACUGAGAAACCACUUAGGCUUCCUCUUCAGGAUGUCUACAAAAUUGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUGGAGACUGGUAUCAUGAAACCGGGUAUGU
UGGUCACCUUCGCCCCAGCUAACCUUACUACUGAAGUCAAGUCUGUAGAAAUGCACCACGAAGCUCUUCAAGAGGCACUUCCCGGUGAUAACGUUGGUUUCAACGUGAAGAACGUCUCCGUGAAGGAGUUGCGC
CGUGGUUAUGUCUGCGGUGACAGCAAGAGCAAUCCACCCAAGGCAGCAUCAGACUUCACUGCACAGGUCAUCGUGCUCAACCACCCUGGUCAGAUCGCAAACGGCUACACCCCCGUGCUCGAUUGUCACACAGC
CCACAUCGCCUGCAAAUUCGCAGAGAUAAAGGAGAAGUGCGACCGUCGUACCGGUAAGACCACUGAAGAAAACCCCAAGUCCAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[1053]
OGP_Gomphomacromia_chilensis-------------------
UGGAUAAGCUCAAGGCAGAGCGUGAGCGUGGUAUUACUAUUGACAUUGCCCUAUGGAAAUUCGAAACUGCCAAGUACUACAUCACCAUCAUUGAUGCCCCUGGACACAGAGAUUUCAUUAAGAACAUGAUCACG
GGAACAUCACAGGCUGAUUGUGCCGUGCUCAUCGUCGCCGCUGGUACGGGAGAGUUUGAAGCUGGUAUCUCCAAAAACGGACAGACCAGAGAACAUGCACUUCUCGCUUUCACGCUUGGAGUGAAGCAGCUCAU
UGUUGGUGUUAACAAAAUGGACUCGACCGAGCCCCCGUACAGUGAACCCCGUUUCGAAGAAAUCAAAAAGGAAGUAGGAAACUACAUUAAGAAGAUCGGAUACAAUCCCGCCGCAGUUGCUUUUGUGCCGAUCU
CCGGCUGGCACGGAGAUAACAUGCUCGAGGCCUCCGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAGCGUAAGGAAGGAAAUGCUGACGGAAAGUGCCUCAUUGAGGCCCUCGAUGCAAUCCUCCCUCCC
AGCCGCCCAACUGAGAAAGCACUUAGGCUUCCUCUUCAGGAUGUCUACAAAAUUGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUGGAGACUGGUAUCAUGAAGCCGGGUAUGUUGGUCACCUUCGCCCCUGC
UAACCUUACUACUGAAGUCAAGUCUGUAGAAAUGCACCACGAAGCUCUUCAAGAGGCCCUUCCAGGUGACAACGUUGGUUUUAACGUGAAGAACGUCUCUGUGAAGGAGUUGCGCCGUGGUUAUGUCUGCGGUG
ACAGCAAGACCAAUCCACCCAAGGCAGCAUCAGACUUCACUGCACAGGUCAUCGUGCUCAACCACCCUGGUCAGAUCGCCAACGGCUACACGCCCGUGCUCGAUUGUCACACCGCCCAUAUCGCCUGCAAAUUC
GCGGAGAUUAAGGAGAAGUGCGACCGUCGUACCGGUAAGACCACUGAAGAAAACCCGAAGUCCAUAUAGUCUGGC------------------
Gomphomacromia_paradoxa____--

Syncordulia_serendipator____---

Syncordulia_venator ---

Idionyx_imbricata_EU05518---

Idionyx_selysi______________---

FN356129_Macromidia_rapi____---

FN356186_Oxygastra_curtis---

Cordulephya_pygmaeaEU0551---

Pseudocordulia_circularis---

Hesperocordulia_berthoudi---

Lathrocordulia_metallica____---

Micromidia_convergens_EU0---

Micromidia_atrifrons________---

Austrophya_mystica__________---

Austrocordulia_refracta_____---

Archaeophya_magnifica_______---

Epophthalmia_elegans________---

-------Didymops_trAnsversA_MAC
UUCAAGUAUGCAUGGGUUUUGGAUAAGCUCAAGGCUGAACGUGAGCGUGGUAUUACCAUUGACAUUGCCCUGUGGAAAUUCGAAACUUCCAAGUACUAUAUCACCAUCAUUGAUGCCCCUGGACACAGAGAUUU
CAUUAAGAACAUGAUCACGGGAACGUCACAGGCUGAUUGUGCCGUGCUCAUCGUCGCCGCUGGUACAGGAGAAUUCGAAGCUGGUAUCUCCAAAAAUGGACAAACUAGAGAACAUGCACUCCUUGCUUUCACUC
UCGGAGUGAAGCAGCUCAUUGUAGGUGUUAACAAAAUGGACUCAACGGAGCCCCCAUACAGCGAAUCCCGUUUCGAGGAAAUUAAGAAGGAAGUAGGUAACUACAUUAAGAAGAUCGGAUAUAAUCCUGCUGCA
GUUGCUUUCGUGCCGAUCUCCGGCUGGCACGGAGAUAACAUGCUCGAGGCCUCCGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAACGUAAGGAAGGAAAUGCUGACGGAAAGUGCCUCAUUGAGGCUCU
CGAUGCUAUCCUUCCUCCCAGUCGCCCAACUGAAAAACCACUUAGGCUUCCUCUUCAGGAUGUCUACAAAAUUGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUGGAGACUGGUGUCAUGAAGCCUGGUAUGU
UGGUCACCUUCGCCCCUGCUAACAUCACUACUGAAGUCAAGUCUGUUGAAAUGCACCACGAAGCUCUCCAGGAGGCCCUUCCCGGUGACAACGUUGGUUUCAACGUGAAGAACGUCUCGGUGAAGGAGUUGCGU
CGUGGUUACGUCUGUGGUGACAGCAAGGCAAACCCGCCCAAGGCAGCAUCAGACUUCACAGCACAGGUCAUCGUGCUCAACCACCCUGGACAGAUCGCCAAUGGCUAUACCCCAGUGCUCGAUUGUCACACUGC
UCACAUUGCCUGCAAGUUUGCAGAGAUCAAGGAAAAGUGCGACCGUCGUACCGGUAAGACCACUGAAGAAAACCCCAAGUCUAUAAAGUCAGGCGAUGCGGCUAUCGUCAAN[1053]
MACromiA_illinoiensis_MAC
UUCAAGUAUGCAUGGGUAUUGGAUAAGCUCAAAGCCGAACGUGAGCGUGGUAUUACCAUUGACAUUGCCCUGUGGAAAUUCGAAACUGCUAAGUACUACAUCACCAUCAUCGAUGCCCCUGGACACAGAGAUUU
CAUUAAGAACAUGAUCACGGGAACGUCACAGGCUGAUUGUGCCGUGCUCAUCGUCGCCGCUGGUACGGGAGAAUUCGAAGCUGGUAUCUCCAAAAAUGGACAAACCAGAGAACAUGCACUCCUUGCUUUCACUC
UCGGAGUGAAGCAGCUUAUUGUAGGCGUUAACAAAAUGGACUCAACCGAGCCUCCUUACAGCGAAGCCCGUUUCGAAGAAAUUAAGAAGGAAGUAGGUAACUACAUUAAGAAGAUCGGAUAUAACCCUGCCGCA
GUUGCUUUCGUGCCGAUCUCCGGCUGGCACGGAGAUAACAUGCUCGAGGCCUCCGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAACGUAAGGAAGGAAAUGCUGACGGAAAGUGCCUCAUUGAGGCCCU
CGAUGCCAUCCUUCCUCCCAGUCGCCCAACUGAAAAACCACUUAGGCUUCCUCUUCAGGAUGUCUACAAGAUUGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUGGAGACUGGUGUCAUGAAGCCUGGUAUGU
UGGUCACCUUCGCCCCUGCUAACAUAACUACUGAAGUCAAGUCUGUUGAAAUGCACCACGAAGCUCUCCAAGAGGCCCUUCCCGGUGACAACGUUGGUUUCAACGUGAAGAACGUCUCGGUGAAGGAGUUGCGU
CGUGGUUACGUCUGUGGUGACAGCAAGGCAAACCCACCCAAGGCAGCAUCAGACUUCACAGCACAGGUCAUCGUGCUCAACCACCCUGGACAGAUCGCCAAUGGCUACACCCCUGUGCUCGAUUGUCACACUGC
UCACAUUGCCUGCAAGUUCGCAGAGAUCAAGGAGAAGUGCGACCGUCGUACCGGCAAGACCACUGAAGAAAACCCCAAGUCUAUCAAGUCUGGCGAUGCGGCUAUCGUCAAU[1053]
Macromia_amphigena__________---

Macromia_eurynome_EU05519---

EF640541_Macromia_magnifica---

GCUGAUUGUGCCGUGCUCAUCGUCGCCGCUGGUACGGGAGAAUUCGAAGCUGGUAUCUCCAAAAAUGGACAAACCAGAGAACAUGCACUCCUUGCUUUCACUCUCGGAGUGAAGCAGCUUAUUGUAGGCGUUAA
CAAAAUGGACUCCACCGAGCCUCCAUACAGUGAAGCCCGUUUCGAAGAAAUUAAGAAGGAAGUAGGUAACUACAUUAAGAAGAUCGGAUAUAACCCUGCCGCAGUUGCUUUCGUGCCGAUCUCCGGCUGGCACG
GAGAUAACAUGCUCGAGGCCUCCGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAACGUAAGGAAGGAAAUGCUGACGGAAAGUGCCUCAUUGAGGCCCUCGAUGCCAUCCUUCCUCCCAGUCGCCCAACU
GAAAAACCACUUAGGCUUCCUCUUCAGGAUGUCUACAAGAUUGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUGGAGACUGGUGUCAUGAAGCCUGGUAUGUUGGUCACCUUCGCCCCUGCUAACAUAACUAC
UGAAGUCAAGUCUGUUGAAAUGCACCACGAAGCUCUCCAAGAGGCCCUUCCCGGUGACAACGUUGGUUUCAACGUGAAGAACGUCUCGGUGAAGGAGUUGCGUCGUGGUUACGUCUGUGGUGACAGCAAGAGCA
ACCCACCCAAGGCAGCAUCAGACUUCACAGCACAG---

FN356128_Macromia_splende---

FN356146_Phyllomacromia_ny---

Idomacromia_proavita________---

Aeschnosoma_forcipula_______---

Pentathemis_membranulata____--

-------UetrAGonuriA_CynosurA_CORD
UUCAAGUACGCUUGGGUAUUGGACAAGCUCAAGGCCGAGCGUGAGCGUGGUAUUACAAUUGACAUUGCCCUGUGGAAAUUCGAAACUGCAAAGUACUAUAUUACCAUCAUUGAUGCCCCGGACACAGAGAUUU
CAUUAAGAACAUGAUCACGGGAACRUCACAGGCUGAUUGUGCCGUGCUCAUCGUCGCCGCUGGUACGGGAGAAUUCGAAGCUGGUAUCUCCAAAAACGGACAAACCAGAGAACAUGCACUCCUCGCUUUCACUC
UUGGAGUGAAGCAGCUCAUUGUUGGUGUUAACAAAAUGGAUUCAACCGAGCCCCGUACAGUGAAGCCCGUUUUGAAGAAAUUAAGAAAGAAGUAGGAAACUACAUCAAGAAGAUCGGAUAUAACCCCGCCGCA
GUUGCAUUUGUGCCAAUCUCCGGCUGGCACGGAGAUAACAUGCUCGAGGCCUCCGACAAGAUGCCAUGGUUCAAGGGGUGGAAGGUGGAGCGUAAGGAAGGAAAUGCUGACGGAAAGUGCCUCAUUGAGGCUCU
CGAUGCCAUCCUUCCUCCCAGCCGCCCAACUGAGAAGCCACUCAGGCUUCCCCUCCAGGAUGUUUACAAGAUCGGUGGUAUUGGAACAGUGCCAGUCGGUCGUGUGGAAACUGGUAUCAUGAAACCCUGUAUGU
UGGUCACCUUCGCCCCUGCUAACCUUACUACUGAAGUCAAGUCUGUUGAAAUGCAUCACGAAGCUCUCCAAGAGGCCCUUCCCGGUGACAAUGUUGGUUUCAACGUGAAGAACGUCUCAGUCAAGGAGUUGCGA
CGUGGUUAUGUUUGCGGUGACAGCAAGACCAACCCACCCAAGGCAGCAUCAGACUUCACUGCACAGGUCAUCGUGCUCAAUCACCCUGGCCAGAUUGCCAAUGGCUACACCCCUGUGCUCGAUUGUCACACUGC
CCAUAUCGCCUGCAAGUUCGCAGAGAUCAAGGAAAAGUGCGACCGUCGUACCGGUAAGACCACUGAAGAAAACCCCAAGUCCAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[1053]
Tetragon   ---

Tetragon   ---

Epicordulia_princeps________--

Epitheca_marginata__________--

FN356087_Epitheca_bimacul---

Rialla_villosa_____________---

FN356074_Cordulia_aenea_____---

EF640540_CorduliA_shurtleffi---

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CAAAAUGGACUCAACCGAGCCCCCGUACAGUGAAGCCCGUUUUGAAGAAAUUAAGAAAGAAGUAGGAAACUACAUCAAGAAGAUCGGAUAUAACCCCGCCGCAGUUGCAUUUGUGCCAAUCUCCGGCUGGCACG
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SomAtoChlorA
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OSTn_Somatochlora_tenebrosa-----------------
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Hemicordulia_australiae_E---

Procordulia_jacksoniensis---

Unalignedlibellulids   ---

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Uetrathemis_polleni_________---

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Huonia_____________---

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EF640528_MiAthyriA_mArCellA---

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EF640531_Uholymis_tillArGA---

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FJ596595_Thermorthemis_mad---

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EF640482_Orthemis_ferruGineA---

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FN356119_Libellula_quadrim---

Libellula_Syntetrum_angeli---

Libellula_Eolibellula_semi---

EF640481_LibellulA_sAturAtA--

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???[884]
EF640480_LibellulA_Composit--

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UGAAGUCAAGUCAGUUGAAAUGCACCACGAAGCUCUCCAAGAGGCUCUUCCCGGUGAUAACGUUGGUUUCAACGUGAAGAACGUGUCGGUCAAGGAGUUGCGACGUGGUUAUGUCUGCGGUGACAGCAAGAACA
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??
???[884]LibullulA_puChellA_LIB
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UUGGAGUGAAGCAGCUCAUUGUUGGUGUUAACAAAAUGGACUCGACUGAACCUGCAUACAGUGAAGCUCGAUUUGAGGAAAUUAAAAAGGAAGUAGGAAAUUACAUUAAGAAGAUCGGAUACAAUCCCGCCGCU
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CCACAUUGCCUGUAAGUUCGCAGAGAUCAAGGAGAAGUGCGACCGUCGUACCGGUAAGACCACUGAAGAAAACCCCAAGUCCAUCAAGUCUGGCGAUGCGGCUAUCGUCAAC[1053]
EF640479_LibellulA_ComAnChe   --

GCUGAUUGUGCUGUGCUCAUUGUCGCCGCUGGUACGGGGGAAUUCGAAGCUGGUAUCUCCAAGAACGGUCAAACCCGAGAACAUGCUUUGCUCGCUUUCACUCUUGGAGUGAAGCAGCUCAUUGUUGGUGUUAA
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Libellula_Holotania_auripe---

Libellula_Holotania_axilen---

Libellula_Holotania_luctuo--

Aethriamanta_rezia_GU196369   --

Tetrathemis_corduliformis_GU196368   --

Diplacina_ismene_GU196366   --

Erythemis_vesiculosa_GU196360   --

Nannophyopsis_clara_GU196358   --

Oligoclada_amphinome_GU196357   ---

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Elga_leptostyla_GU196354   ---

Fylgia_amazonica_GU196353   ---

Hemistigma_albipunctatum_GU196352   --

Porpacithemis_sp_GU196351   --

Thermochoria_equivocata_GU196350   ---

Malgassophlebia_bispina_GU196349   ---

Micromacromia_zygoptera_GU196348   ---

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Pseudothemis_zonata_GU196341   ---

EF640485_Oxythemis_phoenicosceles---

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??-????????????????????????????
Olpogastra_lugubris_GU196336   ---

Misagria_parana_GU196331   ---

UnalignedOutgroups   --

GQ886698_EphemerellA_inConst------------------
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Paraleptophlebia_sp ---

AnthopotAnous_POU   ----------------
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Caenis_luctuosa---

ECO
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??[1053]
Callibaetis_sp_AY749925---

Callibaetis_ferrugine_______---

BAetis_sp   ---

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Cloeon______________________---

Leucrocuta_aphrodite________---

Centroptilum_luteolum_______---


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Stenonema_sp________________---------------------------------------------------------------------------------------------------------
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Urigoniopthalmus_altern_____---------------------------------------------------------------------------------------------------------
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AllomAChilis_froGGArt
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EF199981_Machilis_hrabei____---------------------------------------------------------------------------------------------------------
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Dilta_littoralis____________---------------------------------------------------------------------------------------------------------
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GGAUGCUAUUCUUCCACCCUCAAGACCUACUGACAAGCCUCUGAGACUUCCUCUUCAGGAUGUAUACAAAAUUGGUGGUAUUGGAACAGUCCCUGUUGGCCGAGUUGAAACUGGUGUUUUGAAACCUGGUAUGG
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??
??[1053]
Lepisma_sac --

Thermobia_domestica ---

Uricholepidion_gertschi---

RoACh
??????????????????UUGGACAAGUUGAAAGCAGAACGUGAACGUGGUAUUACUAUUGAUAUUGCUCUGUGGAAGUUCGAGACUAGCAAAUACUAUGUUACUAUUAUUGAUGCCCCUGGACACAGAGAUUU
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Isoperla_davisi_AY121148____--

IsoperlA_sp   ---

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AY859546_Gomphocerinae______--

[
UnalignedOutgroups   --

GQ886698_EphemerellA_inConst------------------
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AAGCAGACCCACCGAGAAGCCUCUGCGUCUCCCCUCCAGGACGUAUACAAAAUUGGAGGUAUUGGAACAGUGCCCGUUGGUCGAGUAGAAACUGGUGUGAUCAAACCCGGCAUGGUUGUGGUGUUCGCCCCCG
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Paraleptophlebia_sp_________--

AnthopotAnous_POU   ----------------
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Caenis_luctuosa--

ECO
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???[1053]
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BAetis_sp   ---

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Cloeon_____________________--

Leucrocuta_aphrodite_______--

Centroptilum_luteolum______--

Stenonema_sp_______________--

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AllomAChilis_froGGArt
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Dilta_littoralis____________---

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LepismA_UHY
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IsoperlA_sp --

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IsChnurA_dentiCollis_DmDpSB1h9 --

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EF640473_Leucorrhinia_hudsonica             ------------------------------------------------------------------------------------------
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EF640507_Nannodiplax_rubra   ---

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EF640510_Neurothemis_stigmatizans   ---

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EF640505_Erythrodiplax_unimaculata --

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EF640504_Erythrodiplax_kimminsi --

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EF640503_Erythrodiplax_fusca --

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EF640506_ErythrodiplAx_umbrAtA --

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????????????????????????????????????????????????????????[1033]
PleCopterA_1             ---------------
???????????GCUGAAGGCCGAGCGUGAACGUGGUAUCACUAUUGAUAUUGCUCUGUGGAAGUUCGAGACCGCGAAGUUCUACGUCACGAUCAUUGAUGCUCCUGGGCACAGAGAUUUCAUCAAGAACAUGAU
UACUGGUAUGUUUGAG---
GCUGAUUGUGCUGUGCUGAUUGUCGCUGCCGGUACCGGAGAGUUCGAGCCGGGUAUUUCCAAGAAUGGACGGACUGGCGAGCACGCUCUAUUGGCUUUCACUCUGGGAGUGAAGCAGCUCAUUGUUGGUGUCAA
CAAGCUGGAUUCAACCGAACCACCCUACAGCGAGUCCCGAUUCGAGGAAAUCAAG????????????????????????????????UUACAAUCCAGCAGCCGUAGCGUUCGUUCCCAUCUCCGGUUGGCACG
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GAGAAGCCACUCCGACUCCCCCUGCAGGACGUUUACAAAAUUGGAGGUAUUGGAACAGUGCCCGUUGGCCGAGUGGAGACAGGUGUUCUGAAGCCCGGUACCGUCGUGACCUUCGCCCC???????????????
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?????????????????????????????????????????????????????????????????????????????????[1035]
PleCopterA_2
??????????????????CUGGACAAGCUGAAGGCAGAGCGUGAGCGUGGUAUCACCAUCGAUAUCGCUCUGUGGAAAUUCGAAACUGCCAAGUUCUACGUUACCAUCAUUGAUGCUCCUGGACACAGAGAUUU
CAUCAAGAACAUGAUUACUGGUAUGUUUAGG----
CUGAUUGUGCUGUACUAAUUGUCGCUGCCGGUACCGGAGAGUUCGAGGCUGGUAUUUCUAAGAACGGACAAACCCGAGAGCACGCUCUAUUGGCUUUCACCUUGGGAGUGAAGCAGCUCAUUGUUGGUGUCAAC
AAGAUGGACUCCACCGAGCCACCUUACAGCGAGUCUCGUUUCGAGGAAAUCAAGAAG?????????????????????????????????????????????????????????????????????????????
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AGAAGAUUGACCGUCGUUCGGGUAAGUCGAUCGAAGACACCCCCAAGUUCAUCAAGUCCGGUGACGCCGCCAUGGUCAAG[1049]
BlAberus_Atropos           -----------------------------------------------------------------------------------------------------------
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ACUCGUUUUGAGGAAAUCAAAAAGGAAGUUAGCAAUUAUAUUAAGAAGAUUGGUUACAAUCCUGCUGCUGUAGCAUUUGUGCCAAUCUCUGGCUGGCAUGGAGACAACAUGUUGGAACAUUCUGACAAGAUGUC
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---[261]CAtoColA
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CAUCAAGAACAUGAUCACUGGUACCUCACAG---
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GAGAAAGUUGACCGUCGUACUGGUAAAUCCACUGAGGAGAACCCCAAAUCUAUCAAAUCUGGUGAUGCCGCUAUUGUCAAC[1050]
ArCheoGnAthA C-UAACUA-
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CollembolA
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GAUAAAGCCCUCCGUCUUCCACUCCAAGACGUGUACAAAAUCGGUGGUAUUGGAACAGUACCCGUUGGCCGAGUUGAAACUGGCAUAUUGAAACCCGGCAUGGUCGUCACCUUUGCUCCUACCGCUUUGACUAC
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GCCCUCCCAAGGGAGCUGCUGAUUUCUCGGCCCAAGUUAUUGUAUUGAAUCACCCUGGCCAAAUUUCCAAUGGCUACUGUCCUGUCUUGGAUUGCCACACAGCUCACAUUGCUUGCAAAUUCCAGGAAAUCAAG
GAGAAGUGCGACCGUCGUACCGGCAAGACCACUGAAGAAAAUCCCAAGGCCAUCAAAUCUGGCGAUGCCGCCAUCGUGACU[1050]
]

[HistoneH3][
EU055423_Lestes_sp
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AY125229_Argia_vivida
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ZPCs_Protosticta_curiosa_[Protoneura?]
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Palaemnema_paulicoba_ZPP
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Palaemnema_domina_ZPDm
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EU055499_Isosticta_robustior
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EU055443_Rhadinosticta_simplex
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Argia_moesta_COE
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EU055487_Mortonagrion_binocellata
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Archibasis_viola_ZAV[x]
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Coenagrion_puella_AJ488546_[x]
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Cercion_lindenii_AJ488550[x]
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Ishnura_elegans_1239[x]
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ZPRm_Psaironeura_remissa[x]
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EU055463_Telebasis_salva
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Leptagrion_sp
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Diceratobasis_sp_A_ZDA
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Pyrrhosoma_nymphula_1202[x]
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ZTA2_Teinobasis_alluaudi[x]
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ZCG_Coryphagrion_grandis[x]
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EU055506_Heteragrion_sp_SMB_2007
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ZDP_Dimeragrion_percubitale[x]
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EU055508_Philogenia_cassandra
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Amanipodagrion_gilliesi_ZAG
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Protolestes_kerckhoffae_ZPKc
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Lestomima_flavostigma_OPBc3
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Rhipidolestes_hiraoi_ORH
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Sinocnemis_yangbingi_ZSY
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Cora_marina_POL_OCMr
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EU055517_Polythore_boliviana
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EU055511_Euthore_fasciata
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Pentaphlebia_stahli_AMP_OPSt
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EU055494_Devadatta_podolestoides
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Anisopleura_sp_A_EUP_ZAA
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Disparocypha_biedermanni_ZDB
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Chlorocypha_curta_AJ746319_ZCC
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Sundacypha_petiolata[x]
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Rhinocypha_fenestrella_CHL_ORF
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EU055434_Rhinocypha_tincta ---
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Atrocal
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EU055485_Echo_modesta
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GCCAGCGAGGCUUACCUCGUGGGUCUCUUCGAGGACACCAACCUCUGCGCCAUCCACGCCAAGCGCG
EU055437_Neurobasis_ianthinipennis
UAAAUCCACCGGAGGAAAGGCCCCCGUAAACAGCUGGCCACCAAGGCCGCACGUAAGAGCGCACCAGCAACCGGAGGAGUGAAGAAGCCCCACAGGUACCGCCCUGGUACUGUGGCACUCCGAG
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Sapho_orichalcea_CAL_OSO
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Calopteryx_amata_CAL_OCAm
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???
DCS_Calopteryx_splendens
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Y338636_Calopteryx_aequabilis
AAAGUCCACCGGAGGCAAGGCCCCCAGGAAGCAGCUGGCUACCAAAGCCGCUCGCAAGAGCGCCCCAGCCACCGGAGGAGUGAAGAAGCCCCACAGGUACCGCCCUGGUACAGUGGCCCUCCGUG
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Iridictyon
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Iridictyon_trebbaui_ZIT
???
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Unaligned_Lestoids
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???
Nubiolestes_diotima_PER_OND
???
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???
EU055515_Perilestes_kahli
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Perissolestes_remotus_BYB
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??
???
Perissolestes_magdalenae_OPMg
???
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???
Chlorolestes_umbrata_SLE_OCU
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???
Euchlorolestes_tessellata_SLE_OET
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Phylolestes_ethelae_SLE_OPE
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EU055457_Synlestes_weyersii
UAAGUCCACUGGUGGCAAGGCCCCGAGGAAGCAGCUGGCCACCAAGGCUGCGCGAAAGAGUGCCCCUGCCACGGGAGGUGUCAAGAAGCCUCACAGGUACCGCCCUGGUACAGUGGCCCUUCGAG
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Synlestes_tropicus_SLE_ZST
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UAAGUCCACUGGUGGCAAGGCCCCAAGGAAGCAGCUAGCCACCAAGGCUGCGCGUAAGAGCGCACCAGCCACCGGUGGUGUCAAGAAGCCCCAUAGGUACCGCCCUGGAACGGUGGCCCUUCGUGAGAUCAGGA
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Episynlestes_cristatus_SLE_ZEC
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???
EU055441_Episynlestes_albicauda
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Megalestes_micans_ZMMc
???
??
???
Megalestes_kurahashii
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Orolestes_octomaculatus_LES_ZOO
???
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??? EU055448_Austrolestes_annulosus
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EU055482_Sympecma_paedisca
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ZSF_Sympecma_fusca[x]
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EU055448_Austrolestes_analis
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Indolestes_peregrinus_OIP
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Indolestes
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Chalcolestes_viridis_ZCV
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EU055476_Archilestes_grandis
UAAGUCCACUGGAGGCAAGGCCCCCAGGAAGCAGCUCGCCACCAAGGCUGCGCGCAAGAGCGCCCCAGCUACCGGAGGCGUGAAGAAGCCCCACAGGUAUCGCCCUGGUACAGUGGCUCUCCGUG
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Lestes_rectangularis_OLR
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Lestes_eurinus_OLE
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Hemiphlebia_mirabilis_OHM
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Unaligned_Anisoptera
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EU055518_Epiophlebia_superstes
UAAGUCCACCGGAGGCAAGGCCCCGCGAAAGCAGCUCGCCACCAAGGCGGCCCGCAAGAGCGCACCGGCCACCGGAGGAGUGAAGAAGCCUCACAGAUACCGCCCGGGAACUGUGGCCCUUCGUG
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Epiophlebia_laidlawi
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Unaligned_Aeshnoids
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???
Archipetalia_auriculata_AUS_AAAu
???
??
???
Austropetalia_victoria_AAV_AUS
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Hypopetalia_pestilens_OHPe
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FJ596639_Phyllopetalia_apicalis
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EU055516_Phyllopetalia_apollo
GAAGUCCACCGGAGGGAAGGCGCCUCGUAAGCAGCUGGCUACCAAGGCCGCCCGCAAGAGCGCACCAGCAACCGGUGGAGUUAAGAAGCCCCACAGGUACCGGCCCGGAACCGUCGCUCUCCGUG
AGAUCAGGCGUUACCAGAAGAGCACGGAGCUCCUCAUCCGCAAGCUGCCCUUCCAGCGACUGGUUCGCGAGAUCGCUCAGGACUUCAAGACGGACUUGCGCUUCCAGAGCUCGGCUGUUAUGGCUCUUCAGGnn
nnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnn
Eurypetalia_altarensis_OEA_AUS
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Ophiopetalia_diana_OOD
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Gomphaeschna_furcillata_OGF
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Oligoaeschna_pryeri[x]
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Austroaeschna_parvistigma_AAPs
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Telephlebia_tillyardi_AUU[x]
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Boyeria_vinosa_OBV
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EU055492_Brachytron_pratense
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GCCAGCGAGGCGUACCUCGUGGGUCUGUUCGAGGACCACUCAAnnnnnnnnnnnnnnnnnnnnnnnn
Epiaeschna_heros_OEH
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FJ596626_Caliaeschna_microstigma
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FJ596628_Anaciaeschna_isoceles
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GQ118317_Oplonaeschna_sp_BYU
GAAGUCCACCGGAGGAAAGGCGCCUCGCAAACAGCUCGCCACCAAGGCAGCGCGAAAGAGCGCUCCCGCCACCGGAGGAGUGAAGAAACCUCAUCGUUACCGCCCUGGAACUGUGGCACUGCGAG
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Aeshna_canadensis_OAC
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EU055438_Rhionaeschna_multicolor
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AF461203_Aeshna_cyanea
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FJ596630_Aeshna_grandis
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FJ712316_Gynacantha_japonica_bullata
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EU055453_Austrogynacantha_heterogen
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GCCAGCGAGGCUUACCUUGUUGGUCUUUUUGAGGACACCAACCUAUGCGCCAUCCACGCCAAGCGAG
Hemianax_ephippiger[x]
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Y555570_Anax_junius
GAAGUCCACCGGAGGAAAGGCGCCUCGCAAACAGCUCGCCACCAAGGCAGCGCGAAAGAGCGCUCCCGCCACCGGAGGAGUGAAGAAACCUCAUCGUUACCGCCCUGGAACGGUGGCACUGCGAG
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FJ596632_Anax_imperator
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Unaligned_Gomphids
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Sinogomphidia_kruegeri_ASK
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EU055451_Ictinogomphus_australis
AAAGUCAACCGGAGGAAAAGCACCCCGGAAGCAGCUUGCAACCAAAGCUGCCCGGAAAAGUGCUCCUGCAACCGGAGGAGUGAAGAAGCCACACAGGUAUCGUCCGGGAACUGUGGCCCUUCGUG
AGAUCAGGCGGUACCAGAAGAGCACUGAGCUUCUGAUCCGCAAACUGCCCUUCCAGCGUCUGGUUCGUGAGAUAGCGCAAGAUUUCAAGACUGAUUUGCGUUUCCAAAGCUCUGCAGUUAUGGCACUUCAAGAA
GCCAGUGAGGCUUACCUCGUUGGCCUCUUCGAAGACACCAAUCUUUGCGCCAUCCACGCAAAGCGUG
Ictinogomphus_sp[x]
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FJ596617_Lindenia_tetraphylla
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Phyllogomphoides_stigmatus_APS
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Y749750_Progomphus_obscurus
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Progomphus ????????
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EU055428_Hagenius_sp_SMB_2007
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Lanthus_vernalis_OLV
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Davidius_nanus[x]
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Neogomphus_edenticulatus_ONE
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EU055444_Armagomphus_armiger
GAAGUCCACCGGAGGUAAGGCUCCCCGGAAGCAGCUUGCAACCAAGGCUGCCCGGAAGAGCGCUCCAGCAACCGGAGGAGUGAAGAAGCCACACAGGUAUCGCCCAGGUACUGUGGCCCUUCGUG
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Hemigomphus_comitans_AHC[x]
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FJ596622_Hemigomphus_heteroclytus
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EU055424_Hemigomphus_magela
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GCAAGCGAGGCUUACCUCGUCGGUCUCUUUGAAGACACCAAUCUCUGUGCAAUUCACGCCAAGCGCG
Trigomphus_sp[x]
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FJ596615_Lanthus_albistylus
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FJ712325_Stylogomphus_shirizui
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EU055479_Davidioides_martini
GAAGUCCACGGGAGGAAAGGCUCCCCGGAAGCAGUUGGCCACUAAAGCUGCCCGUAAGAGCGCUCCUGCAACCGGAGGAGUUAAGAAGCCGCAUAGGUACCGCCCUGGUACAGUCGCACUUCGAG
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Burmagomphus_collaris_GOM_ABC
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EU055478_Cyclogomphus_heterostylus
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GCAAGCGAGGCUUACCUUGUUGGUCUCUUUGAAGACACAAAUCUCUGUGCCAUCCACGCCAAGCGUG
Anisogomphus_pinratani_not_pinratanai[x]
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Dromogomphus_spinosus_GOM
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Arigomphus_villosipes_OAV
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Arigomphus_cornutus
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FJ712319_Stylurus_intricatus
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Stylurus_amnicola[x]
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FJ596610_Stylurus_nagoyanus
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FJ596612_Gomphurus_Gomphus_externus
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FJ596611_Asiagomphus_melaenops
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FJ596614_Phanogomphus_Gomphus_exilis
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Gomphus_Gomphus_graslini[x]
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Gomphus_Hylogomphus_adelphus_OGA
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FJ712320_Gomphus_Gomphus_vulgatissimus
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Megalogomphus_sp[x]
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Onychogomphus_Onychogomphus_uncatus[x]
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FJ596620_Onychogomphus_forcipatus_unguiculatus
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A_FJ712322_Onychogomphus_sp
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Ophiogomphus_Ophionurus_carolus_OOC
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Y125228_Ophiogomphus_severus
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GCUAGCGAGGCUUAUCUCGUCGGUCUCUUUGAAGAUACAAAUCUCUGCGCUAUCCAUGCGAAACGGG
Ophiogomphus_Ophiogomphus_caecilia[x]
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Leptogomphus_elegans_OLEg[x]
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FJ596609_Leptogomphus_sauteri
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Epigomphus_compactus_AEC[x]
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FJ712323_Microgomphus_chelifer
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Heliogomphus_retroflexus[x]
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Macrogomphus_parallelogramma[x]
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Ceratogomphus_pictus_OCH
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Lestinogomphus_angustus_ALA[x]
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Austrogomphus_guerini_AAG_GOM
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EU055460_Austrogomphus_amphiclitus
GAAAUCCACUGGAGGAAAGGCUCCACGGAAACAGCUUGCAACGAAGGCUGCCCGAAAGAGCGCUCCUGCAACCGGUGGUGUGAAGAAGCCUCAUAGGUAUCGUCCCGGUACAGUCGCUCUUCGUG
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GCGAGCGAGGCUUACCUCGUUGGUCUCUUUGAAGAUACCAAUCUCUGCGCUAUCCACGCCAAGCGCG
EU055454_Antipodogomphus_acolythus
GAAGUCUACCGGAGGUAAGGCACCUCGGAAACAGCUUGCUACGAAGGCUGCACGAAAGAGUGCUCCUGCUACUGGUGGUGUGAAGAAACCCCACAGAUAUCGCCCCGGAACCGUCGCACUCCGUG
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Unaligned_Petalurids
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EU055461_Tanypteryx_hageni
CAAGUCCACAGGAGGCAAGGCUCCGCGGAAGCAGCUCGCCACCAAGGCAGCUCGCAAGAGUGCACCGGCCACCGGAGGCGUGAAGAAGCCGCAUCGAUACCGGCCAGGUACCGUGGCUCUUCGUG
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Tanypteryx_sp[x]
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FJ712330_Tanypteryx_pryeri
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Tachopteryx_thoreyi_OUU
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EU055422_Phenes_raptor
UAAGUCGACGGGAGGCAAGGCCCCGAGGAAGCAGCUCGCCACCAAGGCUGCCCGCAAGAGUGCGCCGGCUACCGGCGGCGUGAAGAAGCCCCACAGGUAUCGGCCCGGUACUGUGGCACUCCGCG
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Phenes_centralis_OPR
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Uropetala_carovei_AUC
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Petalura_hesperia_PET_APH
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??? EU055446_Petalura_gigantea
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Petalura_litorea_PET_OPG
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Petalura_ingentissima_API
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Zoraena_bilineata_OZB
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Taeniogaster_obliqua_OTO
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Kalyptogaster_erronea_OKE
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FJ712317_Pangaeagaster_Cordulegaster_macu
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EU055470_Cordulegaster_dorsalis
UAAGUCUACCGGUGGGAAGGCUCCUCGUAAGCAGCUGGCUACCAAGGCUGCUCGCAAGAGCGCACCAGCUACCGGAGGAGUGAAGAAGCCUCACAGGUAUCGCCCUGGAACUGUGGCUCUUCGUG
AGAUCAGGAGAUACCAGAAGAGCACUGAGCUUCUCAUCCGCAAGCUACCGUUCCAGCGCUUGGUUCGUGAGAUUGCUCAGGACUUCAAGACCGACCUUCGCUUCCAAAGCUCGGCGGUCAUGGCUCUUCAAGAG
GCCAGCGAGGCUUACCUCGUCGGUCUUUUUGAGGACACCAACCUGUGCGCUAUCCACGCUAAGCGAG
FJ596634_Cordulegaster_boltonii
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???
FJ596637_Cordulegaster_picta
???
??
???
FJ596638_Anotogaster_sieboldii
???
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???
Neopetalia_punctata_ONP
???
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???
Chloropetalia_soarer_OCSr
???
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???
Sinorogomphus_nasutus_OSN
???
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???

EU055477_Chlorogomphus_brunneus
UAAGUCGACCGGUGGGAAGGCUCCCCGCAAGCAGCUGGCCACCAAGGCUGCCCGGAAGAGCGCACCAGCAACCGGCGGAGUGAAGAAGCCCCACAGGUAUCGGCCCGGUACCGUCGCCCUUCGUG
AGAUCAGGAGAUACCAGAAGAGCACCGAGCUCCUCAUCCGGAAGCUGCCCUUCCAGCGCCUGGUGCGUGAGAUCGCCCAGGACUUCAAGACUGACCUCCGGUUCCAGAGCUCGGCGGUGAUGGCCCUCCAGGAG
GCAAGCGAGGCUUACCUCGUGGGUCUCUUCGAGGACACCAACCUUUGCGCCAUCCACGCCAAGCGGG
Chlorogomphus_sp
???
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???
Synthemis_eustalacta_OSE3
???
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???
EU055452_Synthemis_marcrostigma
UAAGUCCACGGGAGGAAAAGCUCCCCGCAAGCAGCUGGCGACGAAGGCCGCUCGCAAGAGCGCGCCUGCGACCGGAGGAGUGAAGAAACCCCACAGGUACCGCCCUGGUACCGUCGCUCUCCGUG
AGAUCAGACGUUACCAGAAGAGCACUGAACUCCUGAUCCGCAAGCUGCCCUUCCAGCGCCUGGUCCGCGAGAUCGCGCAGGACUUCAAGACCGACCUCCGCUUCCAGAGCUCAGCGGUCAUGGCCCUCCAGGAG
GCCAGCGAGGCUUACCUCGUGGGUCUCUUUGAGGACACCAACnnnnnnnnnnnnnnnnnnnnnnnnn
Archaeosynthemis_leachii[x]
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Eusynthemis_brevistyla_OEB
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Eusynthemis_gutatta
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EU055455_Eusynthemis_nigra
CAAGUCGACGGGAGGGAAAGCUCCCCGCAAGCAGCUGGCGACGAAGGCCGCUCGCAAGAGCGCGCCUGCCACCGGAGGAGUGAAGAAACCCCACAGGUACCGCCCUGGUACAGUGGCCCUCCGUG
AGAUCAGGCGUUACCAGAAGAGCACUGAACUCCUCAUCCGCAAGCUGCCCUUCCAGCGCCUAGUCCGCGAAAUCGCGCAGGACUUCAAGACCGACCUCCGCUUCCAGAGCUCAGCGGUCAUGGCCCUCCAGGAG
GCCAGCGAGGCUUACCUCGUGGGUCUCUUUGAGGACACCAACCUCUGCGCCAUCCACGCCAAGCGAG
EU055456_Choristhemis_flavoterminat
CAAGUCGACGGGAGGGAAAGCUCCCCGCAAGCAGCUGGCGACGAAGGCCGCUCGCAAGAGCGCGCCUGCCACCGGAGGAGUGAAGAAACCCCACAGGUACCGCCCUGGUACAGUGGCCCUCCGUG
AGAUCAGGCGUUACCAGAAGAGCACUGAACUCCUCAUCCGCAAGCUGCCCUUCCAGCGCCUAGUCCGCGAAAUCGCGCAGGACUUCAAGACCGACCUCCGCUUCCAGAGCUCAGCGGUCAUGGCCCUCCAGGAG
GCCAGCGAGGCUUACCUCGUGGGUCUCUUUGAGGACACCAACCUCUGCGCCAUCCACGCCAAGCGAG
Synthemiopsis_gomphomacromioides_ASG
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??
???
Gomphomacromia_chilensis_OGP
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???
FJ712318_Gomphomacromia_paradoxa
???
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???
Syncordulia_serendipator[x]
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???
Syncordulia_venator
??
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EU055480_Idionyx_imbricata
CAAGUCCACCGGAGGCAAGGCUCCCCGUAAGCAGCUCGCGACCAAGGCCGCCCGCAAGAGCGCGCCCGCCACCGGGGGCGUUAAGAAGCCCCACAGGUAUCGCCCUGGUACCGUGGCUCUCCGUG
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GCCAGCGAGGCUUACCUCGUCGGUCUCUUCGAGGACACCAACCUGUGCGCCAUCCACGCCAAGCGCG
Idionyx_selysi[x]
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??
???
Macromidia_rapida_OMR[x]
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???
EU424325_Oxygastra_curtisii
???
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???
EU055439_Cordulephya_pygmaea
UAAGUCCACCGGAGGAAAGGCUCCCCGCAAGCAGCUGGCCACCAAAGCUGCCCGCAAGAGCGCGCCCGCCACCGGAGGAGUGAAGAAGCCUCACAGAUACCGCCCUGGUACCGUCGCUCUCCGUG
AGAUCAGGCGUUACCAGAAGAGCACGGAACUUUUGAUCCGCAAGCUGCCCUUCCAGCGCCUCGUCCGCGAGAUCGCUCAGGACUUCAAGACCGACCUCCGCUUCCAGAGCUCAGCGGUGAUGGCCCUCCAGGAG
GCCAGCGAGGCUUACCUCGUCGGUCUCUUGGAGGACACCAACCUGUGCGCCAUCCACGCCAAGCGAG
Pseudocordulia_circularis[x]
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EU055450_Hesperocordulia_berthoudi
UAAGUCCACCGGAGGGAAGGCCCCCCGCAAGCAGCUGGCGACCAAGGCCGCUCGCAAGAGCGCGCCCGCCACCGGAGGAGUGAAGAAGCCCCACAGGUACCGCCCCGGUACGGUGGCUCUCCGUG
AGAUCAGGCGUUACCAGAAGAGCACGGAACUCCUGAUCCGCAAGCUGCCCUUCCAGCGCCUGGUCCGCGAGAUCGCCCAGGACUUCAAGACCGACCUCCGCUUCCAGAGCUCGGCGGUCAUGGCCCUCCAAGAG
GCCAGCGAGGCUUACCUCGUCGGUCUUUUCGAGGACACCAACCUGUGCGCCAUCCACGCCAAGCGAG
Lathrocordulia_metallica[x]
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EU055442_Micromidia_convergens
UAAGUCCACCGGAGGGAAGGCCCCCCGCAAGCAGCUGGCGACCAAGGCCGCUCGCAAGAGUGCGCCCGCCACCGGAGGAGUGAAGAAGCCUCACAGGUACCGCCCCGGUACCGUCGCUCUCCGUG
AGAUCAGGCGUUACCAGAAGAGCACGGAGCUGUUGAUCCGCAAGCUGCCCUUCCAGCGCCUGGUCCGCGAGAUCGCCCAGGACUUCAAGACCGACCUCCGCUUCCAGAGCUCAGCGGUGAUGGCCCUGCAGGAG
GCCAGCGAGGCUUAUCUCGUCGGCCUCUUUGAGGACACCAACCUGUGCGCCAUCCACGCCAAGCGAG
Micromidia_atrifrons[x]
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???
Austrophya_mystica[x]
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Austrocordulia_refracta[x]
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???
Archaeophya_magnifica[x]
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???
JQ780908_Epophthalmia_elegans   --
CCUGCCACNNGAGGAGUAAAGAAGCCGCAUAGGUACCGUCCCGGAACCGUCGCCCUCAGAGAGAUCAGGCGUUACCAGAAGAGCACGGAGCUUCUGAUCCGCAAGCUGCCGUUCCAGCGCCUGGUCCGCGAGAU
CGCUCAGGACUUCAAGACCGACCUCCGCUUCCAGAGCUCCGCCGUUAUGGCUUUGCAAGAGGCAUCCGAGGCUUACCUCGUCGGUCUCUUUGAGGACACCAACCUGUGCGCCAUCCACGCCAAGCGAG
Didymops_transversa_ODT
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?? JQ780972_Macromia_illinoiensis
UAAAUCCACCGGAGGAAAGGCUCCCCGCAAGCAGCUGGCGACCAAGGCCGCUCGCAAGAGCSCACCAGCCACCGGUGGAGUUAAGAAACCUCACCGUUACAGGCCUGGUACCGUUGCACUUCGAGAAAUUCGUC
GGUACCAGAAGAGCACAGAAUUGCUCAUCAGAAAGUUGCCCUUCCAACGCCUGGUUCGUGAGAUUGCUCAGGAUUUCAAGACUGAUUUACGUUUCCAGAGCUCAGCUGUCAUGGCUCUGCAGGAGGCGUCCGAG
GCUUACCUUGUGGGUCUCUUCGAAGAUACCAACUUGUGCGCUAUCCACGCUAAGCGUG
Macromia_amphigena[x]
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EU055483_Macromia_eurynome
UAAAUCCACCGGAGGAAAGGCUCCACGGAAGCAGCUGGCGACCAAGGCCGCUCGCAAGAGCGCACCCGCCACCGGAGGCGUAAAGAAGCCUCACAGAUAUCGUCCCGGAACCGUCGCUCUCCGAG
AGAUCAGGCGUUACCAGAAGAGCACGGAAUUGCUCAUCCGCAAGCUGCCCUUCCAGCGCCUCGUUCGUGAGAUCGCUCAAGAUUUCAAGACCGACCUGCGCUUCCAGAGCUCUGCAGUCAUGGCCCUCCAGGAG
GCCAGCGAGGCUUACCUCGUCGGUCUGUUUGAGGACACCAACCUGUGCGCCAUCCACGCCAAGCGAG
Macromia_magnifica[x]
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???
Macromia_splendens[x]
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???
Phyllomacromia_bifasciata_sp_nyanzana[x]
???
??
???
Idomacromia_proavita[x]
???
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???
Aeschnosoma_forcipula[x]
???
??
???
Pentathemis_membranulata[x]
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Tetragoneuria_cynosure
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Tetragoneuria_cos
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Tetragoneuria_can
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Epicordulia_princeps[x]
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Epitheca_marginata[x]
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Epitheca_bimaculata[x]
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Rialla_villosa[x]
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Cordulia_aenea[x]
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EU055471_Cordulia_shurtleffii
UAAGUCCACAGGAGGGAAGGCCCCGCGCAAGCAGCUGGCAACUAAGGCCGCUCGCAAGAGCGCUCCUGCCACUGGAGGAGUGAAGAAGCCACACAGGUACCGUCCUGGAACUGUCGCCCUGAGAG
AGAUCAGGCGUUACCAGAAGAGCACUGAGCUUCUGAUCCGCAAGCUGCCAUUCCAGCGCCUGGUCCGUGAGAUUGCUCAGGACUUUAAGACCGACCUCCGCUUCCAGAGCUCUGCUGUCAUGGCCCUCCCGGAG
GCCAGCGAGGCUUACCUCGUCGGUCUCUUUGAGGACACCAACCUGUGCGCCAUCCAUGCCAAGCGAG
Somatochlora_alpestris[x]
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EU055490_Somatochlora_flavomaculata
UAAGUCCACCGGAGGGAAGGCCCCGCGAAAGCAGCUGGCGACUAAGGCAGCUCGCAAGAGCGCUCCCGCCACUGGAGGAGUAAAGAAGCCACAUAGGUAUCGCCCUGGAACUGUAGCUCUCAGAG
AGAUCAGGCGUUACCAGAAGAGCACAGAGCUUCUGAUCCGCAAGCUGCCAUUCCAGCGCCUUGUCCGCGAGAUAGCUCAGGACUUCAAGACCGACCUCCGCUUCCAAAGCUCAGCUGUNAUGGCCCUCCAGGAG
GCCAGCGAGGCUUACCUCGUAGGACUCUUUGAGGACACCAACCUCUGCGCCAUCCACGCCAAGCGAG
Somatochlora_metallica[x]
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Somatochlora_tenebrosa_OSTn
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A_FJ596562_Hemicordulia_min_nipponica
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EU055459_Hemicordulia_australiae
UAAGUCCACCGGAGGGAAGGCCCCGCGCAAGCAGCUGGCCACCAAGGCCGCUCGCAAGAGCGCCCCCGCCACCGGAGGAGUAAAGAAGCCGCAUAGGUACCGUCCCGGAACCGUCGCCCUCAGAG
AGAUCAGGCGUUACCAGAAGAGCACGGAGCUUCUGAUCCGCAAGCUGCCGUUCCAGCGCCUGGUCCGCGAGAUCGCUCAGGACUUCAAGACCGACCUCCGCUUCCAGAGCUCCGCCGUCAUGGCCCUCCAGGAG
GCUAGCGAGGCUUACCUCGUCGGUCUCUUUGAGGACACCAACCUGUGCGCCAUCCACGCCAAGCGAG
EU055447_Procordulia_jacksoniensis
UAAGUCCACCGGAGGGAAGGCCCCGCGCAAGCAGCUGGCGACCAAGGCCGCUCGCAAGAGCGCCCCCGCCACCGGAGGAGUGAAGAAGCCACAUAGGUACCGUCCCGGAACCGUCGCUCUCAGAG
AGAUCAGGCGUUACCAGAAGAGCACCGAGCUUCUGAUCCGCAAGCUGCCAUUCCAGCGCCUGGUCCGGGAGAUCGCUCAGGACUUCAAGACCGACCUCCGCUUCCAGAGCUCUGCCGUGAUGGCCCUCCAGGAG
GCCAGCGAGGCUUACCUCGUCGGUCUGUUUGAGGACACCAACCUGUGCGCCAUCCACGCCAAGCGAG
Unaligned_Libellulids
???
??
???
FJ596583_Notiothemis_robertsi
???
??
???
FJ596578_Tetrathemis_irregularis
???
??
???
Tetrathemis_polleni[x]
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???
FJ596587_Urothemis_signata
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???
Urothemis_assignata[x]
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???
Macrodiplax_cora[x]
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EU055425_Macrodiplax_balteata
UAAGUCCACCGGAGGGAAGGCCCCCCGCAAACAGCUGGCCACCAAGGCCGCUCGCAAGAGCGCACCCGCCACCGGAGGAGUGAAGAAGCCCCACAGGUACCGCCCGGGUACCGUGGCUCUCCGAG
AGAUCAGGCGUUACCAGAAGAGCACGGAACUUCUCAUCCGCAAGUUGCCCUUCCAGCGCCUUGUUCGUGAGAUCGCUCAGGACUUCAAGACCGAUCUCCGCUUCCAGAGCUCCGCAGUCAUGGCCCUCCAGGAG
GCCAGCGAGGCCUACCUCGUCGGUCUCUUCGAGGACACCAACCUGUGCGCCAUCCACGCCAAGCGAG
Zyxomma_elgneri[x]
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Zyxomma_petiolatum
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??
FJ596576_Zygonyx_torridus_or_ida
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EU055429_Nannophlebia_sp_SMB_2007
UAAGUCCACCGGAGGAAAGGCUCCCCGCAAGCAGCUGGCCACCAAGGCUGCGCGGAAGAGCGCACCGGCAACCGGAGGAGUGAAGAAGCCCCACAGGUACCGCCCUGGUACCGUGGCCCUCCGAG
AAAUCAGGCGUUACCAGAAGAGCACCGAGCUUCUCAUCCGCAAGCUGCCCUUCCAGCGCCUUGUUCGUGAGAUCGCUCAGGACUUCAAGACCGAUCUCCGCUUCCAGAGCUCUGCGGUGAUGGCCCUUCAGGAG
GCCAGCGAGGCUUACCUCGUCGGUCUGUUCGAGGACACCAACCUGUGCGCCAUCCACGCCAAGCGAG
Bironides_sp[x]
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Huonia_[x]
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???
Huonia_oreophila[x]
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???
Onychothemis_testacea[x]
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???
FJ596582_Rhyothemis_variegata_imperatrix
??
??
??
FJ712327_Rhyothemis_fuliginosa
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??
???
Miathyria_marcella[x]
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??
???
Miathyria_simplex
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FJ596577_Tholymis_citrina
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???
Tholymis_tillarga[x]
???

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???
AY870292_Pantala_flavescens
GAAGUCCACCGGAGGAAAAGCUCCCCGCAAACAGCUCGCCACCAAGGCUGCGCGUAAAAGCGCACCCGCCACCGGAGGAGUGAAGAAGCCCCACAGAUACCGCCCAGGAACUGUGGCCCUCCGAG
AAAUCAGGCGUUACCAGAAGAGCACUGAGCUUCUCAUCCGCAAGCUCCCCUUCCAGCGCCUCGUCCGUGAGAUCGCUCAGGACUUUAAGACCGAUCUCCGUUUCCAGAGCUCCGCCGUUAUGGCCCUCCAGGAG
GCCAGCGAGGCUUAUCUCGUCGGUCUCUUUGAGGACACCAACCUUUGCGCCAUCCACGCCAAGCGUn
EU055462_Tramea_lacerata_
GAAGUCCACCGGAGGAAAGGCGCCCCGGAAGCAGCUGGCCACCAAGGCAGCGCGCAAGAGCGCUCCUGCUACCGGAGGGGUGAAGAAGCCCCACAGGUACCGCCCCGGUACCGUGGCUCUGAGAG
AGAUCAGGCGUUACCAGAAGAGCACGGAGCUGCUCAUCCGCAAGCUGCCCUUCCAGCGCUUGGUUCGCGAGAUCGCUCAGGACUUCAAGACCGAUCUCCGCUUCCAGAGCUCUGCCGUUAUGGCUCUCCAGGAG
GCCAGCGAGGCUUACCUCGUCGGUCUUUUUGAGGACACCAACUUGUGCGCCAUCCACGCCAAGCGAG
Tramea_calverti[x]
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Sympetrum_Kalosympetrum_janeae_OSJ
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??
???
Sympetrum_Kalosympetrum_obtrusum[x]
???
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???
FJ596606_Sympetrum_Sympetrum_vulgatum
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??
???
AB127406_Sympetrum_Sympetrum_pedemontanum
??
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??
Sympetrum_Nesogonia_blackburni[x]
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???
FJ596607_Sympetrum_Sympetrum_sanguineum
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EU055426_Sympetrum_corruptum
UAAGUCGACCGGAGGAAAGGCUCCCCGCAAACAGCUGGCCACCAAGGCUGCGCGUAAAAGCGCACCGGCCACCGGAGGAGUGAAGAAACCCCACAGAUAUCGCCCAGGAACUGUGGCCCUCCGUG
AGAUCAGGCGUUACCAGAAGAGCACCGAGCUUCUCAUCCGCAAGCUCCCCUUCCAGCGCCUCGUCCGUGAGAUCGCUCAGGACUUCAAGACCGAUCUCCGAUUCCAGAGCUCCGCCGUGAUGGCUCUCCAGGAG
GCCAGCGAGGCUUACCUCGUCGGUCUCUUUGAGGACACCAACCUUUGCGCUAUCCACGCCAAGCGUG
Sympetrum_Tarnetrum_fonscolombii[x]
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Sympetrum_Tarnetrum_illotum[x]
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Sympetrum_Tarnetrum_infuscatum[x]
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EU424330_Sympetrum_danae
??
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??
FJ712328_Sympetrum_meridionale
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FJ596605_Leucorrhinia_pectoralis
???
??
???
Leucorrhinia_glacialis[x]
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???
Celithemis_elisa_OCE
???
??
???
Celithemis_eponina_1233
???
??
???
Brachymesia_gravida[x]
???
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???
Brachymesia_herbida
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??
Brachythemis_leucosticta
???
??
???
Brachythemis_contaminata[x]
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???
Deielia_phaon[x]
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Pachydiplax_longipennis[x]
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AY749751_Erythemis_sp_OD024
UAAGUCCACCGGAGGAAAGGCUCCCCGCAAGCAGCUGGCCACCAAAGCCGCGAGGAAGAGUGCUCCAGCAACCGGAGGAGUGAAGAAGCCCCACAGAUACCGCCCUGGAACUGUGGCUCUCCGAG
AGAUCAGGCGUUACCAGAAGAGCACUGAGCUUCUCAUCCGCAAGCUGCCUUUCCAGCGCUUGGUUCGUGAGAUCGCUCAGGACUUCAAGACCGAUCUCCGCUUCCAGAGCUCUGCAGUGAUGGCACUCCAGGAG
GCUAGCGAGGCUUACCUCGUCGGUCUCUUUGAGGACACCAACCUGUGCGCCAUCCACGCCAAGCGAG
FJ596592_Acisoma_panorpoides
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EU055435_Erythrodiplax_minuscula[ID_to_Hesperagrion_COEN]
UAAAUCCACCGGAGGAAAGGCUCCUCGCAAGCAGCUCGCCACCAAGGCCGCUCGCAAGAGCGCACCGGCAACCGGAGGAGUGAAGAAGCCCCACAGAUAUCGCCCAGGAACUGUGGCUCUCCGAG
AGAUCAGGCGUUACCAGAAGAGCACUGAACUUCUGAUCCGCAAGCUGCCCUUCCAGCGCCUUGUUCGUGAGAUCGCUCAGGACUUCAAGACCGAUCUCCGCUUCCAGAGCUCCGCUGUAAUGGCUCUUCAGGAG
GCUAGCGAGGCUUACCUCGUCGGUCUCUUUGAAGACACCAACUUGUGCGCCAUCCACGCCAAGCGAG
Erythrodiplax_basalis[x]
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Crocothemis_servilia[x]
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???
Crocothemis_erythraea[x]
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FJ596590_Rhodothemis_rufa
???
??
???
Neurothemis_fulvia_
???
??
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Neurothemis_ramburii
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??
Diplacodes_lefebvrii[x]
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Diplacodes_trivialis
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Bradinopyga_strachani[x] ??
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EU055458_Brachydiplax_denticauda
UAAGUCCACCGGAGGAAAGGCCCCCCGCAAGCAGCUGGCCACCAAGGCCGCUCGCAAGAGCGCCCCCGCAACCGGAGGAGUGAAGAAGCCCCACAGAUACCGCCCCGGUACAGUCGCUUUGAGAG

AGAUCAGGCGCUACCAGAAGAGCACUGAGCUCCUCAUCCGCAAGCUGCCCUUCCAGCGCCUGGUUCGUGAGAUCGCCCAGGACUUCAAGACCGAUCUCCGCUUCCAGAGCUCCGCCGUGAUGGCUCUCCAGGAG
GCCAGCGAGGCUUACCUCGUCGGUCUCUUUGAGGACACCAACCUGUGCGCCAUCCACGCCAAGCGAG
FJ596585_Brachydiplax_chalybea_flavovittata
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FJ596584_Chalcostephia_flavifrons
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Micrathyria_aequalis[x]
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Micrathyria_atra[x]
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Micrathyria_didyma
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??
Uracis_imbuta[x]
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Uracis_infumata[x]
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FJ596589_Nannophya_pygmaea
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Nannothemis_bella_LIc
???
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???
Paltothemis_lineatipes[x]
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Brechmorhoga_mendax[x]
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Brechmorhoga_praedatrix
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Dythemis_fugax[x]
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EU055496_Trithemis_aurora
UAAGUCCACCGGAGGAAAGGCUCCUCGCAAGCAGCUGGCCACCAAGGCUGCUCGCAAGAGCGCACCAGCAACCGGAGGAGUGAAGAAGCCCCACAGAUACCGCCCCGGUACAGUGGCACUCCGAG
AAAUCAGGCGUUACCAGAAGAGCACUGAGCUUCUGAUCCGCAAGUUGCCCUUCCAGCGCCUCGUUCGUGAGAUCGCUCAGGACUUCAAGACCGAUCUCCGCUUCCAGAGCUCUGCAGUGAUGGCCCUCCAGGAG
GCCAGCGAGGCUUACCUCGUCGGUCUGUUUGAGGACACCAACCUGUGCGCCAUCCACGCCAAGCGAG
Trithemis_africana[x]
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Trithemis_arteriosa[x]
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Perithemis_tenera_OPT
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EU055432_Perithemis_intensa
UAAGUCCACCGGAGGARAGGCCCCCCGCAAACAGCUGGCCACCAAGGCUGCGCGUAAGAGCGCACCGGCAACCGGAGGAGUGAAGAAGCCUCACAGGUACCGCCCCGGUACUGUGGCUCUCAGAG
AGAUCAGGCGUUACCAGAAGAGCACUGAACUUCUCAUCCGCAAGCUGCCAUUCCAGCGCCUUGUUCGUGAGAUCGCUCAGGACUUCAAGACUGAUCUCCGCUUCCAGAGCUCUGCAGUGAUGGCCCUCCAGGAG
GCCAGCGAGGCUUACCUCGUCGGUCUCUUUGAGGAUACCAACCUCUGCGCCAUCCAUGCCAAGCGAG
Perithemis_lais_GU196362
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??
Palpopleura_lucia_sp[x]
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FJ596579_Diastatops_pullata
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Zenithoptera_fasciata[x]
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???
Neodythemis_afra_pauliani[x]
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???
Selysiothemis_nigra[x]
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???
Trithetrum_navasi[x]
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Porpax_risi[x]
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Micromacromia_camerunica_DQ021[x]
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FJ596594_Neodythemis_preussi
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Neodythemis_klingi
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FJ596575_Hadrothemis_infesta
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FJ596595_Thermorthemis_madagasc
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FJ596599_Agrionoptera_insignis
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FJ596593_Cratilla_metallica
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Pseudoleon_superbus[x]
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FJ596597_Orthemis_cultriformis
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Orthemis_ferruginea[x]
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FJ596601_Orthetrum_albistylum
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???

Orthetrum_pruinosum[x]
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???
Orthetrum_coerulescens[x]
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???
FJ596600_Lyriothemis_elegantissima
??
??
???
FJ596602_Ladona_fulva
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??
???
Ladona_julia
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???
FJ596598_Ladona_Platetrum_depressa
??
??
??
Plathemis_subornata[x]
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??
??
Plathemis_lydia[x]
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???
FJ712326_Libellula_Libellula_quadrimaculata
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??
Libellula_Syntetrum_angelina[x]
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Libellula_Eolibellula_semifasciata[x]
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AY338637_Libellula_saturata
UAAGUCCACCGGAGGAAAGGCCCCCGCAAACAGCUGGCCACCAAGGCUGCGCGUAAAAGCGCACCGGCAACCGGAGGAGUGAAGAAGCCCCACAGGUACCGCCCCGGUACUGUGGCACUCCGAG
AGAUCAGGCGUUACCAGAAGAGCACUGAACUUCUCAUCCGCAAGCUGCCAUUCCAGCGCCUUGUUCGUGAGAUCGCUCAGGACUUCAAGACUGAUCUCCGCUUCCAGAGCUCUGCAGUUAUGGCCCUCCAGGAG
GCCAGCGAGGCUUACCUCGUCGGUCUCUUUGAGGAUACCAACCUCUGCGCCAUCCAUGCCAAGCGAG
Libellula_Eotainia_composita[x]
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Libellula_Neotetrum_pulchella_OLP
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Libellula_Holotania_comanche[x]
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Libellula_Holotania_auripennis[x]
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Libellula_Holotania_axilena[x]
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Libellula_Holotania_luctuosa[x]
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Aethriamanta_rezia_GU196369
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Tetrathemis_corduliformis_GU196368
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Diplacina_ismene_GU196366
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Erythemis_vesiculosa_GU196360
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Nannophyopsis_clara_GU196358
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Oligoclada_amphinome_GU196357
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Idiataphe_sp_HOL_2010_GU196356
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Atoconeura_sp_HOL_2010_GU196355
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Elga_leptostyla_GU196354
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Fylgia_amazonica_GU196353
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Hemistigma_albipunctatum_GU196352
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Porpacithemis_sp_GU196351
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Thermochoria_equivocata_GU196350
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Malgassophlebia_bispina_GU196349
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Micromacromia_zygoptera_GU196348
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Argyrothemis_argentea_GU196347
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Pseudothemis_zonata_GU196341
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Oxythemis_phoenicosceles_GU196338
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Olpogastra_lugubris_GU196336
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Misagria_parana_GU196331
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Unaligned_Outgroups
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AY749700_Ephemerella_sp
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EU874586_Paraleptophlebia_vaciva
CAAGUCCACGGGAGGCAAGGCUCCCCGCAAGCAGCUGGCCACCAAGGCCGCUCGCAAGAGUGCGCCCGCCACCGGCGGCGUGAAGAAGCCCCAUCGCUAUCGCCCCGGCACAGUGGCYCUGCGUG
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GCCAGCGAGGCYWWCCUGGUUGGUCUGUUCGAGGACACCAACCUGUGC???????????????????
AY338631_Anthopotamus_sp
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AY338630_Caenis_sp
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GUUAUCAAAAAAGUACCGAAUUGUUGAUCCGCAAAUUGCCUUUCCAACGUUUAGUUCGUGAAAUUGCUCAAGAUUUAAAGACCGAUUUGCGUUUCCAGAGCUCAGCAGUUAUGGCUCUACAGGAAGCCAGUGAA
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GQ118323_Ephemera_simulans
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AY749703_Callibaetis_sp
CAAGUCGUCCGGAGGAAAGGCUCCCCGCAAGCAGCUGGCCACGAAGGCAGCUCGCAAGAGCGCUCCCGCCACCGGCGGAGUGAAGAAGCCUCAUCGCUACAGACCCGGCACGGUGGCUCUGCGUGAGAUCCGUC
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GCNUACCUGGUCGGUCUCUUCGAGGACACCAACNUGUGCGCCAUCCACGCCAAGCGCG
AF370815_Callibaetis_ferrugineus
CAAGUCGACCGGAGGAAAGGCUCCNCGCAAGCAGCUGGCCACCAAGGCNGCUCGCAAGAGCGCMCCCGCCACCGGCGGAGUGAAGAAGCCUCANCGCUACAGRCCCGGCACGGUGGCYCUGCGUGAGAUCCGUC
GCUACCAGAAGAGCACUGAGCUGCUCAUCCGCAAGCUGCCCUUCCAGCGGCUGGUGCGUGAAAUCGCSCAGGACUUCAAGACCGACCUGCGCUUCCAGAGCUCUGCSGUSAUGGCYCUGCAGGAGGCCAGCGAG
GCYUACCUSGUCGGUCUCUUCGAGGAYACCAACYUGUGCGCCAUCCACGCCAARCGCn
GU066909_Baetis_sp
CAAGUCGACCGGAGGCAAGGCGCCSCGCAARCAGCUGGCCACCAAGGCCGCGAGGAAGAGCGCGCCGGCCACCGGYGGCGUSAAGAAGCCCCAUCGCUACAGACCCGGAACAGUGGCCCUKCGUGAGAUCCGUC
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GCCUACYUGGUCGGUCUGUUCGAGGACACCAACCUGUGCGCCAUCCACGCCAAGCGCn
AY125223_Hexagenia_sp
CAAAUCAACCGGUGGCAAGGCUCCCCGUAAGCAACUGGCCACCAAGGCCGCUCGCAAGAGCGCACCCGCCACCGGAGGCGUCAAGAAGCCCCAUCGUUACAGGCCCGGCACAGUCGCUCUGCGAGAAAUCCGUC
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Cloeon_dipterum_AF461220
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Leucrocuta_maculipennis_AY749959
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AY749710_Centroptilum_luteolum
CAAGUCGACCGGAGGCAAGGCGCCCCGCAAGCAGCUGGCCACCAAGGCCGCUCGCAAGAGCGCCCCGGCCACCGGAGGAGUGAAGAAGCCCCAUCGCUACAGACCCGGCACAGUGGCCCUUCGUG
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GCNAGCGAGGCCUACUUGGUCGGACUCUUCGAGGACACCAACUUGUGCGCCAUCCACGCCAAGCGCG
GQ118325_Stenonema_sp CAAGUCCACCGGAGGCAAGGCUCCCCGCAAGCAGCUCGCCACCAAGGCCGCUCGCAA
GAGCGCACCCGCCACCGGCGGAGUGAAGAAGCCCCAUCGUUACAGGCCCGGCACAGUCGCUCUGCGUGAGAUCCGUCGUUACCAGAAGAGUACCGAGCUGCUCAUCCGCAAGCUCCCCUUCCAACGUCUGGUCC
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Trigoniopthalmus_altern
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AF110864_Allomachilis_froggarti
AAAAUCGACAGGCGGCAAAGCUCCGCGCAAACAACUGGCCACGAAAGCGGCCAGAAAGAGCGCACCGGCAACAGGCGGCGUGAAAAAACCUCAUCGUUACAGGCCAGGAACCGUUGCCCUGAGAG
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GUUACCAGAAGAGCACCGAGCUUUUGAUCAGAAAGUUGCCAUUCCAGCGACUCGUCCGUGAAAUUGCCCAGGACUUCAAAACCGACUUGCGGUUUCAGAGCUCUGCUGUGAUGGCUCUUCAGGAAGCAAGCGAG
GCCUAUCUUGUUGGUUUGUUUGAGGACACCAACUUGUGCGCCAUUCACGCCAAGCGUG
Dilta_littoralis_AY859570
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Ctenolepisma_longicaudataAY210810
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AY555568_Lepisma_sp
GAAAUCUACUGGAGGCAAAGCUCCUCGAAAGCAGCUUGCCACCAAAGCUGCCAGAAAGAGUGCUCCAGCUACCGGUGGAGUGAAAAAGCCCCAUCGUUACAGGCCUGGUACUGUGGCUCUCCGAG
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GCAAGUGAAGCUUACCUUGUAGGGCUUUUCGAAGACACCAACUUGUGUGCUAUUCACGCAAAGAGAn
Lepisma_sac
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AAAAUCAACCGGUGGAAAAGCUCCACGAAAGCAGCUGGCUACCAAAGCUGCCAGAAAGAGUGCUCCAGCAACCGGAGGAGUGAAGAAGCCCCACAGGUACCGCCCUGGUACAGUGGCCCUCCGAGAGAUCAGGA
GAUACCAGAAGAGCACGGAGCUCUUGAUCCGCAAGCUGCCCUUCCAGCGUCUUGUCCGUGAGAUCGCUCAGGACUUCAAGACCGACCUCCGCUUCCAGAGCUCGGCCGUCAUGGCUCUGCAGGAGGCCUCCGAG
GCUUACCUCGUUGGUCUCUUCGAGGAUACCAACCUUUGCGCCAUCCACGCCAAGCGUG
AF110863_Tricholepidion_gertschi
nnnnUUUACGGGUGGCAAGGCCCCGAGGAAGCAGCUUGCUACAAAAGCGGCUCGCAAGAGUGCUCCCGCCACAGGUGGAGUAAAGAAACCUCAUCGUUACAGGCCNGGAACNGUNGCCCUCCGAG
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CAAGUCAACCGGAGGCAAGGCCCCUCGGAAGCAGCUGGCCACAAAGGCAGCGAGGAAGAGCGCCCCGGCCACAGGAGGCGUCAAGAAGCCCCAUCGCUACAGGCCAGGAACCGUGGCCCUCAGGGAGAUUCGCC
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AY125233_Isoperla_davisi
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GU066928_Isoperla_sp
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GCUACCAGAAGAGCACCGAACUGCUAAUCAGGAAGUUGCCCUUCCAGCGCCUCGUGCGCGAGAUUGCGCAAGACUUUAAGACCGACCUCCGUUUCCAGAGCUCCGCCGUGAUGGCACUGCAGGAGGCUAGCGAG
GCCUACCUCGUCGGUCUGUUCGAUGACACGAACCUGUGCGCCAUCCACGCCAAGCGnn
AY859546_Gomphocerinae
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Unaligned_Zygoptera
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Protosticta_sp_A_ZPA________
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ZPCs_Protosticta_curiosa____
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Protosticta_sanguinostigm___
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ZSOg_Sinosticta_ogatai______
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Palaemnema_paulicoba________
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Palaemnema_domina_ZPDm______
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EU055415_Palaemnema_melanostig--ACAAAUAAUUUACUUUCAUGAUCAUACCAUAAUAAUUUUAUUAAUCAUUACAGUAACAGUAGGGUAUGUA---
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AAUAGAUGAAGUAAGAGAACCAUCAAUAACACUAAAAACAGUAGGACACCAAUGAUAUUGAAGAUAUGAAUAUUCGGACUUCAAACACGUAGAAUUUGAUUCAUAUAUAAUUCCUCAAAACGAAAUAGAAAAUA
AUAUAACCCGACUAAUUGAAGUAGAUAAUCGAGCCGUUUUACCUAUACAAACACAAAUUCGAGUAUUAGUAACUGCAGCAGAUGUACUACAUUCAUGAACAAUUCCUUCAAUAGGAAUAAAGGUAGAUGCUACU
CCUGGACGAAUCAAUCAAACCAGAUUUUUCAUAAACCGUCCAGGUCUUUUUUACGGUCAAUGCUCAGAAAUUUGCGGGGCCAAUCAUAGAUUUAUACCCAUUUCAAUUGAAAGAGUAAAUACAAAAACAUUUAU
UAAAUGAAUUCAAAAAAUAAAUGAAUCUUCAUUA-----[640]
EU055403_Isosticta_robustior_oGAACAAAUGGUAUAUUUUCAUGAUCACACCAUAAUAAUUCUGUUAAUUAUUACUAUUAUAGUAAGAUAUGUA---
AUAAUCUCAAUAGCUUGAAACAAACAAGUUAAUCGAACACUACUAGAUGGUCAAAAAAUCGAAACAGCAUGAACUAUUUUACCAGUAUUUGUAUUAAUUCUAAUUGCACUACCAUCCCUACGACUACUAUACUU
GAUAGAUGAAGUAAGUGAACCAUCAUUAACACUAAAAACAAUUGGACAUCAAUGAUACUGAAGAUAUGAAUAUUCAGACUUCAAUCACAUCGAAUUCGAUUCAUAUAUAAUUCCUACAAACGACAUGGAAAAGG
GGAUAUUUCGUCUACUAGAAGUAGACAACCGAGUAGUAUUACCUAUACAUUCACAAGUACGAGUACUUGUAACAGCAGCAGAUGUCCUACAUUCAUGAACAGUACCAUCUAUAGGAGUGAAGGUAGAUGCCACU
CCUGGCCGAAUCAAUCAGACAAGUUUUUUUAUAAACCGACCUGGUUUAUUUUAUGGUCAAUGCUCUGAAAUCUGUGGAGCAAACCACAGAUUUAUACCAAUCACAAUUGAAAGAGUUAAAACUAAAACAUUCAU
UAACUGAAUUCAAAAAAUAAAUGAAGCCUCAUUAGA---[644]
Rhadinosticta_simplex_612___
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Amphisticta_silvarum________
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Labidiosticta_vallisi_AY7___
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Orosticta_filiciola_________
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EU055397_Platycnemis_pennipes GAACAAAUAGUUUAUUUUCAUGAUCAUACAAUAAUAAUUCUUUUGGUUAUUACAGUAAUAGUAGGAUACGUU---
AUAGUGUCAAUAUGUUGAAACACUCAACUAAACCGAAAUCUUUUAGAUGGACAGAAAAUUGAAACUGCAUGAACAGUUUUACCAGUAUUUGUAUUAAUUAUAAUUGCAUUACCAUCAUUACGACUUUUGUAUUU
AAUAGAUGAAGUAAGCGAACCCUCAAUUACAUUAAAAACAGUUGGCCAUCAAUGAUACUGGAGUUAUGAAUACUCAGACUUUAAGGAAAUUGAAUUUGAUUCAUAUAUAAUUCCAGAAAAUGACCUAGAAAAGG

GUAUACCUCGACUAUUGGAAGUAGAUAACCGAGCAGUAUUACCAAUACAAGCCCAAGUACGAGUACUGAUUACGGCAGCAGAUGUACUUCAUUCAUGAACAGUGCCCUCUUUAGGAGUAAAGGUAGAUGCAACU
CCAGGCCGAAUUAAUCAGACAAGUUUUUUUAUGAAUCGACCAGGUUUAUUUUAUGGACAGUGUUCCGAAAUCUGUGGAGCAAAUCAUAGAUUUAUACCAAUCACGAUUGAAAGAGUUAAAACUAACACAUUUAU
UGAUUGAAUUCAAAAAAUAAGUGAAGCCUCAUUA-----[642]
JF288874_Copera_annulata_m1426   GAACAAAUAAUUUAUUUUCAUGAUCAUACAAUAAUAAUCCUAGUAAUUAUUACAGUAAUAGUAGGAUACAUU---
AUACUAUCUUUAUCUUGAAACAAGCAAUUAAAUUCUAAUUUAUUAGAUGGACAAAAAAUCGAGACAGCAUGAACAAUUCUACCAGUAUUCGUAUUAAUCAUGAUUGCAUUACCAUCUUUACGUCUAUUAUAUUU
AAUGGACGAAGUUAGAGAACCAUCUAUCACUUUAAAAACAAUUGGACAUCAAUGAUACUGAAGAUAUGAAUAUUCAGAUUUCAAAGAAAUUGAAUUUGAUUCAUAUAUAAUUCCAGAAACCGACCUAGAAAUAG
GCAUAUCUCGUCUAUUAGAGGUAGAUAAUCGAGCAGUAUUACCUAUACAAGCUCAAGUACGAAUCUUAAUUACCGCUGCAGAUGUUCUUCAUUCAUGAACUGUUCCUUCUUUAGGGGUGAAAGUAGACGCUACU
CCUGGACGA---

EU055394_Copera_vittata_od135   GAACAGUUAAUCUACUUCCAUGACCACACAAUAAUAAUUCUAUUAAUUAUUACAGUAAUAGUAAGUUAUAUU---
AUAAUUUCAAUAUCUUGAAAUAAACAAUUAAACCGUAAUUUACUUGAUGGGCAAAAAAUCGAAACCGCAUGAACAAUUCUACCAGUUUUUGUAUUAGUAAUGAUUGCAUUACCCUCUUUACGGCUAUUAUAUUU
AAUAGAUGAAGUAAGAGAACCCUCAAUCACUUUAAAAACAGUAGGGCAUCAAUGAUACUGAAGAUAUGAAUAUUCAGACUUCAAUGAUGUAGAAUUUGAUUCCUACAUAAUUCCAGAAACGGAUUUAGGAGAAG
GAAUACUACGAUUACUAGAAGUAGAUAACCGGGCAGUACUCCCUAUACAAACACAAGUACGAAUACUUAUUACUGCUGCAGAUGUAUUACAUUCAUGAACUGUUCCAUCAUUAGGAGUAAAAGUAGAUGCUACC
CCAGGACGAAUUAACCAAACAAGAUUUUUCAUAAAUCGUCCUGGAAUCUUUUAUGGCCAAUGUUCCGAAAUUUGUGGGGCAAAUCACAGAUUUAUACCAAUUACUAUUGAGAGUGUUAAAACUAAUACCUUUAU
UGAAUGAAUUCAAAAAAUAAGUAAUAUGUCAUUAGA---[644]
Copera_marsouipes____________
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Coeliccia_albicauda__________
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Coeliccia_cy__________
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Nososticta_solida_61451_____
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Phylloneura_westermanni_6___
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Onychargia_atrocyana_ZOA____
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Argia_moesta________________
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Argia_nahuana_6815221_______
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Argiocnemis_rubescens_ZAR___
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Mortonagrion_binocellata____
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Agriocnemis_pygmea_6095_____
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Archibasis_viola_ZAV________
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C_puella_AJ488546___________
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JQ966636_Coenagrionresolutum   ---CAAAUGGUAUACUUUCAUGAUCACACAAUAAUAAUUUUAUUAAUUAUUACUGUAAUAGUGGGAUACGUA---
AUAGUAUCUUUGUGUUGAAAUAAACAACUAAAUCGAAAUUUACUAGAUGGACAAAAAAUCGAAACAGCAUGAACGGUAUUACCAGUAUUCGUUUUAAUUAUAAUUGCAAUACCAUCCUUACGAUUAUUAUACCU
AAUAGAUGAAGUAAGAGAACCUUCAAUUACACUAAAAACAGUGGGACAUCAAUGAUACUGAAGAUAUGAAUAUUCAGACUUCAACCAUAUUGAAUUUGAUUCAUAUAUAGUUCCAGAAAGAGAUUUAGAAGCAG
GUAUAUUUCGAUUACUAGAGGUUGAUAAUCGAGUUGUAUUACCUAUACAAGCACAAGUGCGAAUCCUAGUAACAGCAGCAGACGUAUUACACUCAUGAACAGUACCAUCACUAGGAGUAAAGGUAGAUGCAACA
CCAGGACGAAUUAACCAAACAAGUUUUUUUAUAAACCGACCAGG---------
UGGACAAUGUUCAGAAAUUUGUGGAGCAAACCACAGUUUUAUACCUAUUACAAUUGAAAGAGUUAAGACUAAAACAUUCAUCAACUGAAUUCAAAAAAUAAGAG----------------
Pseudagrion_cingillum_______
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Pseudagrion_aureofrons_61___
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Pseudagrion_ignifer_________
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EU055396_Erythromma_najas_od14GAACAAAUAGUAUAUUUUCAUGAUCAUACCAUGAUAAUUCUACUAAUUAUUACUGUAAUAGUAGGGUAUGUA---
AUGGUAUCAUUGUGUUGAAAUAAGCAAUUAAACCGAAAUUUAUUAGACGGACAAAAAAUUGAAACAGCAUGAACUGUACUCCCAGUGUUUGUAUUAAUCAUAAUCGCAAUACCAUCUUUACGGUUAUUAUAUUU
AAUAGAUGAAGUAAGAGAACCAUCAAUCACAAUAAAAACAGUAGGACAUCAAUGAUACUGAAGUUAUGAAUACUCAGAUUUUAAUCAUAUUGAAUUUGAUUCCUAUAUAGUACCAGAAAGAGACCUAGAAAAAG
GAAUAUUUCGUUUACUCGAAGUAGAUAAUCGAAUUGUAUUACCUAUACAAGCACAAGUGCGAAUUCUAGUAACUGCUGCAGAUGUCCUUCAUUCAUGGACCGUCCCAUCACUAGGAGUUAAGGUAGAUGCUACA
CCUGGACGAAUUAACCAAACAAGAUUUUUUAUAAACCGACCCGGAUUAUUUUAUGGCCAAUGCUCAGAAAUUUGUGGGGCAAUCCACAGAUUUAUACCCAUUACCAUUGAAAGAGUUAAAACUNNNNNUUUUAU
UAACNNNNNN-----------------------------[618]
Cercion_plagiosum_AJ488552__
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Cercion_lindenii_AJ488550___
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Paracercion_calamorum_______
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Acanthagrion_quadratum______
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ZLV_Leptobasis_vacillans____
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Amphiagrion_saucium_________
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Amphiagrion_abbreviatum_6___
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Xiphiagrion_cyanomelas_ZXC__
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Hesperagrion_sp_AY749911____
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Ischnura_elegans_HQ834805 GAACAGAUAGUUUAUUUUCAUGAUCACACCAUAAUAAUUUUGCUUAUUAUUACAGUAAUAGUAGGAUAUGUA---
AUAUUAUCAAUAUGUUGAAAUAAACAACUAAACCGAAAUUUAUUAGAUGGACAAAAAAUCGAAACAGCGUGAACGGUAUUACCAGUAUUUGUAUUAAUUAUAAUUGCUAUACCAUCUUUACGACUAUUAUAUUU

AAUAGAUGAAGUUAGAGAACCUUCAAUUACCAUAAAAACUGUUGGACAUCAAUGAUAUUGAAGAUAUGAAUACUCAGAUUUUAACCAUAUUGAAUUUGAUUCCUACAUAGUGCCAGAAAGAGAUUUGGAAAAGG
GAAUAUUCCGAUUGUUAGAAGUUGAUAAUCGAGUAGUUUUACCUAUGCAAGCACAGGUACGUAUUUUAGUCACAGCAGCAGAUGUAUUACAUUCAUGAACUGUACCUUCUUUAGGGGUUAAGGUAGAUGCAACA
CCAGGACGUAUUAACCAAACAAGUUUUUUCAUAAACCGACCUGGAUUAUUUUAUGGGCAAUGUUCUGAAAUUUGUGGAGCAAAUCAUAGAUUUAUACCUAUUACCAUCGAGAGAGUAAAAACUAAAACAUUCAU
UGAUUGAAUCCAAAAAAUAAGAGAAGCUUCAUUAGGUG-
EU055333_Ishnura_barberi_od015GAACAAAUAGUGUAUUUUCAUGAUCAUACAAUAAUAAUUUUACUCAUCAUUACUGUAAUAGUAGGUUAUGUG---
AUAAUAUCAUUAUGCUGAAAUAAACAAUUAAAUCGAAACUUAUUAGAUGGACAAAAAAUCGAAACAGCAUGAACAGUACUACCAGUGUUUGUAUUAAUUAUAAUUGCUAUACCUUCAUUACGAUUACUAUAUUU
AAUAGAUGAAGUAAGUGAACCUUCAAUUACUAUAAAAACUGUGGGGCAUCAGUGGUACUGAAGAUAUGAAUAUUCAGAUUUCAAUCAUAUUGAAUUCGAUUCCUAUAUAGUACCUGAAAGAGAUUUAGAAAAAG
GAAUAUUUCGAUUAUUAGAAGUUGAUAAUCGAGUAGUUUUACCUAUACAAGCACAAGUACGUAUUUUGGUUACUGCCGCAGAUGUACUUCAUUCAUGAACAGUACCAUCUUUAGGGGUUAAGGUAGAUGCAACA
CCAGGACGUAUUAACCAAACAAGUUUUUUCAUAAAUCGUCCCGGACUAUUUUACGGACAAUGUUCUGAAAUCUGUGGGGCAAAUCACAGAUUUAUACCCAUUACUAUUGAAAGAGUGAAGACUAAAACAUUUAU
UGAUUGAAUUCAAAAAAUAAGAGAAGCUUCAUUA-----[642]
HQ834807_Ischnura_graellsii   GAACAGAUAGUUUAUUUUCAUGAUCACACCAUAAUAAUUUUGCUUAUUAUUACAGUAAUAGUAGGAUAUGUA---
AUAUUAUCAAUAUGUUGAAAUAAACAACUAAACCGAAAUUUAUUAGAUGGACAAAAAAUCGAAACAGCGUGAACGGUAUUACCAGUAUUUGUAUUAAUUAUAAUUGCUAUACCAUCUUUACGACUAUUAUAUUU
AAUAGAUGAAGUUAGAGAACCUUCAAUUACCAUAAAAACUGUUGGACAUCAAUGAUAUUGAAGAUAUGAAUACUCAGAUUUUAACCAUAUUGAAUUUGAUUCCUACAUAGUGCCAGAAAGAGAUUUGGAAAAGG
GAAUAUUCCGAUUGUUAGAAGUUGAUAAUCGAGUAGUUUUACCUAUGCAAGCACAGGUACGUAUUUUAGUCACAGCAGCAGAUGUAUUACAUUCAUGAACUGUACCUUCUUUAGGGGUUAAGGUAGAUGCAACA
CCAGGACGUAUUAACCAAACAAGUUUUUUCAUAAACCGACCUGGAUUAUUUUAUGGGCAAUGUUCUGAAAUUUGUGGAGCAAAUCAUAGAUUUAUACCUAUUACCAUCGAGAGAGUAAAAACUAAAACAUUCAU
UGAUUGAAUCCAAAAAAUAAGAGAAGCUUCAUUAGGUG-
Anomalagrion_hastatum_______
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Enallagma_parvum_AJ420939___
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Enallagma_granti_AJ420937___
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E_nigridorsumAJ420938_______
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3406491_Enallagma_cyathigerumGAACAAAUAGUAUAUUUUCAUGAUCACACUAUAAUAAUCUUACUCAUUAUUACCGUAAUAGUUGGAUAUGUA---
AUAUUAUCUUUAUGCUGAAAUAAACAAGUAAAUCGAAAUUUAUUAGACGGACAAAAAAUUGAAACAGCAUGAACUGUAUUACCAGUAUUUGUAUUAAUUAUAAUUGCUAUACCAUCAUUACGAUUAUUAUAUUU
AAUAGAUGAGGUAAGUGAGCCUUCAAUUACCAUAAAAACUGUAGGACACCAGUGAUACUGAAGAUAUGAAUAUUCCGAUUUCAAUCAUAUUGAAUUUGAUUCAUAUAUAGUGCCAGAAAGUGACUUAGAAAAGG
GAAUAUUCCGAUUAUUAGAAGUUGAUAAUCGUGUAGUACUACCAAUACAAGCACAAGUACGUAUUUUAGUUACAGCCGCAGAUGUACUACAUUCAUGAACAGUACCUUCUUUAGGGGUAAAGGUUGAUGCCACU
CCAGGACGAAUUAAUCAAACAAGUUUUUUUAUGAAUCGUCCUGGACUAUUUUAUGGACAAUGCUCAGAAAUUUGUGGUGCUAAUCACAGAUUUAUACCUAUUACAAUUGAAAGAGUUAAAACCAAAACU-----
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EU055336_Enallagma_sp_SMB_2007GAACAAAUAGUAUACUUUCAUGAUCACACCAUAAUGAUCUUGCUUAUUAUUACCGUAAUAGUAGGAUAUGUA---
AUACUAUCUUUAUGCUGAAAUAAACAACUAAAUCGAAAUUUAUUAGACGGACAAAAAAUCGAAACAGCAUGAACUGUUUUACCGGUAUUUGUACUGAUUAUAAUUGCAAUACCGUCGUUACGAUUAUUAUAUUU
GAUAGAUGAAGUAAGUGAACCAUCAAUCACCAUAAAAACUGUAGGUCACCAAUGAUAUUGAAGAUACGAAUAUUCAGAUUUCAAUCAUAUUGAGUUUGAUUCAUAUAUAGUACCAGAAAGUGACUUGGAAAAGG
GGAUGUUCCGACUAUUAGAAGUGGAUAAUCGGGUGGUAUUACCAAUACAAGCACAAGUACGUAUUUUAGUUACAGCUGCUGAUGUCCUUCACUCAUGAACAGUUCCUUCUUUAGGAGUGAAGGUUGAUGCUACC

CCAGGACGAAUUAAUCAAACAAGUUUUUUUAUAAACCGUCCUGGAUUAUUUUAUGGACAAUGCUCGGAAAUUUGUGGUGCUAACCACAGAUUUAUACCUAUCACAAUUGAAAGAGUUAAAACUAAAACUUUUAU
UAACUGAAUUCAAAAAAUAAGAGAAGCUUCAU-------[640]
E_aspersum_DQ087506_________
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Aciagrion_pallidum__________
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Aciagrion___________
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Protoneura_capillaris_644___
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Protoneura_cara_ZPC_________
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FN356189_Psaironeura_remis__
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Elattoneura_analis__________
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Neoneura_aaroni_____________
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Neaneura_amelia_ZNA_________
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Neoneura_maria_6425182______
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Ceriagrion_aeruginosum______
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Uelebasis_salva_6325172_____
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Leptagrion_elongatum________
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Leptagrion_sp
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Metaleptobasis_manicaria____
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Diceratobasis_sp_A_ZDA______
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Pyrrhosoma_nymphula_1202____
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Chromagrion_conditum________
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Ueinobasis_alluaudi_________
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Nehalenia_gracilis__________
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Coryphagrion_grandis________
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Microstigma_rotunda_________
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EU055408_Microstigma_anomalum   --------------------------------AAUAAUUCUUGUAAUUGUUACAAUAAGAGUAAGAUAUAUA---
AUAGUAUCAAUAACUUGAAAUAAACAGUUAAAUCUUAACUUAUUAGAUGGUCAAAAAAUUGAAAUAAUUUGAACAAUUUUACCAGUAUUUGUUCUAAUUACUAUUGCUAUACCGUCAUUACGAUUAUUAUACCU
AAUAGAUGAUGCAUAUGAACCAUCAAUUACAUUAAAAACUAUUGGACAUCAAUGAUAUUGAAGUUAUGAAUAUUCUGAUUUUAAUCAAAUUGAAUUUGAUUCAUAUAUAAUUAUAGAAAAUGACUUAAACAAUA
AUAUAUUUCGAAAUCUAGAAGUAGAUAAUCGAGUUAUUUUACCUAUAGAUGCUCAAACACGAAUUAUUAUUACAGCAGCUGAUGUACUACAUUCAUGAACAGUACCAUGUCUAGGAGUAAAAUUAGAUGCAACU
CCUGGCCGACUAAAUCAAACAAGCUUUUUUCUUAGUCGGCCCGGUUUAUUCUAUGGACAAUGCUCAGAAAUUUGCGGAGCUAAUCACAGAUUUAUACCUAUCACUAUUGAAAGUAUUAAAACAGAACUAUUUAU
UAACUGAAUUCGAAAAAUAAGAAGCACUUCAUUAGA---[612]
Mecistogaster_ornata________
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Mecistogaster_linearis_67___
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Megaloprepus_caerulatus_____
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Haplostigma_modesta_ZHM_____
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Pseudostigma_aberans________
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Rhinagrion_mima_____________
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EU055410_Sciotropis_cyclanthor-AACAAAUAGUAUUCUUUCAUGACCAUACAAUAAUAAUUCUACUAAUUAUUACCAUUAUAGUAGGAUAUAUU---
AUAACAGCCAUAACUUGAAAUAAACAAAUAAACCGAAACUUACUUGACGGUCAAAAAAUUGAAACGGCAUGAACAGUACUACCCGUAUUUGUCCUAUUAAGAAUUGCUAUACCAUCCCUACGAUUACUAUACCU
GAUAGAUGAAGUAAGUGAGCCAUCUAUUACUGUUAAAACUAUUGGACAUCAAUGAUAUUGAAGAUAUGAAUAUUCUGAUUUCAACGACGUUGAAUUCGAUUCAUAUAUGAUCCCAACUAAUGACUUAGAAAAAG
GCAUGCUUCGUCUUCUAGAAGUAGAUAAUCGCACCGUCCUACCAAUAAAUGUACAAGUACGAAUUUUGAUUACUGCUGCUGAUGUCCUUCACUCAUGAACAGUCCCAUCAUUAGGAGUAAAGGUUGAUGCCACA
CCAGGACGAAUUAAUCAAACAAGAUUUUAUAUAAGCCGCUGUGGGUUAUUCUAUGGUCAAUGUUCAGAGAUCUGUGGGGCCAAUCACAGUUUUAUACCAAUUACCAUCGAAAGAGUAAGAACUAAAAUAUUCCU
CGAAUGAGUGCAACAUAUAAACGAAACAUCAUU------[640]
Heteragrion_mitratum________
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EU055409_Heteragrion_sp_SMB_20----------------UUCGGGAUCAUACUAUAAUAAUUUUAGUAAUCAUUACUGUUAUAGUGCUAUAUAUU---
AUAGUAGCCAUAACUUGAAAUAAACAAUUAAAUCGUAACCUCUUAGAUGGACAGAAAAUCGAAACAGCUUGAACAAUCUUACCGGUUUUUGUAUUAAUUGCAAUCGCAAUACCAUCACUGCGACUAUUGUAUUU
AAUAGAUGAAGUUAGUGAACCCUCAGUUACAUUAAAAACGAUCGGACACCAAUGAUAUUGAAGAUAUGAAUAUUCAGAUUUUGAUCACGUAGAAUUUGAUUCAUAUAUAAUUCCACAAAAUGAAAUAGAGAAAG
GAAUACUUCGAUUACUAGAGGUAGAUAAUCGAGCAGUACUUCCUAUACAAUCACAAAUCCGAAUCCUAGUAACAGCAGCAGAUGUUUUACAUUCCUGAACAGUCC
CUACACUAGGAGUAAAAGUAGAUGCAACUCCUGGACGGAUUAAUCAAAUCAGUUUCUUUAUAAACCGUCCAGGAUUAUUUUAUGGGCAAUGUUCAGAAAUCUGCGGAGCAAAUCACAGCUUUAUACCUAUCACC
AUUGAAAGUGUUAAAACAAAUACAUUUGUUCAGUGAAUUCAAAAGAUAAAGGAAGGUUCAUUAGA---[628]
Oxystigma_cyanifrons_ZOC____
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ZDP_Dimeragrion_percubital__
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Uatocnemis_malgassica_ZUMa__
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EU055411_Philogenia_cassandra   GAACACUUAACACAAUUUCAUGAUCAUACAAUAAUAAUUCUAGUAAUUAUUACAAUCAUAGUAGGAUACAUA---
AUAGUAUCUUUAGCAUGAAAUAAACAACUAAACCAAACAUUACUAGAUGGACAAAAAAUCGAAACCGCAUGAACAAUUCUACCAAUCUUUGUAUUGAUCAGAAUUGCCCUACCAUCACUACGACUACUAUACUU
AAUAGAUGAAAUCCAUGAACCAGCAAUCACUCUAAAGACAGUAGGUCAUCAAUGAUAUUGAAGAUAUGAAUAUUCAGACUUUCAUCAACUAGAAUUUGACUCCUACAUAAUUCCUCAAAACGAAAUAGAAAAAG
ACUUAUAUCGUCUUCUAGAAGUAGAUAAUCGUGUAGUUUUACCAACAAAAAUCCAAGUACGAAUUCUCAUUACCGCCGCAGAUGUUUUACACUCAUGAACUGUUCCUAGUCUAGGAAUCAAAGUAGAUGCCAAU
CCUGGACGAAUUAACCAAACGAGAUUUUUCAUAAACCGACCAGGAAUUUACUAUGGACAAUGCUCAGAAAUCUGUGGAGCCAACCACAGAUUCAUACCAAUUACCAUCGAAAGAGUUAAAACCAAAACAUUCAU
UAGCUGAAUUAAGAAAAUAAAUGAAGCCUCAUU------[641]
ZPU_Philogenia_terraba______
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ZPBn_Philogenia_bernice_____
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EU055412_Ueinopodagrion_venale---------------------------ACAAUAAUAAUCCUAUUAAUUAUUACUGUAAUAGUGGGGUAUAUC---
AUAACAUCCAUAUCAUGAAACAAUCAAGUAAACCGAAAUAUAUUAGACGGACAAAAAAUCGAAACAGCAUGAACAAUUCUACCAGUAUUCAUCUUAGUUAUGAUCGCCAUACCAUCCUUACGACUACUUUACCU
UAUAGAUGAAGUAAAUGAACCAUCAAUCACUUUAAAAACAAUUGGACACCAAUGAUAUUGAAGAUAUGAAUAUUCAGACUUAAUGAGAAUCGAAUUCGACUCAUACAUAGUUCCCACAAACGAAUUAGAAAGGG
GUAUAACACGGCUACUAGAAGUAGAUAAUCGAGUAGUAUUACCUAUACAAGCUCAAGUACGAAUGCUAGUAACAGCAGCAGACGUAUUACACUCAUGAACUGUGCCCUCCUUGGGAGUAAAAGUAGAUGCUACC
CCCGGCCGGAUCAAUCAAACUAGUUUUUUUAUAAAUCGGCCGGGACUAUUCUAUGGGCAGUGCUCUGAAAUUUGCGGAGCAAAUCACAGUUUCAUACCAAUCACAAUUGAAAGAGUUAGAACUAAAACAUUUAU
UGAAUGAAUCCAAAAAAUAAAUGAAGCUUCAUUAGA---[617]
Ueinopodagrion_lepidum_ZUL__
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Amanipodagrion_gilliesi_____
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Nesolestes_elizabethae_ZNE__
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Protolestes_kerckhoffaeZPK__
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Argiolestes_ochrostomasZAO__
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Argiolestes_sidonia_605_____
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Caledopteryx_maculata_669___
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EU055404_Urineuragroin_percostGAACAAAUAGUCCAAUUUCACGACCACACAAUAAUAAUUCUACUUAUUAUCACUAUAAUAGUAGGAUAUGUA---
AUAUUAUCAAUAUUGUGAAAUAAGCAACUAAACCGGAACCUACUAGACGGGCAAAAAAUUGAAACAGCAUGGACCAUUUUACCAGUAUUUGUAUUAAUCAUAAUUGCAAUACCAUCACUACGAUUAUUAUACCU
AAUAGAUGAAGUAAUAGAACCAUCAAUCACCCUAAAAACAAUUGGACACCAAUGAUACUGAAGAUAUGAGUAUUCAGACUUUAAUCAUGUUGAAUUUGAUUCAUACAUAAUUCCACAAGAAGAACUGGAAGAAG
GAAAAUUUCGAUUAUUAGAAGUAGAUAACCGAGCGGUAUUACCAAUAAAAUCACAAGUACGUAUCUUAAUUACAGCCGCAGACGUACUGCACUCAUGAACAAUUCCAUCAAUAGGAGUCAAAGUUGAUGCUACA
CCAGGACGCAUUAACCAAACAAGAUUCUUCAUAACACGACCUGGACUAUACUACGGUCAAUGCUCCGAAAUUUGUGGGGCAAAUCACAGAUUUAUACCAAUCACCAUUGAAAGAGUUAAAACCAAAACAUUUAU
UGAAUGAGUACAGAAAAUAAGUGAAGCCUCAUUA-----[642]
EU055405_Caledargiolestes_unisGAACAACUAAUCCAAUUUCACGAUCAUACAAUAAUAAUCCUACUAAUCAUUACUAUAAAUAGUAGGUUACAUC---
AUAUCCUCAAUAUCAUGAAACAAACAAUUAAAUCGAAACCUAUUAGAAGGACAAAAGACCGAAACAGCAUGGACCGUUCUGCCCGUUUUUGUAUUGAUAAUAAUCGCCAUGCCAUCACUGCGAUUAUUAUAUUU
AAUAGAUGAGGUAAGAGACCCAACAAUUACAAUAAAAACAAUUGGGCAUCAAUGAUAUUGAAGAUAUGAAUAUUCAGACUUUAGUCAUAUUGAGUUCGACUCAUACAUAGUCCCACAAGAAGACCUAAGACCGG
GAAUAUUCCGACUAUUAGAAGUCGACAACCGAGCAGUUCUUCCAUUACAAUCCCAAGUACGAGUACUUGUCACAGCAGCUGACGUGCUACACUCAUGAACAGUUCCAUCAAUAGGAGUCAAGGUAGACGCCACC
CCAGGACGAAUUAAUCAAACAAGAUUCUUCAUAGCUCGUCCUGGACUAUACUACGGACAAUGCUCAGAAAUCUGUGGGGCAAAUCAUAGAUUUAUACCAAUCACCAUUGAAAGUGUUAAAACCAAAACAUUCAU
UGAAUGAGUUCAACAAAUAAACAAGGCUUCAUUAGA---[644]
Podopteryx_roseonotata_ZPR__
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Austroargiolestes_icterom___
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Griseargiolestes_albescens__
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Griseagriolestes_eboracus___
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Miniargiolestes_minimusZMM__
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Lestomima_flavostigma_OPB___
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Rhipidolestes_hiraoi_ORH____
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Rhipidolestes_aculeata_63___
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Paraphlebia_zoe_____________
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Uhaumatoneura_inopinata_____
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Hypolestes_clara_HYP________
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Hypolestes_sp_EU055183______
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Agriomorpha_fusca_ZAF6______
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Sinocnemis_yangbingi_ZSY____
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Miocora_peraltica_ZMP_______
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Cora_marina_POL_OCMr________
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EU055413_Cora_cyane_od173   GAACAAAUAGUCUAUUUUCAUGACCACACAAUAAUGAUUCUAAUUGCUAUUACAACAAUAGUAGGGUACAUU---
AUAACAUCAAUAAGAUUUAACAAAUACGUCAACCGAAACUUAUUGGACGGCCAAAAAAUCGAAACUGCCUGAACAAUUCUUCCUGUAUUUGUUUUAAUUAUCAUUGCCCUACCAUCACUACGACUACUUUAUCU
AAUAGACGAAAUUAAUGAACCAUCAAUUACUUUAAAAACUAUUGGACACCAAUGAUACUGAAGAUAUGAAUAUUCAGAUUUUAAUCAUAUUGAAUUUGAUUCAUAUAUACUACCGCAAGAAGAAAUAGAAGAAG
GAAUAUUCCGAUUAUUAGAAGUCGAUAAUCGAGCUGUUCUACCUAUAAAGUCCCAAGUACGAGUACUAAUCACAGCAGCAGAUGUUCUUCAUUCAUGAACCGUACCGGCUCUAGGAGUGAAAGUAGAUGCAACA
CCAGGCCGAAUCAAUCAAACAAGAUUUAUAACCCUACGACCAGGGUUAUAUUAUGGACAAUGCUCCGAAAUUUGCGGAACAAACCAUAGAUUUAUACCCAUCGUCGUAGAAAGAGUCCCAAUAAAAACAUUUAU
UAACUGAAUUCAAAAAAUGUCAGAACUAUCAUUA-----[642]
Polythore_boliviana_685_____
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EU055420_Polythore_boliviana_oGAACAAAUAACAUAUUUCCACGAUCACACCAUAAUAAUCUUAAUUCCAAUUACAACCCUGGUUGGAUAUAUU---
AUAGUAUCAAUAACAUAUAACAAAUACAUUAACCGAAACCUCCUUGAUGGACAAAAAAUCGAAACAGCAUGAACCAUUUUACCAGUAUUUAUCCUAGUAAUUAUCGCUUUACCCUCUCUACGACUUCUAUACCU
AAUAGACGAAAUUAAUGACCCAUCAUUAACAAUAAAAACCAUCGGACACCAAUGGUACUGAAGAUAUGAAUACUCUGAUUUUAAUCACGUUGAAUUUGAUUCAUAUAUAUUACCCCAAGAAGAAAUACCAGAAG
GAGGUUUCCGACUAUUAGAAGUAGAUAACCGAGCCGUUAUUCCAAUAAAAACACAAGUACGAGUACUAAUCACAGCAGCAGAUGUACUUCACUCAUGAACAGUACCAGCUUUAGGGGUAAAGGUAGACGCAACC
CCAGGCCGAAUUAACCAAACAAGAUUCCUAGCAUUACGACCUGGACUAUUCUAUGGACAAUGUUCAGAAAUUUGUGGAACAAACCACAGAUUCAUACCAAUUGUAUUAGAAAGAGUAAGAAUGAAAACAUUCGU
UGACUGAGUGCAAAAAAUAUCUGAUAUAUCAUUAGA---[644]
EU055414_Euthore_fasciata_od17GAACAAAUAACAUACUUUCACGAUCACACUAUGAUAAUUUUAAUCCCAAUUACAACUUUAGUAGCCUACAUC---
AUAGUAUCAAUAAUAAGUAACAAGUACAUUAACCGAAACCUUCUGGACGGACAAAAAAUCGAAACCGCAUGAACGAUCCUACCAGUUUUUAUUCUAGUAAUCAUCGCUUUACCAUCCCUACGACUUUUAUAUCU
AAUAGACGAAAUUAACGAUCCAUCGGUGACAAUAAAAACUAUUGGUCAUCAGUGAUAUUGAAGUUAUGAGUACUCGGAUUUUAAUCACGUUGAAUUCGACUCAUAUAUAUUACCCCAAGAUGAAAUACCAGAAG

GAGGUUUCCGACUAUUAGAAGUAGACAAUCGAGCUGUUAUUCCUAUAAAAACUCAAGUACGAGUAUUAAUCACAGCGGCAGAUGUCCUGCAUUCAUGAACAGUACCAGCUUUGGGAGUGAAAGUAGAUGCAACA
CCAGGCCGUAUUAACCAAACAAGAUUCUUAGCACUACGGCCUGGACUAUUUUAUGGGCAGUGUUCAGAAAUUUGCGGAACAAAUCACAGAUUUAUGCCAAUUGUAGUAGAAAGAGUAAGAAUGAAAACGUUCGU
UGACUGAGUACAAAAUAUAUCUGACAUAUCAU-------[640]
Rimanella_arcana____________
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Pentaphlebia_stahli_________
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[EU055398_Devadatta_podolestoidGAACAAUUAGUUUAUUUUCAUGACCAUGCUAUAAUAAUUUUGACUAUUAUUACAGUAUCAGUAGGAUAUACC---
AUAAUUUCAAUAUUUUGAAAUAAACAACUAAAUCGAAACUUAUUAGAUGGGCAAAAUACCGAAACAGCAUGAACUAUUAUACCGGUAUUUGUACUAAUUGCAAUUGCAAUACCUUCAUUACGAUUAUUAUAUCU
GAUGGAUGAAGUAAUAACUCCCGCAUUAACUAUUAAAACAGUAGGCCAUCAAUGAUACUGAAGAUAUGAGUAUUCAGAUUUCAAUAAUAUUGAAUUUGAUUCUUAUAUAAUACAAAACGAGGACAUAGAAAAAG
GAAUAAUUCGAUUAUUAGAAGCAGACAAUCGUACAGUAUUACCCAUAAAGGCACAAAUUCGGUUUUUAGUAACUGCAGCAGACGUAUUGCAUUCAUGGACAGUCCCUUCAAUAGGAGCAAAAGUAGAUGCAAAC
CCUGGACGUCUUAAUCAAAUUAGAUUUUUAAUAACUCGACCAGGAAUAUACUAUGGGCAAUGUUCAGAAAUUUGUGGGGCUAAUCAUAGUUUUAUACCUAUUACUCUAGAAAGAGUGAAUUGUAAAACCUUUAU
UGAAUGGAUCAAAAAAAUAAGAGAGGC------------BLASTStobutterflies][635]
EU055398_Devadatta_podolestoid
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Amphipteryx_longicaudata____
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EU055416_Pseudolestes_mirabili---AUACAUC---
AUAGUAUCAAUAUCAUGAAAUAAACAACUAAACCGAAUAUUAUUAGACGGCCAAAAAAUCGAAACCGCAUGAACGAUUCUACCAGUAUUCGUACUAAUUAUAAUCGCAAUACCAUCACUCCGAUUGUUAUACUU
AAUAGACGAAGUAAGAGAGCCAUCAAUCACUUUAAAAACGGUAGGACACCAAUGGUAUUGAAGAUAUGAAUAUUCAGACUUCAAUCACAUUGAAUUCGACGCAUACAUAGUACCAGAAGACGAUAUAGAAGCAG
GAAUAAUACGACUAUUAGAAGUAGACAAUCGGACAGUACUGCCCAUACAUACACAAAUCCGAAUCCUAGUCACAGCAGCAGACGUUCUACACUCAUGAACUGUGCCAACAUUAGGAGUAAAAGUAGACGCCACA
CCAGGACGAAUUAAUCAAACAAGAUUUUUUAUAAACCGGCCGGGACUUUUUUACGGACAAUGCUCAGAAAUUUGCGGAGCCAAUCAUAGAUUUAUACCUAUCACAAUCGAAAGGGUCAAUACAAAAACAUUCAU
CAACUGAGUACAAAAGAUAUCUGAAGAAUCAUUAGA---[579]
EU055406_Philoganga_vetusta_odGAACAGAUAACACAAUUCCAUGAUCAUACAAUAAUAAUUUUAGUGAUUAUUACAAUCAUAGUAGGUUACGUA---
AUAUUUUCUAUAUCUUGAAAUAAACAAUUAAACCGAAAUCUAUUAGAUGGACAAAAAAUUGAAACUGCAUGAACCAUUUUACCAGUAUUUGUCCUGAUUAUAAUCGCUAUACCAUCACUCCGACUACUAUAUCU
CAUAGAUGAGGUAAGAGAACCAGCCAUUACUUUAAAAACAAUUGGUCAUCAAUGAUACUGAAGAUAUGAGUAUUCAGACUUUAAUCACGCUGAAUUUGAUUCAUAUAUAAUUCCAUAUGAAGAAGUAGAAAAAG
GAAUAUUCCGGCUUCUAGAAGUAGACAAUCGAGCAGUACUACCAAUACAAACACAAGUACGUAUUUUAAUUACUGCAGCAGACGUUCUCCACUCAUGAACAGUUCCAUCACUAGGGGUAAAAGUAGACGCAACC
CCAGGACGUAUUAACCAAACUAGUUUCCUAAUAAACCGACCAGGAUUAUUUUAUGGACAAUGCUCAGAAAUUUGUGGAGCAAACCACAGAUUCAUACCAAUCACAAUCGAAAGAGUUAAAACAAAAACAUUCAU
CGAAUGAAUACAAAAAAUAAACGAAGCCUCAUUAGA---[644]
Philoganga_robusta_PGN______
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EU055401_Lestoidea_conjuncta_oGAACAAAUAGUAUACUUUCAUGACCAUACAAUAAUAAUCUUACUGAUUAUUACAAUUAUAGUAGGGUACGUG---
AUAGUAGCAAUAUCAUGAAAUGCACAGACAAACCGAAACCUUCUAGACGGUCAGAAAAUUGAAACUGCAUGAACAGUUCUUCCCGUAUUUGUAUUGGCAUUUAUCGCCAUACCAUCUCUGCGCCUUCUAUACUU
AAUAGAUGAAGUAAGUGAGCCAGCAUUAACACUAAAAACGGUGGGACAUCAAUGAUACUGAAGAUAUGAAUAUUCUGAUUUCUCAGACCAGGAAUUCGACUCGUAUAUAGUUCCUUUAAAUGAAAUGGACACGG
GAAUGCCCCGACUAUUAGAAGUAGACAACCGGGUCGUAUUGCCAAUACGAGCACAAGUGCGAAUCAUAGUAACAGCUGCUGAUGUUCUUCACUCAUGAACAGUGCCAUCAAUGGGGGUAAAGGUCGAUGCAACU
CCCGGACGACUUAAUCAAACGAGAUUUUUCAUAACGCGACCAGGGCUAUAUUAUGGCCAAUGUUCAGAAAUUUGUGGAGCAAAUCACAGAUUCAUACCAAUUACUCUCGAGAGAGUUAAUACUAACACAUUCAU
CGAAUGAAUCCGAAAAAUAAAUGAAGCAUCAUUAGA---[644]
Diphlebia_lestoides__________
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Diphlebia_coerulescen_AY7___
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Bayadera_melanopteryx_______
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EU055375_Bayadera_brevicauda_oGAACAAAUAGUUUACUUUCAUGAUCAUACUAUAAUAAUUSUAUUGAUUAUUACAGUAAUAGUAGGAUACGUA---
AUAUUAUCUAUAUUUUGAAAUAAGCAAACAAAUCGAACAUUAUUGGAUGGCCAAAAAAUCGAAACAGCAUGAACUAUUCUACCGGUAUUUGUAUUAAUCUUAAUUGCUAUACCAUCAUUACGACUACUAUACCU
AAUGGAUGAAAUCAGAGAACCCUCUAUUACAUUAAAAACAGUAGGACACCAAUGAUACUGAAGAUAUGAAUAUUCAGAUUUCAAUUCAAUUGAAUUUGAUUCAUACAUGAUUCCCCAAAACGAAAUAGAAAAAG
GCAUAUUCCGCUUACUAGAAGUAGACAACCGCACAGUAGUACCUAUACAAGCCCAAGUACGAGUACUAGUUACAGCAGCAGAUGUUCUCCAUUCUUGAACCGUACCCUCAGCAGGGGUAAAGGUAGACGCAACA
CCUGGACGAAUUAAUCAAACAAGUUUCUUUUUAAAUCGUCCUGGAUUAUUUUACGGACAAUGUUCAGAAAUCUGUGGAGCCAACCACAGAUUCAUACCAAUCACAAUUGAAAGAGUAAAAACUAAAACAUUCAU
UGAAUGAAUUGAAAAAAUAAAUGAAGCCUCAUUAGA---[644]
Dysphaea_gloriosa____________
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EU055374_Euphaea_formosa_od098GAACAAAUGAUUUACUUCCACGAUCACACAAUAAUAAUUCUAUUAAUCAUUACAGUAAUAGUAGGAUACGUA---
AUAAUAGCUAUAUUUUGAAACAAACAAACAAACCGAAACUUACUAGAUGGUCAAAAAAUCGAAACAGCAUGAACUGUGUUGCCAGUAUUUGUUUUAAUUUUAAUUGCAAUACCAUCCCUACGGCUACUAUAUUU
AAUAGACGAAAUUAGAGAACCAUCAAUCACUCUAAAAACAGUAGGGCAUCAAUGAUAUUGAAGAUACGAAUAUUCAGAUUUUAAUCAUAUUGAAUUCGAUUCUUAUAUAAUCCCUCAAAACGACAUAGAAAUGG
GAAUAUUUCGAUUAUUAGAAGUUGAUAAUCGAGCAGUUCUACCCAUACAAGCUCAAAUCCGAGUACUAGUAACAGCAGCAGACGUAUUACAUUCAUGAACAGUACCAUCAUUAGGUGUGAAGGUUGAUGCUACU
CCAGGACGUAUUAAUCAAACGAGUUUUUUCAUAAACCGUCCUGGGUUAUUUUAUGGACAGUGUUCAGAAAUUUGUGGGGCAAACCACAGAUUUAUACCAAUCACAAUUGAAAGAGUAAAGACUAAAACAUUUGU
UGAAUGAAUUAAAAAGAUAAAUGAAGCCUCAUUAGA---[644]
EU603570_Euphaea_decorata   --
UUUGAAACAAACAAACAAACCGAAAUUUACUAGAUGGUCAAAAAAUCGAAACAGCAUGAACAGUAUUACCAGUAUUUGUUUUGAUUUUAAUUGCAAUACCAUCACUACGACUACUAUACUUAAUAGACGAAAUU
AGAGAGCCAUCAAUUACAUUAAAAACAGUAGGGCACCAAUGAUAUUGAAGCUAUGAAUAUUCAGAUUUCAACCAUAUUGAAUUCGACUCAUAUAUAAUCCCACAAAAUGACAUAGAACUGGGAAUAUUCCGACU
AUUAGAGGUUGAUAAUCGAGCAGUAUUACCUAUACAAGCUCAAAUCCGAGUAUUAGUAACAGCAGCAGAUGUACUACACUCAUGAACAGUACCAUCACUAGGUGUAAAGGUAGAUGCUACCCCAGGACGCAUUA
AUCAAACAAGUUUUUUUAUAAACCGUCCUGGUUUAUUUUAUGGACAGUGUUCAGAAAUUUGUGGAGCAAAUCAUAGAUUUAUACCAAUCACAAUUGAA-------------------------------------
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Anisopleura_sp_A_____________
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Disparocypha_biedermanni____
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EU055393_Libellago_semiopaca_oGAACAAAUAACUUACUUUCACGAUCACACAAUAAUAAUUUUAUUAAUUAUUACAGUAAUGGUUAGUUACAUU---
AUAAUAUCAAUAUCCUGAAAUAAGCAAGUUAAUCUAAAUUUAUUAGAUGGACAAAAAAUUGAAACAGCUUGAACCAUUUUACCAGUAUUUGUAUUAAUUAGAAUCGCUAUACCCUCCCUGCGACUACUAUACUU
AUUAGAUGAAGUAAGAGAACCAACUAUUACUCUAAAAACAAUCGGCCAUCAAUGAUAUUGAAGAUAUGAAUACUCAGAUUUCAAUAAUAUUGAAUUCGAUUCCUACAUAAUUCCCCAAAACGAAAUCGAGAAAG
GGAUAUUCCGAUUAUUAGAAGUAGAUAAUCGAACUGUACUACCUAUAUUGACACAAGUACGAAUUUUAAUUACAGCAGCUGAUGUACUUCAUUCUUGAACUGUCCCUUCCUUGGGAGUUAAGGUAGAUGCAACC
CCCGGACGAAUCAACCAAACUAACUUUUUUAUAAACCGACCAGGUUUAUUUUAUGGACAAUGUUCAGAAAUUUGUGGAGCAAACCAUAGAUUUAUACCAAUUACAAUUGAAAGAGUCCAAUCUAAAACGUUUAU
UGAAUGAAUUAAAAAAAUAAAUGAGGCCUCAUUAGA---[644]
Heliocypha_biseriata_650____
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Platycypha_caligata_________
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Chlorocypha_curta_CHL_______
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Sundacypha_petiolata_CHL____
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Rhinocypha_fenestrella_CHL__
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Rhinocypha_tincta_60351_____
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Heliocharis_amazona_________
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EU055327_Hetaerina_americana_o--ACAAAUGAUUAACUUUCAUGACCACACCAUGAUAAUCCUAGUUAUUAUUACCGUUAUAGUAGGAUAUUUA---
AUGUUAUCAAUAACCUGAAACAAGCAAACAAACCGAAAUCUAUUAGAUAACCAAAAAAUGGAAACUGCCUGAACAAUUCUCCCAGUAUUCGUUUUAAUCAUAAUUGCUAUACCAUCUCUACGACUCCUCUAUCU
AAUAGAUGAAGUAAGUGAGCCAUCCAUCACAGUAAAAACUAUUGGACAUCAGUGGUACUGAAGUUAUGAAUAUUCCGAUUUUAAUCAAGUUGAGUUUGACUCAUACAUAAUCCCAACUAAUGAAUUGGAAAUAG
GAAUAACUCGACUACUAGAAGUUGAUAACCGGGCCGUUAUACCUAUACAAGCCCAAGUACGAAUUCUAAUUACAGCAGCAGAUGUACUUCAUUCAUGAACAGUUCCAGCCCUAGGAGUAAAGGUAGAUGCCACC
CCAGGACGAAUUAAUCAAACUAGUUUCUUCAUAAAUCGACCCGGAUUAUUUUAUGGGCAAUGUUCCGAAAUCUGCGGAACAAACCACAGAUUCAUACCUAUUACAAUUGAAAGAGUUUCCACAAAAACAUUUAU
UGAAUGAAUUAAAAAAAUAAGUGAGGCUUCAU-------[638]
Calaphaea_confusa___________
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Noguchiphaea_yoshikoae______
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Vestalis_beryllae_66252_____
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EU055378_Matrona_basilaris_od1GAACAAAUAAUUAACUUCCACGACCAUACAAUAAUAAUCUUACUAAUAAUCACAGUAAUAGUAGGAUAUGUU---
AUAUUAUCAAUAAUUUGAAACAAGCAAACGAACCGAAAUUUAUUAGACGGACAAACUAUUGAAACUGCAUGAACAAUUCUGCCAGUAAUAAUUCUUAUUGCAAUUGCAAUACCAUCAUUACGACUAUUAUACCU
AAUAGAUGAGAUUAGAGAACCGUCUAUUACCCUAAAAACAAUUGGGCAUCAAUGAUAUUGAAGAUAUGAAUAUUCUGAUUUUAAUCAGAUUGAAUUUGACUCAUAUAUAAUCCCCUCUAACGAGGUAGAAAAAA
ACAUAACGCGUCUACUAGAAGUAGACAAUCGAACAGUACUACCUAUACAAACUCAAGUGCGAGUGCUAGUAACAGCAGCAGACGUUCUUCAUUCAUGAACAGUACCAUCAAUAGGAGUAAAAGUAGACGCAACA
CCAGGCCGAAUUAAUCAAACUAGAUUCUUUAUAAGACGUCCAGGACUAUUUUAUGGACAAUGUUCAGAGAUUUGUGGAGCAAAUCACAGAUUCAUACCAAUCUCAAUUGAAAGAGUAAAUACUAAAACAUUUUU
AGAGUGAAUUAAAAGAAAUGAAGAAAACUCAUU------[641]
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EU055390_Echo_modesta_od130   ---
UUUUUUAACAAAAAAACAAACCGAAACUUAUUAGAUGGACAAAAUGUAGAAACUGCAUGAACCAUUAUUCCAGUGUUUGUUCUUAUUCUAAUUGCUAUGCCAUCUCUACGCCUACUCUACCUAAUAGAUGAAGU
AAGAGACCCUUCAAUUACUAUAAAAACAAUUGGCCAUCAAUGAUACUGAAGAUAUGAAUACUCGGACUUCAGAGAAGUAGAAAUUGAUUCGUAUAUAUUACCCUUAGACGAAAUAGCCUCUGGAAUAACACGAC
UACUAGAAGUAGACAACCGAGCAAUACUGCCCAUAAAUACUCAGGUACGAAUUUUAGUAACUGCUGCAGACGUGCUUCACUCAUGAACAGUACCCUCACUAGGGGUAAAGGUAGAUGCCACUCCUGGACGAAUC
AAUCAAACAAGAUUUUUCAUAAAUAGACCAGGACUAUUUUAUGGACAAUGCUCAGAAAUCUGUGGAGCAAAUCACAGAUUUAUGCCAAUCACAAUUGAAAGAGUUAGAACAAAGACAUUCCUGAAAUGAAUUCA
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EU055342_Neurobasis_ianthinipeGAACAAAUAAUCAAUUUCCACGAUACUACUAUAAUAAUUUUAUUAAUAAUUACAGUAAUGGUGGGAUAUGUA---
AUACUUUCAAUAUUAUGAAAUAAGCAAACUAACCGAAACUUAUUAGAUGGACAAAAAAUCGAAACAGCAUGAACUGUUCUACCAGUAUUUGUAUUAAUAAUAAUCGCACUACCAUCACUACGACUACUCUACCU
CAUAGACGAAGUAAGAGAGCCUUCAAUUACUUUAAAAACUAUUGGACACCAAUGAUACUGAAGAUAUGAAUAUUCAGAUUUCAGACAAGUUGAAUUUGAUUCAUACAUAAUCCCAACAAACGAAAUAGAAAACA
ACAUAACACGAUUACUAGAAGUAGAUAACCGAACAGUGCUACCAAUACAAACUCAGGUACGAGUACUAGUAACAGCCGCAGACGUCCUACACUCAUGAACUGUGCCAUCGUUAGGAGUAAGGGUAGAUGCAACA
CCAGGACGAAUUAACCAAACCAGUUUUUUCAUAAGACGUGCUGGAUUAUUUUAUGGGCAAUGUUCGGAAAUCUGUGGAGCAAACCACAGAUUUAUACCUAUUUCAAUCGAAAGAAUUAGAACUAAAUCAUUUAU
UGAAUGAAUUAAAAAAUU---------------------[626]
Sapho_orichalcea_____________
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Calopteryx_amata_____________
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AJ459186Calopteryx_splend___
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EU055325_Calopteryx_aequabilisAGACAAAUAAUCAAUUUCCACGAUCAUACAAUAAUAAUCCUAUUAGUAAUUACAGUAAUAGUAGGGUAUAUU---
AUAGUAUCAAUAUUCUGAAAUAAACAAACAAAUCGAAACCUACUUGACGGACAAAAAAUUGAAACAGCCUGAACCAUUCUACCAGUAUUUGUAUUAAUCAUAAUUGCCAUACCAUCUCUUCGUCUACUAUACUU
AAUAGAUGAAAUCAGAGAACCAUCAAUUACUUUAAAAACCAUUGGACAUCAGUGGUAUUGAAGAUACGAGUACUCGGAUUUUGGCCAUGUAGAGUACGACUCAUACAUAAUCCCUUCCAACGAGAUAGAAGACA
GCAUGGCACGUCUACUAGAAGUAGACAACCGAACAGUGUUACCGAUACAGACUCAAGUUCGAGUACUAGUAACCGCGGCGGACGUACUUCACUCAUGAACAGUGCCGUCCAUAGGAGUAAAAGUUGAUGCCACA
CCAGGGCGGAUCAACCAAACCAGAUUUUUCAUUAACCGGGCUGGCCUAUUCUAUGGACAAUGCUCCGAAAUUUGUGGGGCAAACCAUAGAUUCAUACCAAUCUCAAUCGAAAGAGUAACCGCCAAGACAUUCAU
UGAGUGAAUUAAAAAAAACAGAGAAAAUUCAUUAGA---[644]
Iridictyon_myersi____________
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Iridictyon_myersi____________
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Unaligned_Lestoids
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Nubiolestes_diotima__________
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Perilestes_kahli_683522_____
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EU055418_Perissolestes_remotus--ACAAAUAGUAUAUUUCCACGACCAUUCAAUAAUAAUUCUGUUAAUUAUUACCAUCAUAGUGGGAUAUGUU---
AUAACAUCAAUAAUAAUAAACAAACAAGUAAACCGAAACCUGUUAGAUGGCCAAAAAAUCGAAACAGCAUGGACCAUCUUACCCGUAUUUGUAUUAAUUAUUAUUGCAAUACCAUCACUCCGACUACUAUAUAU
AUUGGAUGAAGUAAGAACACCUUCAAUUACGAUAAAAACAAUUGGACAUCAAUGAUACUGGAGAUAUGAAUAUUCAGACUUCAACCAUAUUGAAUUUGAUUCUUACAUAAUUCCAUCAGAUGAAUUAACAGAAA
AUAUAUUCCGACUACUUGAAGUAGAUAAUCGAGCAGUAGUACCCAUACAGACUCAAGUACGAGUGUUAAUUACAGCAGCAGAUGUCUUACACUCAUGAACAGUACCAGCACUAGGAGUAAAAGUAGAUGCUACA
CCAGGACGGAUUAAUCAAACCAGAUUUUUUAUAAAUCGGCCUGGGCUAUUUUACGGACAAUGCUCCGAAAUUUGUGGAGCAAAUCAUAGAUUUAUACCAAUUACACUAGAAGGAGUGAACACAAAAACCUUUAU
UAAAUGAAUUAAAAAUAUAAGUGAAGCUUCAUUAGA---[642]
Perissolestes_magellenae____
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Chlorolestes_umbrata________
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Euchlorolestes_tessellata___
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Phylolestes_ethelae_________
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EU055363_Synlestes_weyersii_odGAACAAAUAGUUUAUUUCCAUGAUCACGCAAUAAUAAUUUUAUUAAUUAUUACAGUAAUAGUGGGAUAUAUU---
AUAGCCUCAAUAUUAUGAAACAAACAAAUUAAUCGAAACCUCCUAGAUGGUCAAAAAAUUGAAACAGCAUGAACAGUACUGCCCGUAUUUGUAUUAAUCAUCAUCGCUAUGCCCUCACUUCGAUUAUUAUAUAU
ACUAGAUGAAGUAAGAGAGCCAUCAAUCACCAUAAAAACAAUUGGACACCAAUGAUACUGAAGAUAUGAGUAUUCAGACUUCAAUCACAUUGAAUUUGAUUCAUAUAUAGUACCAAUAACAGACUUAGAAGAGA
ACAUGUUUCGACUUUUGGAAGUCGAUAACCGAGCAGUAUUACCUAUACAAACUCAAGUUCGAAUUUUGAUCACAGCAGCAGAUGUUCUGCACUCAUGAACUGUACCAUCAUUAGGAGUAAAGGUAGACGCAACC
CCUGGACGGAUUAAUCAAACCAGAUUUUUUAUAAGACGGCCAGGCUUAUUUUAUGGGCAAUGUUCAGAAAUUUGUGGAGCAAAUCACAGAUUUAUACCUAUUACAAUCGAAAGAGUAACCGCAAAGACAUUCAU
UGAAUGAAUUCAAAAGAUAAAUGAAGCCUCAU-------[640]
Synlestes_tropicus__________
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EU055402_Chorismagrion_risi_od-AACAAAUAGUAUACUUUCAUGAUCACACUAUGAUAAUUUUAGUCAUUAUUACAGUCAUAGUGGGGUACGUU---
AUAGCCUCAAUAACCUGAAAUAAGCAAAUUAAUCGAAACCUCUUAGAUGGACAAAAAAUUGAAACCGCCUGAACAAUCCUACCCGUUUUUGUACUAAUAAUUAUUGCAAUACCAUCAUUGCGCCUACUAUACAU
AAUAGACGAAGUAAGAGAGCCCUCCAUCACUAUAAAAACAAUUGGGCAUCAAUGAUAUUGAAGAUACGAAUAUUCAGACUUCAAUCACAUUGAAUUUGACUCGUACAUAAUUCCUGAGGUAGAUAUAGAUAAAG
AAAUAUAUCGCCUGCUCGAAGUAGAUAACCGGGCAGUUCUCCCGAUACAAACACAAAUUCGAAUUCUAAUUACUGCAGCAGACGUCCUACAUUCAUGAACAGUACCCUCUCUAGGAGUAAAAGUAGAUGCAACU
CCUGGUCGAAUCAACCAAACAAGAUUUUUUAUAAGACGACCUGGCUUAUUUUAUGGACAAUGCUCAGAGAUCUGUGGUGCUAAUCACAGAUUUAUACCCAUUACAAUUGAAAGUGUUACAACAAACACAUUCAU
UAAAUGAAUUCAAAAAAUAAAUGAAUCCUCAUU------[640]
Episynlestes_cristatus______
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EU055346_Episynlestes_albicaud--

GAAACAGCCUGAACAGUACUGCCCGUAUUUGUAUUAAUUAUUAUUGCCAUACCAUCCCUACGAUUACUAUAUAUGUUGGAUGAAAUUAGAGAGCCGUCAAUUACUAUAAAGACUAUUGGGCACCAAUGAUACUG
AAGAUAUGAAUAUUCAGAUUUCAACCAUAUUGAAUUCGAUUCUUACAUAAUCCCCCAACCAGAAUUAGAAAGUAAUAUAAUGCGCCUGUUAGAAGUGGAUAAUCGAGCAGUUCUGCCCAUACAAACACAAGUUC
GCAUUCUAAUUACAGCUGCAGAUGUCCUACACUCAUGGACAGUGCCCUCCCUGGGGGUAAAGGUUGAUGCCACUCCAGGACGAAUCAAUCAGACUAGAUUUUUUAUAAGACGUCCAGGACUAUUUUACGGGCAG
UGCUCCGAAAUCUGUGGGGCAAACCACAGAUUUAUGCCCAUUACAAUUGAAAGAGUUAACACAAAAACCUUCAUUAACUGAAUUCAAAAAAUAAAUGAGGCCUC---------[506]
Megalestes_micans___________
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Megalestes_kurahashii
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Orolestes_octomaculatus_LES_ZOO
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EU055355_Austrolestes_annulosuGAACAAAUGUCUUAUUUUCAUGAUCACACUAUAAUAAUUCUCCUUAUUAUUACAGUAAUAGUGGGAUAUGUA---
AUAAUAUCAAUAAUAUGAAACAAGCAAGUUAAUCGAAAUUUACUAGAUGGGCAGAAAAUUGAAACAGCAUGAACAAUUAUACCCGUUUUUGUAUUAAUUAUUAUUGCGAUACCAUCUCUGCGACUGUUAUAUAU
AUUAGAUGAAGUUAGAGAACCUUCCAUUACAUUAAAAACCAUUGGCCAUCAAUGGUAUUGAAGUUAUGAAUAUUCAGAUUUUAACCAUAUUGAAUUUGACUCAUAUAUGAUUCCAACAAGAGAUCUAGAAAAUG
AAAUAUUUCGACUACUCGAAGUAGAUAAUCGAGCGGUCCUUCCAAUACAAACUCAAGUACGAAUUCUAGUAACAGCUGCUGAUGUAUUACAUUCAUGAACAGUGCCCUCGCUAGGAGUAAAGGUAGAUGCAACC
CCUGGACGAAUUAAUCAAACAAGAUUCUUUAUAAGACGUCCGGGACUAUUCUAUGGACAAUGUUCAGAAAUCUGUGGGGCCAACCACAGAUUCAUGCCAAUCACGAUUGAAAGUGUUACUACUAAAACAUUUAU
UAAUUGAAUUCAAAAGAUAAAUGAAGCCUCAUUAGA---[644]
EU055387_Sympecma_paedisca_od1GAGCAAAUAACAUAUUUUCAUGAUCAUACAAUAAUAAUCCUAUUAAUUAUUACAGUAAUAGUAGGAUACGUU---
AUAAUAUCAAUAAUAUGAAACAAACAAGUAAAUCGUAAUUUACUAGAUGGACAAAAAAUCGAAACAGCAUGAACAAUUCUGCCAGUAUUUGUUCUAAUUAUUAUUGCCAUACCAUCACUACGACUUCUAUAUAU
AUUAGAUGAAGUUAGUGAGCCGUCUCUUACUAUGAAAACUAUUGGACACCAAUGAUAUUGAAGAUAUGAAUAUUCAGAUUUUAAUCACAUUGAAUUUGAUUCUUAUAUAAUUCCUACUACAGACCUAGAAGACG
GAAUAUUUCGAUUACUGGAAGUAGACAACCGAGCCGUAUUACCUAUACAAACACAAGUACGAAUUCUAGUGACUGCAGCAGAUGUAUUACAUUCAUGAACAGUCCCAUCAUUAGGAGUAAAGGUAGAUGCUACC
CCCGGACGAAUUAACCAAACAAGAUUUUUUAUAAGUCGUCCAGGACUAUUUUAUGGGCAAUGUUCUGAAAUUUGUGGGGCAAAUCACAGAUUUAUACCAAUUACAAUUGAAAGAGUUACUACUAAAACAUUUAU
UAACUGAAUUCAAAAGAUAAAUGAAGCCUCAUUAGA---[644]
Sympecma_fusca______________
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EU055157_Austrolestes_ann___
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Indolestes_peregrinus_______
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Chalcolestes_viridis________
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EU055382_Archilestes_grandis_oGAACAGAUAUCAUAUUUCCAUGAUCACACCAUAAUAAUCUUGCUUAUUAUUACAGUUAUGGUUGGGUAUGUA---
AUAUUAUCAAUAACAUGAAACAAACAAGUAAAUCGCAAUUUAUUAGAUGGACAGAACAUUGAAACAGCAUGAACAAUUUUACCAGUAUUUGUGCUAAUUAUUAUUGCCAUGCCAUCACUCCGAUUAUUAUAUAU
GCUGGACGAAGUGAGUGAACCAUCAAUCACUUUAAAAACAAUUGGACACCAAUGAUAUUGAAGAUAUGAAUAUUCAGAUUUUAAUCAUAUUGAAUUUGAUUCCUACAUAAUUCCCACAACAGACCUAGAAAAUG
ACAUGUUUCGUUUGCUAGAAGUAGACAACCGAGCAGUAUUACCCAUACAAACCCAAGUUCGAAUUCUAGUAACAGCCGCAGACGUCUUACACUCAUGAACCGUACCAUCACUAGGGGUAAAGGUAGACGCAACC
CCUGGACGCAUUAAUCAAACAAGAUUUUUUAUAAAUCGCCCGGGGCUAAUAUAUGGUCAAUGUUCAGAAAUUUGUGGGGCAAACCACAGUUUUAUACCAAUUACAAUUGAAAGAGUUA----------------
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EU055330_Lestes_sp_XXX_______   GAACAAAUGUCAUAUUUUCAUGAUCAUACCAUGAUAAUUUUACUUAUUAUUACGGUACUAGUGGGAUAUGUU---
AUAAUAGCAAUAACAUGAAAUAAGCAAGUAAAUCGCAACCUUCUAGAUGGCCAAAAUAUUGAAACUGCUUGAACUAUUUUACCAGUAUUUGUGCUAAUUAUUAUUGCUAUACCAUCGUUACGAUUGUUAUAUAU
ACUAGAUGAAGUAAGUGAACCGUCAAUCACUUUAAAAACAAUUGGUCAUCAAUGAUAUUGAAGUUAUGAAUAUUCAGAUUUUAACCAUAUUGAAUUUGAUUCAUAUAUAAUUCCUACAAGAGAUUUAGAAAAUG
ACAUAUUCCGCCUAUUAGAAGUGGAUAACCGAGCAGUACUACCAAUACAAACCCAGGUACGAAUUUUAGUAACAGCAGCAGAUGUUCUUCAUUCAUGAACAGUUCCAUCACUUGGGGUAAAGGUGGACGCAACU
CCGGGACGCAUUAACCAAACAAGAUUUUUUAUAAAUCGACCUGGAUUAAUAUACGGGCAAUGUUCAGAAAUUUGUGGGGCAAACCAUAGAUUUAUACCAAUCACAAUUGAAAGAGUAACUACUAAAACAUUUAU
UAAUUGAAUCCAAAAAAUAAAUGAAGCCUCAUUAGA---[644]
Lestes_eurinus
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FN356183Hemiphlebia_________
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Unaligned_Anisoptera
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EU055421_Epiophlebia_superstesGAACAAAUAGGAUAUUUUCACGAUCACACCAUAAUAAUUUUAGUAAUUAUUACAGUUCUAGUAGCAUAUGUA---
AUAGCAACUAUAUUCUGAAACAAAAGAGUUAACCGAAAUUUACUUGACGGCCAAAAGAUUGAAACUGUAUGAACAGUACUACCAGUAUUUGUACUAAUUAUUAUUGCAAUACCGUCACUUCGAUUAUUAUACCU
ACUAGAUGAAGUAAACGAACCAUCUAUUACCCUAAAAACAGUAGGACAUCAAUGAUACUGAAGUUAUGAAUACUCAGACUUCAACCAUGUUGAAUUUGAUUCUUAUAUAAUUCCUUAUAAUGAAAUAGAAGAAG
GGGGAUUUCGACUUUUAGAAGUAGAUAGCCGGGCAGUAUUACCUAUACAAACUCAAGUCCGUAUACUAAUUACUGCUGCAGAUGUAAUUCAUUCAUGAACUGUACCAUCGCUAGGAGUAAAGGUAGAUGCAACU
CCAGGACGCUUAAACCAGACAAGAUUUUUUAUUAGUCGACCAGGAUUAAUAUAUGGUCAAUGUUCAGAAAUUUGUGGGGCAAAUCACAGAUUUAUACCUAUUGUUAUUGAAAGAGUGACAACUAAAACAUUUAU
UAAUUGAAUUCAAAAAAUACAAGAAGCCUCAUUAGA---[644]
JQ943605_Epiophlebia_laidlawi
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??????????????????????CAACCAUGUUGAAUUUGAUUCUUAUAUAAUUCCUUAUAAUGAAAUAGAAGAAGGGGGAUUUCGACUUUUAGAAGUAGAUAACCGGGCAGUAUUACCUAUACAAACUCAAGUC
CGUAUACUAAUUACUGCUGCAGAUGUAAUUCAUUCAUGAACUGUACCAUCGCUAGGAGUAAAGGUAGAUGCAACUCCAGGACGCUUAAACCAGACAAGAUUUUUUAUUAGUCGACCAGGAUUAAUAUAUGGUCA
AUGUUCAGAAAUUUGUGG??
Unaligned_Aeshnoids
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FN356039Archipetalia_aur____
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Austropetalia_victoria______
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Hypopetalia_pestilens_______
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FJ596639_Phyllopetalia_api__
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EU055419_Phyllopetalia_apollo   ---
AUAUUAAUCGGAACUUAUUAGAUGGACAAAAGAUUGAAACAGCUUGAACUGUAUUACCAGUUUUUGUAUUAAUUAUUAUUGCAAUACCUUCUCUACGAUUACUUUAUUUACUAGAUGAAGUAAGAGAACCUUCA
AUUACACUAAAAACAAUUGGACAUCAAUGAUAUUGAAGUUAUGAAUAUUCAGACUUCAAUCAUAUUGAAUUCGACUCUUAUAUAAUUCCUUACAAUGAAAUAAAUGAAAGAGGAUUUCGAUUAUUAGAAGUAGA
UAAUCGAGCAGUUUUACCUAUACAAACACAAAUCCGAAUUUUAAUUACAGCAGCGGAUGUAUUACAUUCAUGAACUGUUCCUUCUCUAGGAGUAAAGGUAGAUGCAACUCCUGGACGACUAAAUCAAACGAGAU
UUUUUAUCAAUCGUCCAGGAUUAUUAUUUGGUCAAUGUUCCGAAAUUUGUGGUGCAAAUCAUAGCUUUAUACCUAUUGUACUUGAAAGUGUAACUACAAAGUCAUUUAUUAACUGAAUUCAAAAAAUAAAUGAA
GCCUCAUUAGA---[547]
Eurypetalia_altarensis______
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Ophiopetalia_diana__________
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Gomphaeschna_furcilata______
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Oligoaeschna_pryeri_________
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Austroaeschna_parvistigma___
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Uelephlebia_tillyardi_______
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Boyeria_vinosa_OBV__________
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Boyeria_irene_FN356042______
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Brachytron_pratense_EU055___
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Epiaeschna_heros____________
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DQ008197_Caliaeschna_micro__
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DQ008199_Anaciaeschna_iso___
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GQ118262_Oplonaeschna_sp____
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Aeshna_canadensis_OAC_______
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EU055343_Rhionaeschna_multicol---
CAUCAAUGUUUUGAAAUAAAAAUGUUAAUCGAAACUUACUAGAUGGACAACAAAUUGAAACAGCAUGAACUGUCCUUCCAGUAUUUGUAUUAAUUAUUAUUGCUAUACCAUCCUUACGAUUACUUUAUCUAUUA
GAUGAAGUAAGAGAUCCAUCAAUUACUCUAAAAACAGUAGGACAUCAAUGAUACUGAAGAUACGAAUAUUCAGACUUCAAUCAAGUAGAAUUUGAUUCCUACAUAAUUCCAUACAAUGAAAUAAGUGAAAAUGG
AUUUCGAUUACUAGAAGUAGAUAAUCGAGCAGUUUUACCACUACAAACACAAGUACGAAUAUUAAUUACAGCAGCUGAUGUAUUACAUUCAUGAACUGUUCCUUCAUUAGGAGUAAAGGUAGAUGCUACACCAG
GACGAUUAAAUCAAGCAAGUUUUUUCAUUACACGUCCUGGAUUAUUCUUUGGGCG---
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Aeshna_cyanea_1203__________
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FJ596630_Aeshna_grandis_____
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FN356092_Gynacantha_bulla___
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Austrogynacantha_heteroge___
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FN356093_Hemianax_ephippig__
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EU055328_Anax_junius_od005   GAACAAAUAAGUUAUUUCCAUGAUCAUACAAUGAUAGUAUUAGUUAUUAUUACAAUACUUGUUGCUUAUGUA---
AUAAUAUCAAUAUUUUGAAAUAAGAAUGUAAACCGAAAUUUACUAGAUGGACAACAAAUUGAAACAGCUUGAACUGUCCUUCCAGUAUUUGUAUUAAUCAUUAUUGCAAUACCAUCAUUACGUUUACUUUAUUU
AUUAGAUGAAGUAAGAGAUCCUUCUAUUACUUUAAAGACAGUAGGUCAUCAAUGGUACUGAAGUUAUGAAUACUCAGAUUUUAAUCAAGUAGAAUUUGAUUCAUAUAUAAUUCCAUAUAACGAAAUAAGAGAAA
AUGGAUUUCGAUUACUAGAAGUAGAUAAUCGAGCAGUUCUACCAUUACAAACACAAGUACGAGUAUUAAUUACAGCCGCUGAUGUUCUACAUUCUUGAACAGUACCAUCAUUAGGAGUAAAGGUAGAUGCAACA
CCAGGACGAUUAAAUCAAGCUAGUUUUUUCAUUACACGACCAGGUUUAUUUUUUGGUCAAUGUUCCGAAAUUUGUGGAGCUAACCAUAGUUUUAUACCAAUUGUAAUUGAAAGAGUAACUUCUAAAACAUUUAU
UAAUUGAAUUCAAAAAAUAAGUGAAGCUUCAUUAGA---[644]
FN356035_Anax_imperator_____
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Unaligned_Gomphids
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Sinogomphidia_kruegeri______
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EU055358_Ictinogomphus_australGAACAAAUAAGAUACUUCCACGACCAUACCAUAAUAAUCUUACUAGUAAUUACCAUUAUAGUAGCAUACGUC---
AUAAGAAGAAUAUUCUGAAACACCAAUAUUAACCGAACCCUGCUGGACGGACAAAAGAUUGAAACUGCCUGAACCAUUUUACCCGUAAUUGUACUAGUAAUUAUUGCCUUGCCAUCUUUACGGUUAUUAUACCU
UUUAGAUGAAGUUAGAGAUCCUUCUAUUACACUUAAAACAGUAGGGCACCAAUGAUACUGAAGCUAUGAAUAUUCAGACUUCAAUCAAGUCGAAUUUGAUUCUUAUAUAACACCAUACCCAGAAAUACCAGAAA

AUGGGUUUCGGCUACUAGAAGUAGACAAUCGAGCAGUAUUGCCGAUACAAACACAAGUACGAGUAUUAAUUACAGCAGCUGAUGUUUUACAUUCAUGAACAGUCCCUUCACUAGGAAUUAAAGUAGACGCCACC
CCAGGACGUUUAAAUCAAACAAGCUUCUUUAUCAGCCGUCCCGGAGUACUAUUUGGACAAUGUUCAGAAAUCUGUGGAGCAAAUCACAGAUUUAUACCAAUUGUAGUAGAAAGAGUUACAACAAAGACAUUCAU
UAACUGAAUCCAAAAAAUAAGAGAAGCCUCAU-------[640]
Ictinogomphus_sp____________
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FN356120_Lindenia_tetraph___
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Phyllogomphoides_stigmatus__
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Progomphus_obscurus_________
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EU055370_Progomphus_borealis_oGAACAAAUAAAUUACUUCCACGAUCACACUAUAAUAGUGCUAUUAAUUAUUACAGUUAUAGUAGCAUAUGUU---
AUAGCGAGUAUAUUCUGAAACAAAAAUGUAAAUCGAAAUCUACUAGACGGACAAAAAAUUGAAACAGCCUGAACAGUUUUACCAGUUCUUGUAUUAGUGGUUAUUGCCAUACCAUCUCUACGAUUACUAUACCU
ACUUGAUGAGGUAAGAGACCCUUCCAUCACCCUAAAAACUGUAGGACACCAAUGAUAUUGAAGAUAUGAAUAUUCAGACUUUAAUCAAGUUGAAUUUGACUCAUAUAUAAUUCCCUAUAAUGAAAUACAAGAGA
ACGGAUUCCGUCUCUUAGAGGUGGAUAAUCGAGCAGUAUUACCUAUAAGUACACAAGUCCGAGUUUUAAUCACCGCAGCAGAUGUACUCCACUCAUGAACAGUUCCAUCUCUUGGGGUAAAGGUAGAUGCUACA
CCUGGACGAUUAAACCAAACAAGCUUCUUUAUCAAUCGUCCAGGGGUAUUGUUCGGACAAUGUUCAGAAAUCUGUGGAGCAAAUCAUAGCUUUAUACCAAUUGUAGUAGAAAGAGUAACAACCAAAUCUUUUAU
UAACUGAGUC-----------------------------[618]
EU055334_Hagenius_sp_SMB_2007   ---
AAUGUGAUCCGAAAUUUACUGGAUGGACAAAAAAUUGAAACAGCUUGAACAAUUCUUCCAGAAUUCGUAUUAGUUAUCAUUGCAAUACCGUCAUUACGACUACUUUAUUUACUGGAUGAAGUAAGAGACCCCUC
UAUCACCCUAAAAACUGUUGGACAUCAAUGAUACUGAAGAUAUGAAUAUUCAGAUUUAAACCACAUUGAAUUUGAUUCCUAUAUAAUUCCCUACAACGAAAUACAAGAAAGUGGAUUUCGACUAUUAGAAGUAG
AUAACCGAACUGUUCUACCCAUACAAACACAGAUUCGAGUUUUAAUUACUGCAGCCGAUGUAUUACAUUCUUGAGCUGUACCUGCGCUAGGAGUUAAGGUAGAUGCAACUCCUGGACGGUUAAACCAAACAAGU
UUUUUUAUGAAUCGUUCGGGCCUAUUUUUUGGACAAUGUUCAGAAAUCUGUGGAGCAAACCACAGAUUUAUACCUAUUAUAAUUGAGAGAGUAACUACAAAGUCCUUUAUUAAAAGAAUCCAAACAAUAAAUGA
AGCCUCAUUAGA---[548]
Lanthus_vernalis____________
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Davidius_nanus_DQ010047_____
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Neogomphus_edenticulatus____
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EU055350_Armagomphus_armiger_oGAACAAAUAGGAUAUUUUCAUGAUCAUACCAUAAUAGUAUUAGUAGUUAUUACCACAAUAGUGGCCUAUGUA---
AUAGCAAGAAUAUUCUGAAAUAGAACAGUUAACCGAAAUCUAUUAGAUGGACAGAAAAUUGAAACAGCCUGAACAAUUCUACCAGUAUUUGUAUUAAUUACCAUUGCUCUACCCUCCCUACGACUUUUAUAUUU
ACUAGACGAAGUGAGAGAACCUUCUAUUACCCUAAAAACAAUUGGGCAUCAGUGAUAUUGAAGAUAUGAAUAUUCAGAUUUUAAUCAUAUUGAAUUUGAUUCAUAUAUAAUCCCCUACAAUGAAAUGCAAGAAA
ACGGAUUACGUCUUCUAGAAGUAGAUAAUCGAGCAGUAUUGCCUAUAAAUACUCAAGUGCGAAUUUUAAUCACCGCAGCAGACGUUUUACAUUCAUGAACUGUCCCUUCCCUGGGGGUGAAGGUAGAUGCAACA
CCAGGUCGAUUAAACCAAACCAGAUUUUUUAUUAAUCGACCUGGUGUUGCAUUCGGACAAUGUUCAGAAAUUUGUGGUGCAAAUCACAGAUUUAUACCAAUUGUUAUUGAAAGAGUAACAACAAAAUCAUUUAU
UAAAUGAAUUCAAAAAAUAAGAGACAUCUCAUUAGA---[644]
Hemigomphus_comitans_AHC____
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FJ596622_Hemigomphus_heter__
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EU055331_Hemigomphus_magela_odGAACAAAUAAGAUAUUUCCACGACCACACAAUAAUAGUCCUAUUAAUUAUUACAGUACUAGUGGCAUACGUA---
AUGAGCAGAAUAUCAUGAAACAAAAUUGUUAACCGCAACCUACUAGAUGGUCAAAAAAUUGAAACCGCAUGAACAAUCCUACCCGUAUUCGUAUUAGUAGUUAUUGCCAUACCCUCCCUACGACUACUAUACCU
ACUAGAUGAAGUGAGAGAUCCUUCAAUCACACUAAAAACAGUAGGACACCAAUGAUACUGAAGAUAUGAAUAUUCAGACUUUAAUCAUGUAGAAUUUGACUCAUACAUAAUCCCAUAUAAUGAAAUACAAGAAA
AUGGUCUACGUCUCCUAGAAGUAGAUAAUCGAGCAGUAUUGCCCAUAAAUACACAAGUACGAAUCCUAAUUACAGCGGCAGAUGUGUUACAUUCAUGAACAGUACCAUCAUUAGGUGUUAAGGUAGAUGCAACA
CCAGGACGAUUAAACCAAACCAGAUUUUCAUUAACCGUCCUGGUGUUAUAUUCGGCCAAUGUUCAGAAAUCUGUGGAGCAAAUCAUAGAUUCAUACCAAUCGUCAUUGAAAGAGUUACUACAAAAUCAUUUAU
UAAAUGAGUCCAAAAAAUAAGAGAAGCCUCAUUAGA---[644]
Urigomphus_sp_FN356176______
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FJ596615_Lanthus_albistylu__
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FJ712325_Stylogomphus_shir__
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EU055385_Davidioides_martini_oGAACAAAUAAGAUAUUUUCACGACCACACCAUAAUAGUCUUAUUAAUUAUUACUGUUAUAGUGGCCUAUGUA---
AUAGCCAGAAUAUUUUGAAACACUAAUAUUAACCGAAACCUACUAGACGGACAAAAAAUCGAAACAGCAUGAACUAUCUUACCAGUAUUUGUAUUAGUAAUUAUUGCUAUACCAUCAUUACGACUAUUAUACCU
GCUAGAUGAAGUGAGAAGUCCAUCAAUUACCCUAAAAACUGUAGGGCAUCAAUGAUACUGAAGUUAUGAAUAUUCAGACUUUAAUCACAUUGAAUUUGAUUCAUAUAUAACCCCCUACAAUGAGAUACAAGAAA
GAGGAUUCCGUCUACUAGAAGUAGAUAACCGAACUGUACUUCCUAUACAAACACAAGUCCGAGUCCUAAUCACUGCAGCUGACGUUUUACACUCCUGAACUGUUCCAUCCCUAGGAGUAAAAGUAGACGCUACC
CCAGGACGAUUAAAUCAAACUAGAUUCUUUAUUAGCCGUCCAGGACUAUUCUUCGGACAAUGCUCAGAAAUCUGUGGGGCAAACCACAGAUUUAUACCUAUUAUAAUUGAAAGAACAACCACAAAAUCUUUUAU
UAACUGAAUUCAAAAAAUAAGUGAAGCCUCAUUAGA---[644]
Burmagomphus_collaris_______
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EU055384_Cyclogomphus_heterostGAACAAAUAAGCUUUUCAGGAUCAUGACAAAUAAUAGUUUUAAUUAUUAUUACUGUAAUAUUAGCCUACAUU---
AUAGGAGCUAUAUUUUGAAAUAAAAAUGUUAAUCGCAAUUUAUUAGACGGACAAAAAAUUGAAACUGCUUGAACAAUUCUCCCUAUAUUUGUAUUAAUUAUCAUCGCUAUACCCUCUUUACGGUUAUUAUACCU
ACUAGAUGAAGUGAGAGACCCUUCCAUUACUUUAAAAACAGUAGGACAUCAAUGAUAUUGAAGAUAUGAAUAUUCAGAUUUUAAUCAUAUUGAAUUUGAUUCCUAUAUAAUUCCGUAUAAUGAAAUACAAGAAA
GAGGUUUUCGACUUUUAGAGGUAGACAAUCGCACAGUAUUACCUAUACAAACUCAAGUACGAGUUCUAAUUACAGCUGCCGAUGUACUUCACUCUUGAACAGUUCCAUCAUUAGGAGUGAAAGUUGACGCAACU
CCAGGCCGAUUAAAUCAAACAAGAUUCUUUAUUAAUCGGCCUGGGCUAUUCUUCGGACAAUGUUCAGAAAUUUGUGGAGCUAAUCACAGAUUCAUACCUAUUAUACUAGAAAGAGUAACCACAAAAUCAUUUAU
UAAUUGAAUUCAAAAAAUAAGAGAAGCUUCAUUAGA---[644]
Anisogomphus_pinr_FN356037__
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Dromogomphus_spinosus_______
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Arigomphus_villosipes_______
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Arigomphus_cornutus
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FJ712319_Stylurus_intricat__
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Stylurus_amnicola___________
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FJ596610_Stylurus_nagoyanu__
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DQ008184_Gomphus_externus___
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Asiagomphus_hainanensis_____
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DQ008187_Gomphus_exilis_____
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Gomphus_Phanogomphus_grasl__
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Gomphus_adelphus____________
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FN356091_Gomphus_vulgatis___
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FN356132_Megalogomphus_sp___
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Onychogomphus_uncatus_______
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FN356138_Onychogomphus_for__
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A_FJ712322_Onychogomphus_s__
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Ophiogomphus_carolus________
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FJ596618_Ophiogomphus_sev___
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FN356139_Ophiogomphus_caec__
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Leptogomphus_elegans________
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FJ596609_Leptogomphus_saut__
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Epigomphus_compactus________
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FJ712323_Microgomphus_chel__
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Heliogomphus_retroflexus____
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FN356121_Macrogomphus_para__
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Ceratogomphus_pictus _______
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Lestinogomphus_angustus_____
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Austrogomphus_guerini_______
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EU055366_Austrogomphus_amphicl---UAUCUUAUGUG---
AUAGGAAGAAUAUUCUGAAAUAAUAAUAUUAAUCGCAACUUAUUAGAUGGUCAAAAGAUCGAAACAGCAUGAACAAUUCUCCCUGUGUUUGUAUUAGUGAUUAUUGCUAUACCUUCAUUACGAUUAUUAUACUU
AUUAGAUGAAGUAAACGACCCUUCCAUUACCCUUAAAACUGUAGGACAUCAAUGAUAUUGAAGUUAUGAAUAUUCAGAUUUCAAUCACAUUGAAUUUGAUUCUUACAUAAUCCCUUAUAAUGAAAUACAAGAAA
AUGGGUUUCGGUUAUUAGAGGUAGAUAAUCGAACAGUCUUACCUAUGCAAACACAGGUUCGAAUUCUAAUUACAGCUGCAGAUGUAUUACAUUCGUGAACUGUACCUUCAUUAGGGGUAAAAGUAGAUGCAACU
CCAGGUCGAUUAAACCAAACAAGAUUCUUUAUUAAUCGACCUGGAAUUUUAUUUGGUCAAUGCUCAGAAAUUUGUGGAGCAAAUCAUAGUUUUAUACCAAUCAUAAUUGAGAGAGUAACUACAAAGACAUUUAU
UAACUGAAUUCAAAAAAUAAGUGAAGUCUCAUUAGA---[583]
EU055360_Antipodogomphus_acolyGAACAAAUAAGAUAUUUCCAUGAUCACACAAUAAUAGUUCUUCUAAUUAUUACUGUAAUAGUGGCAUACGUA---
AUAGGAAGUAUAUUUUAAACUCGAAUAUUAACCGAAACCUAUUAGAUGGUCAAAAAAUUGAAACAGCUUGAACGAUUUUGCCCGUAUUCGUAUUAAUUAUUAUUGCAAUACCAUCCUUACGGUUACUAUACUU
ACUAGAUGAAGUAAGAGAUCCUUCCAUCACCCUUAAAACAGUAGGACACCAAUGAUAUUGAAGUUAUGAAUAUUCAGACUUUAAUCAUGUUGAAUUUGAUUCAUAUAUAAUCCCAUAUAAUGAAAUACAAGAAA
ACGGUUUCCGUCUAUUAGAAGUAGACAAUCGAACAGUCUUACCUAUGCAAACUCAAGUACGAGUAUUAAUUACAGCCGCCGAUGUACUACACUCAUGAACAGUCCCUUCAUUAGGAGUCAAAGUAGAUGCAACA
CCUGGACGAUUAAAUCAAACAAGCUUCUUCAUUGGUCGUCCAGGAUUAUUUUUGGUCAGUGUUCAGAAAUCUGCGGGGCUAAUCACAGCUUUAUACCAAUUAUAAUUGAAAGAGUAAUCACUAAAUCCUUUAU
CAACUGAAUUCAAAAGAUAAGUGAAGCCUCAUUA-----[642]

Unaligned_petalurids
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EU055367_Uanypteryx_hageni_od0------------------CAUGAUCAUACUAUAAUAGUACUUUUAAUUAUUACUGUAUUAGUAGCAUAUGUA---
AUAGCAACAAUAUUUUGAAAUACAAAUGUAAAUCGUAAUCUUCUAGAUGGUCAAAAAAUCGAAACAGCAUGAACAGUGUUACCUGUUUUUGUUCUAGUUAUUAUUGCUAUACCUUCUUUACGGUUAUUAUAUUU
AUUAGAUGAAGUAAGAGAACCAUCUAUUACUUUAAAAACUGUUGGACACCAAUGAUAUUGAAGUUAUGAAUAUUCCGAUUUUAAUCAUGUAGAAUUUGAUUCUUAUAUAAUUCCUUAUACCGAAUUACAAGAAG
GAGGAUUUCGGUUAUUAGAAGUUGAUAAUCGAGCCGUUUUACCAAUACAAACUCAAGUACGUGUACUUAUUACAGCAGCAGAUGUAUUACACUCAUGAACAGUCCCAUCAUUAGGAGUAAAGGUUGAUGCAACC
CCUGGUCGAUUAAAUCAAACAAGUUUCUUUAUUAAUCGACCAGGAUUAUUUUUUGGUCAAUGUUCGGAAAUUUGUGGAGCUAAUCACAGAUUUAUACCAAUUGUAAUUGAAAGAGUAUCUACAAAAUCAUUUAU
UAACUGAAUUCAAAAAAUAAAUGAAGCCUCAUUAGA---[626]
FN356174_Uanypteryx_sp______
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FJ712330_Uanypteryx_pryeri__
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FN356173_Uachopteryx_thor___
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EU055329_Phenes_raptor_od007   GAACAAAUAAAUUAUUUCCAUGAUCAUACUAUAAUGGUGUUAUUAAUUAUUACUGUAAUAGUAGCUUACAUU---
AUAAUUGCAAUAUCCUGGAAUCUUAAUAUUAAUCGAAAUCUACUAGAUGGACAAAAAAUUGAAACCAUUUGAACUGUUCUACCAGUAUUUGUAUUAGUGGCUAUUGCUAUACCUUCAUUACGAUUACUAUACUU
AUUAGAUGAAGUAAGUGACCCUUCAAUUACUGUAAAAACUGUAGGUCAUCAAUGAUACUGAAGAUAUGAAUAUUCUGAUUUUAACCAUGUAGAAUUUGAUUCAUAUAUAAUUCCCUAUAACGAAUUGCAAGAAG
AUGGAUUUCGACUACUGGAAGUAGAUAAUCGAUCUGUUCUUCCAAUAAUAACACAAGUACGUAUUUUAAUUACUGCAGCAGAUGUACUUCACUCUUGAACUGUACCCUCAUUAGGAAUUAAGGUAGAUGCAAAU
CCAGGACGAUUAAACCAAACUAGAUUUUUUAUUAAUCGUCCUGGCCUAUUCUUUGGUCAGUGUUCUGAAAUUUGUGGGGCCAAUCAUAGAUUUAUACCAAUUGUAAUUGAAAGUGUAACUACAAAUACAUUUAU
UAACUGAGUACAAAAAAUAAUUGAAGUAUCAUUAGA---[644]
Phenes_centralis_OPR________
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Uropetalura_carvori_________
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Petalura_hesperia___________
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EU055352_Petalura_gigantea_od0   GAACAAAUAAGUUAUUUUCAUGAUCAUACCAUAAUAGUACUACUAAUUAUUACUGUAAUAGUAGCAUAUGUU---
AUAAUAAGUAUAUUCUGAAACAGAAAUAUUAACCGAAAUUUACUAGACGGACAAAAGAUCGAGACUGCAUGAACAGUCCUACCUGUAUUUGUCUUAGUAAUUAUUGCCAUGCCUUCCCUACGGUUAUUAUAUUU
AUUAGAUGAAAUUAGUGAACCUUCAAUUACCUUAAAAACUGUAGGACACCAAUGAUACUGGAGAUAUGAAUAUUCAGAUUUUAAUCAAGUAGAAUUUGACUCCUAUAUAGUCCCCUAUAAUGAUAUAGAAGAAG
GAGGAUUUCGACUAUUAGAAGUAGAUAACCGAGCUGUUCUGCCAUUACAAACCCAAAUUCGAGUUCUCAUUACAGCAGCAGACGUUUUACAUUCAUGAACAGUUCCAUCACUAGGAGUGAAAGUAGAUGCAACU
CCUGGUCGGUUAAACCAAACCAGAUUUUUUAUUAACCGACCAGGAUUACUUUUUGGUCAGUGCUCUGAAAUUUGUGGAGCUAAUCAUAGAUUCAUACCUAUUGUAAUUGAAAGCGUUACAACGAAAUCAUUUAU
UAACUGAGUACAAAAAAUAAAUGAAGCCUCAUUAGA---[644]
Petalura_litolae____________
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Petalura_ingentissima_______
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Zoraena_bilineata___________
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Uaeniogaster_obliqua________
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Kalyptogaster_erronea_______
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FJ712317_Cordulegaster_mac__
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EU055376_Cordulegaster_dorsali   GAACAAAUAAGCUAUUUUCAUGAUCAUACUAUAAUAGUAUUAGUAAUUAUUACCAUAGUAGUAGCAUAUAUU---
AUAGCCUCCCUGUUUUGAAAUAAAAAUGUAAACCGAAAUUUAUUAGAUGGACAAAAAAUUGAAACUGCUUGAACAGUUCUUCCUGUUUUCGUAUUAAUUAUUAUUGCAUUACCCUCUUUACGUUUAUUAUACCU
UCUAGAUGAAGUAAGUGAACCUUCUGUUACUUUAAAAACUGUAGGUCAUCAAUGAUAUUGAAGUUAUGAAUAUUCUGAUUUUAAUCACUUGGAAUUUGAUUCUUAUAUAAUUCCUUAUAAUGAAAUACAAGAUA
AUGGAUUUCGAUUAUUAGAAGUAGAUAACCGAACAGUUUUACCUUUACAAACUCAAAUUCGUGUAUUAAUUACUGCCGCAGAUGUUCUUCACUCAUGAGCUGUUCCAUCAUUAGGAGUAAAGGUUGAUGCAACA
CCAGGACGAUUAAAUCAAACUAGAUUCUUUAUAAAUCGUCCUGGUUUACUCUUUGGUCAAUGUUCAGAAAUUUGUGGAGCUAAUCAUAGAUUUAUACCUAUUGUUAUUGAAAGAGUAACAACUAAUACUUUUAU
UAAUUGAAUUCAAAAGAUAAAUGAAUCUUCAU-------[640]

FN356072_Cordulegaster_bol__
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DQ008198_Cordulegaster_pic__
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EF155460_Anotogaster_sieboldii_AS359   GAACAAAUAAGUUAUUUCCAUGAUCACACUAUAAUAGUAUUAGUAAUUAUUACUAUAGUAGUAGCCUAUGUU---
AUAGCAUCUUUAUUUUGAAAUAAAAAUGUAAACCGAAACUUAUUAGAUGGGCAGAAAAUUGAAACUGCUUGAACAGUUCUACCCGUUUUUGUAUUAAUUAUUAUUGCUCUACCUUCAUUACGUUUAUUAUAUUU
AUUAGAUGAAGUUAGAGAGCCCUCUGUUACUUUAAAAACUGUAGGUC---

Neopetalia_punctata_________
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Chloropetalia_soarer________
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Sinorogomphus_nasutus_______
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EU055383_Chlorogomphus_brunneuGAACAAAUAAGAUAUUUUCAUGAUCACACAAUAAUAGUUUUAGUAAUUAUUACCACUAUAGUAGCAUAUAUU---
AUAGUAGCAAUAUCCUGAAACAAAAAUGUUAAUCGAAACUUAUUAGAUGGACAAAAAAUCGAAACUGCUUGGACCGUAUUACCCGUAUUUGUACUAAUUAUUAUUGCCAUACCUUCUUUACGAUUACUAUAUCU
UUUAGAUGAAGUGAGAGAACCGUCCGUAACUCUAAAAACAAUUGGACAUCAAUGAUAUUGAAGUUAUGAAUACUCAGAUUUCAAUCAUGUAGAAUUUGAUUCUUAUAUAAUUCCCUAUAAUGAUCUUAGAGAAA
ACGGAUUUCGUCUAUUAGAAGUAGAUAAUCGAGCAAUUUUACCCUUACAAACACAAGUACGAAUACUUAUUACAGCAGCCGACGUACUUCACUCAUGAACAGUCCCAUCCCUGGGGGUAAAGGUAGACGCAACU
CCUGGGCGGAUCAACCAAGCAAGAUUUUUUAUAAACCGACCUGGUUUAUUUUUUGGACAAUGUUCCGAAAUUUGUGGGGCUAACCAUAGUUUCAUGCCCAUUGUAAUUGAAAGAGUAACAACAAAAAGAUUUAU
UAAUG----------------------------------[613]
Chlorogomphus_sp
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Synthemis_eustalacta________
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EU055359_Synthemis_marcrostigmGAACAAAUAAGAUAUUUCCAUGAUCAUACCAUGAUAGUAUUAGUAAUCAUUACGGUACUUGUAGCAUAUAUU---
AUAGGAACAAUACUACUUAAUAAAAACGUGAAUCGGAAUUUAUUAGAUGGUCAAAAAAUCGAAACAGCUUGGACAGUAUUACCUGUUUUCGUCUUAAUUAUUAUUGCAAUACCAUCCCUACGACUGCUUUAUCU
AAUAGACGAAAUUAGAGAACCCUCUAUUACACUAAAAACUGUAGGUCAUCAAUGAUACUGAUCAUAUGAAUAUUCAGAUUUCAAUCACGUGGAAUUCGAUUCUUACAUAAUUCCGUAUAGAGAAAUAGGAAAUG
ACGGGUUUCGAUUAUUAGAAGUAGAUAAUCGAGCAGUAUUACCUCUACAAACUCAGAUUCGAAUUCUAAUUACUGCUGCCGAUGUAUUACAUUCAUGAACUGUACCCUCAUUAGGAGUAAAGGUUGAUGCUACU
CCGGGCCGAUUAAAUCAAACAAGUUUUUUUAUUAAUCGGCCCGGAGUAUUUUUUGGACAAUGCUCAGAAAUCUGUGGAGCGAACCACAGAUUUAUACCUAUUAUAAUUGAAAGAGUAAUAACGAAAUCAUUUAU
UAACUGAAUUCAAAAGAUAAGAGAAGCCUC---------[638]
Archaeosynthemis_leachii____
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Eusynthemis_brevistyla______
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Eusynthemis_gutatta
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EU055361_Eusynthemis_nigra_od0--ACAAAUAAAUUAUUUCCACGAUCACACUAUAAUAGUGUUAGUAAUCAUUACAAUCCUUGUAGCUUACAUU---
AUAGGAACCAUAAUAUAUAACAAAAACGUAAACCGAAACUUAUUAGACGGACAAAAAAUUGAAACAGCAUGAACAAUCUUACCAGUCUUUGUUUUAAUUAUUAUUGCCAUACCUUCCUUACGUUUGCUUUACCU
UUUAGACGAAGUAAGAGAGCCAUCAAUUACUCUUAAAACUGUAGGGCAUCAAUGAUACUGAUCCUACGAAUACUCAGACUUUAAACAUGUAGAAUUUGACUCUUACAUAAUCCCAUACAGAGAAAUAAGAAAUG
ACGGAUUCCGACUAUUAGAAGUAGAUAAUCGUGCAGUUCUACCCUUACAAACCCAAGUACGAAUAUUAAUUACAGCAGCUGAUGUCUUACAUUCAUGAACAGUGCCAUCACUAGGAGUAAAGGUUGAUGCCACA
CCAGGACGAUUAAAUCAAACAAGAUUCUUUAUUAAUCGUCCUGGUUUAUUUUUCGGACAAUGUUCAGAAAUUUGUGGAGCAAAUCAUAGAUUUAUACCGAUCAUAAUUGAAAGAGUUACAACAAAAUCCUUUAU
UAACUGAAUUCAAAAAAUAAGUGAAGCUUCAUUA-----[640]
EU055362_Choristhemis_flavoterGAACAAAUAAAUUAUUUCCACGAUCACACUAUAAUAGUGUUAGUAAUCAUUACAAUCCUUGUAGCUUACAUU---
AUAGGAACCAUAAUAUAUAACAAAAACGUAAACCGAAACUUAUUAGACGGACAAAAAAUUGAAACAGCAUGAACAAUCUUACCAGUCUUUGUUUUAAUUAUUAUUGCCAUACCUUCCUUACGUUUGCUUUACCU
UUUAGAUGAAGUAAGAGAGCCAUCAAUUACUCUUAAAACUGUAGGGCAUCAAUGAUACUGAUCCUACGAAUACUCAGACUUUAAACAUGUAGAAUUUGACUCUUACAUAAUCCCAUACAGAGAAAUAAGAAAUG
ACGGAUUCCGACUAUUAGAAGUAGAUAAUCGUGCAGUUCUACCCUUACAAACCCAAGUACGAAUAUUAAUUACAGCAGCUGAUGUCUUACAUUCAUGAACAGUGCCAUCACUAGGAGUAAAGGUUGAUGCCACA
CCAGGACGAUUAAAUCAAACAAGAUUCUUUAUUAAUCGUCCUGGUUUAUUUUUCGGACAAUGUUCAGAAAUUUGUGGAGCAAAUCAUAGAUUUAUACCGAUCAUAAUUGAAAGAGUUACAACAAAAUCCUUUAU
UAACUGAAUUCAAAAAAUAAGUGAAGCUUCAUUA-----[642]
Synthemiopsis_gomphomac_____
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Gomphomacromia_chilensis____
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FJ712318_Gomphomacromia_p___
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Syncordulia_serendipator____
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Syncordulia_venator
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Idionyx_imbricata_EU05518___
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Idionyx_selysi______________
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FN356129_Macromidia_rapi____
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FN356186_Oxygastra_curtis___
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EU055345_Cordulephya_pygmaea_o---CCUAUACUUGUUGCCUACGUA---
AUAUUCUCAAUAUUUUGAAACAAAACUGUAAACCGAAACUUAUUAGAUGGACAAAAUAUUGAAACAGCAUGAACAGUACUUCCUGUAUUUGUAUUGGUAAUCAUUGCCUUACCAUCACUUCGACUAUUAUAUUU
AUUGGAUGAAAUUAGUGAACCCUCUAUUACUUUAAAAACCGUAGGACACCAAUGAUACUGAAGUUAUGAAUAUUCCGAUUUUAAUGAAGUAGAAUUUGAUUCUUAUAUAAUUCCAUACAAUGAAUUAAACGAAA
AUGGAUUUCGAUUACUAGAAGUUGAUAAUCGAGCUGUAUUACCAAUACAAACACAAGUACGAAUACUAAUUACAGCUGCAGAUGUCCUUCAUUCAUGAACAGUACCUUCUCUAGGAGUGAAGGUAGAUGCUACU
CCUGGACGACUAAAUCAAACAAGUUUUUUCAUUAUACGACCUGGUCUUUUUUUUGGUCAAUGUUCCGAAAUUUGUGGGGCAAAUCAUAGAUUUAUACCUAUUGUAAUUGAAAGAGUACCUUCAAAACCUUUUAU
UAAAUGAGUUCAAAAGAUAGCAGAAGCCUCAU-------[589]
Pseudocordulia_circularis___
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EU055357_Hesperocordulia_berth-AACAAAUAAAUUACUUCCAUGAUCAUACAAUAAUAGUAUUGGUAAUUAUUACCAUUCUAGUAGCAUAUAUU---
AUAGGAUCUAUAUUUUAUAACAGAAACAUUAACCGAAACCUAUUAGACGGACAAAAAAUUGAAACUGCAUGAACAAUUCUACCAGUAUUUGUAUUAAUUGCAAUUGCAAUACCUUCACUACGACUGCUAUACCU
UCUUGAUGAAAUCAAUGAACCUUCAAUUACAAUCAAAACAGUAGGCCACCAAUGAUAUUGAAGAUAUGAAUAUUCAGAUUUCAAACACAUAGAAUUUGACUCAUAUAUAAUUCCAUACAAAGAAAUAGAAAAUA
AUGGAUUACGACUACUAGAAGUAGAUAAUCGAACAACCUUACCCAUACAAACUCAAGUACGAAUACUAAUCACUGCAGCGGAUGUUCUACACUCAUGAACUGUUCCUUCCCUCGGAGUAAAGGUAGAUGCAACU
CCUGGCCGAUUAAACCAAACAAGAUUCUUCAUUAAUCGGCCAGGAGUAUUCUUCGGACAAUGUUCAGAAAUUUGUGGAGCAAAUCACAGAUUUAUACCAAUCAUAAUUGAAAGAGUAACAACAAAAUCAUUUAU
UAACUGAAUCCAAAAAAUAAAUGAAGCUUACAUU-----[641]
Lathrocordulia_metallica____
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EU055348_Micromidia_convergensGAACAAAUGAAUUAUUUUCACGACCAUACCAUGAUAGUUCUCUUAAUUAUUACCAUUUUAGUAGCAUAUAUU---
AUAGGAACUAUAUUUAAUAAUAUAAGUAUUAAUCGAAACCUACUUGAUGGUCAAAAGAUUGAAACCACAUGAACUAUUCUUCCUGUUUUUGUAUUAAUGGUUAUUGCUAUACCUUCCCUACGUCUACUCUAUUU
ACUUGAUGAAGUCAAUGAGCCUUCAAUCACUCUUAAAACUGUAGGACAUCAAUGAUAUUGAAGAUAUGAAUAUUCUGAUUUCAAACACGUGGAGUUUGAUUCUUAUAUAAUUCCAUAUGGAGAAAUAGAUAGUA
AUGGAUUCCGACUAUUAGAAGUGGAUAAUCGUACAACAUUACCCAUAAAGACUCAAGUACGAAUUCUAAUUACGGCAGCAGACGUUUUACAUUCUUGAACUGUCCCUUCCCUCGGGGUAAAGGUUGAUGCUACC
CCAGGACGAUUAAAUCAGACCAGAUUCUUUAUUAAUCGUCCUGGGAUCUUCUUCGGCCAAUGUUCCGAAAUUUGUGGGGCAAAUCACAGAUUCAUACCAAUUAUAAUUGAAAGAGUGAGAAUUAAAUCAUUUAU
UAACUGAAUUCAAAAGAUAAAUGAGAACUCAUUAGA---[644]
Micromidia_atrifrons________
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Austrophya_mystica__________
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Austrocordulia_refracta_____
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Archaeophya_magnifica_______
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DQ166792_Epophthalmia_elegans   GAACAAAUAAAUUACUUUCAUGAUCAUACUUUAAUAGUUCUACUAAUUAUUACGAUUCUAGUGGCAUAUAUU---
AUAGGAGCAAUAUUUUUUAAUAAAGAUAUUAACCGAAAUUUAUUAGAUGGUCAAAAAAUUGAAACUGCGUGAACUAUUUUACCCGUAUUUGUAUUAAUUAUUAUUGCUAUACCUUCCCUUCGACUACUUUAUCU
ACUAGAUGAAGUAAAUGAACCAUCGAUUACAUUAAAAACAAUUGGUCAUCAGUGAUACUGAAGAUAUGAAUACUCAGAUUUUAAACACAUUGAAUUUGAUUCAUAUAUAAUCCCAUACAAUGAAAUGGAAGAAG
GAGGACUCCGCUUACUUGAAGUAGAUAAUCGGACUACAAUUCCUAUACAAACCCAAGUCCGAGUACUAAUUACAGCAGCGGAUGUACUACAUUCAUGAGCAGUACCCAGACUAGGAGUUAAGGUUGAUGCUACA
CCAGGACGAUUAAAUCAAACGAGAUUUUUUAUUAAUCGUCCUGGUGUAUAUUUCGGUCAAUGUUCUGAAAUUUGUGGAGCAAAUCACAGAUUUAUACCAAUUAUAAUUGAAAGAAUUUCAAUCCCAUCAUUCAU
UAAAUGAAUUCAAAAAAUAAUACAAACUU----------[637]

FN356079_Didymops_transve___
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FN356124_Macromia_illinoie__ ????????????????????
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Macromia_amphigena__________
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EU055388_Macromia_eurynome_od1GAACAAAUAAACUAUUUCCAUGACCAUACCCUAAUGGUUCUAUUAACUAUUACAAUUUUAGUAGCAUAUAUU---
AUAGGAGCAAUAUUCUUUAAUAAGGAUAUUAAUCGAAAUUUAUUAGAUGGACAAAAGAUUGAAACUAUAUGAACAAUUCUUCCCGUGUUUGUCCUAAUCAUUAUUGCUAUACCCUCUCUACGACUUCUUUAUUU
ACUGGAUGAAGUUAAUGAGCCAUCAAUUACCUUAAAAACAGUGGGACACCAAUGAUACUGAAGCUAUGAAUAUUCAGAUUUCAAACAUAUUGAAUUUGACUCCUAUAUAAUCCCUUAUAGUGAAAUAAGAGAAG
AUGGGUUACGUCUAUUAGAAGUGGAUAACCGAACUACAAUUCCUAUGGAAACUCAAGUUCGUAUUCUAAUUACCGCAGCUGAUGUACUUCAUUCAUGAACUGUCCCAAGCUUAGGUGUUAAAGUAGAUGCUACU
CCAGGACGACUAAACCAAACAAGAUUCUUCAUUAAUCGUCCGGGAGUGUUCUUUGGCCAAUGUUCAGAAAUCUGUGGAGCUAAUCAUAGAUUUAUACCAAUCAUAAUUGAAAGAAUUUCUAUUUCAUCAUUCAU
CAAGUGAAUUCAAAAAAUAAUACAAUCCUCAUUAGA---[644]
Macromia_magnifica__________
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FN356128_Macromia_splende___
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FN356146_Phyllomacromia_ny__
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Idomacromia_proavita________
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Aeschnosoma_forcipula_______
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Pentathemis_membranulata____
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Tetragoneuria_cynosure______
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Tetragoneuria
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Tetragoneuria
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Epicordulia_princeps________
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Epitheca_marginata__________
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FN356087_Epitheca_bimacul___
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Rialla_villosa______________
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FN356074_Cordulia_aenea_____
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EU055377_Cordulia_shurtleffii   GAACAAAUAAAUUACUUCCAUGAUCAUACUAUAAUAGUUUUACUCAUCAUUACAAUCCUAGUAGCAUAUAUU---
AUAGCAACUAUAUUUAAUAACGCAAACAUCAAUCGAAAUUUAUUAGAUGGACAAAAAAUCGAAACAGCAUGAACAAUUUUACCAGUAUUUGUCUUAAUAAUUAUUGCCAUACCUUCACUACGAUUAUUAUAUUU
AUUAGAUGAAGUUAGAGAUCCCUCUAUUACAUUAAAAACUAUUGGACACCAAUGAUAUUGAAGUUAUGAAUACUCAGAUUUUAAACAUAUUGAAUUCGAUUCAUAUAUAACCCCACAAACAGAAAUAGAAAACA
AUGGUUUCCGUCUCCUAGAAGUAGAUAACCGAACAACCCUUCCUAUAUGCACUCAAGUACGAAUUUUAAUCACAGCUGCCGAUGUACUACAUUCAUGAACAGUACCUUCCCUUGGAGUAAAGGUAGACGCCACA
CCUGGUCGACUCAAUCAAACUAGAUUUUUCAUUAAUCGACCAGGUGUAUUUUUUGGUCAAUGCUCUGAA---
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FN356163_Somatochlora_alpe__
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Somatochlora_flavomac_1242__
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Somatochlora_metallica______
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EU055395_Somatochlora_flavomac---
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UAAUCGUAAUCUUCUUGAUGGACAAAAAAUUGAAACUGCAUGAACAAUUAUACCAGUAUUUGUUCUAGUAAUUAUUGCAAUACCCUCCUUACGACUCUUAUAUUUACUAGACGAAGUAAGAGAUCCAUCAAUUA
CCUUAAAAACCAUUGGUCACCAAUGAUAUUGAAGAUAUGAAUAUUCAGAUUUUAAACAUAUUGAAUUUGAUUCAUACAUAAUUCCUCAACCAGAAAUAGAAGUAAAUGGAUUCCGCCUUCUAGAAGUAGAUAAU
CGAACAACCCUUCCUAUAUGUACUCAAGUGCGAAUUUUAAUUACAGCCGCGGAUGUACUUCAUUCAUGAACUAUUCCAUCUCUGGGAGUAAAGGUUGAUGCCACUCCUGGUCGAUUAAAUCAGACCAGAUUCCU
UAUUAAUCGACCAGGAGUGUUCUUUGGUCAAUGCUCUGAAAUCUGUGGGGCAAAUCACAGAUUCAUGCCAAUUAUAAUUGAAAGAAUUAGAAUUAAAUCAUUCAUUAACUGAAUUCAAAAAAUAAGUGAGAUAU
CAUA------[540]
A_FJ596562_Hemicordulia_mi__
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EU055365_Hemicordulia_australi--CCAUUCUAGUAGCGUAUGUU---
AUGGCAACUAUAUUCAAUAACACUAAUAUUAAUCGAAAUCUAUUGGAUGGACAAAAAAUUGAAACCGCUUGAACUAUUCUGCCUGUGUUUGUUCUACUAAUUAUUGCAAUACCAUCUCUACGACUUUUAUACUU
AUUAGACGAAGUUAGUGAUCCCUCUAUCACACUAAAAACUGUGGGGCAUCAAUGAUACUGAAGUUAUGAAUAUUCAGAUUUCAAACACAUUGAAUUUGAUUCUUAUAUAAUCCCUCAGACAGAAAUAGAAAAUA
AUGGGUUUCGUCUACUAGAAGUAGAUAAUCGCACAACCCUUCCUAUAUGUACACAAGUACGAAUCCUAAUUACAGCUGCAGAUGUUCUACACUCAUGAACAGUUCCAUCCUUAGGAGUAAAGGUAGAUGCUACC
CCUGGGCGGCUAAAUCAAACUAGAUUUUUUAUUAAUCGCCCAGGGGUUUUUUUGGACAAUGUUCAGAAAUUUGCGGAGCAAAUCAUAGAUUUAUACCAAUCAUGAUUGAAAGAAUUAGAAUUAAAUCAUUUAU
UAACUGAAUUCAAAAGAUAAGUGAAGCAUCAUUAGA---[592]
EU055354_Procordulia_jacksonieGAACAAAUAAAUUAUUUCCAUGAUCACACUAUAAUAGUUUUAUUAAUUAUUACUAUUCUAGUAGCUUACAUU---
AUAGCAACCAUAUUUAACAAUACCAACAUUAACCGAAACUUACUAGAUGGUCAAAAAAUCGAAACUGCAUGAACAAUUCUACCAGUAUUUGUUUUAUUGAUUAUUGCUAUACCAUCCCUACGACUUCUUUAUCU

AUUAGAUGAAGUAAGAGACCCAUCUAUUACCUUAAAAACUGUAGGACAUCAAUGAUAUUGAAGUUAUGAAUAUUCAGAUUUUAAACAUAUCGAAUUCGAUUCCUAUAUAAUUCCUCAGCCAGAAAUAGAAACCA
AUGGAUUUCGUCUUCUAGAAGUAGACAACCGAACAACAUUACCUAUAUGCACACAAGUUCGAAUUCUAAUUACAGCUGCAGAUGUUCUACAUUCAUGAACUGUACCCUCUCUUGGAGUAAAGGUAGAUGCUACC
CCUGGACGAUUAAACCAAACCAGAUUUUUUAUUAAUCGUCCAGGGGUAUUUUUUGGGCAAUGUUCAGAAAUUUGUGGGGCAAAUCACAGAUUUAUACCAAUUAUAAUCGAGAGAAUUAGAAUCAAAUCAUUCAU
UAACUGAAUUCAAAAAAUAAGUGAAGCAUCAUUAG----[643]
Unaligned_Libellulids
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FJ596583_Notiothemis_rober__
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FJ596578_Uetrathemis_irreg__
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Uetrathemis_polleni_________
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FJ596587_Urothemis_signata__
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Urothemis_assignata_________
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Macrodiplax_cora____________
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EU055332_Macrodiplax_balteataGAACAAUUACAUUACUUUCAUGACCAUACCAUAAUAGUAUUAGUAAUUAUUACUGUACUUGUAGCAUAUGUU---
AUAGGAUCAAUAUUUAUAAAUAAUAAUAUUAAUCGAAACCUGUUGGACGGACAAAAAAUCGAAACUGCCUGAACAAUUCUACCAGUGUUUGUUUUAAUUAUUAUUGCCAUACCAUCAUUACGAUUAUUAUAUUU
AUUAGAUGAGGUAAAUGAACCUUCAAUUACUUUAAAAACUAUUGGUCACCAAUGAUACUGAAGAUAUGAAUAUUCAGAUUUUAAACAUGUGGAGUUUGAUUCAUAUAUAAUCCCUUAUAAUGAAAUACAAGAAA
ACGGGCUGCGACUGUUGGAGGUAGAUAAUCGAACUACUCUACCUAUAAAAACCCAAGUACGUAUCCUUAUUACAGCAGCAGACGUUUUACACUCAUGAACAGUACCAGCCCUAGGUGUAAAGGUUGACGCUACA

CCAGGUCGAUUAAAUCAAACAAGUUUUUUUAUUAAUCGACCUGGUGUGUUUUUUGGACAAUGUUCAGAAAUCUGUGGAGCAAAUCAUAGAUUUAUACCCAUUAUGAUUGAAAGAGUGAAUAUUAAGUCAUUUAU
UAAUUGAAUUCAAAAUAUAAGCGAGGUAUCAUUAGA---[644]
Zyxomma_elgneri_____________
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AB709240_Zyxomma_petiolatum
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FN356181_Zygonyx_ida________
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Nannophlebia_sp_EU055138____
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Bironides_sp________________
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Huonia_____________
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Huonia_oreophila____________
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Onychothemis_testacea_______
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FJ596582_Rhyothemis_varieg__
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FJ712327_Rhyothemis_fuligi__
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Miathyria_marcella__________
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Miathyria_simplex
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FJ596577_Uholymis_citrina___
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Uholymis_tillarga___________
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DQ166791_Pantala_flavescens   GAACAACUUCAUUAUUUUCAUGAUCAUACUAUAAUAGUUCUAGUAAUUAUUACAGUAUUAGUAGCUUACGUA---
AUAGGAUCUAUAUUCUUUAAUUCCACAAUUAAUCGUAAUCUUCUAGAUGGUCAAAAGAUUGAAACAGCUUGAACAAUUUUACCAGUAUUUGUUCUAGUAAUUAUUGCUAUACCUUCUUUACGUUUAUUAUACUU
AUUAGAUGAAGUAAGUGAACCUUCAAUUACACUUAAAACUGUCGGUCAUCAAUGAUACUGAAGUUAUGAAUAUUCUGAUUUCAAGCAUGUUGAAUUUGAUUCAUAUAUAAUUCCAUAUAAUGAAAUAGAUCAAA
AUGGAUUUCGUUUAUUGGAAGUAGAUAAUCGAACUACACUACCUAUACAAACUCAAGUUCGUGUUUUAGUUACUGCCGCAGAUGUUCUACACUCAUGAACUGUCCCAUCCUUAGGAGUAAAGGUUGAUGCCACU
CCUGGUCGCCUUAACCAAACAAGUUUUUUUAUUAAUCGACCAGGAUUAUUCUUUGGUCAAUGUUCGGAAAUUUGUGGUGCAAAUCAUAGCUUUAUACCUAUUAUAAUUGAGAGAGUUAAUAUUAAAACAUUUAU
UAAUUGAAUUCAAAAUAUAAAUGAAGCAU----------[637]
EU055368_Uramea_lace
rata_od092GAACAAUUACAUUACUUUCAUGAUCAUACUAUAAUAGUAUUAAUUAUUAUUACCAUUAUGGUAGCCUAUAUU---
AUAGGAGCAAUAUUCUUUAAUAAUAAUAUUAACCGAAACUUACUAGACGGGCAAAAUAUUGAAACCACAUGGACAGUACUACCUGUUUUCGUUCUUAUUAUUAUUGCCAUGCCAUCUUUACGAUUAUUAUAUCU
ACUAGAUGAAGUAAGUGAGCCUUCAAUUACUCUAAAAACAAUUGGACAUCAAUGGUAUUGAAGAUAUGAAUACUCAGACUUUAAGCAUAUUGAAUUCGACUCAUAUAUGAUCCCUUACAAUGAAAUAGAUCCUA
AUGGGUUCCGAUUACUAGAAGUUGAUAAUCGUACUACCUUACCUAUAGAGACACAAGUACGAAUAUUAAUUACAGCUGCAGAUGUAUUGCAUUCAUGAACUGUGCCAACUCUAGGUGUAAAGGUAGAUGCUACU
CCUGGACGAUUAAAUCAAACAAGAUUUUUUAUUAGACGGCCAGGAUUAUUUUUUGGUCAAUGCUCAGAGAUUUGCGGAACAAAUCACAGAUUUAUACCAAUCAUGAUUGAAAGUGUUAACAUUAAAUCAUUUCC
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Uramea_calverti_____________
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Sympetrum_Kalosympetrum_ja__
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EF636437_Sympetrum_obtrusu__
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DQ008201Sympetrum_vulgatum__
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FN356171_Sympetrum_pedemon__
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Sympetrum_Nesogonia_blackb__
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Sympetrum_sanguineum________
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Sympetrum_corruptum_EU055___
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Y12900Sympetrum_fonscolomb__
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Sympetrum_Uarnetrum_illotu__
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Sympetrum_Uarnetrum_infusc__
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Sympetrum_
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Sympetrum_
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Leucorrhinia_pectoral_0610__
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Leucorrhinia_glacialis______
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FJ010031_Celithemis_elisa___
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Celithemis_eponina_1233_____
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Brachymesia_gravida__________
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Brachymesia_herbida
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Brachythemis_leucosticta____
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DQ166797_Brachythemis_contaminGAACAGCUUCAUUAUUUUCAUGAUCACACAAUAAUAGUAUUAAUUAUUAUUACUAUUAUAGUAGCUUAUAUU---
AUAGGAGCUAUAUUUUUUAAUAAUAAUAUUAAUCGAAAUUUAUUAGAUGGGCAAAAUAUUGAAACUACAUGAACAGUACUACCAGUAUUUGUUCUUAUUAUUAUUGCUAUACCUUCAUUACGAUUAUUAUAUUU
AUUAGAUGAAGUAAGUGAACCUUCAAUUACUUUAAAAACAGUUGGUCACCAAUGAUAUUGAAGUUAUGAAUAUUCAGAUUUUAAACAUAUUGAAUUUGAUUCAUACAUAAUCCCUUAUAAUGAAAUAGAUCCUA
AUGGAUUCCGAUUAUUAGAAGUUGAUAAUCGUACCACUUUACCUAUAGAAACUCAAGUACGAAUGUUAAUUACAGCCGCAGACGUAUUACAUUCUUGAACUGUUCCUACAUUAGGUGUAAAGGUUGAUGCAACU
CCAGGACGAUUAAAUCAAACUAGUUUCUUUAUUAGUCGUCCUGGAUUAUUCUUUGGUCAAUGCUCAGAAAUUUGUGGAACAAAUCACAGAUUUAUACCUAUUAUAAUUGAAAGUGUUAAUAUUAAAUCAUUUAU
UCAAUGAAUUCAAAAUAUAAGUGAAGCUU----------[637]
Deielia_phaon________________
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Pachydiplax_longipennis_____
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AY750042_Erythemis_sp_coll__
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DQ166802_Acisoma_panorpoides   GAACAAUUGCACUAUUUUCAUGAUCAUACUAUAAUAGUUCUCGUUAUUAUUACUGUUAUAGUAGCUUAUGUU---
AUAGGAGUAAUAUUUUUUAAUAACAAUAUCAAUCGAAAUUUAUUAGAUGGACAAAAAAUUGAAACAGCUUGAACCAUUCUUCCAGUGUUUGUACUCGUAAUUAUUGCAAUACCAUCUUUACGAUUAUUAUAUUU
AUUAGAUGAAGUAAGUGAACCAUCUAUUACCCUGAAAACAGUAGGACAUCAAUGAUACUGAAGUUAUGAAUACUCAGAUUUUAAACAUGUCGAAUUUGAUUCUUACAUAAUCCCUUAUAAUGAAAUAGAUAAUA
GAGGGUUUCGAUUACUAGAAGUAGAUAAUCGAACUACAUUACCAAUACAAACACAAGUUCGUAUUUUAAUUACAGCAGCAGAUGUAUUACAUUCAUGAACAGUUCCUUCCUUAGGAGUCAAGGUGGAUGCUACA
CCAGGCCGACUAAAUCAAACAAGUUUCUUUAUUAACCGGCCUGGUUUAUUCUUUGGUCAAUGUUCUGAAAUCUGUGGAGCAAAUCACAGAUUUAUACCUAUUAUAAUUGAAAGAAUUAAUAUUAAAUCAUUUAU
UAAUUGAAUCCAAAAUAUAAGAGAAGCAU----------[637]
EU055340_Erythrodiplax_minuscuGAACAACUACACUACUUUCAUGAUCAUACCAUGAUAGUUUUAGUAAUUAUUACUGUCCUAGUAGCCUACAUU---
AUAGGAGCAAUAUUUUUUAAUAAGGACAUCAACCGAAACUUAUUAGACGGCCAAAAGAUUGAAACCGCAUGAACUAUCUUACCAGUGUUUGUGUUAGUGAUUAUUGCUAUACCGUCUUUACGUCUUCUAUAUUU
ACUUGAUGAAGUUAGAGAGCCUUCAAUUACAUUGAAAACGGUAGGUCAUCAAUGAUACUGAAGAUAUGAAUAUUCAGAUUUCAAGCACGUAGAGUUUGACUCUUACAUAAUUCCAUAUAACGAAAUAGAUAGAA

GAGGAUUUCGUUUAUUAGAAGUAGAUAAUCGUACAACCUUACCUAUACAAACUCAAGUUCGUAUUUUAAUUACAGCAGCAGACGUUCUACAUUCAUGAACUGUACCAUCCCUAGGUAUUAAGGUUGAUGCUACU
CCAGGACGGUUAAAUCAAACUAGAUUCUUUAUUAACCGUCCUGGCCUGUUCUUUGGUCAAUGUUCAGAAAUCUGUGGUGCAAAUCACAGAUUCAUACCUAUUAUAAUUGAAAGAGUUAAUAUUAAAUCGUUUAU
UAAUUGAAUUCAAAAUAUAAAUGAAGCAUCAUUAGA---[644]
Erythrodiplax_basalis_______
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DQ166789_Crocothemis_servilia   GAACAAUUACAUUAUUUUCAUGAUCAUACUAUAAUAGUACUAGUAAUUAUUACAGUUAUAGUAGCUUAUAUU---
AUAGGGGCAAUAUUUUUUAACAGAAAUAUUAACCGUAAUUUAUUAGAUGGUCAAAAAAUUGAAACUGCUUGAACAGUAUUACCAGUAUUUGUACUUGUAAUUAUUGCUAUACCUUCAUUACGAUUAUUAUAUUU
ACUUGAUGAAGUAAGUGAGCCUUCAAUCACUUUAAAGACUGUUGGUCAUCAGUGAUACUGAAGCUAUGAAUAUUCAGAUUUUAAACACGUUGAAUUUGAUUCCUACAUAAUCCCUUAUAAUGAAAUAGGGGCAG
AAGGGUUCCGUCUACUUGAAGUAGAUAACCGAACAACAUUACCAAUACAAACACAAGUGCGAAUCCUUAUUACAGCAGCAGAUGUAUUACACUCAUGAACAGUACCAACAUUAGGAAUUAAGGUAGAUGCAACA
CCAGGACGUCUAAAUCAAACUAGAUUCUUCAUCAACCGUCCGGGUUUAUUCUUUGGACAAUGUUCAGAAAUCUGCGGCGCAAAUCAUAGAUUCAUGCCAAUUAUAAUUGAAAGUGUUAAUAUCAAAUCUUUUAU
UAACUGAAUUCAAAAUAUAAGUGAAGCAU----------[637]
DQ008200_Crocothemis_eryt___
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FJ596590_Rhodothemis_rufa___
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DQ166784_Neurothemis_fulvia   GAACAAUUACACUACUUUCAUGACCAUACCAUGAUAGUUCUGGUUAUCAUUACAGUUAUAGUAGCUUAUAUU---
AUAGGAGCAAUAUUUUUCAAUUCAAAUAUUAAUCGAAAUUUAUUAGAUGGACAAAAAAUUGAAACUGCAUGAACAAUUUUACCUAUAUUUGUUUUAAUUAUCAUUGCAAUACCAUCACUACGUCUACUAUAUUU
AUUAGAUGAAGUAAGAGAACCAUCAAUUACAUUAAAAACAGUUGGACAUCAAUGAUAUUGAAGUUAUGAAUAUUCAGAUUUCAAGCAACUGGAAUUUGAUUCCUAUAUAAUCCCUUAUAAUGAGAUGGAGGCUA
GAGGAUUUCGGUUAUUAGAAGUGGAUAACCGAACUACAUUACCUAUACAAACUCAAGUUCGAAUUCUUAUUACAGCAGCAGAUGUAUUACACUCUUGAACUGUACCUACUUUAGGAGUUAAGGUGGAUGCAACA
CCAGGACGAUUAAAUCAAACUAGAUUUUUUAUUAAUCGUCCUGGAUUAUUUUUUGGUCAGUGUUCAGAAAUCUGCGGGGCUAACCACAGAUUUAUACCUAUCAUAAUUGAAAGUGUUAAUAUUAAAUCAUUUAU
UGACUGGAUUCAAAAUAUAAGUGAGGCAU----------[637]
Neurothemis_ramburii
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FN356080_Diplacodes_lefebv__
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DQ166785_Diplacodes_trivialis   GAACAAUUACACUACUUUCAUGAUCACACCAUAAUAGUACUAGUUAUCAUUACAGUUCUAGUGGCUUAUAUU---
AUAGGAGCAAUAUUUAUUAACAUCAAUAUCAAUCGAAACUUACUUGAUGGACAAAAAAUCGAAACUGCUUGAACUAUUUUACCAGUAUUUGUGUUAGUAAUCAUUGCUCUACCAUCAUUACGAUUACUUUAUCU
UCUGGAUGAAGUAAGUGAGCCAUCAAUUACUUUAAAAACAGUAGGGCAUCAAUGAUACUGAAGCUAUGAAUACUCAGAUUUCAAACAUGUAGAAUUCGAUUCAUAUAUAAUUCCUUACAAUGAAAUAAUACCAA
AUGGGUUUCGACUCUUAGAGGUAGAUAAUCGAACAACAUUACCGAUACAAACACAAGUUCGUAUCUUAAUUACAGCAGCAGAUGUAUUACAUUCAUGAACCGUUCCGGCCUUAGGAAUUAAGGUCGAUGCCACC
CCCGGUCGAUUAAACCAAACCAGAUUUUUUAUUAAUCGACCGGGUUUAUUUUUUGGUCAAUGUUCAGAAAUUUGUGGUGCAAAUCACAGAUUUAUGCCAAUCAUGAUUGAAAGAAUUAAUAUUAAAUCAUUUAU
UAAUUGAAUUCAGAACAUAAGUGAUGCAU----------[637]

Bradinopyga_strachani_______
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EU055364_Brachydiplax_denticauGAACAGCUACAUUACUUUCAUGAUCAUACCAUAAUAGUUCUAGUAAUUAUUACUGUUAUCGUAGCCUAUGUU---
AUAGGGGCAAUAUUUUUAAACAAAAAUAUUAACCGAACCUUACUAGAUGGACAAAAAAUUGAAACUGUAUGAACAAUUUUACCAGUAUUUGUAUUAAUCAUUAUUGCAAUACCAUCAUUACGAUUAUUAUAUUU
ACUGGAUGAAGUAAGAGAACCUUCAAUUACUUUAAAAACAAUUGGACAUCAAUGAUACUGAAGUUAUGAAUAUUCAGAUUUUAAACAAGUUGAAUUUGAUUCAUAUAUAACCCCUUAUAAUGAAAUAUCUAGUA
AUGGAUUUCGGCUUUUAGAAGUAGAUAAUCGAACAGUCUUACCUAUACAGACCCAAGUACGUAUAUUAAUUACAGCUGCAGACGUACUACAUUCAUGAACAGUACCUACACUAGGGGUUAAGGUAGACGCCACA
CCAGGACGCCUAAACCAAACAAGAUUCUUUAUCAAUCGCCCUGGAAUCUUUUUUGGGCAGUGCUCAGAAAUUUGUGGAGCAAAUCAUAGAUUUAUACCAAUCAUAAUUGAAAGUGUUAAUAUUAAAUCAUUCAU
UAAUUGAAUCCAAAAUAUGAGAGAAGCAUCAUUAGA---[644]
FJ596585_Brachydiplax_chal___
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FN356059_Chalcostephia_fl___
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Micrathyria_aequalis________
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Micrathyria_atra____________
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Micrathyria_didyma
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Uracis_imbuta_______________
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Uracis_infumata_____________
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FJ596589_Nannophya_pygmaea__
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Nannothemis_bella___________
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Paltothemis_lineatipes______
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Brechmorhoga_mendax_________
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Brechmorhoga_praedatrix
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Dythemis_fugax______________
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EU055400_Urithemis_aurora_od15---CAAUUACACUAUUUUCAUGAUCAUACUAUGAUAGUUUUAGUAAUUAUUACAAUUAUAGUAGCAUAUAUU---
AUAGGUGCAAUAUUUAUUAAUAUAGAUAUUAAUCGAAACUUACUAGAUGGUCAAAAAAUCGAAACAGCUUGAACAAUUCUACCUGUUUUCGUUUUAGUAAUUAUUGCUAUACCAUCACUCCGUUUACUUUAUCU
UUUAGAUGAAGUAAGAGAACCAUCAAUUACAUUAAAAACAGUAGGACAUCAAUGAUAUUGAAGUUAUGAAUAUUCAGAUUUUAAACAUGUUGAAUUUGAUUCAUAUAUAACCCCUUAUAGAGAAAUAGAAAAUA
AUGGGUUCCGCUUAUUAGAGGUUGAUAACCGAACAACAUUACCUAUACAGACACAGGUUCGUGUUCUGGUAACUGCUGCUGAUGUAUUACAUUCAUGAACUGUACCUUCAUUAGGAGUUAAGGUUGAUGCCACU
CCUGGACGAUUAAAUCAGACAAGAUUUUUUAUUAAUCGUCCAGGAGUGUUUUUUGGACAAUGUUCAGAAAUUUGUGGGGCGAAUCAUAGAUUUAUACCUAUUAUAAUUGAAAGAGUUAAUAUUAAAUCAUUUAU
UAACUGAAUUCAAAAUAUAAGUGAAGCAUCAU-------[637]
Urithemis_africana__________
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FN356177_Urithemis_arterio__
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Perithemis_tenera___________
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EU055337_Perithemis_intensa_odGAACAAUUACAUUAUUUUCAUGACCAUACUAUAAUAGUAUUAGUAAUAAUUACAAUAUUAGUAGCUUAUAUU---
AUAAGAAUAAUGUUUUUAAAUUCAAAUAUUAACCGAAAUCUAUUAGAUGGUCAAAAAAUUGAAACUAUAUGAACUAUUCUACCAGUAUUUAUUCUACUAAUUAUUGCAAUACCCUCUUUACGUCUAUUAUAUUU
AUUAGAUGAAGUUAAUGAACCCUCAAUCACAUUAAAGACAAUUGGUCAUCAAUGAUAUUGAAGAUAUGAAUAUUCAGAUUUUAAUCAUAUCGAAUUUGAUUCUUAUAUAACUCCCUAUAAUGAAAUAAGAAAUA
GUGGAUUCCGUCUACUUGAUGUAGAUAAUCGAACUACCUUACCUAUACAAACCCAAGUUCGUAUACUUAUUACAGCUGCAGAUGUUCUACAUUCAUGAACUAUUCCUUCAUUAGGGUAAAGGUGGAUGCUACU
CCUGGACGGUUAAAUCAAACAAGUUUUAUAAUUAACCGUCCAGGAGUAUUUUUUGGACAAUGUUCAGAAAUUUGUGGUGCAAAUCACAGAUUUAUACCCAUUAUAAUUGAAAGAGUUAAUAUUAAAUCCUUUAU
UAACUGAAUUCAAAAUAUAAGAGAAGCAUCAUUAGA---[644]
Perithemis_lais_GU196362
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FN356143Palpopleura_sp______
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FJ596579_Diastatops_pullat__
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Zenithoptera_fasciata_______
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Neodythemis_afra_pauli______
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FN356162_Selysiothemis_nig__
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FN356179_Urithetrum_navasi__
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Porpax_risi_________________
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FN356133_Micromacromia_cam__
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FJ596594_Neodythemis_preu___
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Neodythemis_klingi__________
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FJ596575_Hadrothemis_infes__
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FJ596595_Uhermorthemis_mad__
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FJ596599_Agrionoptera_insi__
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FJ596593_Cratilla_metallic__
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Pseudoleon_superbus__________
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FJ596597_Orthemis_cultrifo__
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Orthemis_ferruginea__________
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DQ166806_Orthetrum_albistylum   GAACAAUUACAUUAUUUUCAUGAUCAUACAAUAAUAGUUCUUGUAGUCAUUACAGUAUUGGUUGCCUAUGUU---
AUAGGGGCCAUAUUCUUUAAUCAAGAUGUUAAUCGAAACUUACUAGAUGGGCAAAAAAUUGAAACGGCAUGAACAGUACUACCAGUAUUUGUAUUAUUAGUUAUUGCCAUACCAUCUUUACGUUUAUUAUAUUU
AUUAGAUGAAGUAAGUGAACCAUCUAUAACAUUAAAAACAGUAGGACAUCAAUGAUACUGAAGAUAUGAAUACUCAGAUUUCAAGCACGUUGAAUUUGAUUCUUAUAUAAUUCCUUAUAAUGAAAUAGAAAAUA
GAGGGUUACGACUAUUAGAAGUAGAUAAUCGAACAACCUUACCUAUACAGACUCAAUUACGUAUUUUAAUUACAGCUGCCGAUGUAUUACACUCAUGAACUGUUCCGGCAUUAGGAAUUAAGGUUGAUGCUACU
CCGGGGCGAUUAAAUCAAACAAGAUUUUUUAUUAACCGUCCAGGAGUAUUCUUUGGACAAUGUUCAGAAAUUUGUGGAGCAAAUCACAGUUUCAUACCUAUUAUAAUUGAAAGAGUUAAUAUUAAAUCAUUCAU
UAAGUGAAUUCAAAACAUAAGUGAAGCCU----------[637]
Orthetrum_pruinosum__________
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Orthetrum_coerulescens______
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FJ596600_Lyriothemis_elega__
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DQ008205_Ladona_fulva_______
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Ladona_julia________________
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DQ166795_Ladona_depressa   GAACAGUUACAUUAUUUUCAUGAUCAUACCAUAAUAGUUCUUACAAUUAUCACUAUUAUUGUAGCUUAUGUU---
AUAGGAGCUAUAUUCUUUAAUAAAGAUAUUAAUCGAAAUCUCUUAGAUGGUCAGAAAAUUGAAACUAUUUGAACUAUCUUGCCAGUAUUUGUAUUAGUAAUCAUCGCAAUACCUUCAUUACGAUUACUAUACUU
ACUGGAUGAAGUAAGAGAACCUUCUCUUACUUUAAAAACAAUAGGACAUCAAUGAUACUGAAGUUAUGAAUAUUCAGAUUUUAAACAAAUUGAAUUUGAUUCUUAUAUAAUUCCAUAUAAUGAAAUGGAUAAUA
UAGGGUUCCGUUUAUUAGAGGUUGAUAAUCGUACAACUUUACCUAUACAAACUCAAGUACGAAUCCUCAUUACUGCCGCCGACGUCUUGCAUUCAUGAGCCAUUCCAUCACUAGGUAUUAAGGUUGAUGCCACU
CCCGGACGUUUAAAUCAAACUAAUUUCUUUAUUAAUCGUCCAGGUUUAUUUUUCGGGCAGUGUUCAGAAAUUUGUGGGGCAAAUCACAGUUUUAUACCUAUUAUAAUUGAAAGUGUUAAUAUUAAAUCAUUUAU
UAAUUGAAUCCAAAAUAUGAGAGAAGUGU----------[637]
Plathemis_subornata_________
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Plathemis_lydia_____________
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FN356119_Libellula_quadrim__
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Libellula_Syntetrum_angeli__
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Libellula_Eolibellula_semi__
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EU055326_Libellula_saturata_od---CAAUUCCACUACUUUCAUGAUCAUACUAUAAUAGUUCUUGUGAUCAUUACUGUACUAGUAGCCUAUAUU---
AUAGGAGCUAUAUUUUUCAAUAAAGAUAUUAACCGGAAUUUAUUAGAUGGUCAGAAAAUUGAAACUGCUUGAACCAUCUUACCAGUAUUUGUUUUAGUAAUUAUUGCCAUACCAUCAUUACGAUUAUUAUAUCU
ACUAGAUGAAGUAAGAGAACCUUCAAUUACAUUAAAAACAGUAGGUCACCAGUGAUACUGAAGAUAUGAAUAUUCAGAUUUCAAACACAUUGAAUUUGAUUCAUAUAUAAUUCCUUAUAAUGAAAUAGAAAGUA

AUGGACUUCGUCUACUAGAAGUUGAUAACCGAACAACAUUACCUAUACAAACACAAGUACGUGUUCUUAUUACAGCUGCUGAUGUUCUUCAUUCAUGAACAGUCCCAGCAUUAGGUAUUAAGGUAGAUGCUACU
CCUGGCCGUCUAAAUCAAACAAGAUUCUUUAUUAAUCGGCCAGGAGUAUUUUUUGGUCAAUGUUCAGAAAUUUGUGGAGCAAAUCAUAGAUUUAUACCUAUUAUAAUUGAAAGUAUUAAUAUUAAAUCAUUUAU
UAACUGAAUCCAAAAUAUAG-------------------[625]
Libellula_Eotainia_composi
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LPU65109_Libellula_pulchel__
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Libellula_Holotania_comanc__
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Libellula_Holotania_auripe__
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Libellula_Holotania_axilen__
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Libellula_Holotania_luctuo__
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Aethriamanta_rezia_GU196369
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Tetrathemis_corduliformis_GU196368
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Diplacina_ismene_GU196366
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Erythemis_vesiculosa_GU196360
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Nannophyopsis_clara_GU196358
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Oligoclada_amphinome_GU196357
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Idiataphe_sp_HOL_2010_GU196356
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Atoconeura_sp_HOL_2010_GU196355
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Elga_leptostyla_GU196354
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Fylgia_amazonica_GU196353
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Hemistigma_albipunctatum_GU196352
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Porpacithemis_sp_GU196351
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Thermochoria_equivocata_GU196350
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Malgassophlebia_bispina_GU196349
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Micromacromia_zygoptera_GU196348
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Argyrothemis_argentea_GU196347
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Pseudothemis_zonata_GU196341
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Oxythemis_phoenicosceles_GU196338
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Olpogastra_lugubris_GU196336
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Misagria_parana_GU196331
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Unaligned_Outgroups
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Ephemerella_sp______________
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Paraleptophlebia_sp_________
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Anthopotamus_sp_____________
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Caenis_luctuosa_____________
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229324789_Ephemera_orientalis   GAACAACUUACAUUCUUCCAUGACCACACGCUUCUUAUUUUAGUAAUAAUUACAACUUUAGUAGGAUACUUA---
AUAUUUAUACUAUUCUUUAAUAACUACACAAACCGAUUCCUAUUAGAAGGCCAAACAAUUGAAAUUAUCUGAACGAUUCUACCCGCAAUCACCUUGAUUUUUAUUGCUCUACCUUCUUUACGUCUACUUUACUU
ACUAGAUGAAGUUAGAGAUCCCUCCCUCACUCUUAAAACUAUUGGGCACCAAUGAUAUUGAAGAUAUGAAUAUUCAGAUUUUCUACAAGUAGAAUUUGAUUCUUAUAUAAUCCCUUCAACAGAAUUAGAGUUAG
GAAAUUUCCGACUUCUAGAAGUAGAUAACCACGCAGUAUUACCCAUAAAUACUCAAAUCCGAGUACUUAUUACAGCAGCAGAUGUUUUACAUUCAUGAGCAGUUCCUAGCUUAGGUGUUAAGGUAGAUGCUACU
CCAGGACGAUUAAAUCAAACUAGCUUCCUUAUAAAUCGUCCUGGGCUGUUCUAUGGUCAAUGUUCUGAAAUUUGUGGUGCUAAUCACAGUUUUAUACCUAUUGUAAUUGAAAGCACCCCAACAAAUACAUUUAU
UUCAUGAAUUUCUAAAAUAAGAAAUGCUU----------[637]
Callibaetis_sp_AY749925_____
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Callibaetis_ferrugine_______
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Baetis_buceratus____________
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Hexagenia_rigida____________
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Leucrocuta_aphrodite________
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Stenonema_sp________________
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Urigoniopthalmus_altern_____
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Allomachilis_froggart_______
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50059210_Uhermobia_domestica   GAACAAAUAACAUUUUUUCAUGAUCACACAAUACUCAUUGUGACCAUAAUUACAGUUCUUGUAGGCUAUCUA---
CUAGCCUCCCUUCUACCAAACACAUAUAUUAACCGCAAUUUAUUAGAAGGACAAACUCUAGAAACUAUUUGAACAAUCUUACCUGCCAUUACGCUAAUCUUCAUUGCUCUCCCAUCCUUACGACUCUUAUAUCU
AUUAGAUGAAAUUCAUCAACCAGCAAUUACUCUUAAAACAAUUGGGCAUCAAUGAUACUGAAGUUAUGAAUAUUCUGACUUCUCCUUAACAGAAUUUGAUUCUUACAUAAUUCCUAUUAAUGAAAUAAAUCCCA
AUUCAUUUCGUCUAUUAGAUGUAGACAAUCGUAUUGUAUUACCUAUUAACAUUGAUAUUCGUAUCCUAAUUACUGCCGCCGAUGUUCUUCACUCAUGGGCCAUGCCCGCCUUUGGUAUUAAGGCGGAUGCUACU
CCAGGACGCUUAAAUCAAGUAGCAGCCAACAUUACACGCACAGGUCUAUUCUUUGGUCAAUGUUCAGAAAUCUGUGGUGCAAAUCACAGUUUCAUACCAAUUGUUGUUGAAGCCUGCCCUCACUCAGUAUUCAU
UAAAUGAAUAACAAAAAUAAUACAAGAACUUU-------[640]
42632243_Uricholepidion_gertscGAACAAUUAUUAUUUUUUCAUGAUCACACUUUAUUAAUCUUAGCAAUAAUUACAGUUUUAGUAGGAUAUAUA---
UUAACUAUAAUAUUUAUAAAUUCAUAUACUCAUCGAUUUCUGCUUGAAGGACAAACAGUCGAAUUAAUUUGAACCGUACUUCCAGCAAUCACAUUAAUCUUUAUUGCAAUACCAUCCUUACGGUUAUUAUAUUU
AUUAGAUGAAAUUUAUAAUCCGUCACUAACACUAAAAACAAUUGGACAUCAAUGAUAUUGAAAAUAUGAAUAUUCAGAUUUUACUCAAAUUGAGUUUGAUUCAUAUAUAUUACCGAUUAAUGAAUUACCACUUG
AUGGGUUUCGCUUACUAGACGUGGAUAAUCGAACUGUAUUACCAAUAAAUACACAAGUUCGAAUUCUAAUUAGUGCUGCUGACGUUUUACAUUCAUGAGCAAUGCCAUCAUUAGGGAUUAAGGUAGAUGCAUCC
CCAGGACGUCUAAAUCAAACCAGAUUCAUCUUAAAUCGGCCUGGUUUAUAUUUUGGACAAUGUUCUGAAAUCUGUGGUGCAAAUCAUAGUUUUAUACCAAUUGUAUUGGAAAGAGUAAACAUUAGUACAUUUUU
AUCCUGAAUCAUGAAGAUAAGAAAUUAA-----------[636]
DQ874287_Gromphadorhina_oblongGAACAAUUAAUUUACUUUCAUGAUCAUGCACUAAUAAUUAUCAUUAUAAUCUUAACAAUUGUUUCCUACAUA---
AUAAUCAUAUUAAUCUUAAACAAAUUUACUGAUCGUUUCUUAUUAGAAGGACAAUUUAUUGAAGUAGCAUGAACAAUUGCUCCUGCCAUUAUUUUAGUCUUCAUUGCAAUUCCAUCACUACGACUUUUAUACCU
UAUAGAUGAAAUCAACAGUCCAGCAGUUACGUUAAAAACAAUUGGACAUCAAUGAUACUGAAGCUAUGAAUAUUCUGAUUUCCUAAAAAUUGAAUUUGAUUCUUAUAUAAUUCCACAAAACGAACUAAGUAAUA
AUGAUUUUCGUCUUCUUGACGUUGAUAAUCGCGCUACUCUACCUAUAAAUACCUUUAUCCGUAUUAUUAUCACAGCUACUGAUGUUUUACAUUCCUGAACCGUCCCAAGCCUAGGCGUUAAGGCUGAUGCAACC
CCUGGUCGCCUUAAUCAAACCAGCUUCUUUAUUAGUCGACCAGGAGUUUUUUAUGGUCAAUGUUCAGAAAUCUGUGGGGCAAAUCAUAGAUUCAUACCCAUCGUUAUUGAAAGUGUUUCGACAAAUAAUUUCAU
UAACUGAAUCUCAUCAAUAAGUGACUCAUCAGAUGG---[644]

EF623070_Isoperla_davisi_isola------------------------------------AUUCUAAUUAUAAUUACUACUUUGGUUAGCUAUAUU---
AUAGCUACAAUAUUUUUUAACCCUUUUAUUAAUCGAUUCCUUUUAGAUGGUCAAACCAUCGAAAUAAUCUGGACUAUUCUCCCUGCAGUUACUUUAGUCUUUAUUGCUCUUCCUUCAUUACGACUUUUAUACUU
AUUAGACGAAGUGAGAGACCCUGCUCUAACUCUUAAAACAAUCGGUCAUCAAUGAUAUUGAAGUUAUGAGUAUUCAGAUUUUCUAAAUGUUGAAUUUGAUUCUUAUAUAAUUCCCUACCACGAAAUAAAUACUG
AUGGUUUCCGAUUACUAGAUGUUGAUAAUCGAGCUGUUCUUCCUAUAAAUACUCAAGUCCGAAUAUUAGUAACUGCGGCAGAUGUAUUACACUCAUGAACUGUUCCUGCCUUAGGUGUUAAGGUAGAUGCUACC
CCUGGCCGAUUAAACCAAACCAGUUUUUUACUUAGACGACCUGGUUUAUUUUUCGGUCAAUGCUCAGAAAUUUGUGGGGCUAAUCAUUCUUUUAUGCCUAUUGUUAUUGAAAGAGUUCCCACAAGAACUUUCAU
UAAUUGAGUCUCAUCUGUAAGAGAAGCCUCAUCAG----[607]
EU414717_Isoperla_sp________
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158120699_Chorthippus_chinensiGAACAAUUAUCAUUCUUUCAUGACCACACUAUAGUUGUAUUAUUAUUAAUUACAGUGAUUGUAGGAUAUUCA---
CUUAGAUAUACAUUAAUAUUUAAAUUAACAAAUCGAAAUAUAUUACACGGACAUUUAAUUGAAACAAUUUGAACAGCAUUACCAGCUAUUACAUUAAUUUUUAUUGCAUUACCAUCACUACGACUAUUAUAUUU
UUUAGACGAUUCAGUAGAUACAAUAAUUACAAUUAAAACAAUUGGACGACAAUGAUAUUGAAGAUAUGAAUAUUUUGAUUUUGUAGACGUAGAAUUUGAUACAUACAUAACACCAGAAAGAGAUUUUCAAAUUA
AUAGAUUCCGUAUUCUAGAUGUAGAUAAUCGCACAAUUUUACCAAUAAAUACAGAAGUACGAAUUUUAACUAGAGCAUCAGACGUUUUACAUUCAUGAGCAGUGCCUGCUCUUGGAAUUAUUAUUGAUGCAACA
CCAGGACGUUUAAAUCAAGGAACAUUUUCAAUUAAUCGACCAGGACUAUUCUUUGGUCAAUGUCCAGAAAUUUGUGGAGCAAACCACAGAUUUAUACCAAUUGUUAUUGAAAGAACUUCAGUAAAUUUAUUUAU
CAAAUGAUUAUCUAAAAUUAUAU----------------[631]

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Platycnemis_pennipes________
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AUUAGUACCACUAAUACUAGGAGCUCCCGAUAUAGCUUUCCCACGACUUAAUAACAUAAGUUUUGACUCCUUCCUCCUUCUUUAACCUUACUUCUCGCAAGCAGUCUAGUAGAAUCAGGAGCCGGUACAGGAU
GAACUGUGUACCCUCCCCUAGCUGGGGCCAUUGCCCAUGCAGGAGGGUCUGUAGACCUUACUAUUUUUUCACUACACUUAGCUGGAGUGUCAUCAAUCCUAGGGGCAAUUAAUUUUAUUACAACAACUAUUAAU
AUAAAAUCCCCAGGAAUAAGAUUAGAUCAAAUACCUUUAUUUGUAUGAGCUGUAGUAAUUACUGCAGUUCUAUUAUUGUUGUCAUUACCAGUAUUAGCAGGGGCUAUUACAAUACUAUUAACUGACCGUAAUAU
UAAUACUUCGUUUUUUGAUCCAGCUGGAGGAGGAGACCCAAUUUUAUAU---

UGGCAUCUUGGGUUUUGUGGUAUGAGCUCAUCAUAUAUUUACAGUUGGAAUAGAUGUAGAUACUCGGGCAUAUUUCACAUCAGCAACCAUAGUAAUUGCUGUUCCUACAGGAAUUAAAAUUUUUAGCUGGUUAG
CUACUUUACAUGGUUCACAAUUAAAUUAUAGCCCUUCUUUACUAUGGGCUCUAGGAUUUGUAUUUUUAUUUACAGUAGGAGGAUUAACGGGAGUAGUAUUAGCAAAUUCAUCAAUUGAUAUCGCUAUACAUGAC
ACUUACUAUGUAGUAGCUCACUUUCAUUACGUUCUAUCGAUGGGGGCAGUAUUUGCAAUUAUAGGCGGAUUAAUUCACUGAUUCCCGUUAUUCACUGGAGUUAGAAUAAACAGUCAAUGACUAAAAGGUCAGUU
UUUAAUUAUAUUUAUUGGGGUAAACUUAACAUUCUUCCCACAACACUUUUUAGGAUUAGCUGGCAUACCA
Copera_vittata_6585198______
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UUACUUCCCCCCUCAUUAACCCUUUUAUUGGCAAGAAGCUUAGUAGAAAGAGGGGCAGGAACUGGGUGAACUGUUUACCCCCCAUUAGCUGGGGCUAUUGCCCAUGCAGGAGGAUCAGUAGAUCUUACAAUUUU
CUCUUUGCACUUGGCAGGUGUAUCAUCAAUUUUGGGAGCAAUUAACUUUAUUACAACAACCAUCAAUAUAAAGUCUCCUGGAAUAAAGUUAGACCAAAUACCACUAUUUGUUUGAGCUGUAGUAAUUACAGCAG
UUCUUUUACUCUUAUCAUUACCAGUAUUAGCUGGUGCUAUUACCAUACUAUUAACAGAUCGUAAUAUUAAUACAUCCUUCUUUGACCCAGCAGGAGGGGGAGACCCCAUUUUAUAUCAACAUCUAUU-------
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Mortonagrion_binocellata____
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AB708464_Agriocnemis_pygmaea---

AUUAGUUCCUCUAAUAUUAGGGGCGCCAGAUAUAGCCUUCCCACGACUUAAUAAUAUAAGAUUUUGAUUGUUACCGCCCUCACUAACAUUAUUAUUAGCAAGCAGUUUAGUAGAAAGUGGGGCAGGUACUGGAU
GAACAGUCUAUCCUCCCCUAGCAGGGGCUAUUGCCCAUGCGGGAGGGUCUGUAGACCUCACUAUUUUUUCACUCCAUUUGGCUGGAGUUUCAUCAAUUUUAGGUGCAAUUAACUUUAUUACUACAACUAUUAAU
AUAAAAUCACCUGGAAUAAAAAUGGAACAACUACCUUUAUUUGUAUGAGCAGUAGUAAUUACUGCCGUAUUACUAUUACUAUCCUUACCCGUACUAGCAGGAGCUAUCACUAUACUAUUAACAGACCGUAAUAU
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Archibasis_viola_ZAV________
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EF176769_1_Erythromma_najas
??GGACCGCCUUAAGUAUGCUUAUUCGAGUAGAACUUGGUCAACCAGGAUCACUUAUUGGAGAUGAUCAAAUUUAUAAUGUAGUAGUUAC
UGCACACGCUUUUGUUAUAAUUUUCUUUAUAGUAAUACCAAUCAUAAUUGGUGGAUUUGGUAACUGAUUAGUACCCUUAAUACUUGGGGCGCCAGAUAUGGCUUUCCCCCGACUUAAUAAUAUAAGAUUUUGAC
UUUUACCACCAGCAUUAACAUUACUACUAGCAAGUAGUCUAGUAGAAAGAGGAGCAGGUACUGGAUGAACAGUCUAUCCGCCAUUAGCAGGCGCAAUUGCACAUGCAGGAGGAUCUGUAGAUUUAACCAUCUUC
UCAUUACACCUAGCAGGUGUGUCCUCAAUUUUAGGGGCAAUUAAUUUUAUUACUACUACUAUUAACAUAAAAUCCCCAGGGAUAAAAAUAGAUCAAUUACCUCUAUUCGUUUGAGCUGUGGUUAUUACAGCAGU
AUUAUUAUUACUAUCAUUGCCAGUUUUAGCUGGAGCAAUCACCAUAUUAUUAACUGAUCGAAAUAUUAAUACAUCAUUUUUUGACCCUGCCGGAGGGGGAGACCCUAUUUUAUACCAACAUCUGUUCUGGUUCU
UUGGCCAUCCAGAGGUUUACAUUUUAAUCCUACCAGGGUUUGGUAUAAUCUCACAUAUUAUUGCACAAGAAAGAGGUAAAAAGGAAACGUUUGGAGUAUUAGGAAUAAUUUAUGCUAUAAUUGCAAUUGGAAUC
UUGGGAUUCGUAGUAUGAGCUCACCACAUAUUUACUGUAGGAAUAGACGUAGAUACCCGAGCAUACUUUACCUCAGCAACAAUAGUAAUUGCUGUACCCACAGGAAUUAAAAUUUUCAGAUGGCUUGCAACUUU
ACAUGGUAGUCAACUGAACUAUAGUCCCUCAUUAUUAUGAGCAUUAGGAUUUGUUUUUCUAUUUACUGUAGGAGGAUUAACAGGGGUAGUUUUAGCAAACUCAUCAAUUGAUAUUGCAAUACAUGACACUUACU
ACGUCGUAGCCCACUUCCAUUAUGUUCUCUCUAUGGGAGCAGUAUUCGCAAUCAUAGGAGGACUAAUUCACUGAUUCCCUUUGUUUACAGGAACUACAAUGAAUAGACAAUUAUUAAAGGCCCAAUUUCUAACA
AUAUUUGUAGGAGUAAACCUGACGUUCUUUCCGCAACAUUUUCUAGGUUUAGCAGGAAUACCU
Cercion_plagiosum_AJ488552
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ACUAGUUCCAUUAAUACUUGGUGCACCAGAUAUAGCUUUCCCACGACUUAAUAACAUAAGAUUUUGAUUACUACCCCCUUCACUAACUCUAUUACUAGCAAGUAGUCUAGUAGAAAGAGGAGCAGGUACAGGAU
GGACAGUUUACCCUCCAUUAGCAGGUGCAAUUGCUCACGCAGGUGGAUCAGUAGAUUUAACUAUUUUUUCACUACAUCUAGCAGGUGUAUCUUCAAUUUUAGGAGCGAUUAAUUUUAUUACAACAACUAUUAAU
AUAAAGUCUCCAGGAAUAAAAAUAGACCAACUACCUCUAUUCGUAUGAGCUGUAGUUAUUACAGCAGUCCUACUUUUAUUAUCUCUACCUGUAUUAGCAGGAGCUAUUACUAUAUUACUGACUGACCGAAAUAU
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Acanthagrion_quadratum______
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AGGGACUGCUUUAAGAAUAUUAAUUCGAGUUGAACUAGGGCAACCUGGAUCUCUAAUUGGAGAUGACCAAAUUUAUAAUGUAGUAGUAACCGCACACGCUUUUGUCAUAAUUUUUUUUAUAGUAAUGCCUAUCA
UAAUUGGUGGAUUUGGAAAUUGAUUGGUGCCAUUAAUAUUAGGAGCACCAGAUAUAGCUUUCCCCCGAUUAAAUAAUAUAAGAUUUUGACUUUUACCUCCCUCGUUAACUUUACUUUUAGCAAGAAGUUUAGUA
GAGAGAGGGGCAGGAACUGGAUGAACAGUAUAUCCACCACUAGCAGGAGUAAUUGCUCACGCUGGAGCAUCCGUUGAUUUAACGAUUUUUUCAUUACACUUGGCAGGGGUGUCCUCAAUUUUAGGAGCAAUUAA
UUUUAUUACAACUACAAUCAAUAUAAAGUCACCUGGAAUAAACAUAGAUCAAUUGCCUCUAUUUGUUUGAGCUGUAGUAAUUACCGCAGUACUACUUUUAUUAUCAUUACCAGUACUAGCCGGUGCUAUUACUA
UACUACUGACAGACCGUAAUAUCAAUACAUCAUUCUUUGAUCCUGCAGGGGGAGG---

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AGGGACUGCUUUAAGAAUAUUAAUUCGAGUUGAACUAGGGCAACCUGGAUCUCUAAUUGGAGAUGACCAAAUUUAUAAUGUAGUAGUAACCGCACACGCUUUUGUCAUAAUUUUUUUUAUAGUAAUGCCUAUCA
UAAUUGGUGGAUUUGGAAAUUGAUUGGUGCCAUUAAUAUUAGGAGCACCAGAUAUAGCUUUCCCCCGAUUAAAUAAUAUAAGAUUUUGACUUUUACCUCCCUCGUUAACUUUACUUUUAGCAAGAAGUUUAGUA
GAGAGAGGGGCAGGAACUGGAUGAACAGUAUAUCCACCACUAGCAGGAGUAAUUGCUCACGCUGGAGCAUCCGUUGAUUUAACGAUUUUUUCAUUACACUUGGCAGGGGUGUCCUCAAUUUUAGGAGCAAUUAA
UUUUAUUACAACUACAAUCAAUAUAAAGUCACCUGGAAUAAACAUAGAUCAAUUGCCUCUAUUUGUUUGAGCUGUAGUAAUUACCGCAGUACUACUUUUAUUAUCAUUACCAGUACUAGCCGGUGCUAUUACUA
UACUACUGACAGACCGUAAUAUCAAUACAUCAUUCUUUGAUCCUGCAGGGGGAGG---

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Enallagma_parvum_AJ420939___
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Enallagma_granti_AJ420937___
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KC912314_Enallagma_cyathigerum_E   ---
AAUUCGAGUUGAAUUAGGACAACCUGGAUCAUUAAUUGGAGAUGAUCAAAUUUAUAAUGUAGUAGUUACUGCACAUGCAUUUGUUAUAAUUUUUUUUAUAGUUAUGCCUAUUAUAAUUGGAGGAUUUGGAAAUU
GACUGGUACCAUUAAUAUUAGGAGCGCCAGAUAUGGCUUUCCCCCGAUUAAAUAACAUGAGAUUUUGACUUUUACCCCCAUCACUAACCUUAUUACUAGCAAGAAGAUUAGUAGAAAGAGGAGCCGGGACUGGU
UGAACUGUAUACCCUCCAUUAGCAGGGGUAAUUGCUCAUGCUGGAGCAUCAGUUGAUUUAACUAUUUUUUCAUUACACUUAGCAGGUGUCUCAUCAAUUUUAGGGGCAAUCAAUUUUAUUACAACCACUAUUAA
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Protoneura_capillaris_644___
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Protoneura_cara_ZPC_________
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Uelebasis_salva_6325172_____
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KC912325_Leptagrion_elongatum_Le   ---
AAUUCGAAUUGAAUUAGGUCAACCAGGAUCUUUAAUUGGAGAUGAUCAAAUUUAUAAUGUUGUAGUCACAGCACAUGCUUUCGUAAUAAUUUUUUUAUAGUAAUACCUAUUAUAAUUGGAGGAUUUGGAAACU
GGUUAAUUCCUUUAAUAUUAGGCGCGCCUGAUAUAGCUUUCCCACGCUUAAACAACAUAAGAUUCUGACUUUUACCUCCAUCAUUAACACUCCUUUUGGUAAGAAGAUUAGUAGAAAGAGGAGCCGGAACUGGG
UGAACAGUUUAUCCUCCUUUAGCAGGAGCUAUUGCUCAUGCAGGAGGAUCUGUUGAUUUAACAAUUUUUUCAUUACACUUAGCAGGUGUUUCCUCCAUUUUAGGAGCUAUUAACUUUAUUACCACAGUAAUUAA
UAUAAAAUCUCCUGGUAUAAAAUUAGAUCAAAUACCUUUAUUUGUAUGAGCGGUUGUUAUUACAGCAGUGCUACUAUUACUAUCUUUACCUGUCCUCGCAGGAGCAAUUACAAUACUAUUAACAGACCGAAAUA
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Diceratobasis_sp_A_ZDA______
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Pyrrhosoma_nymphula_1202____
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JN419471_Chromagrion_conditu---

CUUAAUAAUAUAAGAUUUUGAUUAUUACCUCCAUCAUUAACUCUUCUUUUAGCAAGAAGGUUAGUAGAAAGAGGAGCUGGUACUGGAUGAACAGUGUAUCCACCUCUCGCUGGUGCUAUUGCCCACGCAGGAGG
GUCAGUAGAUUUAACAAUUUUUUCAUUACAUCUGGCAGGAGUAUUCUCCAUUUUAGGUGCAAUUAACUUUAUUACAACAGUAAUUAAUAUAAAGUCACCUGGUAUAAAAUUAGAUCAAUUACCACUAUUUGUUU
GAGCAGUAGUANUUACUGCNGUUUUAUUGCUAUUAUCAUUACCAGUAUUAGCAGGUGC--

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AAUUCGCGUAGAACUUGGACAACCAGGAUCAUUGAUUGGAGACGAUCAAAUUUACAAUGUAGUUGUUACCGCUCAUGCAUUUGUAAUAAUUUUUUCAUAGUAAUACCAAUUAUAAUUGGAGGUUUUGGAAACU
GACUAGUACCAUUGAUACUUGGAGCACCUGAUAUAGCUUUCCCACGUCUUAAUAAUAUAAGAUUUGACUUUUACCCCCAUCGUUAACUCUCCUUCUAGCAAGAAGAUUAGUAGAAAGAGGAGCUGGGACUGGU
UGAACAGUAUACCCACCUCUAGCAGGAGCUAUUGCACACGCAGGAGGAUCUGUAGAUUUAACAAUUUUUUCCUUGCAUCUAGCGGGAGUAUCCUCAAUUUUAGGAGCAAUUAACUUCAUUACAACAGUAAUUAA
UAUAAAAUCACCCGGUAUGAAAUUAGAUCAAUUACCUUUAUUUGUGUGAGCAGUGGUUAUUACAGCUGUUUUACUUUUACUUUCUCUUCCAGUUCUUGCAGGAGCAAUU------------------------
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GQ256041_Nehalennia_gracilis
AUUGGUACUCUCUACUUAAUAUUUGGUGCAUGGGCAGGUAUAGUAGGCACUGCAUUAAGUAUAUUAAUUCGAGUUGAAUUAGGACAACCAGGAUCAUUAAUUGGGGAUGAUCAAAUUUACAAUGUAAUUGUAAC
UGCACACGCAUUCGUUAUAAUCUUCUUCAUAGUAAUACCAAUCAUAAUUGGUGGAUUCGGAAACUGAUUAGUUCCCUUGAUAUUAGGGGCGCCUGAUAUAGCUUUCCCACGACUUAAUAAUAUAAGAUUUUGGU
UACUACCCCCCUCACUAACUUUAUUGCUAGCAAGAAGUCUAGUAGAAAGAGGAGCUGGUACAGGUUGAACUGUAUAUCCUCCUCUGGCUGGAGCAAUUGCGCAUGCAGGAGGGUCUGUAGAUUUAACAAUUUUC
UCCUUGCAUCUUGCAGGUGUAUCAUCAAUUUUAGGAGCUAUUAAUUUUAUCACAACAGUAAUUAAUAUGAAAUCCCCUGGCAUAAAAUUAGAUCAAAUACCGUUAUUUGUUUGAGCAGUCAUAAUUACUGCAGU

GUUACUAUUACUAUCAUUACCCGUACUUGCAGGAGCAAUUACAAUACUUUUAACUGACCGUAAUAUUAAUACAUCAUUCUUUGAUCCUGCAGGAGGAGG-----------------------------------
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KC912402Coryphagrion_grandis---
AAUUCGAAUUGAAUUAGGACAACCUGGUUCACUAAUUGGGGAUGAUCAAAUCUACAAUGUAGUAGUGACAGCCCACGCCUUUGUUAUAAUCUUUUUCAUAGUAAUACCAAUUAUAAUUGGUGGAUUUGGAAACU
GGUUAAUCCCUUUAAUAUUAGGAGCUCCAGACAUAGCUUUCCCACGACUUAAUAAUAUAAGAUUCUGAUUAUUACCUCCCUCAUUAACCCUUCUACUUGCAAGUAGAUUAGUAGAAAGUGGAGCCGGUACCGGC
UGAACUGUUUAUCCCCCACUAGCAGGGGCAAUUGCUCAUGCAGGAGCUUCAGUAGAUUUAACUAUCUUCUCACUACACCUUGCAGGUGUAUCCUCAAUCUUAGGGGCUAUUAAUUUCAUUACAACUACUAUUAA
UAUAAAAUCCCCAGGUAUAAAAAUAGAUCAACUACCUUUAUUUGUAUGGGCAGUAGUAAUUACUGCAGUAUUACUGUUAUUAUCCCUACCAGUUCUCGCUGGAGCAAUUACAAUACUAUUAACGGAUCGAAACA
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Microstigma_rotunda_________
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Microstigma_anomalum_672____
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Mecistogaster_ornata________
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Megaloprepus_caerulatus_____
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Haplostigma_modesta_ZHM_____
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Pseudostigma_aberans________
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Rhinagrion_mima_____________
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Sciotropis_cyclanthorum_6___
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Oxystigma_cyanifrons_ZOC____
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Philogenia_cassandra________
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Protolestes_kerckhoffaeZPK__
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Argiolestes_sidonia_605_____
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Caledopteryx_maculata_669___
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Lestomima_flavostigma_OPB___
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AB813249_Rhipidolestes_hiraoi---

ACUAGUACCCUUAAUACUAGGGGCUCCUGACAUAGCUUUCCCUCGGCUUAAUAAUAUAAGAUUUUGACUGUUACCCCCUUCACUUACCCUCCUUUUAACAAGAAGUUUAGUAGAAAGAGGAGCGGGAACUGGGU
GAACUGUCUACCCUCCCCUAGCAGGUGCAAUUGCACAUGCCGGAGCCUCAGUAGAUUUAACAAUUUUUUCUUUACAUCUCGCAGGAGUAUCUUCAAUCUUAGGGGCCAUUAAUUUCAUUACCACAACAAUUAAU
AUGAAAACCCCUGGCAUAAAAUUAGACCAAAUACCUUUAUUUGUAUGAGCUGUGGUCAUUACAGCAGUACUACUUCUAUUAUCUCUCCCAGUAUUAGCAGGAGCCAUUACAAUAUUACUAACAGACCGAAACAU
CAAUACAUCAUUCUUUGAUCCAGCAGGAGGAGGAGAUCCAAUCUUAUAU---

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AB708368_Rhipidolestes_acule---

AUUGGUCCCCUUAAUAUUAGGAGCUCCUGACAUAGCUUUUCCCCGUCUUAAUAAUAUAAGAUUUUGAUUAUUACCUCCUUCACUUACACUCCUAUUAACAAGAAGUUUAGUAGAAAGAGGAGCAGGAACUGGAU
GAACUGUAUACCCUCCUCUAGCGGGUGCAAUUGCACAUGCCGGAGCUUCAGUAGACUUAACAAUCUUCUCCCUACAUCUUGCAGGAGUAUCUUCAAUUCUAGGAGCCAUUAACUUCAUUACCACAACAAUUAAU
AUAAAAACCCCUGGUAUAAAAUUAGACCAAAUACCUCUAUUUGUAUGGGCCGUUGUUAUUACCGCAGUUCUACUUCUAUUAUCACUUCCAGUAUUAGCAGGAGCUAUUACAAUAUUACUAACAGAUCGAAAUAU
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Paraphlebia_zoe_____________
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Uhaumatoneura_inopinata_____
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Hypolestes_clara_HYP________
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Hypolestes_sp_EU055183______
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Agriomorpha_fusca_ZAF6______
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Sinocnemis_yangbingi_ZSY
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Miocora_peralticta_ZMP2
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CUAGGAUUUGUUGUAUGAGCACACCACAUAUUUACUGUAGGAAUAGAUGUAGACACCCGAGCAUAUUUUACCUCCGCUACAAUAGUAAUUGCAGUUCCAACUGGAAUUAAAAUCUUUAGUUGACUAGCUACUUU
ACAUGGAUCUCAACUUAAUUACAGCCCAUCAUUAUUAUGAGCCUUAGGAUUUGUAUUCUUAUUCACAGUUGGAGGAUUAACUGGAGUUGUUUUAGCAAAUUCUUCAAUUGACAUUGCAAUACACGACACCUAUU
AUGUAGUAGCUCACUUCCAUUAUGUCUUAUCUAUAGGAGCUGUAUUCGCCAUCAUAGGAGGAUUGAUCCAUUGAUUUUCUUUAUUUACAGGAACAACCAUAAAUAGACAAAUAUUAAAAGCACAAUUUCUAACA
AUGUUUAUUGGAGUAAACAUGACAUUCUUUCCUCAACAUUUCCUAGGACUUGCAGGAAUACCC
OCMr_Cora_marina
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Cora_cyane_6775217
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Polythore_boliviana_685_____
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AAUUUCACAUAUUAUUGCACAAGAGAGAGGAAAGGAAGAAACAUUUGGUGUUCUAGGAAUAAUUUAUGCAAUAAUCGCAAUUGGAAUCCUAGGAUUCGUAGUAUGAGCACACCACAUAUUUACUGUAGGAAUAG
AUGUAGAUACACGAGCCUACUUUACAUCAGCAACAAUAAUUAUUGCUGUACCAACGGGAAUUAAGAUUUUUAGAUGACUGGCCACCCUCCAUGGGACCCAACUAUCUUAUAGACCACCACUCCUUUGGGCAUUA
GGAUUUGUGUUCCUAUUCACAGUAGGGGGAUUAACAGGAGUAAUCCUAGCCAAUUCAUCCAUUGACAUCGCAAUACACGACACAUAUUAUGUAGUUGCCCAUUUUCACUAUGUACUGUCAAUAGGUGCCGUAUU
UGCAAUCAUGGGAGGAUUUAUUCAAUGAUUCCCCCUAUUUACUGGAAUAACCCUACAUAAUCAAUUGUUAAAAGCACAAUUCGCAACUAUAUUUAUCGGAGUAAACCUAACCUUUUUCCCCCAACACUUCCUAG
GACUAGCAGGAAUGCCA
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Rimanella_arcana____________
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Pentaphlebia_stahli_________
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Devadatta_podolestoides_6___
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Pseudolestes_mirabilis_68___
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Philoganga_vetusta__________
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Philoganga_robusta_PGN______
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GGCCGGUAUAGUAGGCACUGCAAUAAGUAUAUUAAUUCGAAUCGAAUUAGGACAACCAGGAUCACUAAUUGGAGACGAUCAAAUUUAUAACGUAAUUGUAACAGCGCAUGCAUUUGUAAUAAUUUUCUUUAUAG
UAAUACCAAUUAUAAUUGGAGGAUUUGGCAACUGACUAGUACCUCUAAUAUUAGGAGCCCCUGAUAUAGCAUUCCCCCGACUUAAUAAUAUAAGAUUUUGACUACUACCCCCAUCAAUCACCCUACUUCUAACA
AGAAGUAUAGUUGAAAGAGGAGCAGGAACAGGAUGAACAGUAUAUCCUCCUUUAGCAGGAGCUAUUGCACAUUCGGGAGGAUCUGUAGACCUAACUAUUUUUUCUUUACACUUAGCAGGAGUAUCCUCAAUUCU
AGGAGCAAUUAACUUCAUUAGAACAACAAUUAAUAUAAAAACACCAGGAAUAAAAUUAGAUCAAAUACCUUUAUUUGUAUGAGCCGUAGUAAUUACAGCACUACUACUUCUUCUUUCACUACCCGUUCUUGCCG

GAGCAAUUACAAUAUUAUUAACAGAUCGUAAUAUUAAUACAUCAUUCUUCGAUCCGGCAGGAGGAGGN--
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306960177_Euphaea_formosa
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AGCUCACGCAUUUGUAAUAAUUUUCUUCAUGGUCAUACCUAUUAUAAUUGGAGGAUUUGGAAAUUGACUAGUCCCUUUAAUAUUAGGAGCUCCAGACAUGGCAUUCCCACGAUUGAAUAAUAUAAGAUUCUGAU
UAUUACCUCCAUCAAUUACCCUUCUUCUAACUAGAAGAAUGGUAGAAAGUGGAGCCGGAACAGGAUGGACAGUUUACCCCCCACUAGCAGGAGCUAUUGCACAUGCAGGAGGAUCCGUAGACUUAACCAUCUUU
UCUUUACAUCUAGCCGGUGUUCCAUCAAUUUUAGGAGCAAUUAACUUUAUUAGAACAACAAUUAAUAUAAAGACCCCAGGAAUAAAAAUAGAUCAAAUACCAUUAUUUGUAUGAGCUGUAGUAAUCACAGCCCU
UCUCCUACUCUUAUCAUUACCAGUACUUGCAGGAGCAAUUACAAUACUAUUAACAGAUCGAAACAUUAAUACCUCCUUCUUUGAUCCAGCCGGGGGGGGUGACCCUAUCCUAUAUCAACAUUUAUUUUGAUUUU
UUGGACACCCUGAAGUUUAUAUUUUAAUUUUACCUGGGUUUGGAAUAAUUUCUCACAUUAUUGCCCAAGAAAGAGGAAAAAAGGAAACAUUCGGAGUAUUAGGAAUAAUUUAUGCAAUAAUUGCAAUUGGGAUU
UUAGGAUUCGUAGUAUGAGCCCAUCACAUAUUCACGGUAGGAAUGGAUGUAGAUACACGAGCAUACUUUACAUCAGCAACAAUAGUUAUUGCUGUACCAACAGGUAUUAAAAUUUUCAGUUGACUAGCAACCUU
ACAUGGAACACAGUUAAGAUACAGACCUUCACUACUUUGAGCUCUAGGUUUUGUUUUCCUGUUUACAGUAGGUGGAUUAACAGGAGUAGUACUAGCAAAUUCAUCACUUGACAUUGCUAUACACGAUACCUACU
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Anisophaea_decorata_________
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Anisopleura_sp_A____________
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Disparocypha_biedermanni____
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Libellago_semiopaca_657_____
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Heliocypha_biseriata_650____
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KC912304_Platycypha_caligata_Pc9   ---
AAUUCGAGUUGAAUUAGGACAGCCUGGAAGACUAAUUGGUGAUGAUCAAAUUUAUAAUGUAGUAGUUACAGCACAUGCCUUCAUUAUAAUUUUCUUUAUAGUAAUACCAAUUAUAAUUGGUGGAUUUGGAAAUU
GAUUAGUACCAUUAAUACUAGGAGCACCAGAUAUAGCAUUCCCACGAAUAAAUAACAUAAGAUUUUGAUUAUUACCACCGUCAAUUACCCUAUUAAUAUCAAGAAGAUUGGUGGAAAGAGGGGCAGGAACUGGA
UGAACAGUUUAUCCUCCCCUAGCAGGAGUAAUUGCUCAUGCAGGAGGGUCAGUAGAUUUAACUAUCUUUUCUCUACAUUUGGCUGGGGUCUCCUCAAUUUUAGGAGCAAUUAACUUCAUCACCACAACCAUUAA
CAUGAAACCACCAGGAAUAAAAAUAGAUCAAAUACCGUUAUUUGUAUGAGCAGUUAUUAUUACUGCAGUAUUAUUACUUCUAUCCUUACCUGUAUUAGCAGGUGCUAUCACUAUAUUAUUAACAGAUCGUAAUA
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Chlorocypha_curta_CHL_______
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Sundacypha_petiolata_CHL____
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AB708424_Aristocypha_fenestrella   --

ACUAGUUCCAUUAAUACUUGGAGCACCAGAUAUAGCAUUUCCACGCAUAAACAACAUAAGAUUUUGAUUACUACCUCCCUCAUUAACCUUACUAUUGUCAAGAAGAUUAGUAGAAAGAGGAGCAGGAACAGGGU
GAACAGUCUAUCCUCCAUUAGCAGGGGCUAUUGCCCAUGCAGGAGGAUCUGUAGACCUUACAAUUUUUUCACUACACUUGGCAGGAGUUUCAUCCAUCUUGGGGGCCAUUAAUUUCAUCACAACUACUAUUAAU
AUAAAACCACCCGGAAUAAAAAUAGAUCAAUUACCUUUAUUCGUAUGAGCUGUGGUUAUUACAGCAGUAUUACUACUACUAUCCCUACCAGUUUUAGCAGGGGCUAUUACAAUACUACUAACAGAUCGUAACAU
CAAUACAUCUUUUUUUGACCCAGCAGGGGGUGGAGACCCAAUUUUAUAU---

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Rhinocypha_tincta_60351_____
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Heliocharis_amazona_________
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AF072910_Hetaerina_americana---

UCGUAUAAACAACAUAAGAUUUUGAUUAUUACCACCAUCAUUAUCACUUCUUCUACAAAGUAGAAUAGUUGAAAGAGGAGCAGGUACUGGCUGAACAGUUUAUCCACCAUUAGCUGGUAAUAUUGCCCAUGGUG
GGGCUUCUGUAGAUUUAGCUAUCUUUUCCCUACAUUUAGCAGGAAUUUCAUCAAUUUUAGGUGCAGUCAAUUUUAUUUCUACUACUAUUAAUAUAAAACCUAUUUAUAUAAAACCAGAUCAAAUUCCUUUAUUU

GUAUGAGCAGUAGUAAUUACAGCUUUACUCCUAUUACUCUCCCUACCAGUUUUGGCAGGAGCUAUUACCAUAUUAUUAACUGAUCGUAACUUAAAUACAUCCUUUUUUGACCCAGCUGGAGGAGGGGAUCCUAU
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Noguchiphaea_yoshikoae______
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Vestalis_beryllae_66252_____
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AB708338_Matrona_basilaris   --

ACUAGUACCAUUAAUAUUAGGAGCACCAGAUAUAGCUUUCCCCCGACUUAAUAAUAUAAGAUUCUGGCUUCUACCUCCUGCGUUAACUAUUCUAAUAGCAAGAAGUUUAGUAGAAAGAGGGGCUGGAACAGGUU
GAACUGUCUAUCCACCUCUAGCUAGAGGUGUAGGACAUGCAGGAGGGUCAGUGGACCUGACAAUUUUCUCCUUACACCUAGCAGGUGUAUCAUCAAUCUUAGGGGCUAUUAACUUUAUUACAACAACUAUUAAU
AUAAAAACGCCAGGAAUAAAACUAGACCAAAUACCACUUCUAGUGUGAGCAGUAGCAAUUACUGCAUUAUUAUUACUCUUAUCCCUCCCAGUAUUAGCUGGUGCUAUCACAAUAUUAUUAACAGACCGAAAUAU
AAAUACAUCGUUUUUUGACCCUGCAGGGGGAGGGGAUCCUAUUCUAUAU??
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AB708324_Atrocalopteryx_atrata   ---

AUUAGUGCCCUUAAUAUUAGGGGCCCCAGAUAUGGCUUUCCCACGAUUAAAUAACAUAAGAUUUUGACUAUUACCUCCCGCGCUAACUAUUCUAAUAGCAAGAAGUUUAGUAGAAAGAGGGGCUGGCACAGGUU
GAACAGUUUACCCCCCACUAGCUAGUGGGGUAGGACAUGCAGGAGCAUCCGUAGACCUAACGAUUUUUUCCCUUCACCUAGCAGGGGUAUCCUCAAUUUUAGGGGCUAUCAACUUUAUCACAACAACUAUUAAU
AUAAAAACACCAGGUAUAAAACUAGAUCAAAUACCCUUGCUAGUAUGAGCAGUAGUAAUCACUGCAUUACUAUUACUUCUAUCUCUUCCGGUACUUGCAGGAGCCAUCACAAUACUAUUAACAGACCGUAACAU
AAAUACAUCAUUUUUCGACCCAGCGGGGGGAGGGGAUCCAAUUUUAUAC---

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Echo_modesta_6545194________
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Neurobasis_ianthinipennis___
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Sapho_orichalcea____________
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DQ411628_Calopteryx_amata_Ca---

CUGCUGUCCUUGCCAGUACUCGCUGGCGCCAUUACCAUAUUACUAACCGACCGUAAUAUAAACACGUCAUUUUUUGACCCUGCGGGGGGGGGAGACCCAAUUCUAUAUCAACACCUAUUUUGAUUCUUCGGGCA
UCCCGAAGUUUACAUUCUAAUCCUGCCCGGAUUUGGCAUAAUCUCCCAUAUUAUUGCCCAAGAAAGUGGUAAAAAAGAAACAUUUGGCGUAUUAGGAAUAAUCUAUGCAAUAAUCGCAAUUGGGCUGCUAGGAU
UUGUAGUAUGAGCACACCACAUAUUUACAGUAGGGAUAGACGUAGAUACGCGAGCAUAUUUUACUUCAGCAACAAUAGUAAUCGCUGUUCCAACAGGAAUCAAAAUUUUCAGAUGACUGGCCACAUUGCAUGGA

ACCCAAUUCACAUACUCACCAUCAUUAAUAUGUGCAUUAGGGUUUGUAUUCUUAUUCACCCUAGGUGGGCUAACAGGCGUGGUUUUAGCAAACUCAUCAAUUGAUAUUGCAAUACAUGAUACAUAUUAUGUAGU
GGCUCACUUCCAUUACGUAUUAUCAAUAGGAGCCGUAUUCGCCAUCAUAGGAGGACUGAUCCACUGAUUUCCACUAUUUACAGGAUUAACUAUAAAUAACACGAUACUAAAGGCUCAGUUUGUAGUAAUAUUUU
UGGGGGUAAACAUGACAUUUUUCCCUCAACACUUCUUAGGA---------------[711]
DQ411707_Calopteryx_splenden--

CUACUAUCUCUCCCAGUACUUGCUGGAGCUAUUACAAUACUACUAACUGACCGUAACAUAAAUACAUCAUUCUUCGACCCUGCUGGGGGUGGAGACCCAAUUCUAUACCAGCAUUUAUUCUGAUUCUUUGGUCA
CCCCGAAGUAUAUAUCCUAAUCCUGCCAGGAUUUGGAAUAAUCUCUCACAUUAUUGCACAAGAAAGAGGUAAAAAGGAAACAUUCGGAGUAUUAGGGAUAAUCUACGCAAUACUAGCAAUUGGACUAUUAGGAU
UUGUAGUAUGGGCCCACCACAUAUUUACAGUAGGAAUAGAUGUAGAUACUCGAGCGUACUUUACCUCAGCCACAAUAGUAAUUGCUGUUCCCACAGGAAUUAAAAUCUUCAGAUGAUUAGCUACAUUACACGGC
ACCCAAUUCACAUAUUCUCCAUCACUAAUAUGAGCAUUAGGGUUCGUGUUUCUAUUCACCGUUGGGGGACUAACAGGAGUAGUUUUAGCAAAUUCAUCAAUUGAUAUCGCUAUACAUGACACAUACUAUGUAGU
AGCACACUUCCACUAUGUAUUAUCAAUAGGAGCAGUAUUUGCCAUUAUAGGAGGAUUAAUUCAUUGGUUUCCUUUAUUCACAGGAGUAACUAUAAAUAAUACAUUACUAAAGGCACAAUUUAUCGUUAUAUUUG
UAGGAGUUAAUAUAACAUUUUUCCCCCAGCAUUUCUUAGGA---------------[711]
JN419427_DQ411625_C_aequabil-----
GACACUAUAUCUACUAUUUGGAGCUUGAGCAGGAAUAGUAGGAACAGCCCUAAGAAUAUUAAUCCGCGUAGAACUUGGUCAGCCAGGGUCACUAAUUGGAGAUGACCAAAUCUAUAACGUAGUCGUUACAGCAC
ACGCUUUUGUUAUAAUUUUUUUUAUAGUAAUACCAAUUAUAAUCGGUGGAUUUGGGAACUGAUUAGUGCCCUUGAUACUAGGGGCCCCUGAUAUAGCUUUCCCACGACUCAAUAACAUGAGAUUUUGAUUGCUA
CCCCCCGCCCUAACUCUGCUUCUAGCAAGAAGAUUAGUA--

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CUGCUGUCCUUGCCAGUACUCGCUGGCGCCAUUACCAUAUUACUAACCGACCGUAAUAUAAACACGUCAUUUUUUGACCCUGCGGGGGGGGGAGACCCAAUUCUAUAUCAACACCUAUUUUGAUUCUUUGGGCA
UCCCGAAGUUUACAUUCUAAUCCUGCCCGGAUUUGGCAUAAUCUCCCAUAUUAUUGCCCAAGAAAGUGGUAAAAAAGAAACAUUUGGCGUAUUAGGAAUAAUCUAUGCAAUAAUCGCAAUUGGGCUGCUAGGAU
UUGUAGUAUGAGCACACCACAUAUUUACAGUAGGGAUAGACGUAGAUACGCGAGCAUAUUUUACUUCAGCAACAAUAGUAAUCGCUGUUCCAACAGGAAUCAAAAUUUUCAGAUGACUGGCCACAUUGCAUGGG
ACCCAAUUCACAUACUCACCAUCAUUAAUAUGGGCAUUAGGGUUUGUAUUUUUAUUCACCGUAGGUGGCCUAACAGGAGUGGUUUUAGCAAACUCAUCAAUUGAUAUUGCAAUACACGAUACAUAUUAUGUAGU
GGCUCACUUCCAUUACGUAUUAUCAAUAGGAGCCGUAUUCGCCAUCAUAGGCGGACUGAUCCACUGAUUUCCACUAUUUACAGGAUUAACUAUAAAUAACACGAUACUAAAGGCUCAGUUUGUAGUAAUAUUUU
UGGGGGUAAACAUGACAUUUUUCCCUCAACACUUCUUAGGA---------------[711]
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Episynlestes_albicauda_61___
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Megalestes_micans____________
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Megalestes_kurahashii
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Orolestes_octomaculatus_____
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Austrolestes_annulosus_61___
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AB708320_Sympecma_paedisca   ---------------------------------------------------------------------------------------------------------
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AUUAGUUCCUUUAAUAUUAGGAGCACCAGAUAUGGCAUUCCCACGGCUUAAUAAUAUAAGAUUUUGGCUGCUUCCACCAUCAUUAACACUUUUAUUAGCAAGAAGCCUAGUAGAAAGAGGUGCAGGAACAGGGU
GAACAGUUUAUCCACCUCUGGCAGGAGCAAUUGCACAUGCAGGUGCAUCCGUAGAUUUGACAAUUUUUUCAUUACACUUGGCUGGGGUAUCCUCAAUUCUAGGUGCAAUUAAUUUUAUUACAACUACAAUUAAU
AUAAAGUCUCCAGGUAUAAAGCUGGACCAAAUACCAUUAUUUGUGUGAGCAGUAGUAAUUACUGCUGUAUUAUUAUUACUAUCUUUACCCGUUCUCGCUGGAGCCAUUACUAUAUUAUUAACUGAUCGUAAUAU
UAAUACCUCCUUCUUUGAUCCGGCUGGGGGAGGGGAUCCAAUUCUUUAC?????????????????????????????????????????????????????????????????????????????????????
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HQ830314_Sympecma_fusca      ---------------------------------------------------------------------------------------------------------
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AUUUCACACAUUAUUGCCCAAGAAAGAGGUAAAAAGGAAACUUUCGGGUUACUAGGAAUAAUUUAUGCUAUAAUGGCUAUUGGAUUAUUGGGAUUUGUAGUAUGAGCUCAUCACAUGUUUACAGUAGGAAUAGA
UGUAGAUACACGAGCAUACUUUACAUCAGCUACAAUAGUAAUUGCCGUUCCAACUGGGAUCAAAAUUUUUAGUUGAUUAGCUACAUUACAUGGGACUCAAAUAAAUUAUAGACCUUCAUUAUUAUGAGCCCUAG
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GAUUUGUUUUCCUUUUCACAAUUGGGGAUUAACUGGAGUUGUUUUAGCAAACUCAUCAAUUGAUAUUGCUAUACAUGACACUUACUAUGUAGUUGCACACUUUCACUACGUAUUAUCUAUAGGAGCAGUAUUU
GCAAUUAUAGGAGGCCUAGUGCAUUGGUUCCCUUUAUUCACAGGAACAACUAUAAAUAACCGACUAUUAAAGGCACAAUUUGCAAUUAUGUUUUUAGGUGUAAAUUUAACAUUCUUCCCUCAACAUUUUUUAGG
GUUAGCCGGAAUACCU
AB708297_Austrolestes_analis   ---

ACUAGUCCCCUUGAUAUUAGGAGCACCAGAUAUGGCAUUCCCACGUCUUAAUAAUAUAAGAUUUUGGCUGCUACCACCCUCAUUGACAUUAUUAUUAGCAAGAAGCCUAGUAGAAAGAGGGGCAGGAACAGGGU
GAACAGUUUACCCCCCACUGGCUGGAGCAAUUGCCCAUGCGGGAGCGUCAGUAGACCUUACAAUUUUUUCACUGCAUCUAGCCGGGGUCUCGUCAAUUCUAGGGGCUAUUAAUUUCAUUACAACAACUAUUAAC
AUAAAGGCCCCAGGAAUAAAGCUUGAUCAAAUGCCUUUAUUUGUGUGAGCAGUGGUAAUUACAGCAGUGCUAUUAUUAUUAUCCCUACCAGUACUAGCAGGGGCCAUCACUAUGCUAUUGACUGACCGUAAUAU
UAAUACCUCCUUCUUUGACCCGGCUGGGGGAGGGGAUCCAAUUCUAUAU---

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AB708300_Indolestes_peregrin---

ACUAGUACCCUUAAUGCUGGGAGCACCAGAUAUGGCGUUCCCACGUCUUAACAAUAUAAGAUUUUGGCUGCUACCACCAUCAUUAACACUUUUAUUAGCAAGAAGCCUAGUAGAAAGAGGAGCAGGUACAGGAU
GAACUGUAUAUCCGCCCUUGGCAGGUGCAAUUGCACAUGCUGGGGCGUCAGUAGACCUAACAAUUUUCUCAUUACACCUGGCAGGAGUAUCAUCCAUUUUAGGAGCCAUCAAUUUUAUUACAACAACUAUUAAU
AUAAAGGCCCCAGGAAUAAAGCUGGACCAAAUACCACUGUUUGUAUGGGCGGUAGUUAUUACCGCAGUAUUACUACUAUUAUCAUUGCCGGUGCUAGCAGGGGCCAUUACUAUGCUAUUAACCGAUCGUAAUAU
UAAUACCUCCUUCUUUGAUCCGGCUGGCGGAGGGGAUCCAAUUCUAUAC???
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Indolestes_cyaneus_DIC   ---

ACUAGUUCCCCUAAUAUUAGGAGCACCAGAUAUGGCAUUCCCACGUCUUAAUAAUAUAAGAUUUUGGCUGCUACCACCAUCAUUAACACUUCUGUUAGCAAGAAGUCUAGUAGAAAGAGGAGCAGGUACAGGAU
GAACGGUAUAUCCUCCACUAGCAGGAGCAAUUGCUCAUGCAGGAGCAUCAGUAGACCUCACAAUUUUUUCAUUACACUUAGCCGGGGUAUCUUCCAUUUUAGGGGCCAUUAACUUUAUUACAACAACCAUUAAU
AUAAAGGCACCCGGAAUAAAAUUAGACCAAAUACCACUAUUUGUAUGAGCAGUAGUUAUUACCGCAGUAUUACUAUUGUUGUCCCUACCUGUAUUAGCAGGGGCUAUUACUAUACUAUUAACUGAUCGUAAUAU
UAACACCUCCUUCUUUGAUCCGGCUGGGGGAGGGGAUCCAAUUUUAUAU???
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HQ830313_Chalcolestes_virid---

UUUGGUAUAAUUUCACAUAUUAUUGCGCAAGAGAGAGGAAAAAAGGAGACAUUUGGUCUAUUAGGAAUAAUUUAUGCGAUAAUAGCUAUUGGCCUUCUUGGAUUCGUAGUGUGAGCACACCAUAUGUUUACCGU
AGGGAUGGAUGUUGAUACACGAGCAUACUUCACUUCAGCCACAAUAGUAAUCGCCGUACCUACUGGAAUUAAAAUUUUUAGCUGGUUAGCCACGCUACACGGAACACAGAUAAAUUACAGCCCAUCUUUAUUAU
GAGCAUUAGGAUUUGUAUUCCUUUUUACAAUUGGUGGUUUAACAGGAGUAGUAUUAGCCAACUCAUCUAUUGAUAUCGCCAUACAUGACACUUAUUAUGUAGUAGCACACUUCCACUAUGUAUUAUCAAUAGGA
GCAGUAUUUGCAAUUAUAGGUGGGCUAGUACACUGAUUUCCAUUGUUUACAGGGACAACUAUAAAUAGAAAGCUUCUAAAGGCACAAUUUACAAUUAUAUUUAUUGGAGUAAACCUAACAUUUUUCCCUCAACA
CUUCUUAGGAUUAGCUGGUAUACCA
Archilestes_grandis_645_____
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Lestes_rectangularis_OLR____
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AB708562_Epiophlebia_superst--

AUUAGUGCCCCUAAUAUUAGGGGCUCCUGAUAUGGCUUUUCCUCGACUAAAUAAUAUAAGAUUUUGAUUACUACCUCCAUCUCUAACACUAUUAUUAUCAAGAAGUAUAGUAGAAAGAGGAGCAGGAACAGGAU

GAACUGUUUAUCCGCCACUUGCAGGAGCCAUUGCUCAUGCAGGAGCAUCUGUAGAUCUAACCAUUUUUUCCUUACACCUAGCAGGUGUAUCUUCUAUUCUUGGGGCAAUUAAUUUUAUUACAACAACAAUUAAU
AUAAAGUCCCCGGGAAUGAAAUUAGACCAAAUACCAUUAUUUGUGUGAGCUGUAGCAAUUACUGCAGUAUUACUACUAUUAUCCCUACCAGUAUUGGCAGGAGCAAUCACAAUAUUAUUAACAGACCGAAAUAU
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Austropetalia_victoria______
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Hypopetalia_pestilens________
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Phyllopetalia_apollo_684____
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Eurypetalia_altarensis______
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Ophiopetalia_diana__________
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Austroaeschna_parvistigma___
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Uelephlebia_tillyardi_______
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Boyeria_vinosa_OBV__________
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Boyeria_irene_FN356042______
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KC912236_Brachytron_pratense_Brp   ---
AAUUCGAAUUGAAUUAGGACAACCAGGAUCUCUAAUUGGAGAUGAUCAAAUUUAUAAUGUAAUUGUAACAGCACAUGCAUUUGUUAUAAUUUUCUUUAUAGUUAUACCCAUUAUAAUUGGAGGAUUUGGAAAUU
GAUUAGUACCAUUAAUAUUAGGAGCACCUGAUAUAGCUUUUCCACGAUUAAAUAAUAUAAGAUUUUGAUUAUUACCACCAUCACUAACAUUACUAUUAGCUGGAAGAAUGGUAGAAAGAGGAGCAGGAACAGGU
UGAACUGUUUAUCCACCUCUUGCUGGUGCAAUUGCUCAUGCAGGAGCAUCAGUAGAUUUAACUAUUUUUUCAUUACAUCUAGCCGGAGUAUCAUCUAUUCUAGGAGCCAUUAAUUUUAUUACAACUACUAUUAA
UAUAAAGUCUCCAGGAAUAAAAAUAGAUCAAAUACCUUUAUUUGUAUGAGCUGUUGUAAUUACAGCAGUACUUUUACUUUUAUCACUUCCUGUUCUUGCUGGUGCAAUUACAAUAUUAUUAACUGAUCGAAAUA
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Epiaeschna_heros____________
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DQ008197_Caliaeschna_micro__
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DQ008199_Anaciaeschna_iso___
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GQ118262_Oplonaeschna_sp____
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Aeshna_canadensis_OAC_______
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EU055147_Rhionaeschna_mult__
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KC912202_Aeshna_cyanea ---
AAUUCGAAUUGAAUUAGGACAACCAGGAUCAUUAAUUGGAGAUGAUCAAAUUUAUAAUGUAAUUGUAACAGCGCAUGCUUUUGUUAUAAUUUUCUUUAUAGUAAUACCUAUUAUAAUUGGAGGAUUUGGAAAUU
GGUUAGUACCACUAAUAUUAGGAGCUCCUGAUAUAGCUUUCCCACGUUUAAAUAAUAUAAGAUUUUGAUUAUUACCUCCAUCAUUAACACUAUUAUUAGCAGGAAGUAUAGUUGAAAGAGGAGCUGGAACAGGA
UGAACCGUUUAUCCUCCUCUGGCUGGUGCUAUUGCUCAUGCAGGUGCAUCAGUAGAUUUAACUAUUUUUUCCUUACAUUUAGCUGGAGUAUCUUCAAUUUUAGGUGCUAUUAAUUUUAUUACUACAACAAUUAA
UAUGAAAUCACCAGGAAUAAAAAUAGACCAAAUACCUUUAUUUGUAUGAGCUGUUGUAAUUACAGCCGUACUUCUAUUACUUUCUUUACCUGUUUUAGCCGGUGCAAUUACUAUAUUAUUAACAGACCGAAAUA
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KC912203_Aeshna_grandis   ---
AAUUCGAAUUGAAUUAGGACAACCUGGAUCAUUAAUUGGAGAUGAUCAAAUUUAUAAUGUAAUUGUAACAGCACAUGCUUUUGUUAUAAUUUUCUUUAUAGUUAUACCUAUUAUAAUUGGAGGAUUCGGAAAUU
GGUUAGUACCACUAAUAUUAGGAGCUCCUGAUAUAGCUUUCCCACGUUUGAAUAAUAUAAGAUUUUGAUUACUACCUCCUUCACUAACAUUAUUAUUAGCAGGAAGUAUAGUUGAAAGAGGAGCCGGUACAGGU
UGAACUGUAUAUCCACCCUUGGCUGGUGCAAUUGCUCACGCAGGAGCAUCAGUAGAUUUAACUAUUUUCUCUUUACACCUGGCUGGAGUAUCUUCAAUUUUAGGUGCUAUUAAUUUUAUUACUACAACAAUUAA
UAUAAAGUCACCAGGAAUAAAGAUAGAUCAAAUACCUCUUUUUGUGUGAGCCGUUGUAAUUACAGCUGUACUUUUAUUAUUAUCUUUACCAGUUCUUGCUGGAGCAAUUACCAUAUUACUAACAGACCGAAAUA
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AB708623_Gynacantha_japonica   ---

AUUAGUACCUUUAAUACUAGGAGCUCCAGAUAUAGCUUUCCCUCGAUUGAAUAAUAUAAGAUUUUGACUAUUACCUCCUUCUCUAACCCUAUUAUUAGCAGGAAGUAUAGUUGAAAGUGGUGCUGGGACAGGUU
GAACAGUUUAUCCUCCUCUUGCUGGAGCUAUUGCUCAUGCCGGAGCAUCGGUAGAUUUAACUAUUUUUUCUUUACAUCUUGCCGGGGUAUCUUCAAUUUUAGGAGCAAUUAAUUUUAUUACUACAACAAUUAAU
AUAAAGUCUCCAGGUAUAAAAUUAGAUCAAAUACCUUUAUUUGUUUGAGCAGUUGUAAUUACAGCUGUACUUUUAUUACUUUCAUUACCCGUACUUGCUGGAGCUAUUACAAUACUACUAACAGACCGUAAUAU
UAAUACAUCAUUUUUUGAUCCUGCUGGAGGAGGAGAUCCAAUUUUAUAU---

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Austrogynacantha_heteroge___
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FN356093_Hemianax_ephippig__
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??? AY555548_Anax_junius   ------
ACACUUUAUUUUUUAUUUGGAGCAUGAUCAGGAAUGGUAGGAACUGCUCUAAGAGUCCUAAUUCGAAUUGAAUUAGGACAACCAGGAUCAUUAAUUGGAGAUGAUCAAAUUUAUAAUGUAAUUGUAACAGCUCA
UGCUUUUGUUAUAAUUUUCUUUAUAGUAAUACCUAUUAUAAUUGGAGGAUUUGGAAAUUGAUUAGUGCCACUAAUAUUAGGAGCACCUGAUAUAGCUUUCCCACGAUUAAAUAAUAUAAGAUUUUGAUUAUUAC
CACCUUCUCUUACACUUUUAUUAGCAGGAAGUAUAGUUGAAAGAGGUGCAGGAACAGGAUGAACAGUUUAUCCUCCUCUUGCUGGUGCUAUUGCUCAUGCAGGAGCAUCUGUAGAUUUAACUAUUUUUUCACUU
CACUUAGCUGGUGUAUCUUCAAUUUUAGGUGCUAUUAAUUUUAUUACUACAACAAUUAAUAUAAAGUCACCAGGGAUAAAGAUAGAUCAAAUACCAUUAUUUGUAUGAGCCGUAGUAAUUACAGCUGUAUUAUU
AUUAUUAUCUCUUCCUGUUCUUGCUGGUGCAAUUACAAUAUUAUUAACAGAUCGAAAUAUUAAUACAUCAUUCUUUGAUCCUGCAGGAGGGGGUGAUCCAAUUCUUUAUCAACAUUUAUUU------------

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KC912228_Anax_imperator   ---
AAUUCGAAUUGAAUUAGGACAACCAGGAUCAUUAAUUGGAGAUGAUCAAAUUUAUAAUGUAAUUGUAACAGCUCAUGCUUUUGUUAUAAUUUUCUUUAUAGUAAUACCUAUUAUAAUUGGAGGAUUUGGAAAUU
GAUUAGUGCCACUAAUAUUAGGAGCACCUGAUAUAGCUUUCCCACGAUUAAAUAAUAUAAGAUUUUGAUUAUUACCACCUUCUCUAACCCUUUUAUUAGCAGGAAGGAUAGUUGAAAGAGGUGCAGGAACAGGA
UGAACAGUUUAUCCUCCUCUUGCUGGUGCAAUUGCCCAUGCAGGAGCAUCUGUAGAUUUAACUAUUUUUUCUCUUCAUUUGGCUGGAGUAUCUUCAAUUUUAGGUGCUAUUAAUUUUAUUACUACAACAAUUAA
UAUAAAGUCACCAGGAAUAAAGAUAGAUCAAAUACCACUAUUUGUAUGAGCUGUAGUAAUUACAGCCGUACUAUUAUUAUUAUCUCUUCCUGUUCUUGCUGGUGCAAUUACAAUGUUAUUAACAGAUCGAAAUA
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Unaligned_Gomphids
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Sinogomphidia_kruegeri______
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Ictinogomphus_australis_6___
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Ictinogomphus_sp____________
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FN356120_Lindenia_tetraph___
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Phyllogomphoides_stigmatus__
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Progomphus_obscurus_________
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Progomphus_borealis_633_____
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?? JN419845_4_Hagenius_brevistylus   -----
AACUCUAUACCUUCUGUUUGGAGCAUGAGCUGGAAUGGUUGGGACUGCAUUAAGUAUAUUAAUUCGAAUCGAAUUAGGACAACCUGGAUCCUUAAUUGGAGAUGAUCAAAUCUAUAAUGUUAUUGUCACUGCUC
ACGCAUUUGUUAUGAUUUUUUUUAUAGUAAUGCCUAUUAUAAUCGGAGGAUUUGGUAAUUGACUGGUGCCCUUAAUGUUAGGAGCUCCUGAUAUGGCAUUUCCACGCCUUAAUAAUAUAAGAUUUUGACUUCUA
CCUCCUUCAUUGACAUUACUAUUAGCAAGAAGUAUAGUYGAAAGAGGGGCAGGAACUGGAUGAAUGAUCUAUCCACCCCUUGCAGAGGCUAUCACUCAUGCAGGAGCCUCAGUUGAUUUAAUAAUCUUUUCCUU
ACACUUAGCUGGUGUGUCUUCAAUUCUAGGGGCAAUUAAUUUUAUUACCACAACCAUUAAUUUAAAAUUCCCCAGAAUAAAUUUAGAUCAAAUACCAUUAUUUGUAUGAGCCAUAGUCAUUAGUGCCAUCCUUC
UCUUGUUAUCACUUCCUGUGCUUGCAGGGGCCAUUACAAUGUUACUAACCGACCGAAAUAUUAACACUUCAUUCUUUGAUCCUGCUGGAGGGGGUGACCCUAUUCUCUAUCAUCACUUAUUU-----------
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Lanthus_vernalis____________
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AB708698_D_nanus_AY841189   ---

GCUAGUACCUCUAAUACUAGGUGCUCCUGAUAUGGCCUUUCCACGUCUAAACAAUAUAAGAUUUUGACUUCUGCCUCCUUCACUAACUCUUCUACUUGCUAGAAGUAUAGUAGAAAGAGGAGCAGGAACAGGAU
GAACUGUAUACCCACCUCUUGCAGGAGCAAUCGCUCACGCCGGAGCAUCUGUAGACUUAACCAUCUUUUCCUUACACCUAGCAGGUGUUUCAUCAAUUUUAGGAGCAAUCAAUUUUAUUACAACAACUAUUAAC
AUAAAAUCUCCCGGUAUGAAAUUAGAUCAAAUACCUUUAUUUGUAUGAGCAGUAAUUAUUACAGCUAUUCUCCUUUUACUUUCACUACCGGUUCUUGCAGGAGCAAUUACAAUAUUAUUAACUGACCGUAAUAU
CAAUACAUCCUUCUUUGACCCUGCGGGUGGGGGUGAUCCAAUUCUCUAU---

UGCGAUAGUGGCAAUUGGAGUUCUUGGAUUUGUAGUAUGAGCACACCAUAUGUUCACUGUAGGUAUGGAUGUAGAUACACGAGCUUAUUUCACUUCUGCAACCAUAGUAAUUGCGGUUCCAACAGGAAUUAAAA
UUUUUAGUUGACUUGCAACCUUACAUGGAGCACAGAUGUCCUAUAGUCCCUCACUUCUAUGAGCUCUAGGGUUUGUAUUUCUAUUUACUAUUGGAGGACUAACAGGAGUAAUCCUAGCCAAUUCUUCUAUUGAU
AUUUCCAUACAUGAUACAUACUAUGUAGUGGCCCACUUCCACUACGUUUUAUCAAUAGGAGCUGUAUUCGCAAUUAUAGGAGGCUUAGUUCACUGAUUUCCUCUAUUUUCUGGGGUUACGUUAAACAACUACCU
UUUAAAGGUUCAAUUUGUAGUCAUAUUUACAGGAGUAAAUCUAACAUUCUUCCCUCAACACUUUUUAGGACUGAGAGGAAUACCC
Neogomphus_edenticulatus____
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Armagomphus_armiger_613_____
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Hemigomphus_comitans_AHC____
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FJ596622_Hemigomphus_heter__
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Hemigomphus_magela_5935_____
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Trigomphus_ogumai_AB708794   --

AUUAGUUCCUUUAAUAUUAGGAGCACCAGAUAUAGCUUUCCCUCGAUUAAAUAAUAUAAGAUUCUGAUUAUUACCUCCAUCAUUAACACUUUUAUUAGCAAGUAGUAUAGUAGAAAGAGGAGCAGGUACUGGAU
GAACAGUAUACCCUCCUUUAGCAGGAGCUAUUGCACAUGCAGGAGCAUCUGUAGAUCUAACCAUCUUCUCAUUACACUUGGCUGGAGUAUCUUCAAUUUUAGGGGCUAUUAAUUUUAUUACCACAACAAUUAAU
AUAAAGUCCCCAGGAAUAAAAUUAGAUCAAAUACCUUUAUUUGUUUGAGCAGUUGUUAUUACUGCAGUAUUAUUACUUCUAUCAUUACCAGUUCUUGCUGGAGCAAUUACUAUACUAUUAACAGAUCGAAAUAU
UAAUACAUCCUUUUUUGAUCCAGCUGGAGGGGGAGAUCCUAUUUUAUAU--

JN420298_S_albistylus   -------
CACUUUACCUUCUAUUCGGUGCGUGAGCUGGAAUAGUAGGGACAGGAUUAAGAAUGCUAAUUCGAGUAGAACUGGGCCAACCAGGAUCACUAAUUGGUGAUGAUCAAAUUUAUAAUGUAAUUGAUACUGCUCAC

GCAUUUGUAAUAAUUUUCUUUAUAGUAAUACCAAUUAUAAUUGGUGGGUUUGGUAACUGGCUAGUCCCCUUAAUACUAAGAGCUCCAGAUAUGGCGUUUCCACGACUCAAUAAUAUAAGAUUUUGACUACUACC
UCCCUCACUAACCUUGCUUUUAGCAAGAAGCUUAGUAGAAAGAGGGGCAGGGACAGGAUGAACAGUGUACCAUCCUCUGGCUGGAGUAAUUGCCCAUGCUGGGGCAUCAGUAGAUCUAACUAUUUUCUCCCUCC
AUCUAGCAGGUGUAUCGUCAAUCCUAGGAGCAAUCAACUUUAUUACAACAACAAUUAAUAUAAAAUCCCCCGGAAUAAAACUAGAUCAAAUACCCUUAUUUGUAUGGGCAGUAGUAAUCACCGCUAUUCUAUUA
CUUUUAUCCCUCCCAGUCCUGGCAGGGGCCAUCACUAUACUAUUAACUGACCGAAAUAUUAACACCUCAUUUCUGGACCCGGCAGGAGGGGGAGACCCAAUCCUAUCAGCAUUU--------------------
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 AB708758_Stylogomphus_shiro---

ACUGGUGCCACUGAUGUUAGGAGCCCCUGAUAUGGCAUUCCCACGUCUAAACAAUAUAAGAUUUUGACUGUUACCCCCUUCAUUAACACUUCUUCUAGCAAGAAGAAUAGUAGAAAGAGGGGCAGGUACAGGAU
GAACGGUCUACCCUCCUCUGGCCGGAGUAAUUGCUCACGCAGGAGCAUCAGUAGAUUUAACCAUCUUCUCUUUACACCUCGCAGGAGUAUCGUCAAUUCUAGGAGCAAUUAAUUUUAUUACUACCACUAUUAAU
AUAAAGUCGCCUGGGAUGAAAUUAGACCAGAUACCCUUAUUCGUAUGAGCAGUGGUAAUCACAGCCAUCUUACUUCUACUAUCACUUCCCGUAUUAGCAGGAGCCAUCACCAUGUUAUUAACCGAUCGAAAUAU
UAAUACCUCAUUCUUUGAUCCGGCGGGGGGAGGAGAUCCAAUUUUGUAU???
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Davidioides_martini_648_____
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Burmagomphus_collaris_______
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Cyclogomphus_heterostylus___
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Anisogomphus_pinr_FN356037__
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Dromogomphus_spinosus_______
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Arigomphus_villosipes_______
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Arigomphus_cornutus
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FJ712319_Stylurus_intricat__
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Stylurus_amnicola___________
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AB708768_Stylurus_nagoyanus---

ACUUGUGCCUUUAAUAUUAGGAGCUCCUGAUAUGGCUUUCCCUCGUCUUAAUAAUAUAAGAUUCUGACUUUUACCUCCUUCAUUAACACUUUUAUUAGCUAGAAGAUUAGUAGAAAGAGGGGCUGGAACAGGAU
GAACUGUUUAUCCUCCUCUUGCUGGAGCAAUCGCUCAUGCAGGAGCAUCAGUUGAUUUAACUAUUUUUUCAUUACAUCUUGCUGGAGUAUCCUCCAUUUUAGGUGCCAUUAAUUUCAUCACCACAACCAUUAAU
AUAAAGUCACCAGGUAUAAAGUUAGAUCAAAUACCUUUAUUUGUUUGAGCUGUAGUUAUUACUGCAGUACUACUUUUAUUAUCUUUACCUGUACUAGCUGGAGCUAUUACUAUAUUAUUAACUGAUCGUAAUAU
UAAUACAUCCUUCUUUGAUCCGGCAGGAGGGGGAGACCCAAUUUUAUAU???
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DQ008184_Gomphus_externus___
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Asiagomphus_hainanensis_____
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??? JN419842_3_Gomphus_exilis -------------------------------
GGGCGGGANUAGUAGGAACUGCUUUAAGUAUAUUAAUUCGAAUUGAAUUAGGACAACCAGGAUCAUUAAUUGGAGAUGAUCAAAUUUAUAAUGUUAUUGUAACUGCACAUGCAUUCGUGAUAAUUUUUUUCAUA

GUUAUACCUAUUAUAAUUGGAGGAUUUGGAAAUUGACUAGUUCCUCUUAUACUAGGAGCACCUGAUAUAGCUUUCCCGCGCCUUAACAAUAUAAGAUUCUGACUUUUACCUCCAUCCCUAACACUUUUAUUAGC
CAGAAGUCUAGUAGAAAGAGGAGCAGGAACAGGAUGAACAGUAUACCCUCCUCUUGCAGGAGCAAUUGCACAUGCAGGAGCAUCAGUUGAUUUAACUAUCUUCUCUCUUCAUCUUGCAGGAGUUUCAUCAAUUC
UAGGAGCAAUUAACUUUAUUACUACAACUAUNAAUAUAAAGUCACCAGGAAUGAAAUUAGACCAAAUACCUCUAUUUGUAUGGGCUGUAGUUAUUACUGCAGUUUUACUUUUAUUAUCUUUACCAGUAUUAGCA
GGAGCCAUUACCAUAUUAUUAACAGAUCGUAAUAUUAAUACCUCAUUCUUUGACCCUGCCGGAGGGGGAGACCCCAUUCUAUAUCAACACCUAUUC--------------------------------------
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Gomphus_Phanogomphus_grasl__
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?? JN419834_Gomphus_adelphus   --------
CUUAUAUCUACUAUUUGGUGCCUGAGCAGGAAUAGUAGGAACCGCCUUAAGUAUACUAAUUCGAAUUGAAUUAGGUCAACCAGGAUCAUUAAUUGGAGAUGAUCAAAUUUAUAAUGUAAUUGUAACUGCCCACG
CAUUUGUAAUAAUUUUCUUCAUAGUUAUACCCAUUAUAAUUGGUGGUUUCGGAAAUUGACUAGUGCCUCUUAUAUUAGGAGCACCUGAUAUAGCCUUCCCUCGUCUCAAUAACAUAAGUUUCUGAUUACUACCU
CCAUCAUUAACACUUCUAUUAGCUAGAAGUAUAGUA--

FN356091_Gomphus_vulgatis___
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FN356132_Megalogomphus_sp___
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Onychogomphus_uncatus_______
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FN356138_Onychogomphus_for__
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A_FJ712322_Onychogomphus_s__
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?? JN420084_Ophiogomphus_carolus   -----
AACCUUAUACUUGUUAUUUGGAGCCUGAGCAGGAAUAGUUGGAACAGCUUUAAGAAUAUUAAUUCGAAUUGAAUUAGGACAACCAGGAUCAUUAAUUGGAGAUGAUCAAAUUUAUAAUGUCAUUGUAACUGCUC
AUGCAUUUGUAAUAAUUUUCUUUAUAGUUAUACCUAUUAUAAUUGGAGGAUUUGGAAAUUGAUUAGUACCUUUAAUAUUAGGAGCACCAGAUAUAGCAUUCCCACGACUUAAUAAUAUAAGAUUUUGAUUACUA
CCUCCCUCAUUAACUUUACUACUAGCCAGUAGUUUAGUAGAAAGAGGAGCCGGAACAGGAUGAACUGUUUACCCUCCACUUGCAGGAGCUAUUGCCCAUGCAGGAGCAUCAGUUGAUCUUACCAUUUUUUCAUU
ACACUUGGCAGGAGUAUCUUCAAUUUUAGGAGCAAUUAAUUUUAUUACUACAACAAUUAAUAUAAAGUCUCCUGGAAUAAAGCUAGAUCAAAUACCUUUAUUUGUUUGAGCUGUUGUUAUUACUGCCGUGCUAC
UUUUAUUAUCUCUACCAGUUUUAGCAGGAGCAAUUACUAUAUUAUUAACUGAUCGAAAUAUUAAUACAUCAUUCUUUGAUCCCGCUGGAGGAGGAGAUCCAAUUUUAUAUCAACAUCUAUUC------------
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FJ596618_Ophiogomphus_sev___
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FN356139_Ophiogomphus_caec__
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Leptogomphus_elegans________
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FJ596609_Leptogomphus_saut__
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Epigomphus_compactus________
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FJ712323_Microgomphus_chel__
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Heliogomphus_retroflexus____
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FN356121_Macrogomphus_para__
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Ceratogomphus_pictus _______
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Lestinogomphus_angustus_____
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Austrogomphus_guerini_______
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Austrogomphus_amphiclitus___
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Antipodogomphus_acolythus___
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Unaligned_Petalurids
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Tanypteryx_hageni_EU05517___
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FN356174_Uanypteryx_sp______
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AB708800_Tanypteryx_pryeri   ---

GUUAGUACCAUUAAUAUUAGGUGCCCCUGAUAUGGCUUUCCCUCGACUUAAUAAUAUAAGAUUUUGAUUACUUCCUCCUUCUUUAACUCUUCUUUUAGCAAGAAGUAUAGUAGAAAGAGGAGCAGGAACUGGAU
GAACUGUUUACCCACCAUUAGCAGGGGCUAUUGCUCAUGCAGGAGCAUCUGUAGAUUUAACUAUUUUUUCCUUACACUUAGCAGGAGUUUCUUCUAUUUUAGGAGCAAUUAAUUUCAUCACUACUACAAUUAAU
AUGAAAUCACCAGGAAUAAAAUUAGAUCAAAUACCCUUAUUUGUUUGGGCCGUAGUAAUUACAGCAGUAUUACUUUUAUUAUCCUUGCCAGUAUUAGCAGGGGCUAUUACUAUAUUAUUAACAGACCGAAAUAU
UAACACUUCUUUCUUUGAUCCUGCCGGGGGAGGAGAUCCAAUUCUAUAU???
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FN356173_Tachopteryx_thor___
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Phenes_raptor_AY338720______
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Phenes_centralis_OPR________
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Uropetalura_carvori_________
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Petalura_hesperia___________
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Petalura_gigantea_EU05515___
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Petalura_litolae____________
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Petalura_ingentissima_______
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Zoraena_bilineata___________
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Uaeniogaster_obliqua________
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Q329628_Kalyptogaster_errone   ---

UUUGGAAAUUGACUUGUUCCCCUUAUAUUAGGGGCUCCUGAUAUAGCUUUCCCCGUUUAAAUAAUAUAAGAUUUUGAUUAUUACCUCCUUCCUUAAUAUUACUCUUAUCUAGAAGAAUUGUAGAAAGAGGUGC
AGGAACUGGAUGAACAGUUUAUCCUCCUCUCGCUGGAGCAAUUGCUCAUGCUGGAGCUUCUGUAGAUCUAACCAUUUUUUCCCUACAUUUAGCAGGAGUUUCAUCAAUUUUAGGAGCUAUUAAUUUUAUUACCA
CAACUAUUAAUAUAAAGUCUCCUGGAAUAAAGCUAGAUCAAAUACCUUUAUUUGUUUGAGCAGUUGCUAUUACUGCCGUCUUAUUAUUAUUAUCAUUACCCGUAUUAGCCGGAGCUAUUACUAUACUAUUAACU
GAUCGAAAUAUUAAUACANCCUUUUUUGAUCCAGCUGGAGGAGGAGAUCCAAUUCUUUAUCAACAUUUAUUUUGGUUCUUUGGUCACCCUGAAAUUUACAUUCUC-----------------------------
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--------[507]JN419650_Cordulegaster_maculata   -----
AACAUUAUAUCUUUUAUUUGGAGCAUGAGCUGGUAUAGUGGGUACAGCUUUAAGUGUCCUAAUUCGUGUAGAGUUAGGUCAACCUGGAUCACUAAUUGGAGACGACCAAAUUUAUAAUGUAAUUGUUACUGCUC
ACGCCUUUGUUAUAAUUUUCUUUAUAGUUAUACCUGUUAUAAUUGGGGGAUUCGGAAAUUGACUUGUUCCCCUUAUGUUAGGAGCCCCUGAUAUAGCUUUCCCUCGUUUGAAUAACAUAAGAUUUUGAUUAUUA

CCUCCUUCUUUAAUAUUACUUCUAUCCAGAAGUAUUGUAGAAAGAGGAGCAGGAACUGGAUGAACAGUUUAUCCUCCCCUUGCCGGGGCUAUUGCCCAUGCUGGAGCUUCUGUAGAUUUAACUAUUUUUUCUCU
ACACUUAGCAGGAGUCUCAUCAAUUUUAGGGGCUAUUAAUUUUAUUACUACAACUAUUAAUAUAAAGUCCCCUGGGAUAAAGCUAGACCAAAUACCUUUAUUUGUAUGAGCAGUUGCUAUUACUGCCGUUUUAU
UAUUAUUAUCAUUACCAGUUUUAGCAGGAGCUAUUACUAUAUUAUUGACGGAUCGAAACAUUAAUACAUCCUUCUUUGAUCCAGCUGGGGGAGGUGAUCCAAUUCUUUAUCAACAUUUAUUU------------
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EU055179_Cordulegaster_dor__
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FN356072_Cordulegaster_bol__
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AB708846_Cordulegaster_picta   ---

ACUUGUCCCCCUUAUAUUAGGUGCUCCUGAUAUAGCUUUCCCUCGAUUAAAUAAUAUAAGAUUUUGAUUACUACCACCAUCUUUAAUAUUACUUCUAUCUAGAAGUAUUGUAGAAAGAGGUGCAGGAACUGGGU
GAACAGUCUAUCCUCCUCUUGCCGGAGCAAUUGCUCAUGCUGGAGCUUCCGUAGAUUUAACCAUUUUUUCUUUACAUUUAGCCGGGGUUUCAUCAAUUCUUGGUGCUAUUAAUUUUAUUACUACAACUAUUAAU
AUGAAGUCUCCUGGUAUGAAAAUAGAUCAAAUACCUUUAUUUGUGUGAGCAGUUGCUAUUACUGCUGUUUUAUUAUUAUUAUCCUUACCAGUUUUAGCAGGAGCUAUUACUAUAUUAUUAACUGACCGAAAUAU
UAAUACGUCCUUUUUUGACCCCGCUGGAGGAGGAGAUCCAAUUCUUUAU???
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AB708836_Ano_siebolEF155460   ---

ACUUGUUCCUCUCAUACUAGGGGCCCCCGAUAUAGCCUUCCCACGUUUAAAUAAUAUAAGAUUUUGAUUAUUACCUCCAUCUUUAAUAUUAUUAUUAUCUAGAAGAAUUGUUGAAAGAGGUGCAGGGACUGGAU
GAACAGUUUAUCCACCUCUUGCUGGAGCAAUUGCCCACGCAGGAGCUUCCGUAGAUUUAACUAUUUUUUCCUUACAUCUAGCGGGAGUCUCAUCAAUUCUUGGAGCUAUUAAUUUUAUUACCACAACUAUUAAU
AUGAAGUCCCCAGGAAUAAAGUUAGAUCAAAUACCUUUAUUUGUAUGAGCAGUUGCUAUUACUGCUGUUUUAUUAUUAUUAUCCUUACCUGUUCUAGCAGGAGCUAUUACAAUGCUAUUAACAGAUCGAAAUAU
CAAUACAUCAUUUUUUGACCCAGCCGGUGGGGGAGAUCCAAUUCUUUAU---

UAUAGUCCCUCAUUAUUAUGAGCAUUAGGAUUCCUUUUCCUAUUUACCAUUGGUGGUCUCACUGGAGUAGUAUUAGCUAAUUCAUCAAUUGAUAUUGCUAUACAUGAUACUUAUUAUGUAGUAGCUCAUUUUCA
UUAUGUACUAUCAAUAGGAGCAGUAUUUGCAAUUAUAGGAGGAUUAGUUCAUUGAUUUCCUUUAUUCUCAGGGGUUACAUUAAAUAAUCAUAUAUUAAAAAUUCAAUUCUCAGUAAUAUUUAUUGGAGUUAAUU
UAACAUUUUUCCCACAGCAUUUCUUAGGACUGAGUGGUAUACCA

Neopetalia_punctata_________
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Chloropetalia_soarer________
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Sinorogomphus_nasutus_______
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AB708862_Chlorogomphus_brunn---

ACUAGUCCCAUUAAUAUUAGGGGCUCCAGACAUGGCUUUCCCACGACUAAACAAUAUAAGAUUCUGACUACUACCACCAUCACUAACAUUACUAUUAGCUAGCAGUUUAGUAGAAAGAGGAGCAGGAACAGGAU
GAACCGUAUAUCCACCACUUGCUGGAGCAAUCGCUCACGCUGGGGCCUCUGUUGAUUUAACAAUUUUUUCUUUACAUUUAGCGGGAGUUUCGUCCAUUCUCGGAGCUAUUAAUUUUAUCACUACAACUAUUAAU
AUAAAAUCCCCAGGAAUAAAAAUAGAUCAAUUGCCUUUAUUUGUAUGGGCAGUAGCUAUUACAGCAGUUUUAUUACUUCUAUCUCUACCAGUACUUGCUGGAGCAAUUACAAUAUUAUUAACGGAUCGAAACAU
UAAUACUUCAUUCUUUGAUCCUGCGGGGGGGGGAGACCCAAUCCUAUAU???
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Chlorogomphus_sp
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Synthemis_eustalacta________
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Synthemis_marcrostigma_EU___
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Archaeosynthemis_leachii____
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Eusynthemis_brevistyla______
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Choristhemis_flavotermina___
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Synthemiopsis_gomphomac_____
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Gomphomacromia_chilensis____
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FJ712318_Gomphomacromia_p___
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GQ329631Syncorduliaserendipa--

GAUAUAGCAUUCCCCCGAUUAAAUAAUAUAAGAUUUUGAUUAUUACCUCCUUCCUUAACCCUUUUAUUAGCUAGAAGAAUAGUGGAAAGAGGGGCCGGAACAGGGUGAACAGUAUACCCUCCACUGGCAGGAGC
AAUUGCACAUGCAGGAGCUUCAGUAGAUUUAACUAUCUUCUCACUCCACUUGGCAGGUGUAUCCUCCAUUCUAGGGGCCAUUAAUUUUAUUACAACUGUAAUUAAUAUAAAAUCCCCUGGAAUAAAACUAGACC
AAUUACCUUUAUUUGUAUGAGCAGUAGUAAUUACUGCAGUAUUACUUCUAUUAUCUUUACCUGUACUAGCAGGUGCCAUUACCAUAUUACUUACAGAUCGUAAUAUUAAUACCUCUUUUUUGAUCCUGCUGGA
GGGGGAGACCCUAUUUUAUAUCAACACUUAUUUUGAUUUUUCGGGCAUCCAGAAGUCUACAUUCUC--
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---[468]
GQ329632_Syncordulia_venator--

GGGGGAUUUGGAAAUUGAUUAGUUCCUUUAAUACUAGGAGCUCCUGAUAUAGCAUUUCCUCGAUUAAAUAAUAUAAGAUUUUGAUUAUUACCUCCCUCCUUAACCCUUCUUCUAUCCAGUAGAAUGGUAGAAAG
AGGAGCCGGAACAGGAUGAACUGUUUAUCCUCCUUUAGCAGGAGCAAUUGCUCAUGCAGGAGCAUCAGUAGAUUUAACAAUUUUUCACUACACCUUGCAGGUGUAUCAUCAAUUCUCGGAGCAAUCAAUUUUA
UUACAACUGUGAUUAAUAUAAAAUCUCCCGGAAUAAAAAUAGACCAAAUACCUUUAUUCGUAUGAGCAGUAGUAAUUACUGCAAUAUUACUUCUUCUAUCCUUACCAGUUCUAGCAGGAGCUAUUACCAUACUC
CUCACAGACCGGAACAUUAAUACAACAUUCUUCGAUCCCGCUGGAGGGGGGGACCCAAUUUUA---
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Idionyx_imbricata_EU05518___
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GQ329627_Idionyx_selysi   ---

GGAGGAUUUGGAAAUUGAUUAGUACCUUUAAUAUUAGGGGCUCCAGAUAUAGCAUUUCCAGGACUUAACAACAUAAGAUUUUGAUUAUUACCUCCCUCACUAACACUAUUAUUAGCAGGCAGAAUAGUAGAAAG
AGGAGCAGGAACAGGAUGAACAGUAUAUCCUCCUCUAGCAGGAGCUAUUGCUCAUGCAGGAGCUUCCGUUGAUUUAACCAUUUUCUCCUUACAUUUAGCAGGGGUUUCCUCAAUUCUUGGAGCUAUUAAUUUUA
UCACAACUGUGAUUAAUAUAAAAUCCCCUGGUAUAAAACCAGACCAAUUACCUUUAUUUGUAUGAGCUGUAGUAAUUACUGCUGUACUACUUUUAUUAUCUCUCCCUGUAUUAGCAGGAGCAAUUACCAUACUU
CUUACAGAUCGUAAUAUUAAUACCUCAUUCUUUGAUCCUGCAGGAGGAGGAGAUCCUAUUUUAUACCAACACUUAUUUUGGUUUUUUGGACAUCCAGAAGUCUACAUUCUA-----------------------

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FN356129_Macromidia_rapi____
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FN356186_Oxygastra_curtis___
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GQ329629_Cordulephya_pygmaea---

GGAGGAUUUGGAAAUUGACUAGUACCUUUAAUAUUAGGAGCUCCUGAUAUAGCAUUCCCUCGACUUAAUAACAUAAGAUUUUGACUUUUACCUCCUUCUUUGACCCUACUUUUAGCUAGUAGAAUAGUGGAAAG
AGGAGCAGGAACUGGUUGAACAGUAUACCCCCCAUUAGCAGGAGCUAUCGCUCACGCUGGAGCAUCUGUAGAUUUAACUAUUUUUUCCCUUCACCUUGCAGGAGUUUCAUCAAUUUUAGGGGCAAUUAACUUUA
UUACAACUGUAAUCAAUAUAAAAUCUCCUGGUAUAAGACUAGAUCAAAUACCUUUAUUCGUAUGAGCAGUAGUAAUUACUGCUAUCUUAUUACUUCUAUCCCUUCCUGUUCUUGCAGGGGCAAUUACUAUACUA
UUAACUGAUCGAAAUAUUAAUACCUCCUUCUUUGACCCAGCUGGGGGAGGAGACCCAAUU--
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Pseudocordulia_circularis___
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Hesperocordulia_berthoudi___
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Lathrocordulia_metallica____
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Micromidia_convergens_EU0___
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Micromidia_atrifrons________
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Austrophya_mystica__________
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Austrocordulia_refracta_____
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ArchaeophyamagnificaGQ329630
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AB708872_Epophthalmia_elegan---

ACUGGUACCACUGAUAUUAGGAGCACCAGAUAUGGCCUUCCCCCGAUUAAAUAAUAUAAGAUUCUGAUUAUUACCCCCAUCAUUAACUCUUCUUUUAUCAAGAAGACUAGUUGAAAGUGGAGCAGGGACUGGUU
GAACUGUUUAUCCUCCAUUAGCAGGCACUAUUGCCCAUGCGGGUUCCUCUGUAGACCUAACCAUCUUCUCAUUACAUUUGGCAGGAGUAUCUUCCAUUCUAGGAGCAAUUAAUUUUAUUACUACUGUAAUUAAC
AUAAAAUCUCCAGGGAUAAAAUUAGAUCAAAUACCACUAUUUGUAUGAGCAGUAGUAAUCACUGCAGUUCUUCUCCUACUAUCUCUCCCGGUUCUAGCAGGAGCUAUUACAAUACUAUUAACUGAUCGAAAUAU
UAAUACAUCCUUCUUUGAUCCCGCAGGAGGAGGUGAUCCAAUUCUCUAU???
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FN356079_Didymops_transve___
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AACUCUUUACCUUAUUUUUGGAGCUUGGGCAGGAAUAGUGGGAACGGCACUGAGAGUUUUAAUUCGAAUCGAACUAGGACAGCCCGGAUCACUAAUUGGAGAUGAUCAAAUUUAUAAUGUAGUUGUUACAGCCC
ACGCCUUCGUAAUAAUUUUCUUUAUAGUUAUACCUAUUAUAAUUGGAGGGUUUGGAAAUUGACUUGUCCCCCUAAUACUAGGAGCUCCUGAUAUAGCAUUCCCUCGAUUAAAUAACAUAAGAUUUUGAUUACUC
CCUCCUUCAUUAACUCUACUUUUAUCUAGAAGUUUAGUUGAAAAUGGAGCUGGAACAGGAG---
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AB708880_Macromia_amphigena---

ACUGGUACCUCUAAUACUCGGAGCCCCCGACAUGGCAUUUCCACGAUUAAAUAAUAUAAGAUUUUGACUCCUUCCUCCUUCAUUAACUUUAUUGCUUUCUAGCAGCUUAGUUGAAAGAGGUGCAGGAACAGGAU
GAACAGUUUAUCCUCCAUUGGCUGGAACAAUUGCCCAUGCAGGAUCCUCCGUAGACCUAACUAUUUUUUCAUUACAUCUUGCAGGUGUAUCAUCAAUUCUAGGAGCAAUUAAUUUUAUUACCACUGUAAUUAAC
AUGAAAUCACCGGGAAUAAAAUUAGACCAAAUACCACUAUUUGUAUGAGCAGUAGUAAUUACUGCAGUACUCCUAUUACUUUCUCUUCCUGUAUUGGCAGGGGCCAUCACUAUACUAUUAACUGAUCGAAAUAU
UAAUACCUCAUUCUUUGACCCAGCUGGGGGAGGAGAUCCUAUUUUAUAU???
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Macromia_eurynome_EU05519___
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Macromia_magnifica__________
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FN356128_Macromia_splende___
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FN356146_Phyllomacromia_ny__
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Idomacromia_proavita________
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Aeschnosoma_forcipula_______
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Pentathemis_membranulata____
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Tetragoneuria_cynosure______
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GACCUUAUACUUAAUCUUCGGAGCAUGAGCUGGAAUAGUAGGAACAGCAUUAAGAGUUUUAAUUCGAAUUGAAUUAGGUCAACCAGGAUCUUUAAUUGGAGAUGAUCAAAUUUAUAACGUUAUUGUAACAGCUC
AUGCUUUUGUAAUAAUUUUCUUUAUAGUAAUACCAAUUAUAAUUGGGGAUUUGGAAAUUGAUUAGUUCCUUUAAUAUUAGGAGCUCCAGAUAUAGCCUUCCCACGACUUAAUAAUAUAAGAUUCUGAUUAUUA
CCUCCUUCUUUAACCUUAUUAUUAUCAAGAAGAAUGGUUGAAAGAGGAGCAGGAACAGGAUGAACUGUAUACCCCCCCUUGCAGGAGCAAUCGCCCAUGCAGGAGCAUCAGUAGAUUUAACUAUUUUCUCACU
ACACCUUGCAGGUGUAUCAUCAAUUUUAGGAGCUAUCAAUUUUAUCACAACUGUCAUUAACAUAAAAUCUCCUGGUAUAAAAAUAGACCAAAUACCAUUAUUUGUAUGGGCUGUAGUAAUUACAGCUGUACUAU
UAUUACUAUCGUUGCCUGUCCUUGCAGGAGCAAUUACGAUAUUACUAACUGAUCGAAAUAUUAAUACUUCAUUCUUUGACCCCGCGGGGGGGGGAGACCCUAUUCUUUAUC-----------------------
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Epitheca_princeps
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AB708900_Epitheca_marginata---

AUUGGUCCCUUUAAUAUUGGGAGCUCCAGAUAUAGCAUUUCCACGACUUAAUAAUAUAAGAUUUUGAUUAUUACCUCCAUCUUUAACUUUAUUACUAUCCAGUAGUAUAGUUGAAAGAGGGGCAGGAACAGGAU
GGACAGUAUAUCCUCCCCUUGCAGGAGCAAUUGCUCAUGCAGGAGCAUCUGUAGAUUUAACUAUUUUUUCAUUACACCUUGCAGGAGUCUCAUCUAUUUUGGGAGCAAUUAAUUUCAUUACAACUGUCAUCAAU
AUAAAAUCCCCUGGGAUAAAAAUAGAUCAAAUACCAUUAUUUGUAUGGGCUGUAGCAAUUACAGCAGUUUUAUUAUUACUUUCCUUACCUGUCCUUGCAGGAGCAAUUACUAUACUACUAACUGAUCGAAAUAU
UAAUACAUCAUUUUUUGAUCCAGCAGGUGGGGGAGACCCCAUUUUAUAU??
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AB708898_Epitheca_bimaculata---

AUUAGUCCCUUUAAUAUUAGGAGCUCCAGAUAUAGCAUUCCCACGACUUAAUAAUAUAAGAUUUUGACUACUACCACCGUCUUUAACCCUACUACUAUCUAGUAGUAUGGUUGAAAGAGGAGCAGGAACAGGAU
GAACAGUAUAUCCUCCUCUUGCAGGAGCAAUUGCUCAUGCAGGAGCAUCCGUAGACUUAACUAUUUUCUCAUUACAUCUUGCAGGUGUAUCCUCUAUUCUAGGAGCAAUCAAUUUCAUCACAACUGUGAUCAAU
AUAAAAUCCCCUGGGAUAAAAAUAGAUCAAAUGCCAUUAUUUGUAUGAGCUGUAGUAAUUACAGCAGUUUUAUUACUCCUUUCCUUACCCGUUCUUGCAGGAGCAAUUACUAUACUAUUAACAGAUCGAAAUAU
UAAUACAUCAUUUUUUGAUCCAGCAGGUGGAGGAGAUCCCAUUUUAUAU??

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Rialla_villosa_____________
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FN356074_Cordulia_aenea_____
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Cordulia_shurtleffii_EU05___
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AB708910_Somatochlora_alpe   ---

AUUAGUUCCACUAAUAUUAGGAGCUCCAGAUAUAGCAUUCCCUCGACUUAAUAAUAUAAGAUUUUGAUUAUUACCUCCAUCUUUAACUCUUCUUCUAUCCAGAAGUAUAGUUGAAAGAGGUGCAGGAACAGGAU
GAACUGUUUAUCCUCCACUAGCAGGAGCAAUUGCUCAUGCCGGUGCGUCAGUAGACUUAACUAUUUUCUCACUACAUCUCGCAGGUGUAUCAUCCAUUCUUGGGGCAAUCAAUUUUAUCACAACUGUGAUCAAC
AUAAAAUCUCCUGGAAUAAAAAUAGACCAAAUACCACUAUUCGUAUGAGCUGUAGUAAUUACAGCAGUACUAUUAUUACUUUCUUUACCUGUUUUAGCUGGAGCUAUUACUAUACUAUUAACAGACCGAAAUAU
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Somatochlora_flavomac_1242__
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AUUAAUUCCGUUAAUAUUAGGAGCUCCAGAUAUAGCCUUUCCACGACUUAAUAAUAUAAGAUUUUGAUUACUACCUCCAUCUUUAACUCUUCUACUAUCCAGUAGUAUAGUUGAAAGAGGUGCAGGAACAGGAU
GAACUGUUUACCCUCCAUUGGCAGGAGCUAUCGCUCAUGCUGGUGCAUCAGUAGAUCUAACUAUUUUUUCAUUACACCUUGCAGGUGUAUCAUCCAUUCUUGGGGCAAUUAAUUUUAUCACAACUGUGAUCAAC
AUAAAAUCACCUGGAAUAAAAAUAGACCAAAUACCAUUAUUCGUAUGAGCUGUAGUAAUUACAGCAGUACUAUUAUUAUUAUCAUUACCUGUAUUAGCAGGUGCUAUUACUAUACUAUUAACAGACCGAAAUAU
UAAUACGUCAUUCUUUGAUCCUGCAGGAGGGGGUGAUCCUAUUUUAUAU??
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AB708902_Hemicordulia_mindan--

ACUAGUACCUCUAAUAUUAGGAGCUCCAGAUAUGGCAUUCCCCCGACUUAAUAAUAUAAGAUUUUGAUUAUUACCUCCAUCUUUAACUCUAUUAUUAUCAAGAAGAAUAGUUGAAAGAGGGGCAGGAACAGGAU
GAACAGUUUACCCUCCAUUAGCAGGAGCAAUUGCUCAUGCAGGAGCCUCAGUAGAUCUAACCAUUUUUUCAUUACAUCUUGCUGGGGUAUCUUCAAUUCUUGGAGCAAUUAAUUUUAUCACAACUGUAAUCAAU
AUAAAAUCUCCUGGGAUAAAGCUAGAUCAAAUACCUCUAUUUGUAUGAGCUGUAGUAAUUACAGCUGUACUAUUAUUACUUUCUUUACCCGUACUUGCUGGAGCAAUUACUAUGCUGUUAACUGAUCGAAAUAU
UAAUACAUCAUUCUUUGAUCCUGCAGGAGGAGGAGAUCCAAUUUUAUAU??
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AB708994_Macrodiplax_cora   ---

AUUAGUACCUUUAAUAUUAGGAGCACCUGAUAUAGCAUUUCCACGAUUAAAUAAUAUGAGAUUUUGAUUACUACCUCCUUCCUUCACUUUACUUCUAGCAAGAAGUAUGGUUGAAAGAGGAGCAGGUACUGGAU
GAACAGUUUACCCUCCUUUAGCUGGUGCAAUUGCUCAUGCAGGAGCUUCUGUAGAUUUAACCAUUUUCUCCCUCCAUUUAGCAGGGGUAUCCUCCAUUUUAGGAGCAAUUAAUUUCAUUACAACUGUAAUUAAU
AUAAAGUCUCCCGGUAUAAACUUAGAUCAAUUACCUUUAUUUGUAUGAGCUGUAGUAAUUACAGCAGUACUUCUUUUACUAUCUCUACCCGUAUUAGCCGGAGCUAUUACAAUGCUUUUAACAGAUCGAAAUAU
UAAUACAUCAUUUUUUGAUCCUGCAGGAGGAGGAGAUCCAAUUCUCUAU???
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AB709240_Zyxomma_petiolatum---

AUUAGUACCAUUAAUAUUAGGAGCACCAGAUAUGGCCUUCCCUCGAUUAAAUAAUAUAAGAUUCUGAUUAUUACCACCAUCAUUCACAUUAUUAUUGGCAAGUAGUAUAGUUGAAAGAGGAGCAGGAACAGGAU
GAACCGUUUAUCCUCCACUAGCAGGAGCUAUUGCACAUGCAGGAGCAUCAGUAGAUUUAACAAUCUUCUCCUUACAUUUAGCAGGUGUAAGUUCAAUUUUAGGAGCAAUUAAUUUUAUCACUACAGUAAUUAAU
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UAACACAUCAUUCUUUGAUCCAGCAGGUGGAGGAGACCCAAUUUUAUAU???
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FN356181_Zygonyx_ida________
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Nannophlebia_sp_EU055138____
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Bironides_sp________________
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Huonia_oreophila____________
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Onychothemis_testacea_______
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AB709113_Rhyothemis_variega---

GCUUGUGCCAUUAAUAUUAGGAGCACCAGAUAUGGCUUUCCCACGACUAAAUAAUAUAAGAUUUUGAUUAUUACCUCCCUCAUUCACUUUAUUACUUGCAAGAAGAGUAGUAGAAAGAGGGGCAGGAACAGGAU
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AB709109_Rhyothemis_fuligino---

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Miathyria_marcella__________
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Miathyria_simplex
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FJ596577_Tholymis_citrina___
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AB709198_Tholymis_tillarga_--

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[433]
AB709202_Tramea_lacerata   ---

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Tramea_calverti_____________
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EF636318_Sympetrum_janeae_   ---

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EF636328_Sympetrum_obtrusum---

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EF636247_Sympetrum_vulgatum---

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FN356171_Sympetrum_pedemon----------

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UAAUACAUCAUUCUUUGAUCCUGCAGGAGGAGGAGAUCCUAUUCUUUAU???
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Sympetrum_Nesogonia_blackb__
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EF636237_Sympetrum_sanguin   ---

UAAUAUUAGGGGCACCAGAUAUAGCUUUCCCUCGAUUAAAUAAUAUAAGAUUCUGACUUUUACCACCCUCUUUCACUCUUCUUUUAGCUAGAAGAAUGGUUGAAAGAGGAGCAGGAACAGGAUGAACUGUUUAU
CCCCCCUUAGCUGGUGCCAUUGCUCAUGCUGGAGCAUCUGUAGAUCUAACUAUUUUCUCGUUACAUCUUGCAGGAGUGUCCUCAAUUUUAGGAGCAAUCAAUUUUAUCACUACAGUAAUUAAUAUAAAAUCUCC
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AACUAUGGUAAUUGCUGUACCAACAGGAAUUAAAAUUUUAAGCUGAAUGGCUACACUUCAUGGUACACAAUUCUCAUACAGGCCAUCACUAUUAUGAGCCCUAG------------------------------
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JQ772573_Sympetrum_corruptum   ---

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GGAUACUCGUGCAUACUUCACUUCUGCCACAAUAGUAAUUGCUGUACCAACAGGAAUUAAAAUUUUUAGAUGGUUAGCUACAUUACAUGGUACUCAAUUCUCUUAUAGU-------------------------
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B709156_Sympetrum_fonscolomb---

AUUAGUUCCUUUAAUAUUAGGUGCACCCGAUAUAGCCUUCCCACGAUUAAAUAAUAUAAGAUUUUGAUUACUUCCUCCAUCCUUCACUUUACUUUUGGCUAGAAGCAUGGUAGAAAGAGGGGCAGGAACUGGAU
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AUAAAAUCCCCUGGUAUAAAAAUGGAUCAAAUACCAUUAUUUGUAUGGGCUGUAGUAAUUACUGCUGUACUUCUACUACUUUCAUUACCCGUUCUAGCAGGAGCUAUUACAAUACUAUUAACAGACCGAAAUAU
UAAUACGUCAUUCUUUGACCCAGCAGGGGGAGGUGAUCCAAUUCUUUAU???
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JQ772581_Sympetrum_illotum   ---

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AUCGAAACAUUAAUACAUCAUUUUUUGACCCAGCUGGAGGGGGUGAUCCAAUUCUUUAUCAACACCUCUUCUGAUUCUUUGGGCACCCCGAAGUAUACAUUUUAAUUUUACCAGGAUUUGGUAUAAUUUCACAU
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ACGUGCCUAUUUUACCUCUGCCACUAUAGUAAUUGCUGUUCCAACAGGAAUUAAAAUCUUUAGUUGAUUAGCUACCUUACAUGGAACACAAUUCUCUUACAGA-------------------------------
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AB709168_Sympetrum_infuscat---

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UAAUACAUCAUUUUUCGAUCCUGCAGGAGGGGGGACCCUAUCCUUUAU???
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AB709122_S_danaeEU743616   ---

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UAAUACAUCAUUUUUUGAUCCUGCGGGAGGGGGAGACCCUAUUUUAUAUCAACAUUUAUUUUGAUUCUUUGGCCAUCCUGAGGUAUAUAUUUUAAUUUUACCGGGAUUUGGUAUAAUUUCUCAUAUUAUUGCUC
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UUCACUUCCGCCACAAUAGUGAUUGCUGUACCAACAGGAAUUAAAAUUUUCAGUUGAUUAGCUACACUUCAUGGCACACAAUUCUCAUAUAGCCCAUCAUUAUUAUGAGCACUAGGAUUUGUAUUU???????
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EF636213_Sympetrum_meridionale   ---

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UACCCGUGCAUACUUCACUUCCGCCACAAUGGUGAUUGCUGUCCCAACAGGAAUUAAAAUUUUUAGAUGACUAGCUACAAUUCAUGGUACACAAUUCUCAUACAGUC---------------------------
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JN991193_Leucorrhinia_pecto   ---

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UAGUUGAAAGAGGUGCAGGUACCGGUUGAACAGUAUAUCCUCCAUUGGCUGGAGCUAUUGCCCAUGCUGGAGCAUCUGUAGAUUUAACUAUUUUCUCACUACAUCUUGCUGGAGUAUCAUCAAUUUUAGGAGCA
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JQ772570_Leucorrhinia_glacialis   ---

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UGGUAUAAAAAUAGAUCAAAUACCAUUAUUUGUAUGAGCAGUAGUAAUUACUGCAGUCCUACUUCUCCUAUCUUUACCUGUCCUAGCUGGGGCUAUUACCAUACUACUAACUGACCGAAAUAUUAAUACAUCAU
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AACAAUAGUAAUUGCAGUACCAACAGGAAUUAAAAUUUUUAGAUGACUGGCCACUCUUCAUGGAACACAAUUUUCAUAUAGU--------------------------------------
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FJ010031_Celithemis_elisa___
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AB708950_Brachythemis_conta---

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AB708962_Deielia_phaon_RF928---

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AF228601_Pachydiplax_longipe---

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AF195759_AF195759_Erythemis_---

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CUAGGAGCUAUUAAUUUUAUUACAACAGUAAUCAAUAUAAAAUCCCCUGGGAUGAAGCUGGAUCAAAUACCUCUUUUUGUAUGAGCAGUAGUAAUUACUGCAGUAUUAUUACUUUUAUCCCUUCCUGUNYYAGC
AGGAGCUAUUACUAUACUUUUAACAGAUCGUAAUAUCAACACUUCAUUCUUCGACCCAGCAGGGGGAGGNGAUCCAAUNUUAUAUCAACACUCAUUUUGAUUUUUUGGGCAUCCAGAAGUAUAUAUUUUAAUUU
UACCGGGAUUCGGUAUAAUCUCCCACAUCAUUGCCCAAGAAAGAGGUAAAAAGGAAACAUUUGGAGUACUAGGAAUAAUCUACGCUAUAGUAGCUAUUGGUAUUUUAGGUUUUGUAGUGUGAGCACAUCAUAUA
UUUACUGUAGGAAUAGAUGUAGACACUCGAGCAUAUUUUACAUCAGCCACUAUGGUUAUUGCUGUACCUACUGGUAUCAAAAUUUUUAGAUGGCUUGCAACACUACACGGUACUCAAUUUUCUUAUAGUCCUUC
ACUAUUAUGGGCUUUAGGGUUUGUAUUUCUAUUC--

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AB708940_Acisoma_panorpoides---

ACUUGUACCUCUAAUACUAGGAGCUCCAGAUAUAGCGUUCCCACGAUUAAAUAAUAUAAGAUUUUGAUUAUUACCUCCUUCUUUUACAUUACUUUUAUCUAGUAGUAUAGUAGAAAGAGGAGCAGGAACAGGUU
GAACUGUUUAUCCACCAUUAGCAGGUGCAAUUGCUCAUGCAGGUGCAUCAGUAGAUCUAACGAUUUUCUCACUUCAUUUAGCUGGGGUUUCCUCAAUUCUAGGAGCCAUUAAUUUUAUUACAACAGUAAUUAAU
AUAAAAUCACCUGGAAUAAAGCUAGAUCAAAUACCUCUUUUUGUAUGAGCAGUAGUAAUUACUGCUGUCCUUCUUUUAUUAUCUUUACCCGUAUUGGCUGGAGCAAUUACAAUGUUAUUGACUGAUCGAAAUAU
CAAUACAUCAUUCUUCGAUCCUGCCGGAGGGGGAGAUCCUAUUCUAUAU???
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Erythrodiplax_basalis_______
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JN119571_Crocothemis_servili--
CACUAAUUGGUGAUGAUCAAAUUUAUAAUGUUAUUGUAACCGCUCAUGCGUUUGUUAUGAUUUUUUUUAUACCAAUGCCCAUCAUAAUUGGUGGUUUUGGAAACUGACUAGUGCCAUUAAUAUUAGGAGCACCU
GAUAUAGCAUUCCCACGAUUAAAUAAUAUAAGAUUUUGACUAUUACCUCCCUCAUUUACUUUACUAUUAGCAAGAAGAAUGGUAGAAAGAGGGGCAGGAACUGGAUGAACAGUUUAUCCACCGUUGGCUGGUGC
AAUUGCCCAUGCUGGUGCAUCUGUAGACUUAACCAUCUUUUCCCUACACCUAGCAGGAGUAUCAUCAAUUUUAGGAGCAAUUAAUUUUAUCACUACAGUAAUUAAUAUAAAGUCACCUGGUAUAAAGUUGGAUC
AAUUACCUUUAUUUGUAUGAGCAGUAAUAAUUACUGCGGUAUUACUUUUACUAUCUUUACCAGUAUUAGCAGGGGCUAUUACUAUGCUUUUAACAGAUCGUAAUAUUAAUACAUCAUUUUUUGAUCCGGCAGGG
GGUGGAGACCCAAUUUUAUAU???

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KC912244_Crocothemis_erythraea_C   ---
AAUUCGAAUUGAAUUAGGUCAACCAGGAUCACUAAUUGGAGAUGAUCAAAUUUAUAAUGUUAUUGUAACCGCCCAUGCAUUUGUCAUAAUUUUCUUUAUAGUAAUACCUAUUAUAAUUGGUGGAUUUGGAAAUU
GAUUAGUACCAUUAAUAUUAGGAGCACCUGAUAUAGCAUUUCCACGAUUAAAUAAUAUAAGAUUUUGACUUUUACCUCCUUCAUUCACCCUACUACUAGCAAGAAGUAUAGUAGAAAGAGGAGCAGGAACUGGG
UGAACAGUCUACCCACCUUUAGCUGGUGCAAUUGCCCAUGCGGGGGCUUCUGUAGACCUAACCAUCUUUUCAUUACAUUUAGCGGGAGUAUCAUCAAUUUUAGGAGCAAUUAAUUUUAUUACUACAGUAAUUAA
UAUAAAGUCUCCUGGUAUAAAGUUGGAUCAAUUACCUUUAUUUGUAUGAGCAGUAGUAAUUACUGCAGUAUUGCUUUUAUUAUCAUUACCAGUAUUAGCGGGUGCUAUUACUAUACUUCUAACAGAUCGUAACA
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FJ596590_Rhodothemis_rufa___
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JN817427_Neurothemis_fulvia_--

GCUAGUCCCACUGAUACUCGGAGCACCUGACAUGGCUUUCCCGCGACUUAAUAACAUAAGAUUUUGACUUCUACCACCCUCUUUUACUUUAUUAUUAGCUAGAAGUUUAGUAGAAAGAGGAGCAGGAACGGGGU
GAACAGUAUAUCCCCCCCUAGCAGGAGCCAUUGCACAUGCCGGGGCAUCUGUAGAUUUAACAAUUUUUUCACUUCAUCUGGCAGGGGUUUCAUCAAUUCUGGGUGCUAUUAAUUUUAUUACCACAGUAAUUAAU
AUAAAGUCUCCUGGAAUAAAACUAGAUCAAUUACCCUUAUUUGUAUGGGCAGUAGUAAUUACUGCAGUACUCCUACUAUUGUCUUUACCAGUUCUUGCUGGUGCUAUUACAAUACUAUUAACCGACCGAAAUAU
UAAUACAUCAUUUUUUGAUCCUGCAGGAGGUGGUGAUCCAAUUUUAUAU???
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AB709008_Neurothemis_ramburii--

AUUGGUCCCAUUAAUACUAGGAGCACCAGAUAUAGCCUUCCCUCGACUUAAUAAUAUAAGAUUUUGACUUUUACCCCCUUCUUUUACUUUACUUUUAGCUAGAAGUAUAGUUGAAAGAGGGGCAGGAACAGGAU
GAACAGUCUAUCCACCCCUAGCUGGAGCUAUUGCACAUGCAGGAGCAUCUGUAGAUUUAACAAUUUUUUCCCUACAUUUAGCAGGUGUUUCAUCAAUUUUGGGUGCAAUUAAUUUUAUUACAACAGUAAUUAAU
AUAAAGUCUCCCGGAAUGAAGUUAGAUCAAAUACCUUUAUUUGUAUGAGCAGUAGUAAUUACUGCAGUACUGCUUCUUUUAUCCUUACCAGUUCUUGCAGGAGCAAUUACCAUAUUAUUAACUGACCGAAAUAU
UAACACAUCAUUCUUUGACCCUGCAGGAGGAGGAGAUCCAAUUCUAUAU---

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FN356080_Diplacodes_lefebv__
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UACUUCAUCUUUGGAGCAUGGGCAGGAAUAAUUGGAACAGCAUUAAGAGUUUUAAUUCGAAUUGAACUAGGUCAACCAGGGUCUCUAAUUGGAGAUGAUCAAAUUUAUAAUGUUGUUGUAACAGCCCAUGCAUU
UGUAAUAAUUUUUUUUAUAGUAAUGCCUAUUAUAAUUGGGGGGUUUGGUAAUUGGUUAGUUCCUUUAAUAUUAGGAGCACCAGAUAUGGCCUUCCCACGACUAAAUAAUAUAAGAUUUUGAUUAUUACCUCCAU
CAUUUACACUACUUUUAGCAAGAAGAAUAGUAGAAAGAGGGGCAGGAACAGGAUGAACGGUUUAUCCACCCUUAGCUGGGGCUAUUGCCCAUGCAGGGGCCUCUGUUGAUCUAACAAUUUUUUCAUUACAUCUU
GCAGGGGUUUCAUCUAUUCUUGGUGCAAUCAAUUUUAUUACCACAGUAAUUAAUAUAAAAUCUCCAGGUAUAACACUAGAUCAGUUACCACUAUUUGUAUGAGCAGUAGUAAUUACAGCUGUUUUACUUUUAUU
AUCUUUACCCGUAUUAGCAGGUGCUAUUACAAUACUACUAACUGAUCGAAAUAUUAAUACAUCAUUUUUUGACCCGGCAGGUGGUGGAGAUCCAAUUCUUUAUCAGCAUUUAGUUU??????????????????
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Brachydiplax_denticauda_E___
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AB708948_Brachydiplax_chaly---

ACUUGUACCUUUAAUACUAGGAGCCCCAGAUAUGGCAUUCCCACGCCUAAAUAAUAUAAGAUUUUGACUUUUACCACCAUCAUUUACAUUAUUAUUAGCAAGAAGAGUAGUUGAAAGAGGUGCAGGAACGGGAU
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AUAAAGUCACCUGGGAUGACAAUAGAUCAAAUACCUUUAUUUGUAUGAGCAGUAGUAAUUACUGCUGUACUCCUUCUAUUAUCACUUCCAGUUCUAGCAGGUGCUAUUACAAUAUUACUAACAGAUCGAAAUAU
UAACACUUCAUUCUUUGACCCCGCAGGAGGGGGAGACCCUAUUUUAUAC???
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FN356059_Chalcostephia_fl___
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Uracis_infumata_____________
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AACCCUAUACCUAAUUUUCGGAGCAUGAGCAGGAAUAGUAGGAACUGCAUUAAGUGUAUUAAUUCGAAUUGAAUUGGGACAGCCGGGAUCUUUAAUUGGAGAUGAUCAAAUUUAUAACGUUAUCGUUACUGCUC
AUGCUUUUGUAAUAAUUUUCUUUAUGGUUAUACCUAUUAUAAUUGGAGGAUUUGGAAACUGAUUAGUACCAUUAAUACUGGGUGCUCCAGAUAUAGCAUUCCCACGGCUAAAUAAUAUAAGAUUUUGAUUACUA
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ACACCUAGCAGGUGUCUCAUCUAUUUUAGGAGCUAUUAAUUUUAUUACUACUGUAAUCAAUAUAAAAUCUCCUGGCAUAAAAUUAGAUCAAAUACCAUUAUUUGUAUGAGCAGUAGUAAUUACUGCUGUAUUAC
UUUUAUUAUCUUUACCAGUACUAGCAGGGGCCAUUACUAUGUUAUUAACAGAUCGAAAUAUUAAUACAUCAUUUUUUGAUCCUGCAGGGGGAGGAGACCCUAUUUUAUAUCAACACCUCUUU????????????
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Nannothemis_bella___________
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Paltothemis_lineatipes______
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Dythemis_fugax______________
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AB709238_Trithemis_aurora   ---

AUUAGUACCAUUAAUAUUAGGGGCACCAGAUAUAGCAUUCCCACGUCUAAAUAAUAUAAGAUUUUGACUUCUCCCACCAUCAUUUACGUUAUUACUAGCAAGAAGAAUAGUAGAAAGAGGAGCAGGAACAGGAU
GAACAGUUUAUCCUCCUCUUGCAGGAGCAAUUGCUCAUGCUGGAGCAUCUGUAGACUUAACUAUUUUUUCUUUACAUCUUGCAGGAGUUUCAUCAAUUUUAGGUGCUAUCAAUUUUAUUACAACAGUAAUUAAU
AUAAAAUCUCCAGGUAUGAAACUAGAUCAAUUACCUCUAUUUGUAUGAGCCGUAGUAAUUACAGCAGUACUAUUAUUAUUAUCACUACCAGUACUAGCGGGGGCAAUUACAAUAUUAUUAACAGAUCGUAAUAU
UAAUACAUCAUUCUUCGAUCCUGCAGGUGGAGGAGACCCAAUUUUAUAU???
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Trithemis_africana__________
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KC912287_Trithemis_arteriosa_Tar   ---
AAUUCGAAUUGAGUUAGGACAGCCUGGAUCAUUAAUUGGAGAUGACCAAAUUUAUAAUGUUAUUGUAACGGCUCAUGCAUUCGUAAUAAUUUUUUUUAUAGUUAUACCUAUUAUAAUUGGUGGGUUCGGUAAUU

GAUUAGUACCUUUAAUAUUAGGAGCUCCGGAUAUAGCAUUUCCACGACUUAAUAACAUAAGAUUUUGACUUCUCCCUCCUUCAUUUACUUUAUUACUAGCAAGUAGUAUAGUAGAAAGAGGAGCAGGAACAGGA
UGAACAGUUUAUCCUCCCCUUGCUGGAGCUAUUGCCCAUGCCGGAGCAUCUGUAGAUUUAACUAUUUUCUCUCUACACCUUGCUGGAGUAAGUUCAAUUUUAGGAGCGAUUAAUUUUAUUACAACAGUAAUUAA
UAUAAAAUCACCCGGAAUAAAGUUAGAUCAAAUACCUCUAUUUGUAUGAGCUGUAGUAAUUACUGCAGUACUAUUAUUAUUAUCCCUACCAGUUCUUGCUGGAGCAAUUACUAUGCUGUUAACAGAUCGUAACA
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Perithemis_tenera___________
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Perithemis_intensa_EU0551___
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Perithemis_lais_GU196362
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AY582795_Palpopleura_lucia   ---

GCACCCUGAAGUAUAUAUUUUAAUUCUUCCAGGAUUUGGAAUAAUUUCACAUAUUAUUGCCCAAGAAAGUGGUAAGAAGGAAACAUUUGGAGUUCUAGGUAUAAUUUAUGCAAUAGUAGCUAUUGGUGUUUUAG
GGUUUGUUGUUUGAGCACACCAUAUAUUUACUGUCGGUAUAGACGUAGACACACGAGCUUAUUUUACUUCAGCAACUAUAGUAAUUGCUGUACCUACUGGAAUUAAAAUUUUUAGCUGGCUUGCAACUUUACAU
GGAACCCAAUUUUCAUAUAGUCCGCCUUUAUUAUGAGCAUUAGGUUUUGUUUUCUUAUUCACUAUUGGUGGUUUAACAGGUGUUGUUUUAGCAAAUUCAUCAAUUGAUAUUACCCUACAUGAUACUUACUACGU

UGUAGCACAUUUUCAUUAUGUCUUAUCUAUAGGAGCUGUAUUUGCAAUUAUAGCGGGAUUAGUGCAAUGAUUCUCAUUAUUUACAGGCCUUACCUUAAAUAACCACCUACUGAAGGUGCAAUUUUUAGUUAUAU
UUGUGGGAGUAAAUCUUACAUUUUUCCCUCAGCACUUCUWAGGYCUAAAAGGAAUGCCU[595]
FJ596579_Diastatops_pullat__
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Zenithoptera_fasciata_______
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Neodythemis_afra_pauli______
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FN356162_Selysiothemis_nig__
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FN356179_Urithetrum_navasi__
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Porpax_risi_________________
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FN356133_Micromacromia_cam__
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FJ596594_Neodythemis_preu___
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Neodythemis_klingi__________
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AB708943_Agrionoptera_insignis   ---

AUUAGUACCUCUAAUACUAGGAGCACCAGAUAUAGCAUUUCCACGACUUAAUAAUAUAAGAUUUUGACUUUUACCUCCUUCAUUUACUUUAUUACUAUCAAGUAGAAUAGUUGAAAGAGGAGCAGGAACUGGAU
GAACUGUUUAUCCACCAUUAGCAGGAGCAAUUGCUCAUGCUGGAGCAUCAGUAGAUUUAACUAUUUUCUCAUUACAUCUUGCAGGUGUAUCAUCAAUUCUGGGAGCGAUUAAUUUUAUUACAACAGUAAUUAAU
AUAAAGUCCCCAGGAAUAAAUAUAGAUCAAAUACCUUUAUUUGUAUGAGCAGUAGUAAUUACAGCAGUAUUACUUCUUCUUUCAUUACCAGUUUUAGCAGGAGCUAUUACCAUAUUAUUAACAGACCGAAAUAU
UAAUACAUCUUUUUUUGAUCCUGCAGGAGGAGGAGAUCCUAUUUUAUAU---

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AB708952_Cratilla_metallica_---

ACUAGUUCCAUUAAUAUUAGGAGCUCCAGACAUGGCAUUUCCACGACUUAAUAAUAUAAGAUUCUGGCUUUUACCUCCUUCUUUUACACUAUUAUUAGCAAGUAGAAUAGUUGAAAGAGGAGCAGGAACAGGAU
GAACAGUUUACCCCCCUUUAGCAGGAGCUAUUGCACACGCUGGAGCAUCAGUAGAUUUAACAAUUUUUUCUUUACACCUUGCUGGAGUAUCUUCUAUUCUUGGAGCAAUUAAUUUUAUUACUACAGUAAUUAAU
AUGAAAUCACCAGGAAUAAAAAUAGAUCAACUACCAUUAUUCGUAUGAGCAGUAGUAAUUACUGCUGUUUUACUACUUUUAUCGUUACCUGUUCUAGCAGGAGCUAUUACUAUAUUACUAACAGAUCGAAAUAU
UAAUACAUCAUUUUUUGAUCCAGCCGGAGGGGGUGAUCCAAUUCUAUAC???
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Pseudoleon_superbus_________
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FJ596597_Orthemis_cultrifo__
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AF195760_Orthemis_ferruginea---

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CAGGAACAGGAUGAACAGUAUAUCCUCCUCUAGCCGGUGCAAUUGCACAUGCUGGAGCAUCAGUAGACUUAACAAUUUUUUCCUUACACCUUGCAGGUGUUUCAUCAAUUCUAGGAGCUAUUAAUUUUAUUACU
ACAGUAAUUAAUAUAAAGUCUCCUGGCAUAAAGUUAGAUCAACUACCAUUAUUUGUAUGAGCAGUAGUAAUUACAGCAGUAUUAUUAUUAUUGUCCCUUCCAGUUCUAGCAGGAGCAAUUACUAUGUUAUUAAC
AGAUCGAAAUAUUAAUACAUCAUUCUUUGAUCCAGCAGGAGGAGGUGACCCAAUUCUAUAUCAACACUUGUUUUGAUUUUUUGGACAUCCAGAAGUGUAUAUUCUAAUUUUACCAGGGUUUGGAAUAAUUUCUC
AUAUUAUUGCUCAAGAAAGAGGAAAGAAGGAAACAUUUGGUGUAUUAGGAAUAAUUUAUGCAAUAGUAGCAAUUGGAAUUUUAGGAUUUGUAGUAUGAGCCCAUCAUAUAUUCACAGUAGGUAUGGAUGUUGAU
ACUCGAGCAUAUUUCACAUCAGCAACUAUAGUUAUUGCUGUCCCUACAGGAAUUAAAAUUUUCAGUUGACUAGCAACUUUACAUGGAACACAAUUCUCAUAUAGUCCUUCACUCUUAUGAGCACUAGGAUUCGU
UUUCUUAUUC--

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AB709017_Orthetrum_albistyl---

ACUUGUACCACUGAUAUUAGGAGCACCUGAUAUAGCAUUCCCACGACUUAAUAACAUAAGAUUUUGACUUUUACCUCCUUCAUUUACCCUAUUACUAGCAAGCAGAAUGGUUGAAAGAGGGGCAGGAACAGGUU
GAACUGUAUACCCUCCUCUUGCAGGAGCAAUCGCUCAUGCGGGAGCAUCUGUGGAUUUAACAAUUUUCUCAUUACAUCUUGCAGGAGUAUCUUCUAUUUUAGGAGCAAUUAACUUUAUUACAACAGUAAUUAAU
AUGAAGUCACCAGGAAUAAAGUUAGAUCAAAUACCAUUAUUUGUAUGAGCAGUAGUAAUUACAGCAGUAUUAUUACUUUUAUCUUUACCUGUACUUGCAGGAGCAAUCACUAUACUUUUAACAGACCGAAAUAU
UAAUACUUCCUUUUUCGAUCCUGCUGGAGGAGGAGAUCCUAUUUUAUAU???
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AB709090_Orthetrum_pruinosum---

ACUUGUACCUUUAAUAUUAGGUGCACCAGAUAUAGCAUUCCCUCGACUUAAUAAUAUAAGAUUUUGACUUUUACCUCCUUCAUUCACCUUAUUACUAGCAAGUAGUAUAGUUGAAAGCGGUGCAGGAACAGGAU
GAACAGUUUAUCCUCCCCUUGCAGGAGCAAUUGCUCAUGCUGGAGCAUCUGUAGACUUAACAAUUUUUUCUUUACACCUUGCUGGUGUAUCUUCCAUUUUAGGAGCUAUUAAUUUUAUUACAACAGUAAUUAAU
AUAAAAUCACCAGGUAUAAAGCUAGAUCAAAUACCUUUAUUUGUAUGAGCAGUAGUAAUUACAGCUGUAUUACUACUUUUAUCCUUACCCGUACUUGCAGGAGCAAUUACUAUACUCUUAACAGAUCGAAAUAU
UAAUACUUCUUUCUUUGAUCCUGCAGGAGGAGGAGAUCCUAUUUUAUAU???
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KC912271_Orthetrum_coerulescens   ---
AAUUCGAAUUGAACUUGGACAACCCGGAUCUUUAAUUGGAGAUGACCAAAUUUAUAAUGUAAUUGUUACUGCUCAUGCAUUUGUAAUAAUUUUUUUUAUAGUUAUACCUAUUAUAAUUGGUGGUUUUGGAAAUU
GACUCGUACCAUUAAUAUUAGGGGCACCUGAUAUAGCAUUCCCUCGGCUUAAUAAUAUAAGAUUUUGAUUAUUACCUCCAUCAUUUACUUUAUUAUUAGCCAGUAGUAUAGUUGAAAGAGGGGCAGGGACAGGA
UGAACAGUAUACCCUCCCCUUGCAGGAGCAAUUGCUCAUGCAGGAGCAUCUGUAGAUUUAACAAUCUUUUCUUUACACCUUGCAGGUGUAUCUUCUAUUCUGGGAGCAAUCAAUUUUAUCACAACAGUAAUUAA
UAUAAAAUCACCAGGAAUAAAAUUAGAUCAAAUACCAUUAUUUGUAUGAGCAGUAGUAAUUACAGCUGUAUUAUUACUUUUAUCUCUACCAGUCCUUGCAGGAGCAAUUACUAUACUUUUAACAGACCGAAAUA
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AB708988_Lyriothemis_elegant---

ACUUGUUCCUUUAAUGUUAGGAGCGCCAGAUAUAGCAUUCCCCGAUUAAAUAAUAUAAGAUUUUGAUUACUUCCUCCUUCAUUUACACUUCUUUUAUCAAGUAGUAUAGUUGAAAGAGGAGCAGGAACUGGAU
GAACAGUUUAUCCUCCACUCGCUGGAGCUAUUGCACAUGCAGGAGCUUCUGUUGAUUUAACAAUUUUUUCGUUACACUUAGCAGGUGUAAGAUCAAUUUUGGGAGCUAUUAAUUUUAUUACAACUGUAAUUAAU
AUAAAAACUCCUGGAAUAAAAAUAGAUCAAAUACCUUUAUUUGUAUGAGCAGUAGUAAUUACUGCUGUUUUACUUCUCCUCUCUUUACCUGUUUUAGCUGGUGCUAUUACUAUACUAUUAACUGACCGUAACAU
UAAUACUUCAUUUUUUGAUCCUGCAGGGGGGGGAGACCCUAUCUUAUAU???
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AF195745_AF195745_Ladona_ful---

CUUUUACCUCCCUCUUUCACUUUACUUUUAGCAAGAAGUAUAGUUGAAAGUGGAGCAGGAACUGGAUGAACUGUAUAUCCUCCAUUAGCAGGUGCUAUUGCACACGCUGGGGCAUCAGUAGACUUAACAAUUUU
CUCCUUACAUCUUGCAGGAGUAUCUUCUAUCUUAGGAGCAAUUAAUUUCAUUACUACUGUAAUUAAUAUAAAAUCUCCUGGGAUAAAAAUAGAUCAGAUACCCUUAUUUGUAUGGGCAGUAGUAAUUACUGCUG
UUCUAUUACUUUUAUCCUUGCCUGUAUUAGCAGGUGCUAUCACCAUACUCUUAACAGAUCGAAAUAUUAAUACAUCCUUUUUUGAUCCUGCAGGAGGAGGAGAUCCUAUUUUAUAUCAACAUUUAUUCUGAUUU
UUCGGGCAUCCAGAAGUUUAUAUUUUAAUCCUCCCAGGAUUUGGUAUAAUUUCACAUAUUAUUGCACAAGAAAGAGGAAAAAAGGAAACUUUUGGAGUACUGGGAAUAAUUUAUGCCAUAGUAGCCAUUGGAAU
UUUAGGAUUUGUAGUCUGAGCACAUCAUAUAUUUACAGUAGGGAUAGAUGUAGAUAGUCGAGCAUACUUCACAUCAGCAACCAUAGUUAUUGCUGUACCAACAGGAAUUAAAAUUUUCAGAUGAUUAGCAACUN
NNCAUGGUACUCAAUUUCA-UACAACCCCUCCUUAUUAUGAGCUUUAGGGUUUGUAUUUCUGUUC---
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AF195748_AF195748_Ladona_jul---

CUCUUACCUCCUUCAUUUACAUUACUUCUAGCCAGAAGUAUAGUUGAAAGAGGUGCAGGAACUGGGUGAACUGUAUACCCUCCACUGGCAGGUGCUAUUGCCCAUGCUGGUGCAUCAGUAGACUUAACAAUUUU
CUCUUUACACCUAGCAGGUGUAUCCUCAAUUCUAGGAGCAAUUAACUUUAUUACCACUGUAAUUAAUAUAAAAUCCCCCGGAAUAAAAAUAGAUCAAAUACCUCUAUUCGUAUGAGCAGUAGUAAUUACUGCAG
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AF195750_Plathemis_lydia   ---

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GUUCAAUGGUUCUCCUUAUUUACAGGAGUAACAUUAAAUAAUCAUCUAUUAAAAAUCCAAUUUCUAAUUAUAUUUAUUGGUGUAAAUUUGACAUUCUUCCCUCAGCACUUUUUAGGAUUAAGUGGGAUACCA
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UUCAUGGAACUCAAUUCUCAUACAGACCUUCCUUACUGUGAGCUCUAGGGUUUGUAUUUCUAUUC---

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UUUAGGAUUUGUAGUAUGAGCUCAUCAUAUGUUUACUGUAGGAAUGGAUGUAGACACUCGAGCAUAUUUCACCUCGGCAACUAUAGUUAUUGCUGUUCCAACAGGUAUUAAAAUUUUCAGUUGACUUGCAACUC
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AF195737_AF228600_Libellula_comp-----------------------------------------------------------------------------------------------------
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UUUAGGAUUUGUAGUAUGAGCUCACAAUAUNNUUACUGUAGGAAUAGAUGUAGAUACUCGAGCAUAUUUUACAUCAGCAACUAUAGUUAUUGCUGUUCCAACUGGUAUUAAAAUUUUUAGAUGACUAGCAACUC
UUCACGGAACACAAUUUUCAUAUAGUCCAUCCUUAUUAUGAGCUUUAGGAUUCGUGUUCCUAUUUACUAUUGGAGGAUUAACUGGAGUAGUUCUAGCAAAUUCUUCAAUUGAUAUUACCUUACAUGAUACCUAU
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AF195753_Libellula_pulchella---------------------------------------------------------------------------------------------------------
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UUUAGGAUUUGUAGUAUGAGCUCAUCAUAUAUUUACUGUGGGUAUAGAUGUUGACACUCGAGCAUAUUUCACCUCAGCAACUAUAGUUAUUGCUGUUCCAACAGGAAUUAAAAUUUUCAGAUGAUUAGCUACUC
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AF195734_Libellula_auripen   ---------------------------------------------------------------------------------------------------------
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AF195749_Libellula_luctuosa--

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UAUUACUAUCUUUACCAGUUUUAGCUGGGGCUAUUACUAUACUUUUAACUGACCGUAACCUAAAUACAUCUUUCUUUGACCCUGCCGGAGGAGGGGAUCCUAUUUUAUACCAACAUUUAUUU------------
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UCAUUACAUUUAGCAGGUGUCUCUUCAAUUUUAGGUGCUGUAAAUUUUAUUACCACUACAAUCAAUAUGCGUUCUAGAGGUAUAACUAUAGACCGUAUUCCUCUAUUUGUUUGGUCUGUAGUUAUUACAGCAGU
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229324789_Ephemera_orientalis
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UGCUCACGCAUUUAUUAUAAUUUUCUUCAUAGUAAUGCCUAUUAUAAUUGGUGGGUUUGGAAAUUGAUUAGUACCUUUAAUACUAGGAGCCCCUGAUAUAGCAUUCCCUCGAAUAAAUAAUAUAAGAUUCUGAU
UAUUACCUCCUGCCUUAACCCUUCUUUUAGCUAGUAGAAUAGUAGAAAGAGGUGCAGGAACAGGUUGAACUGUUUACCCUCCUCUAGCCGCAGGAAUCGCUCAUGCAGGCGCUUCAGUUGAUUUAGCAAUUUUC
UCCCUACAUCUAGCUGGAGUAUCCUCAAUCCUUGGAGCCGUAAAUUUUAUUACUACAACUAUUAAUAUACGUACAAGAGGAAUAACUAUAGACCGUAUUCCUUUAUUUGUUUGAUCAGUAGUAAUUACUGCAGU
CUUACUUCUUCUUUCCCUACCAGUUCUAGCAGGAGCAAUUACUAUAUUAUUAACAGACCGUAAUUUAAAUACUUCUUUCUUUGACCCAGCAGGAGGAGGAGACCCCAUCCUAUACCAACACUUAUUUUGAUUCU
UUGGGCACCCUGAAGUUUAUAUUCUCAUUUUACCAGGAUUUGGUAUAAUUUCCCAUAUUAUUAGUCAAGAAAGAGGUAAAAAGGAAGCCUUUGGUUCUUUAGGAAUAAUCUACGCUAUACUUGCAAUUGGUCUU
UUAGGAUUUGUUGUAUGAGCCCAUCAUAUAUUUACUGUAGGUAUAGACGUUGAUACUCGAGCUUAUUUUACCGCAGCUACUAUAAUUAUUGCUGUGCCUACCGGAAUUAAAAUUUUUAGAUGACUAGCUACACU
UCAUGGGACUCAAUUAACAUAUAGGCCAUCCCUUCUCUGGGCUUUAGGGUUUGUAUUUUUAUUUACAAUUGGAGGUUUAACCGGAGUAGUAUUAGCUAAUUCAUCUAUUGAUAUUGUACUACACGAUACAUAUU
AUGUAGUAGCUCAUUUCCAUUAN---
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Callibaetis_sp_AY749925_____
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?? AY326804_Callibaetis_ferrugine------------------
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AAUUUUUUUUAUAGUUAUGCCUAUUAUAAUCGGGGGUUUCGGGAAUUGAUUGGUGCCCUUAAUAUUAGGAGCUCCCGAUAUAGCCUUCCCCCGUAUGAAUAAUAUAAGAUUCUGGUUAUUACCCCCUUCUCUAG
CAUUACUAGUUUCUAGUAGCCUUGUCGAUGUGGGGGCUGGGACUGGUUGAACGGUGUACCCUCCUUUAGCGGCUAAUAUCGCCCAUGGAGGUUCUUCUGUGGAUUUUGCUAUCUUUUCAUUACACUUAGCUGGU
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JF262046_Baetis_melanonyx_MEL2---
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GAACUGGUUGAACCGUUUACCCUCCUCUCGCAGCUAAUAUUGCUCACGGGGGUUCUUCAGUAGAUUUCGCAAUUUUUUCUCUACACUUGGCUGGUAUCUCUUCUAUUUUAGGUGCAGUUAAUUUCAUUACAACA
GUUGUUAACAUGCGCAGCCCUGGUAUGACUUUGGAUCGAAUACCAUUAUUUGUAUGAUCUGUAGUUAUUACAGCUGUUUUGUUGCUUUUAUCUCUUCCUGUUUUAGCUGGGGCUAUCACAAUAUUACUUACUGA
UCGUAAUUUAAAUACUUCAUUUUUUGACCCUGCAGGGGGAGGGGAUCCUAUUUUAUACCUACACCUCUUUUGGUUUUUCGGACACCCUGAAGUUUAUAUUUUAUUUUUACCGGGA-------------------
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CCUCCUGCUCUUACCCUUUUAUUAGCUAGUAGUAUAGUUGAAAGAGGGGCUGGAACUGGAUGAACUGUAUAUCCUCCUUUAGCUGCAGGGAUUGCCCACGCAGGAGCUUCAGUGGACUUAGCUAUCUUCUCUCU
ACACCUAGCAGGUGUUUCUUCAAUUCUGGGAGCAGUAAAUUUUAUUACUACUACUAUUAAUAUACGUACAAGAGGAAUAACAAUAGACCGAAUCCCCUUAUUUGUUUGAUCCGUAAUUAUUACAGCAGUACUUC
UCCUUCUCUCCCUCCCCGUCUUAGCCGGAGCUAUCACUAUAUUAUUAACUGACCGUAAUUUAAAUACUUCUUUCUUUGACCCCGCAGGAGGAGGAGAUCCUAUUUUAUACCAACACUUAUUU------------
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CUUUAUUACUGGCUAGCAGUAUAGUUGAAAGUGGAGCUGGGACAGGUUGGACCGUUUACCCUCCACUUUCUGCAGGAAUCGCCCAUGCAGGAGCUUCGGUUGAUUUAGCUAUCUUUUCCUUACAUUUGGCAGGA
GUUUCAUCAAUUUUAGGAGCAGUAAAUUUUAUUACAACAACUAUCAAUAUACGAUCUAGAGGUAUAACUAUAGACCGAAUUCCCUUAUUUGUUUGAUCAGUUUUAAUUACAGCCAUCUUAUUACUACUAUCUCU
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---[630]AY326895_Centroptilum_triangul------------------
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CUUUAUUAAUUUCUAGCAGUAUAGUUGACGUAGGAGCUGGUACAGGGUGAACUGUUUACCCGCCCCUAUCUGCUAAUAUCGCUCAUGGAGGGGCUUCUGUAGACUUUGCAAUUUUCUCUUUGCAUCUGGCUGGU
GUCUCAUCAAUUUUAGGAGCGGUUAAUUUUAUUACUACAGUGAUUAAUAUACGUAGAGCAGGUAUAACAUUAGAUCGUAUACCUUUAUUUGUCUGGUCAGUAGUAAUUACUGCAGUAUUACUACUUCUUUCUUU
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---[630]AY326891_Stenonema_femoratum_S------------------
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ACCUGUAUUAGCUGGAGCUAUCACAAUACUAUUAACAGACCGUAAUCUUAAUACCUCAUUCUUUGAUCCAGCUGGAGGGGGAGAUCCAAUUUUA--
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Urigoniopthalmus_altern_____
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CAUCAAUCUUAGGAGCUGCUAACUUUAUUACAACUGUAAUUAAUAUACGAGCAAGAGGUAUAACAUUAGAUCGAAUACCACUUUUUGUUUGAUC------------------------------
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EF199981_Machilis_hrabei____
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Ctenolepisma_longicaudata___
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CUUUUAUCCCUUCCCGUNNUAGCAGGNGCUAUUACAAUGCUCUUAACUGANCGAAAUCUUAAUACCUCCUUCUUUGAUCCUUCAGGAGGAGGAGAUCCAAUUUUAUAUCAACACCUAUUC--------------
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CUAGGAUUUGUAGUCUGAGCACAUCAUAUAUUUACUGUAGGAAUAGAUGUAGAUACACGCGCAUAUUUUACAGCAGCAACAAUAACCAUUGCAGUACCAACUGGUAUUAAAAUUUUCAGAUGAAUAGCAACAAU
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  90509100915092009250930093509400945095009550960096509700975098009850990099509000
 1005010100101501020010250103001035010400104501050010550106001065010700107501080010850109001095010000
 1105011100111501120011250113001135011400114501150011550116001165011700117501180011850119001195011000
 12050;
```

```
CharsetUnaligned_lestoid=
4487-45185136-51396724-67316899-69296955-69867058-70667200-72057347-73597373-73747377-7399[check]
7573-75827666-76837692-77387764-77727784-77977832-7840785778747921-79458106-81468185-8222
8246-82518268-82858291-82988375-84098441-84508524-85338739-87989076-90906829-6836;
CharsetUnaligned_aeshnoid=
4192-41994204-42114464-45286904-69216957-69797573-75827598-75997666-76827697-77357784-7797
7865-78747936-79448141-81468201-82158276-82859296-93028385-84008440-84508526-85338791-8796
9076-90906829-6836;
CharsetUnaligned_Gomphidae=2854-28562862-28692958-29743282-32853330-33403346-33584192-42114464-45285069-50985104-5128
6643-66616724-67316881-68906899-69336757-69797058-70667200-72057251-72577573-75827598-7599
7666-76837692-77357764-77727784-77977832-78367865-78767925-79507973-79918009-80258106-8146
8185-82228246-82518268-82858291-83028375-84098485-84978524-85338739-87989076-90906829-6836;
CharsetUnaligned_Petaluridae=3278-32793282-32853330-33403346-33584464-45286853-68616902-69337058-70667666-76867692-7735
```

7784-77977832-78407848-78747935-79507973-79838125-81378185-82228375-83988485-84978524-8533
8768-87969076-90906829-6836;
CharsetUnaligned_Libellulid=2850-28562862-28752958-29743108-31203278-32793282-32853330-33583800-38093837-38593864-3901
4192-42114464-45285069-51365924-59336902-69336958-69847058-70667373-74017573-75827666-7686
7692-77357752-77587784-77977832-78407848-78748106-81468185-82228246-82518268-82858291-8302
8435-84508524-85338739-87989076-90906829-6836;

excludeunalignedEarly_D1COI_weak;

TaxsetNo_18S=Atoconeura_sp Neodythemis_klingiOrthetrum_pruinosumLadona_juliaPlathemis_subornataPlathemis_subornata
Libellula_Eolibellula_semifasciata Libellula_Syntetrum_angelina
UnalignedUnaligned_ZygopteraProtosticta_curiosaLibellula_Syntetrum_angelinaLibellula_Eolibellula_semifasciata
Hesperagrion_heterodoxumLeptagrion_sp Lestomima_flavostigma Unaligned_lestoidUnaligned_AnisopteraEpiophlebia_laidlawi
Unaligned_AeshnoidRheopetalia_apicalisOligoaeschna_pryeriBoyeria_vinosaEpiaeschna_herosAeshna_Aeshna_canadensis
Aeshna_Aeshna_grandisUnaligned_gomphid
Davidius_nanusHemigomphus_heteroclytusStylogomphus_albistylusStylogomphus_shirozui[sp]Stylurus_nagoyanus
Asiagomphus_melaenopsGomphus_Gomphus_grasliniOnychogomphus_uncatusOnychogomphus_spLeptogomphus_sauteri Microgomphus_chelifer
Heliogomphus_retroflexusUnaligned_PetaluridPangaeagaster_maculataAnotogaster_sieboldiiEusynthemis_guttata
Gomphomacromia_paradoxaSyncordulia_serendipatorSyncordulia_venatorIdionyx_selysiPseudocordulia_circularisLathrocordulia_metallica
Micromidia_atrifronsAustrophya_mysticaAustrocordulia_refractaArchaeophya_magnificaEpophthalmia_elegansMacromia_magnifica
Idomacromia_proavitaAeschnosoma_forcipulaPentathemis_membranulataTetragoneuria_costalisTetragoneuria_canisEpicordulia_princeps
Epitheca_marginataRialla_villosaSomatochlora_metallicaHemicordulia_min_nipponica
Unaligned_LibellulidNotiothemis_robertsiTetrathemis_irregularisTetrathemis_polleniUrothemis_signataUrothemis_assignata
Macrodiplax_coraZyxomma_elgneriZyxomma_petiolatumBironides_sp_HOL_2010Huonia_epinephelaHuonia_oreophilaOnychothemis_testacea
Rhyothemis_variegata_or_imperatrixRhyothemis_fuliginosaMiathyria_marcellaMiathyria_simplexTholymis_citrinaTholymis_tillarga
Tramea_calvertiSympetrum_Kalosympetrum_obtrusumSympetrum_Nesogonia_blackburniSympetrum_Tarnetrum_illotum
Sympetrum_Sympetrum_infuscatumSympetrum_meridionaleLeucorrhinia_glacialisBrachymesia_gravidaBrachymesia_herbida
Brachythemis_leucostictaBrachythemis_contaminataDeielia_phaonPachydiplax_longipennisErythrodiplax_basalisCrocothemis_servilia
Rhodothemis_rufaNeurothemis_ramburiiDiplacodes_trivialisBradinopyga_strachaniBrachydiplax_chalybea_or_flavovittata
Micrathyria_aequalisMicrathyria_atraMicrathyria_didymaUracis_imbutaUracis_infumataNannophya_pygmaeaNannothemis_bella
Paltothemis_lineatipesBrechmorhoga_mendaxBrechmorhoga_praedatrixDythemis_fugaxTrithemis_africanaDiastatops_pullata
Zenithoptera_fasciata
Neodythemis_afra_or_paulianiPorpax_risiHadrothemis_infestaThermorthemis_madagascariensisAgrionoptera_insignis
Cratilla_metallicaPseudoleon_superbusOrthemis_cultriformisOrthemis_ferruginea
Orthetrum_coerulescensLyriothemis_elegantissima Plathemis_lydia Libellula_Eotainia_compositaLibellula_Holotania_auripennis
Libellula_Holotania_axilenaLibellula_Holotania_luctuosaAethriamanta_reziaTetrathemis_corduliformisDiplacina_ismenePerithemis_lais
Erythemis_vesiculosaNannophyopsis_claraOligoclada_amphinome
Idiataphe_sp[_HOL_2010]Idiataphe_sp[_HOL_2010]Elga_leptostylaFylgia_amazonicaHemistigma_albipunctumPorpacithemis_sp
Thermochoria_equivocataMalgassophlebia_bispinaMicromacromia_zygopteraArgyrothemis_argenteaPseudothemis_zonata
Oxythemis_phoenicoscelesOlpogastra_lugubrisMisagria_paranaUnaligned_OutgroupsCallibaetis_spMachilis_hrabei
Ctenolepisma_longicaudataLepisma_saccharinaIsoperla_spGomphocerinae;

Taxset18S_1=Indolestes_cyaneusLibellula_Libellula_quadrimaculataLibellula_Belonia_saturataLibellula_Neotetrum_pulchella
Platetrum_depressaEurothemis_fulvaOrthetrum_albistylumMicromacromia_camerunicaSelysiothemis_nigraPalpopleura_lucia
Iridictyon_myersiHesperagrion_heterodoxum Epiophlebia_laidlawi
Coenagrion_resolutumProtosticta_sanguinostigmaPalaemnema_melanostigmaIsosticta_robustiorRhadinosticta_simplexLabidosticta_vallisi
Platycnemis_pennipesCopera_vittataCoeliccia_albicaudaCoeliccia_cyanomelasProdasineura_vittata[sp]Nososticta_solida
Phylloneura_westermanniArgia_nahuanaMortonagrion_aborense[sp]Agriocnemis_pygmaea
Coenagrion_puellaPseudagrion_aureofronsErythromma_najasParacercion_plagiosumErythromma_lindeniiParacercion_hieroglyphicum
Amphiagrion_abbreviatum[monotypicheterodoxum]Ishnura_elegansIshnura_barberiIschnura_graellsii[sp]

Amphiallagma_parvumAzuragrion_grantiAzuragrion_nigridorsumEnallagma_cyathigerumEnallagma_spEnallagma_aspersum
Protoneura_capillarisPsaironeura_remissaElattoneura_analis_or_glaucaNeoneura_mariaTelebasis_salvaPyrrhosoma_nymphula
Microstigma_anomalumMecistogaster_ornataMecistogaster_linearisRhinagrion_mimaSciotropis_cyclanthorumHeteragrion_mitratum
Heteragrion_spPhilogenia_cassandraTeinopodagrion_venalePyrrhargiolestes_sidoniaCaledopteryx_maculataTrineuragrion_percostale
Caledargiolestes_uniseriesAustroargiolestes_icteromelasGriseargiolestes_albescensRhipidolestes_aculeataHypolestes_spCora_cyane
Polythore_spEuthore_fasciataRimanella_arcanaPentaphlebia_stahliDevadatta_podolestoidesPseudolestes_mirabilisPhiloganga_vetusta
Lestoidea_conjuncta
Diphlebia_coerlescensBayadera_brevicaudaDysphaea_gloriosaEuphaea_formosaAnisophaea_decorataLibellago_semiopaca
Heliocypha_biseriataPlatycypha_caligataChlorocypha_curtaSundacypha_petiolataRhinocypha_tinctaHeliocharis_amazona
Hetaerina_americanaCaliphaea_confusaNoguchiphaea_yoshikoaeVestalis_beryllaeMatrona_basilarisAtrocalopteryx_atrataEcho_modesta
Neurobasis_ianthinipennisSapho_orichalceaCalopteryx_amataCalopteryx_splendensCalopteryx_aequabilis
Perilestes_kahliPerissolestes_remotusSynlestes_weyersiiChorismagrion_risiEpisynlestes_albicaudusMegalestes_kurahashii
Austrolestes_annulosusSympecma_paediscaSympecma_fuscaAustrolestes_analisChalcolestes_viridisArchilestes_grandis
Hemiphlebia_mirabilisEpiophlebia_superstesEpiophlebia_laidlawiArchipetalia_auriculataOdontopetalia_apolloBoyeria_irene
Brachytron_pratenseCaliaeschna_microstigmaAnaciaeschna_isocelesOplonaeschna_spAeshna_Rhionaeschna_multicolorAeshna_Aeshna_cyanea
Gynacantha_japonica_or_bullataAustrogynacantha_heterogenaHemianax_ephippigerAnax_juniusAnax_imperatorIctinogomphus_australis
Lindenia_tetraphyllaProgomphus_Neaprogomphus_obscurusProgomphus_Neaprogomphus_borealisHagenius_brevistylus[monotypicsomustbe
bevistylus]Armagomphus_armigerHemigomphus_magela
Trigomphus_spDavidioides_martiniCyclogomphus_heterostylusAnisogomphus_pinrataniDromogomphus_spinosusArigomphus_villosipes
Arigomphus_cornutusStylurus_intricatusStylurus_amnicolaGomphus_Gomphurus_externusGomphus_Phanogomphus_exilis
Gomphus_Hylogomphus_adelphusGomphus_Gomphus_vulgatissimusMegalogomphus_spOnychogomphus_forcipatus_unguiculatus
Ophiogomphus_Ophionurus_carolusOphiogomphus_Ophiogomphus_severusOphiogomphus_Ophiogomphus_caeciliaMacrogomphus_parallelogramma
Austrogomphus_amphiclitusAntipodogomphus_acolythusTanypteryx_hageniTanypteryx_spTachopteryx_thoreyiPhenes_raptor
Petalura_giganteaLaurogaster_dorsalisCordulegaster_boltoniiCordulegaster_pictaChlorogomphus_brunneusChlorogomphus_sp
Archaeosynthemis_macrostigmaEusynthemis_nigraChoristhemis_flavoterminataIdionyx_imbricataMacromidia_rapidaOxygastra_curtisii
Cordulephya_pygmaeaHesperocordulia_berthoudiMicromidia_convergensDidymops_transversaMacromia_illinoiensisMacromia_amphigena
Macromia_eurynomeMacromia_splendensPhyllomacromia_bifasciata_or_nyanzana_or_spEpitheca_bimaculataCordulia_aenea
Cordulia_shurtleffiiSomatochlora_alpestrisSomatochlora_flavomaculataHemicordulia_australiaeProcordulia_jacksoniensis
Macrodiplax_balteataZygonyx_torridus_or_idaNannophlebia_sp_or_risiTramea_lacerataSympetrum_Sympetrum_vulgatum
Sympetrum_Sympetrum_pedemontanumSympetrum_Sympetrum_sanguineumSympetrum_Tarnetrum_corruptumSympetrum_Tarnetrum_fonscolombii
Sympetrum_danaeLeucorrhinia_pectoralisCelithemis_eponinaErythemis_collocata_or_simplicicollis_or_spAcisoma_panorpoides
Erythrodiplax_minusculaCrocothemis_erythraeaNeurothemis_fulvia_Diplacodes_lefebvriiBrachydiplax_denticauda
Chalcostephia_flavifronsTrithemis_auroraTrithemis_arteriosaPerithemis_intensa
Palpopleura_luciaSelysiothemis_nigraTrithetrum_navasiMicromacromia_camerunicaNeodythemis_preussiOrthetrum_albistylum
Eurothemis_fulvaPlatetrum_depressaLibellula_Libellula_quadrimaculataLibellula_Belonia_saturataParaleptophlebia_vaciva
Anthopotamus_spCaenis_luctuosaEphemera_spCallibaetis_ferrugineusBaetis_spHexagenia_spCloeon_dipterumLeucrocuta_maculipennis
Centroptilum_luteolumStenonema_spAllomachilis_froggartDilta_littoralisLepisma_spThermobia_domesticaTricholepidion_gertschi
Gromphadorhina_laevigataIsoperla_davisi;

TaxsetV4=Ictinogomphus_spPolythore_bolivianaIndolestes_cyaneusIridictyon_myersiAciagrion_pallidumHesperagrion_heterodoxum
Libellula_Libellula_quadrimaculataLibellula_Belonia_saturataLibellula_Neotetrum_pulchellaPlatetrum_depressaEurothemis_fulva
Orthetrum_albistylumMicromacromia_camerunicaSelysiothemis_nigraPalpopleura_lucia
Perissolestes_magdalenaeLestes_rectangularisAmphipteryx_longicaudataPhiloganga_robusta_Disparocypha_biedermanni
Aristocypha_fenestrellaHypolestes_clara_Agriomorpha_fuscaSinocnemis_yangbingiMiocora_peralticaCora_marinaRhipidolestes_hiraoi
Argiolestes_ochrostomasPodopteryx_roseonotataGriseagriolestes_eboracus[sp]Miniargiolestes_minimusTatocnemis_malgassica
Philogenia_terrabaPhilogenia_berenice[sp]Teinopodagrion_lepidumNesolestes_elizabethaeProtolestes_kerckhoffae
Diceratobasis_melanogasterCoryphagrion_grandisOxystigma_cyanifronsDimeragrion_percubitaleLeptobasis_vacillans
Xiphiagrion_cyanomelasOnychargia_atrocyanaArgiocnemis_rubescensArchibasis_violaCoenagrion_resolutumPalaemnema_paulicoba
Palaemnema_dominaSinosticta_ogataiProtosticta_spProtosticta_sanguinostigmaPalaemnema_melanostigmaIsosticta_robustior
Rhadinosticta_simplexAmphisticta_silvarumLabidosticta_vallisiOrosticta_filicola[sp]

Platycnemis_pennipesCopera_annulataCopera_vittataCopera_marginipes[sp]Coeliccia_albicaudaCoeliccia_cyanomelasCalicnemia_miles
Prodasineura_vittata[sp]Chlorocnemis_abbotti[sp]Nososticta_solidaPhylloneura_westermanniArgia_moestaArgia_nahuana
Mortonagrion_aborense[sp]Agriocnemis_pygmaeaAustroagrion_watsoni
Coenagrion_puellaPseudagrion_cingillumPseudagrion_aureofronsPseudagrion_igniferErythromma_najasParacercion_plagiosum
Erythromma_lindeniiParacercion_hieroglyphicumAcanthagrion_quadratumAmphiagrion_sauciumAmphiagrion_abbreviatum
Ishnura_elegansIshnura_barberiIschnura_graellsii[sp]Anomalagrion_hastatumAmphiallagma_parvumAzuragrion_granti
Azuragrion_nigridorsumEnallagma_cyathigerumEnallagma_spEnallagma_aspersumAciagrion_borneenseProtoneura_capillarisProtoneura_cara
Psaironeura_remissaElattoneura_analis_or_glaucaNeoneura_aaroniNeoneura_ameliaNeoneura_mariaCeriagrion_aeruginosumTelebasis_salva
Leptagrion_elongatumMetaleptobasis_manicariaPyrrhosoma_nymphulaChromagrion_conditumSeychellibasis_alluaudi[sp]
Nehalennia_gracilisMicrostigma_rotundatumMicrostigma_anomalumMecistogaster_ornataMecistogaster_linearisMegaloprepus_coerulatus
Haplostigma_modestaPseudostigma_aberransRhinagrion_mimaSciotropis_cyclanthorumHeteragrion_mitratumHeteragrion_sp
Philogenia_cassandraTeinopodagrion_venaleAmanipodagrion_gilliesiPyrrhargiolestes_sidoniaCaledopteryx_maculata
Trineuragrion_percostaleCaledargiolestes_uniseriesAustroargiolestes_icteromelasGriseargiolestes_albescensRhipidolestes_aculeata
Paraphlebia_zoeThaumatoneura_inopinataHypolestes_spCora_cyanePolythore_spEuthore_fasciataRimanella_arcanaPentaphlebia_stahli
Devadatta_podolestoidesPseudolestes_mirabilisPhiloganga_vetustaLestoidea_conjuncta
Diphlebia_lestoidesDiphlebia_coerlescensBayadera_melanopteryxBayadera_brevicaudaDysphaea_gloriosaEuphaea_formosa
Anisophaea_decorataAnisopleura_spLibellago_semiopacaHeliocypha_biseriataPlatycypha_caligataChlorocypha_curta
Sundacypha_petiolataRhinocypha_tinctaHeliocharis_amazonaHetaerina_americanaCaliphaea_confusaNoguchiphaea_yoshikoae
Vestalis_beryllaeMatrona_basilarisAtrocalopteryx_atrataEcho_modestaNeurobasis_ianthinipennisSapho_orichalceaCalopteryx_amata
Calopteryx_splendensCalopteryx_aequabilisIridictyon_trebbauiNubiolestes_diotimaPerilestes_kahliPerissolestes_remotus
Chlorolestes_umbratus[sp]Euchlorolestes_tessellatus[sp]Phylolestes_ethelaeSynlestes_weyersiiSynlestes_tropicus
Chorismagrion_risiEpisynlestes_cristatusEpisynlestes_albicaudusMegalestes_micansMegalestes_kurahashiiOrolestes_octomaculatus
Austrolestes_annulosusSympecma_paediscaSympecma_fuscaAustrolestes_analisIndolestes_peregrinusChalcolestes_viridis
Archilestes_grandisLestes_eurinusHemiphlebia_mirabilisEpiophlebia_superstesArchipetalia_auriculataAustropetalia_victoria
Hypopetalia_pestilensOdontopetalia_apolloEurypetalia_altarensisOphiopetalia_dianaGomphaeschna_furcillataAustroaeschna_parvistigma
Telephlebia_tillyardiBoyeria_ireneBrachytron_pratenseCaliaeschna_microstigmaAnaciaeschna_isocelesOplonaeschna_sp
Aeshna_Rhionaeschna_multicolorAeshna_Aeshna_cyaneaGynacantha_japonica_or_bullataAustrogynacantha_heterogenaHemianax_ephippiger
Anax_juniusAnax_imperatorSinogomphidia_kruegeri[Gomphidia?]Ictinogomphus_australisLindenia_tetraphyllaPhyllogomphoides_stigmatus
Progomphus_Neaprogomphus_obscurusProgomphus_Neaprogomphus_borealisHagenius_brevistylus[monotypicsomustbebevistylus]
Lanthus_vernalisNeogomphus_edenticulatusArmagomphus_armigerHemigomphus_comitansHemigomphus_magela
Trigomphus_spDavidioides_martiniBurmagomphus_collarisCyclogomphus_heterostylusAnisogomphus_pinrataniDromogomphus_spinosus
Arigomphus_villosipesArigomphus_cornutusStylurus_intricatusStylurus_amnicolaGomphus_Gomphurus_externusGomphus_Phanogomphus_exilis
Gomphus_Hylogomphus_adelphusGomphus_Gomphus_vulgatissimusMegalogomphus_spOnychogomphus_forcipatus_unguiculatus
Ophiogomphus_Ophionurus_carolusOphiogomphus_Ophiogomphus_severusOphiogomphus_Ophiogomphus_caeciliaLeptogomphus_elegans
Epigomphus_compactusMacrogomphus_parallelogrammaCeratogomphus_pictus[sp]Lestinogomphus_angustusAustrogomphus_guerini
Austrogomphus_amphiclitusAntipodogomphus_acolythusTanypteryx_hageniTanypteryx_spTanypteryx_pryeriTachopteryx_thoreyi
Phenes_raptorPhenes_centralisUropetalura_carovei[sp]Petalura_hesperiaPetalura_giganteaPetalura_litorea[sp] Petalura_ingentissima
Zoraena_bilineataTaeniogaster_obliquaKalyptogaster_erroneaLaurogaster_dorsalisCordulegaster_boltonii
Cordulegaster_pictaNeopetalia_punctataChloropetalia_soarerSinorogomphus_nasutusChlorogomphus_brunneusChlorogomphus_sp
Synthemis_eustalactaArchaeosynthemis_macrostigmaArchaeosynthemis_leachiiEusynthemis_brevistylaEusynthemis_nigra
Choristhemis_flavoterminataSynthemiopsis_gomphomacromioidesGomphomacromia_chilensisIdionyx_imbricataMacromidia_rapida
Oxygastra_curtisiiCordulephya_pygmaeaHesperocordulia_berthoudiMicromidia_convergensDidymops_transversaMacromia_illinoiensis
Macromia_amphigenaMacromia_eurynomeMacromia_splendensPhyllomacromia_bifasciata_or_nyanzana_or_spTetragoneuria_cynosura[sp]
Epitheca_bimaculataCordulia_aeneaCordulia_shurtleffiiSomatochlora_alpestrisSomatochlora_flavomaculataSomatochlora_tenebrosa
Hemicordulia_australiaeProcordulia_jacksoniensisMacrodiplax_balteataZygonyx_torridus_or_idaNannophlebia_sp_or_risi
Pantala_flavescensTramea_lacerataSympetrum_Kalosympetrum_janeaeSympetrum_Sympetrum_vulgatumSympetrum_Sympetrum_pedemontanum
Sympetrum_Sympetrum_sanguineumSympetrum_Tarnetrum_corruptumSympetrum_Tarnetrum_fonscolombiiSympetrum_danaeLeucorrhinia_pectoralis
Celithemis_elisaCelithemis_eponinaErythemis_collocata_or_simplicicollis_or_spAcisoma_panorpoidesErythrodiplax_minuscula
Crocothemis_erythraeaNeurothemis_fulvia_Diplacodes_lefebvriiBrachydiplax_denticaudaChalcostephia_flavifronsTrithemis_aurora
Trithemis_arteriosaPerithemis_teneraPerithemis_intensaPalpopleura_luciaSelysiothemis_nigraTrithetrum_navasi
Micromacromia_camerunicaNeodythemis_preussiOrthetrum_albistylumEurothemis_fulvaPlatetrum_depressa

```
Libellula_Libellula_quadrimaculataLibellula_Belonia_saturataLibellula_Neotetrum_pulchellaEphemerella_spParaleptophlebia_vaciva
Anthopotamus_spCaenis_luctuosaEphemera_spCallibaetis_ferrugineusBaetis_spHexagenia_spCloeon_dipterumLeucrocuta_maculipennis
Centroptilum_luteolumStenonema_spTrigonioptha lmus_alternAllomachilis_froggartDilta_littoralisLepisma_spThermobia_domestica
Tricholepidion_gertschiGromphadorhina_laevigataIsoperla_davisi;

Taxset18S_3=Ictinogomphus_spIridictyon_myersiPolythore_bolivianaAciagrion_pallidumHesperagrion_heterodoxumIndolestes_cyaneus
Libellula_Libellula_quadrimaculataLibellula_Belonia_saturataLibellula_Neotetrum_pulchellaPlatetrum_depressaEurothemis_fulva
Orthetrum_albistylumMicromacromia_camerunicaSelysiothemis_nigraPalpopleura_lucia
   Coenagrion_resolutumProtosticta_sanguinostigmaPalaemnema_melanostigmaIsosticta_robusti
orRhadinosticta_simplexLabidosticta_vallisiPlatycnemis_pennipesCopera_vittataCoeliccia_albicaudaCoeliccia_cyanomelas
Prodasineura_vittata[sp]Nososticta_solidaPhylloneura_westermanniArgia_nahuanaMortonagrion_aborense[sp]Agriocnemis_pygmaea
Coenagrion_puellaPseudagrion_aureofronsErythromma_najasParacercion_plagiosumErythromma_lindeniiParacercion_hieroglyphicum
Amphiagrion_abbreviatum
 Ishnura_elegansIshnura_barberiIschnura_graellsii[sp]Amphiallagma_parvumAzuragrion_grantiAzuragrion_nigridorsum
Enallagma_cyathigerumEnallagma_spEnallagma_aspersumProtoneura_capillarisPsaironeura_remissaElattoneura_analis_or_glauca
Neoneura_mariaTelebasis_salvaPyrrhosoma_nymphulaMicrostigma_anomalumMecistogaster_ornataMecistogaster_linearisRhinagrion_mima
Sciotropis_cyclanthorumHeteragrion_mitratumHeteragrion_spPhilogenia_cassandraTeinopodagrion_venalePyrrhargiolestes_sidonia
Caledopteryx_maculataTrineuragrion_percostaleCaledargiolestes_uniseriesAustroargiolestes_icteromelasGriseargiolestes_albescens
Rhipidolestes_aculeataHypolestes_spCora_cyanePolythore_spEuthore_fasciataRimanella_arcanaPentaphlebia_stahli
Devadatta_podolestoidesPseudolestes_mirabilisPhiloganga_vetustaLestoidea_conjunctaDiphlebia_coerlescensBayadera_brevicauda
Dysphaea_gloriosaEuphaea_formosaAnisophaea_decorataLibellago_semiopacaHeliocypha_biseriataPlatycypha_caligataChlorocypha_curta
Sundacypha_petiolataRhinocypha_tinctaHeliocharis_amazonaHetaerina_americanaCaliphaea_confusaNoguchiphaea_yoshikoae
Vestalis_beryllaeMatrona_basilarisAtrocalopteryx_atrataEcho_modestaNeurobasis_ianthinipennisSapho_orichalceaCalopteryx_amata
Calopteryx_splendensCalopteryx_aequabilis
  Perilestes_kahliPerissolestes_remotusSynlestes_weyersiiChorismagrion_risiEpisynlestes_albicaudusMegalestes_kurahashii
Austrolestes_annulosusSympecma_paediscaSympecma_fuscaAustrolestes_analisChalcolestes_viridisArchilestes_grandis
Hemiphlebia_mirabilisEpiophlebia_superstesArchipetalia_auriculataOdontopetalia_apolloBoyeria_ireneBrachytron_pratense
Caliaeschna_microstigmaOplonaeschna_spAeshna_Rhionaeschna_multicolorAeshna_Aeshna_cyaneaGynacantha_japonica_or_bullata
Austrogynacantha_heterogenaHemianax_ephippigerAnax_juniusAnax_imperatorIctinogomphus_australisLindenia_tetraphylla
Progomphus_Neaprogomphus_obscurusProgomphus_Neaprogomphus_borealisHagenius_brevistylus[monotypicsomustbebevistylus]
Davidius_nanusArmagomphus_armigerHemigomphus_magela
  Trigomphus_spDavidioides_martiniCyclogomphus_heterostylusAnisogomphus_pinrataniDromogomphus_spinosusArigomphus_villosipes
Arigomphus_cornutusStylurus_intricatusStylurus_amnicolaGomphus_Gomphurus_externusGomphus_Phanogomphus_exilis
Gomphus_Hylogomphus_adelphusGomphus_Gomphus_vulgatissimusMegalogomphus_spOnychogomphus_forcipatus_unguiculatus
Ophiogomphus_Ophionurus_carolusOphiogomphus_Ophiogomphus_severusOphiogomphus_Ophiogomphus_caeciliaMacrogomphus_parallelogramma
Austrogomphus_amphiclitusAntipodogomphus_acolythusTanypteryx_hageniTanypteryx_spTachopteryx_thoreyiPhenes_raptor
Petalura_giganteaLaurogaster_dorsalisCordulegaster_boltoniiCordulegaster_pictaChlorogomphus_brunneusChlorogomphus_sp
Archaeosynthemis_macrostigmaEusynthemis_nigraChoristhemis_flavoterminataIdionyx_imbricataMacromidia_rapidaOxygastra_curtisii
Cordulephya_pygmaeaHesperocordulia_berthoudiMicromidia_convergensDidymops_transversaMacromia_illinoiensisMacromia_amphigena
Macromia_eurynomeMacromia_splendensPhyllomacromia_bifasciata_or_nyanzana_or_spEpitheca_bimaculataCordulia_aenea
Cordulia_shurtleffiiSomatochlora_alpestrisSomatochlora_flavomaculataHemicordulia_australiaeProcordulia_jacksoniensis
Macrodiplax_balteataZygonyx_torridus_or_idaNannophlebia_sp_or_risiTramea_lacerataSympetrum_Sympetrum_vulgatum
Sympetrum_Sympetrum_pedemontanumSympetrum_Sympetrum_sanguineumSympetrum_Tarnetrum_corruptumSympetrum_Tarnetrum_fonscolombii
Sympetrum_danaeLeucorrhinia_pectoralisCelithemis_eponinaErythemis_collocata_or_simplicicollis_or_spAcisoma_panorpoides
Erythrodiplax_minusculaCrocothemis_erythraeaNeurothemis_fulvia_Diplacodes_lefebvriiBrachydiplax_denticauda
Chalcostephia_flavifronsTrithemis_auroraTrithemis_arteriosaPerithemis_intensaPalpopleura_luciaSelysiothemis_nigra
Trithetrum_navasiMicromacromia_camerunicaNeodythemis_preussiOrthetrum_albistylumEurothemis_fulvaPlatetrum_depressa
Libellula_Libellula_quadrimaculataLibellula_Belonia_saturataParaleptophlebia_vacivaAnthopotamus_spCaenis_luctuosaEphemera_sp
Callibaetis_ferrugineusBaetis_spHexagenia_spCloeon_dipterumLeucrocuta_maculipennisCentroptilum_luteolumStenonema_sp
Allomachilis_froggartDilta_littoralisLepisma_spThermobia_domesticaTricholepidion_gertschiGromphadorhina_laevigataIsoperla_davisi
;
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Taxset5_8S=Indolestes_cyaneusLibellula_Libellula_quadrimaculataOrthetrum_pruinosumAgrionoptera_insignisSelysiothemis_nigra
Palpopleura_lucia Iridictyon_myersi
Aciagrion_pallidumCoenagrion_resolutumPalaemnema_melanostigmaPlatycnemis_pennipesCopera_annulataCoeliccia_albicauda
Prodasineura_vittata[sp]Agriocnemis_pygmaeaCoenagrion_puellaPseudagrion_igniferErythromma_najasParacercion_plagiosum
Erythromma_lindeniiParacercion_hieroglyphicumAcanthagrion_quadratumIshnura_elegansIschnura_graellsii[sp]Amphiallagma_parvum
Azuragrion_grantiAzuragrion_nigridorsumEnallagma_cyathigerum
Elattoneura_analis_or_glaucaPyrrhosoma_nymphulaMecistogaster_ornataRhinagrion_mimaHeteragrion_mitratumPhilogenia_cassandra
Teinopodagrion_venaleRhipidolestes_hiraoiRhipidolestes_aculeataCora_cyaneEuthore_fasciataRimanella_arcanaPentaphlebia_stahli
Devadatta_podolestoidesPhiloganga_vetustaDiphlebia_lestoidesDysphaea_gloriosaEuphaea_formosaAnisophaea_decorata
Platycypha_caligataChlorocypha_curtaRhinocypha_tinctaHeliocharis_amazonaHetaerina_americanaCaliphaea_confusa
Noguchiphaea_yoshikoaeVestalis_beryllaeMatrona_basilarisAtrocalopteryx_atrataEcho_modestaSapho_orichalceaCalopteryx_amata
Calopteryx_splendensCalopteryx_aequabilis
Sympecma_paediscaAustrolestes_analisIndolestes_peregrinusChalcolestes_viridisEpiophlebia_superstesArchipetalia_auriculata
Boyeria_ireneBrachytron_pratenseAeshna_Aeshna_cyaneaGynacantha_japonica_or_bullataHemianax_ephippigerAnax_juniusAnax_imperator
Lindenia_tetraphyllaDavidius_nanus
Trigomphus_spStylogomphus_shirozui[sp]Anisogomphus_pinrataniStylurus_nagoyanusGomphus_Gomphus_vulgatissimusMegalogomphus_sp
Onychogomphus_forcipatus_unguiculatusOphiogomphus_Ophiogomphus_caeciliaMacrogomphus_parallelogrammaTanypteryx_spTanypteryx_pryeri
Tachopteryx_thoreyiCordulegaster_boltoniiAnotogaster_sieboldiiChlorogomphus_spMacromidia_rapidaEpophthalmia_elegans
Didymops_transversaMacromia_illinoiensisMacromia_amphigenaMacromia_magnificaMacromia_splendens
Phyllomacromia_bifasciata_or_nyanzana_or_spEpitheca_marginataEpitheca_bimaculataCordulia_aeneaSomatochlora_alpestris
Somatochlora_metallicaHemicordulia_min_nipponicaMacrodiplax_coraZyxomma_petiolatumZygonyx_torridus_or_ida
Rhyothemis_variegata_or_imperatrixRhyothemis_fuliginosaTholymis_tillargaPantala_flavescensTramea_lacerata
Sympetrum_Kalosympetrum_janeaeSympetrum_Kalosympetrum_obtrusumSympetrum_Sympetrum_vulgatumSympetrum_Sympetrum_pedemontanum
Sympetrum_Sympetrum_sanguineumSympetrum_Tarnetrum_corruptumSympetrum_Tarnetrum_fonscolombiiSympetrum_Tarnetrum_illotum
Sympetrum_Sympetrum_infuscatumSympetrum_meridionaleLeucorrhinia_pectoralisBrachythemis_contaminataDeielia_phaon Acisoma_panorpoides
Crocothemis_serviliaNeurothemis_fulvia_Neurothemis_ramburiiDiplacodes_lefebvriiDiplacodes_trivialis
Brachydiplax_chalybea_or_flavovittataChalcostephia_flavifronsNannophya_pygmaeaTrithemis_arteriosaPerithemis_tenera
Trithetrum_navasiMicromacromia_camerunicaNeodythemis_preussiLibellula_Syntetrum_angelinaEphemerella_sp
Callibaetis_ferrugineusCtenolepisma_longicaudataThermobia_domesticaGomphocerinae;

TaxsetNo_28S= Aciagrion_pallidum UnalignedUnaligned_ZygopteraCoenagrion_puellaErythromma_lindenii
Paracercion_hieroglyphicumIschnura_graellsii[sp]Amphiallagma_parvumAzuragrion_grantiAzuragrion_nigridorsumEnallagma_aspersum
Elattoneura_analis_or_glauca Sundacypha_petiolataNoguchiphaea_yoshikoaeCalopteryx_splendensUnaligned_lestoidUnaligned_Anisoptera
Unaligned_AeshnoidOligoaeschna_pryeriHemianax_ephippigerUnaligned_gomphidIctinogomphus_spDavidius_nanus
Trigomphus_spAnisogomphus_pinrataniArigomphus_cornutusStylurus_amnicolaGomphus_Gomphus_graslini
Ophiogomphus_Ophiogomphus_caeciliaHeliogomphus_retroflexusMacrogomphus_parallelogrammaUnaligned_PetaluridTanypteryx_sp
Chlorogomphus_spEpophthalmia_elegansMacromia_magnificaTetragoneuria_costalisUnaligned_LibellulidMiathyria_marcella
Sympetrum_Kalosympetrum_obtrusumSympetrum_Nesogonia_blackburniSympetrum_Tarnetrum_illotumBrachymesia_gravida
Brachythemis_contaminataErythrodiplax_basalisNeurothemis_fulvia_Diplacodes_lefebvriiMicrathyria_atraUracis_infumata
Trithemis_arteriosaSelysiothemis_nigraTrithetrum_navasiPorpax_risiNeodythemis_klingiPseudoleon_superbusOrthetrum_coerulescens
Plathemis_subornataLibellula_Syntetrum_angelinaLibellula_Eolibellula_semifasciataLibellula_Eotainia_composita
Libellula_Holotania_comancheLibellula_Holotania_auripennisLibellula_Holotania_axilena;

TaxsetNo_28S=Unaligned_OutgroupsAciagrion_pallidum UnalignedUnaligned_ZygopteraCoenagrion_puellaErythromma_lindenii
Paracercion_hieroglyphicumIschnura_graellsii[sp]Amphiallagma_parvumAzuragrion_grantiAzuragrion_nigridorsumEnallagma_aspersum
Elattoneura_analis_or_glauca
Sundacypha_petiolataNoguchiphaea_yoshikoaeCalopteryx_splendensUnaligned_lestoidUnaligned_AnisopteraUnaligned_Aeshnoid
Oligoaeschna_pryeriHemianax_ephippigerUnaligned_gomphidIctinogomphus_spDavidius_nanusTrigomphus_spAnisogomphus_pinratani
Arigomphus_cornutusStylurus_amnicolaGomphus_Gomphus_grasliniOphiogomphus_Ophiogomphus_caeciliaHeliogomphus_retroflexus
Macrogomphus_parallelogrammaUnaligned_PetaluridTanypteryx_spChlorogomphus_spEpophthalmia_elegansMacromia_magnifica

Tetragoneuria_costalisUnaligned_LibellulidMiathyria_marcellaSympetrum_Kalosympetrum_obtrusumSympetrum_Nesogonia_blackburni
Sympetrum_Tarnetrum_illotumBrachymesia_gravidaBrachythemis_contaminataErythrodiplax_basalisNeurothemis_fulvia_
Diplacodes_lefebvriiMicrathyria_atraUracis_infumataTrithemis_arteriosaSelysiothemis_nigraTrithetrum_navasiPorpax_risi
Neodythemis_klingiPseudoleon_superbusOrthetrum_coerulescensPlathemis_subornataLibellula_Syntetrum_angelina
Libellula_Eolibellula_semifasciataLibellula_Eotainia_compositaLibellula_Holotania_comancheLibellula_Holotania_auripennis
Libellula_Holotania_axilena;

TaxsetLittle_or_No_28S=Paracercion_plagiosum   No_28S
Perissolestes_magdalenaeIridictyon_myersiAciagrion_pallidumUnalignedUnaligned_ZygopteraCoenagrion_puellaParacercion_plagiosum
Erythromma_lindeniiParacercion_hieroglyphicumIschnura_graellsii[sp]
Amphiallagma_parvumAzuragrion_grantiAzuragrion_nigridorsumEnallagma_aspersum
Psaironeura_remissaElattoneura_analis_or_glaucaNeoneura_ameliaMetaleptobasis_manicariaCoryphagrion_grandis
Sinocnemis_yangbingiSundacypha_petiolataNoguchiphaea_yoshikoaeCalopteryx_splendensUnaligned_lestoidMegalestes_kurahashii
Unaligned_AnisopteraUnaligned_AeshnoidOligoaeschna_pryeriAeshna_Aeshna_cyanea
Hemianax_ephippigerUnaligned_gomphidIctinogomphus_spDavidius_nanus
Hemigomphus_comitansTrigomphus_spAnisogomphus_pinrataniArigomphus_cornutusStylurus_amnicolaGomphus_Gomphus_graslini
Megalogomphus_spOphiogomphus_Ophiogomphus_caecilia
Leptogomphus_elegansHeliogomphus_retroflexusMacrogomphus_parallelogrammaUnaligned_PetaluridTanypteryx_spChlorogomphus_sp
Archaeosynthemis_macrostigmaSyncordulia_serendipatorSyncordulia_venator
Idionyx_selysiMicromidia_atrifronsEpophthalmia_elegansMacromia_magnificaTetragoneuria_costalisSomatochlora_flavomaculata
Unaligned_LibellulidMiathyria_marcellaSympetrum_Kalosympetrum_obtrusum
Sympetrum_Sympetrum_pedemontanumSympetrum_Nesogonia_blackburniSympetrum_Tarnetrum_illotumSympetrum_Sympetrum_infuscatum
Celithemis_eponinaBrachymesia_gravidaBrachythemis_contaminataErythrodiplax_basalis
Neurothemis_fulvia_Diplacodes_lefebvriiMicrathyria_atraUracis_infumataDythemis_fugaxTrithemis_arteriosaSelysiothemis_nigra
Trithetrum_navasiPorpax_risi
Libellula_Eolibellula_semifasciata   Libellula_Holotania_auripennisLibellula_Holotania_axilenaUnaligned_OutgroupsEphemera_sp
Cloeon_dipterumTrigoniopthalmus_alternAllomachilis_froggart;

TaxsetD1=Hesperagrion_heterodoxumMicromacromia_camerunicaHadrothemis_infestaOrthemis_cultriformisOrthetrum_albistylum
Lyriothemis_elegantissimaPlatetrum_depressaLibellula_Neotetrum_pulchellaAethriamanta_reziaAtoconeura_sp
Protosticta_spProtosticta_sanguinostigmaPalaemnema_paulicobaPalaemnema_dominaPalaemnema_melanostigmaIsosticta_robustior
Rhadinosticta_simplexAmphisticta_silvarumLabidosticta_vallisiOrosticta_filicola[sp]
Platycnemis_pennipesCopera_annulataCopera_vittataCopera_marginipes[sp]Coeliccia_albicaudaCoeliccia_cyanomelasCalicnemia_miles
Prodasineura_vittata[sp]Nososticta_solidaPhylloneura_westermanniOnychargia_atrocyanaArgia_moestaArgia_nahuana
Argiocnemis_rubescensMortonagrion_aborense[sp]Agriocnemis_pygmaeaAustroagrion_watsoniCoenagrion_resolutumPseudagrion_cingillum
Pseudagrion_aureofronsPseudagrion_igniferErythromma_najasAcanthagrion_quadratumAmphiagrion_sauciumAmphiagrion_abbreviatum
Xiphiagrion_cyanomelasHesperagrion_heterodoxum[monotypicheterodoxum]Ishnura_barberiAnomalagrion_hastatumEnallagma_sp
Protoneura_capillarisNeoneura_aaroniNeoneura_mariaTelebasis_salvaLeptagrion_elongatumDiceratobasis_melanogaster
Pyrrhosoma_nymphulaChromagrion_conditumNehalennia_gracilisMicrostigma_rotundatumMicrostigma_anomalumMecistogaster_linearis
Megaloprepus_coerulatusPseudostigma_aberransRhinagrion_mimaSciotropis_cyclanthorumHeteragrion_mitratumHeteragrion_sp
Oxystigma_cyanifronsDimeragrion_percubitaleTatocnemis_malgassicaPhilogenia_cassandraPhilogenia_terrabaTeinopodagrion_venale
Teinopodagrion_lepidumAmanipodagrion_gilliesiNesolestes_elizabethaeProtolestes_kerckhoffaeArgiolestes_ochrostomas
Pyrrhargiolestes_sidoniaCaledopteryx_maculataTrineuragrion_percostaleCaledargiolestes_uniseriesPodopteryx_roseonotata
Austroargiolestes_icteromelasGriseargiolestes_albescensGriseagriolestes_eboracus[sp]Miniargiolestes_minimusLestomima_flavostigma
Rhipidolestes_hiraoiRhipidolestes_aculeataParaphlebia_zoeThaumatoneura_inopinataHypolestes_clara_Hypolestes_spAgriomorpha_fusca
Miocora_peralticaCora_marinaCora_cyanePolythore_spPolythore_bolivianaEuthore_fasciataRimanella_arcanaPentaphlebia_stahli
Devadatta_podolestoidesAmphipteryx_longicaudataPseudolestes_mirabilisPhiloganga_vetustaPhiloganga_robusta_Lestoidea_conjuncta
Diphlebia_lestoidesDiphlebia_coerlescensBayadera_melanopteryxBayadera_brevicaudaDysphaea_gloriosaEuphaea_formosa
Anisophaea_decorataAnisopleura_spDisparocypha_biedermanniLibellago_semiopacaHeliocypha_biseriataPlatycypha_caligata
Chlorocypha_curtaAristocypha_fenestrellaRhinocypha_tinctaHeliocharis_amazonaHetaerina_americanaCaliphaea_confusa

Vestalis_beryllaeMatrona_basilarisAtrocalopteryx_atrataEcho_modestaNeurobasis_ianthinipennisSapho_orichalceaCalopteryx_amata
Iridictyon_trebbauiNubiolestes_diotimaPerilestes_kahliChlorolestes_umbratus[sp]Euchlorolestes_tessellatus[sp] Phylolestes_ethelae
Synlestes_weyersiiSynlestes_tropicusChorismagrion_risiEpisynlestes_cristatusEpisynlestes_albicaudus
Megalestes_micansOrolestes_octomaculatusAustrolestes_annulosusSympecma_paediscaAustrolestes_analisIndolestes_peregrinus
Chalcolestes_viridisArchilestes_grandisLestes_rectangularisLestes_eurinusHemiphlebia_mirabilisEpiophlebia_superstes
Archipetalia_auriculataAustropetalia_victoriaHypopetalia_pestilensRheopetalia_apicalisOdontopetalia_apolloEurypetalia_altarensis
Ophiopetalia_dianaGomphaeschna_furcillataAustroaeschna_parvistigmaBoyeria_vinosaBoyeria_ireneBrachytron_pratenseEpiaeschna_heros
Caliaeschna_microstigmaAnaciaeschna_isocelesAeshna_Rhionaeschna_multicolorAeshna_Aeshna_grandisGynacantha_japonica_or_bullata
Austrogynacantha_heterogenaAnax_juniusAnax_imperatorSinogomphidia_kruegeri[Gomphidia?]Ictinogomphus_australisLindenia_tetraphylla
Phyllogomphoides_stigmatusProgomphus_Neaprogomphus_obscurusProgomphus_Neaprogomphus_borealisHagenius_brevistylus[monotypicso
mustbebevistylus]Lanthus_vernalisNeogomphus_edenticulatusArmagomphus_armigerHemigomphus_heteroclytusHemigomphus_magela
Stylogomphus_albistylusStylogomphus_shirozui[sp]Davidioides_martiniBurmagomphus_collarisCyclogomphus_heterostylus
Dromogomphus_spinosusArigomphus_villosipesStylurus_intricatusStylurus_nagoyanusGomphus_Gomphurus_externus
Asiagomphus_melaenopsGomphus_Phanogomphus_exilisGomphus_Hylogomphus_adelphusGomphus_Gomphus_vulgatissimus
Onychogomphus_uncatusOnychogomphus_forcipatus_unguiculatusOphiogomphus_Ophionurus_carolusOphiogomphus_Ophiogomphus_severus
Leptogomphus_sauteriMicrogomphus_cheliferCeratogomphus_pictus[sp]Austrogomphus_gueriniAntipodogomphus_acolythus
Tanypteryx_hageniTanypteryx_pryeriTachopteryx_thoreyiPhenes_raptorPhenes_centralisPetalura_hesperiaPetalura_litorea[sp]
Petalura_ingentissimaZoraena_bilineataTaeniogaster_obliquaKalyptogaster_erroneaPangaeagaster_maculataLaurogaster_dorsalis
Cordulegaster_boltonii
Cordulegaster_pictaAnotogaster_sieboldiiNeopetalia_punctataChloropetalia_soarerSinorogomphus_nasutusChlorogomphus_brunneus
Synthemis_eustalactaArchaeosynthemis_macrostigmaEusynthemis_guttataEusynthemis_nigraChoristhemis_flavoterminata
Synthemiopsis_gomphomacromioidesGomphomacromia_chilensisGomphomacromia_paradoxaIdionyx_imbricataOxygastra_curtisii
Cordulephya_pygmaeaHesperocordulia_berthoudiMicromidia_convergensDidymops_transversaMacromia_illinoiensisMacromia_amphigena
Macromia_eurynomeMacromia_splendensPhyllomacromia_bifasciata_or_nyanzana_or_spIdomacromia_proavitaTetragoneuria_cynosura[sp]
Tetragoneuria_canisEpicordulia_princepsEpitheca_marginataEpitheca_bimaculataCordulia_shurtleffiiSomatochlora_alpestris
Somatochlora_metallicaSomatochlora_tenebrosaHemicordulia_min_nipponicaHemicordulia_australiaeProcordulia_jacksoniensis
Notiothemis_robertsiTetrathemis_irregularisUrothemis_signataMacrodiplax_coraMacrodiplax_balteataZyxomma_petiolatum
Zygonyx_torridus_or_idaNannophlebia_sp_or_risiBironides_sp_HOL_2010Huonia_epinephelaRhyothemis_variegata_or_imperatrix
Rhyothemis_fuliginosaMiathyria_simplexTholymis_citrinaTramea_lacerataTramea_calvertiSympetrum_Kalosympetrum_janeae
Sympetrum_Sympetrum_vulgatumSympetrum_Sympetrum_sanguineumSympetrum_Tarnetrum_corruptumSympetrum_Tarnetrum_fonscolombii
Sympetrum_danaeSympetrum_meridionaleLeucorrhinia_pectoralisCelithemis_elisaBrachymesia_herbidaDeielia_phaon
Erythemis_collocata_or_simplicicollis_or_spAcisoma_panorpoidesErythrodiplax_minusculaCrocothemis_erythraeaRhodothemis_rufa
Neurothemis_ramburiiDiplacodes_trivialisBrachydiplax_denticaudaBrachydiplax_chalybea_or_flavovittataChalcostephia_flavifrons
Micrathyria_didymaUracis_imbutaNannophya_pygmaeaBrechmorhoga_praedatrixTrithemis_auroraTrithemis_africanaPerithemis_tenera
Perithemis_intensaPalpopleura_luciaDiastatops_pullataZenithoptera_fasciata
Neodythemis_preussiThermorthemis_madagascariensisAgrionoptera_insignisCratilla_metallicaEurothemis_fulvaLadona_julia
Libellula_Libellula_quadrimaculataTetrathemis_corduliformisDiplacina_ismenePerithemis_laisErythemis_vesiculosa
Nannophyopsis_claraOligoclada_amphinome
Idiataphe_sp[_HOL_2010]Idiataphe_sp[_HOL_2010]Elga_leptostylaFylgia_amazonicaHemistigma_albipunctumPorpacithemis_sp
Thermochoria_equivocataMalgassophlebia_bispinaMicromacromia_zygopteraArgyrothemis_argenteaPseudothemis_zonata
Oxythemis_phoenicoscelesOlpogastra_lugubrisMisagria_paranaEphemerella_spParaleptophlebia_vacivaAnthopotamus_spCaenis_luctuosa
Callibaetis_spCallibaetis_ferrugineusHexagenia_spLeucrocuta_maculipennisCentroptilum_luteolumStenonema_spMachilis_hrabei
Dilta_littoralisCtenolepisma_longicaudataLepisma_spLepisma_saccharinaThermobia_domesticaTricholepidion_gertschi
Gromphadorhina_laevigataIsoperla_davisiIsoperla_spGomphocerinae;

TaxsetD2=Anisophaea_decorataLibellula_Holotania_luctuosaLibellula_Belonia_saturataPlathemis_lydiaPhilogenia_berenice
Hesperagrion_heterodoxumMicromacromia_camerunicaHadrothemis_infestaOrthemis_cultriformisOrthetrum_albistylum
Lyriothemis_elegantissimaPlatetrum_depressaLibellula_Neotetrum_pulchellaAethriamanta_reziaAtoconeura_sp
Protosticta_curiosaIsosticta_robustiorRhadinosticta_simplexAmphisticta_silvarumLabidosticta_vallisiPlatycnemis_pennipes
Copera_vittataCoeliccia_albicaudaCoeliccia_cyanomelasCalicnemia_milesProdasineura_vittata[sp]Chlorocnemis_abbotti[sp]
Nososticta_solidaPhylloneura_westermanniArgia_moestaArgia_nahuanaMortonagrion_aborense[sp]Agriocnemis_pygmaea

Coenagrion_resolutumPseudagrion_cingillumPseudagrion_aureofronsPseudagrion_igniferErythromma_najasAmphiagrion_saucium
Amphiagrion_abbreviatum
[monotypicheterodoxum]Ishnura_barberiEnallagma_spProtoneura_capillarisNeoneura_aaroniNeoneura_mariaDiceratobasis_melanogaster
Pyrrhosoma_nymphulaChromagrion_conditumNehalennia_gracilisMicrostigma_rotundatumMicrostigma_anomalumMecistogaster_linearis
Pseudostigma_aberransRhinagrion_mimaSciotropis_cyclanthorumHeteragrion_mitratumHeteragrion_spOxystigma_cyanifrons
Philogenia_cassandraPhilogenia_terrabaTeinopodagrion_venaleTeinopodagrion_lepidumAmanipodagrion_gilliesiArgiolestes_ochrostomas
Pyrrhargiolestes_sidoniaCaledopteryx_maculataTrineuragrion_percostaleCaledargiolestes_uniseriesPodopteryx_roseonotata
Austroargiolestes_icteromelasGriseargiolestes_albescensGriseagriolestes_eboracus[sp]Miniargiolestes_minimusLestomima_flavostigma
Rhipidolestes_hiraoiRhipidolestes_aculeataParaphlebia_zoeHypolestes_clara_Hypolestes_spAgriomorpha_fuscaCora_marinaCora_cyane
Polythore_spPolythore_bolivianaEuthore_fasciataRimanella_arcanaPentaphlebia_stahliDevadatta_podolestoides
Amphipteryx_longicaudataPseudolestes_mirabilisPhiloganga_vetustaLestoidea_conjunctaDiphlebia_coerlescensBayadera_melanopteryx
Bayadera_brevicaudaDysphaea_gloriosaEuphaea_formosa
Libellago_semiopacaHeliocypha_biseriataPlatycypha_caligataAristocypha_fenestrellaRhinocypha_tinctaHeliocharis_amazona
Hetaerina_americanaCaliphaea_confusaVestalis_beryllaeMatrona_basilarisAtrocalopteryx_atrataEcho_modestaNeurobasis_ianthinipennis
Sapho_orichalceaCalopteryx_amataCalopteryx_aequabilisNubiolestes_diotimaPerilestes_kahliPerissolestes_remotus
Perissolestes_magdalenaeChlorolestes_umbratus[sp]Euchlorolestes_tessellatus[sp]Phylolestes_ethelaeSynlestes_weyersii
Synlestes_tropicusChorismagrion_risiEpisynlestes_cristatusEpisynlestes_albicaudusMegalestes_micansOrolestes_octomaculatus
Austrolestes_annulosusSympecma_paediscaAustrolestes_analisIndolestes_peregrinusChalcolestes_viridisArchilestes_grandis
Lestes_rectangularisLestes_eurinusHemiphlebia_mirabilisEpiophlebia_superstesArchipetalia_auriculataHypopetalia_pestilens
Odontopetalia_apolloOphiopetalia_dianaGomphaeschna_furcillataAustroaeschna_parvistigmaBoyeria_vinosaBoyeria_irene
Brachytron_pratenseEpiaeschna_herosCaliaeschna_microstigmaAnaciaeschna_isocelesAeshna_Aeshna_canadensis
Aeshna_Rhionaeschna_multicolorAeshna_Aeshna_grandisGynacantha_japonica_or_bullataAustrogynacantha_heterogenaAnax_junius
Anax_imperatorSinogomphidia_kruegeri[Gomphidia?]Ictinogomphus_australisLindenia_tetraphyllaPhyllogomphoides_stigmatus
Progomphus_Neaprogomphus_obscurusProgomphus_Neaprogomphus_borealisHagenius_brevistylus[monotypicsomustbebevistylus]
Lanthus_vernalisNeogomphus_edenticulatusArmagomphus_armigerHemigomphus_heteroclytusHemigomphus_magelaStylogomphus_albistylus
Stylogomphus_shirozui[sp]Davidioides_martiniCyclogomphus_heterostylusDromogomphus_spinosusArigomphus_villosipes Stylurus_intricatus
Stylurus_nagoyanusGomphus_Gomphurus_externusAsiagomphus_melaenopsGomphus_Phanogomphus_exilis
Gomphus_Hylogomphus_adelphusGomphus_Gomphus_vulgatissimusOnychogomphus_uncatusOnychogomphus_forcipatus_unguiculatusOnychogomphus_sp
Ophiogomphus_Ophionurus_carolusOphiogomphus_Ophiogomphus_severusLeptogomphus_sauteriMicrogomphus_cheliferCeratogomphus_pictus [sp]
Austrogomphus_gueriniAustrogomphus_amphiclitusAntipodogomphus_acolythusTanypteryx_hageniTanypteryx_pryeriTachopteryx_thoreyi
Phenes_raptorPhenes_centralisUropetalura_carovei[sp]Petalura_hesperiaPetalura_giganteaPetalura_ingentissimaZoraena_bilineata
Taeniogaster_obliquaKalyptogaster_erroneaLaurogaster_dorsalisCordulegaster_boltoniiCordulegaster_pictaAnotogaster_sieboldii
Neopetalia_punctataChloropetalia_soarerSinorogomphus_nasutusChlorogomphus_brunneusSynthemis_eustalactaEusynthemis_brevistyla
Eusynthemis_guttataEusynthemis_nigraChoristhemis_flavoterminataSynthemiopsis_gomphomacromioidesGomphomacromia_chilensis
Gomphomacromia_paradoxaIdionyx_imbricataMacromidia_rapidaOxygastra_curtisiiCordulephya_pygmaeaPseudocordulia_circularis
Hesperocordulia_berthoudiLathrocordulia_metallicaMicromidia_convergensAustrophya_mysticaArchaeophya_magnificaDidymops_transversa
Macromia_illinoiensisMacromia_amphigenaMacromia_eurynomeMacromia_splendensPhyllomacromia_bifasciata_or_nyanzana_or_sp
Idomacromia_proavitaAeschnosoma_forcipulaPentathemis_membranulataTetragoneuria_cynosura[sp]Tetragoneuria_canis Epicordulia_princeps
Epitheca_marginataEpitheca_bimaculataRialla_villosaCordulia_shurtleffiiSomatochlora_alpestris
Somatochlora_metallicaSomatochlora_tenebrosaHemicordulia_min_nipponicaHemicordulia_australiaeProcordulia_jacksoniensis
Notiothemis_robertsiTetrathemis_irregularisTetrathemis_polleniUrothemis_signataUrothemis_assignataMacrodiplax_cora
Macrodiplax_balteataZyxomma_elgneriZyxomma_petiolatumZygonyx_torridus_or_idaNannophlebia_sp_or_risiBironides_sp_HOL_2010
Huonia_epinephelaHuonia_oreophilaOnychothemis_testaceaRhyothemis_variegata_or_imperatrixRhyothemis_fuliginosaMiathyria_simplex
Tholymis_citrinaTholymis_tillargaPantala_flavescensTramea_lacerataTramea_calvertiSympetrum_Kalosympetrum_janeae
Sympetrum_Sympetrum_vulgatumSympetrum_Sympetrum_sanguineumSympetrum_Tarnetrum_corruptumSympetrum_Tarnetrum_fonscolombii
Sympetrum_danaeSympetrum_meridionaleLeucorrhinia_pectoralisLeucorrhinia_glacialisCelithemis_elisaBrachymesia_herbida
Brachythemis_leucostictaDeielia_phaonPachydiplax_longipennisErythemis_collocata_or_simplicicollis_or_spAcisoma_panorpoides
Erythrodiplax_minusculaCrocothemis_serviliaCrocothemis_erythraeaRhodothemis_rufaNeurothemis_ramburiiDiplacodes_trivialis
Bradinopyga_strachani
Brachydiplax_denticaudaBrachydiplax_chalybea_or_flavovittataChalcostephia_flavifronsMicrathyria_aequalisMicrathyria_didyma
Uracis_imbutaNannophya_pygmaeaNannothemis_bellaPaltothemis_lineatipesBrechmorhoga_mendaxBrechmorhoga_praedatrixDythemis_fugax

Trithemis_auroraTrithemis_africanaPerithemis_teneraPerithemis_intensaPalpopleura_luciaDiastatops_pullataZenithoptera_fasciata Neodythemis_afra_or_paulianiNeodythemis_preussi
Thermorthemis_madagascariensisAgrionoptera_insignisCratilla_metallicaOrthemis_ferrugineaOrthetrum_albistylumOrthetrum_pruinosum Eurothemis_fulvaLadona_juliaPlatetrum_depressa
Libellula_Libellula_quadrimaculata   Aethriamanta_reziaTetrathemis_corduliformisDiplacina_ismenePerithemis_lais Erythemis_vesiculosaNannophyopsis_claraOligoclada_amphinomeIdiataphe_sp[_HOL_2010]Idiataphe_sp[_HOL_2010]Elga_leptostyla Fylgia_amazonicaHemistigma_albipunctumPorpacithemis_spThermochoria_equivocataMalgassophlebia_bispinaMicromacromia_zygoptera Argyrothemis_argenteaPseudothemis_zonataOlpogastra_lugubrisMisagria_paranaEphemerella_spParaleptophlebia_vacivaCallibaetis_sp Callibaetis_ferrugineusBaetis_spHexagenia_spLeucrocuta_maculipennisCentroptilum_luteolumStenonema_spMachilis_hrabei Dilta_littoralisCtenolepisma_longicaudataLepisma_saccharinaTricholepidion_gertschiGromphadorhina_laevigataIsoperla_davisi Isoperla_spGomphocerinae;

TaxsetD3=Libellula_Belonia_saturataPhilogenia_bereniceMicromacromia_camerunicaHadrothemis_infestaOrthemis_cultriformis Orthetrum_albistylumLyriothemis_elegantissimaPlatetrum_depressaLibellula_Neotetrum_pulchellaAethriamanta_reziaAtoconeura_sp Protosticta_spSinosticta_ogataiPalaemnema_paulicobaPalaemnema_dominaPalaemnema_melanostigmaIsosticta_robustior Rhadinosticta_simplexAmphisticta_silvarumLabidosticta_vallisiOrosticta_filicola[sp]
Platycnemis_pennipesCopera_annulataCopera_vittataCopera_marginipes[sp]Coeliccia_albicaudaCoeliccia_cyanomelasCalicnemia_miles Prodasineura_vittata[sp]Chlorocnemis_abbotti[sp]Nososticta_solidaPhylloneura_westermanniOnychargia_atrocyanaArgia_moesta Argia_nahuanaMortonagrion_aborense[sp]Agriocnemis_pygmaeaAustroagrion_watsoniArchibasis_violaCoenagrion_resolutum Pseudagrion_cingillumPseudagrion_aureofronsPseudagrion_igniferLeptobasis_vacillansAmphiagrion_sauciumAmphiagrion_abbreviatum Ishnura_elegansIshnura_barberiAnomalagrion_hastatumEnallagma_cyathigerumEnallagma_spAciagrion_borneenseProtoneura_capillaris Protoneura_cara
Psaironeura_remissaNeoneura_aaroniNeoneura_ameliaNeoneura_mariaCeriagrion_aeruginosumTelebasis_salvaLeptagrion_elongatum Leptagrion_spMetaleptobasis_manicariaDiceratobasis_melanogasterPyrrhosoma_nymphulaChromagrion_conditumNehalennia_gracilis Coryphagrion_grandisMicrostigma_rotundatumMicrostigma_anomalumMecistogaster_ornataMecistogaster_linearisMegaloprepus_coerulatus Haplostigma_modestaPseudostigma_aberransRhinagrion_mimaSciotropis_cyclanthorumHeteragrion_mitratumHeteragrion_sp Dimeragrion_percubitaleTatocnemis_malgassicaPhilogenia_cassandra
Teinopodagrion_venaleTeinopodagrion_lepidumAmanipodagrion_gilliesiNesolestes_elizabethaeProtolestes_kerckhoffae Argiolestes_ochrostomasPyrrhargiolestes_sidoniaCaledopteryx_maculataTrineuragrion_percostaleCaledargiolestes_uniseries Podopteryx_roseonotataGriseargiolestes_albescensGriseagriolestes_eboracus[sp]Miniargiolestes_minimusLestomima_flavostigma Rhipidolestes_hiraoiRhipidolestes_aculeataParaphlebia_zoeHypolestes_clara_Hypolestes_spAgriomorpha_fuscaMiocora_peraltica
Cora_marinaCora_cyanePolythore_spPolythore_bolivianaEuthore_fasciataRimanella_arcanaPentaphlebia_stahliDevadatta_podolestoides Amphipteryx_longicaudataPseudolestes_mirabilisPhiloganga_vetustaPhiloganga_robusta_Lestoidea_conjunctaDiphlebia_lestoides Diphlebia_coerlescensBayadera_melanopteryxBayadera_brevicaudaDysphaea_gloriosaEuphaea_formosaAnisophaea_decorataAnisopleura_sp Disparocypha_biedermanniLibellago_semiopacaHeliocypha_biseriataPlatycypha_caligataAristocypha_fenestrellaRhinocypha_tincta Heliocharis_amazonaHetaerina_americanaCaliphaea_confusaVestalis_beryllaeMatrona_basilarisAtrocalopteryx_atrataEcho_modesta Neurobasis_ianthinipennisSapho_orichalceaCalopteryx_amataCalopteryx_aequabilisIridictyon_trebbauiNubiolestes_diotima Perilestes_kahliPerissolestes_remotusChlorolestes_umbratus[sp]Euchlorolestes_tessellatus[sp]Phylolestes_ethelae Synlestes_weyersii Synlestes_tropicusChorismagrion_risiEpisynlestes_albicaudusMegalestes_micansOrolestes_octomaculatus Austrolestes_annulosusSympecma_paediscaSympecma_fuscaAustrolestes_analisIndolestes_peregrinusChalcolestes_viridis Archilestes_grandisLestes_rectangularisLestes_eurinus
Hemiphlebia_mirabilisEpiophlebia_superstesEpiophlebia_laidlawiAustropetalia_victoriaHypopetalia_pestilensRheopetalia_apicalis Odontopetalia_apolloEurypetalia_altarensisOphiopetalia_dianaGomphaeschna_furcillataAustroaeschna_parvistigmaTelephlebia_tillyardi Boyeria_vinosaBoyeria_ireneBrachytron_pratenseEpiaeschna_herosCaliaeschna_microstigmaAnaciaeschna_isoceles Aeshna_Aeshna_canadensis Aeshna_Rhionaeschna_multicolorAeshna_Aeshna_cyaneaAeshna_Aeshna_grandisGynacantha_japonica_or_bullata Austrogynacantha_heterogenaAnax_juniusAnax_imperatorSinogomphidia_kruegeri[Gomphidia?]Ictinogomphus_australisLindenia_tetraphylla Phyllogomphoides_stigmatusProgomphus_Neaprogomphus_obscurusProgomphus_Neaprogomphus_b orealisHagenius_brevistylus[monotypicsomustbebevistylus]Lanthus_vernalisNeogomphus_edenticulatusArmagomphus_armiger Hemigomphus_heteroclytusHemigomphus_magelaStylogomphus_albistylusStylogomphus_shirozui[sp]Davidioides_martini Burmagomphus_collarisCyclogomphus_heterostylusDromogomphus_spinosusArigomphus_villosipesStylurus_intricatusStylurus_nagoyanus Gomphus_Gomphurus_externusAsiagomphus_melaenopsGomphus_Phanogomphus_exilisGomphus_Hylogomphus_adelphus

Gomphus_Gomphus_vulgatissimusMegalogomphus_spOnychogomphus_uncatusOnychogomphus_forcipatus_unguiculatusOnychogomphus_sp
Ophiogomphus_Ophionurus_carolusOphiogomphus_Ophiogomphus_severusLeptogomphus_elegansLeptogomphus_sauteriEpigomphus_compactus
Microgomphus_cheliferCeratogomphus_pictus[sp]Austrogomphus_gueriniAustrogomphus_amphiclitusAntipodogomphus_acolythus
Tanypteryx_hageniTanypteryx_pryeriTachopteryx_thoreyiPhenes_raptorPhenes_centralisUropetalura_carovei[sp]Petalura_gigantea
Petalura_litorea[sp]Zoraena_bilineataTaeniogaster_obliquaKalyptogaster_erroneaPangaeagaster_maculataLaurogaster_dorsalis
Cordulegaster_boltoniiCordulegaster_pictaAnotogaster_sieboldiiNeopetalia_punctataChloropetalia_soarerSinorogomphus_nasutus
Chlorogomphus_brunneusSynthemis_eustalactaArchaeosynthemis_leachiiEusynthemis_brevistylaEusynthemis_guttataEusynthemis_nigra
Choristhemis_flavoterminataSynthemiopsis_gomphomacromioidesGomphomacromia_chilensisGomphomacromia_paradoxaIdionyx_imbricata
Idionyx_selysiMacromidia_rapidaOxygastra_curtisiiCordulephya_pygmaeaPseudocordulia_circularisHesperocordulia_berthoudi
Lathrocordulia_metallicaMicromidia_convergensAustrophya_mysticaAustrocordulia_refractaDidymops_transversaMacromia_illinoiensis
Macromia_amphigenaMacromia_eurynomeMacromia_splendensPhyllomacromia_bifasciata_or_nyanzana_or_spIdomacromia_proavita
Aeschnosoma_forcipulaPentathemis_membranulataTetragoneuria_cynosura[sp]Tetragoneuria_canisEpicordulia_princepsEpitheca_marginata
Epitheca_bimaculataRialla_villosaCordulia_aeneaCordulia_shurtleffiiSomatochlora_alpestrisSomatochlora_flavomaculata
Somatochlora_metallicaSomatochlora_tenebrosaHemicordulia_min_nipponicaHemicordulia_australiaeProcordulia_jacksoniensis
Notiothemis_robertsiTetrathemis_irregularisTetrathemis_polleniUrothemis_signataUrothemis_assignataMacrodiplax_cora
Macrodiplax_balteataZyxomma_elgneriZyxomma_petiolatumZygonyx_torridus_or_idaNannophlebia_sp_or_risiBironides_sp_HOL_2010
Huonia_epinephelaHuonia_oreophilaOnychothemis_testaceaRhyothemis_variegata_or_imperatrixRhyothemis_fuliginosaMiathyria_simplex
Tholymis_citrinaTholymis_tillargaPantala_flavescensTramea_lacerataTramea_calvertiSympetrum_Kalosympetrum_janeae
Sympetrum_Sympetrum_vulgatumSympetrum_Sympetrum_sanguineumSympetrum_Tarnetrum_corruptumSympetrum_Tarnetrum_fonscolombii
Sympetrum_danaeSympetrum_meridionaleLeucorrhinia_pectoralisLeucorrhinia_glacialisCelithemis_elisaCelithemis_eponina
Brachymesia_herbidaBrachythemis_leucostictaDeielia_phaonPachydiplax_longipennisErythemis_collocata_or_simplicicollis_or_sp
Acisoma_panorpoidesErythrodiplax_minusculaCrocothemis_serviliaCrocothemis_erythraeaRhodothemis_rufaNeurothemis_ramburii
Diplacodes_trivialisBradinopyga_strachaniBrachydiplax_denticaudaBrachydiplax_chalybea_or_flavovittataChalcostephia_flavifrons
Micrathyria_aequalisMicrathyria_didymaUracis_imbutaNannophya_pygmaeaNannothemis_bellaPaltothemis_lineatipes
Brechmorhoga_praedatrixTrithemis_auroraTrithemis_africanaPerithemis_teneraPerithemis_intensaPalpopleura_luciaDiastatops_pullata
Zenithoptera_fasciata
Neodythemis_afra_or_paulianiMicromacromia_camerunicaNeodythemis_preussiHadrothemis_infestaThermorthemis_madagascariensis
Agrionoptera_insignisCratilla_metallica
Orthetrum_albistylumEurothemis_fulvaLibellula_Libellula_quadrimaculata Tetrathemis_corduliformisDiplacina_ismene
Perithemis_laisErythemis_vesiculosaNannophyopsis_claraOligoclada_amphinomeIdiataphe_sp[_HOL_2010]Idiataphe_sp[_HOL_2010]
Elga_leptostylaFylgia_amazonicaHemistigma_albipunctumPorpacithemis_spThermochoria_equivocataMalgassophlebia_bispinaMicromacromia_zygo
pteraArgyrothemis_argenteaPseudothemis_zonataOxythemis_phoenicoscelesOlpogastra_lugubrisMisagria_parana
Ephemerella_spParaleptophlebia_vacivaAnthopotamus_spCaenis_luctuosaEphemera_spCallibaetis_spCallibaetis_ferrugineusBaetis_sp
Hexagenia_spCloeon_dipterumLeucrocuta_maculipennisCentroptilum_luteolumStenonema_spTrigonioptthalmus_alternAllomachilis_froggart
Machilis_hrabeiDilta_littoralisCtenolepisma_longicaudataLepisma_sp
Lepisma_saccharinaThermobia_domesticaTricholepidion_gertschiGromphadorhina_laevigataIsoperla_davisiIsoperla_spGomphocerinae;

TaxsetD4=Libellula_Belonia_saturataPhilogenia_bereniceHesperagrion_heterodoxumMicromacromia_camerunicaHadrothemis_infesta
Orthemis_cultriformisOrthetrum_albistylumLyriothemis_elegantissimaPlatetrum_depressaLibellula_Neotetrum_pulchella
Aethriamanta_reziaAtoconeura_sp
Protosticta_spProtosticta_sanguinostigmaPalaemnema_paulicobaPalaemnema_dominaIsosticta_robustiorRhadinosticta_simplex
Amphisticta_silvarumLabidosticta_vallisiOrosticta_filicola[sp]
Platycnemis_pennipesCopera_annulataCopera_vittataCopera_marginipes[sp]Coeliccia_albicaudaCoeliccia_cyanomelasCalicnemia_miles
Prodasineura_vittata[sp]Chlorocnemis_abbotti[sp]Nososticta_solidaPhylloneura_westermanniOnychargia_atrocyanaArgia_moesta
Argia_nahuanaMortonagrion_aborense[sp]Agriocnemis_pygmaeaAustroagrion_watsoniCoenagrion_resolutumPseudagrion_cingillum
Pseudagrion_aureofronsPseudagrion_igniferAcanthagrion_quadratumAmphiagrion_sauciumAmphiagrion_abbreviatumHesperagrion_heterodoxum
[monotypicheterodoxum]Ishnura_barberiAnomalagrion_hastatumEnallagma_spAciagrion_borneenseProtoneura_capillarisProtoneura_cara
Neoneura_aaroniNeoneura_mariaCeriagrion_aeruginosumTelebasis_salvaLeptagrion_elongatumLeptagrion_spDiceratobasis_melanogaster
Pyrrhosoma_nymphulaChromagrion_conditumNehalennia_gracilisMicrostigma_rotundatumMicrostigma_anomalumMecistogaster_linearis
Megaloprepus_coerulatusPseudostigma_aberransSciotropis_cyclanthorumHeteragrion_mitratumHeteragrion_spOxystigma_cyanifrons

Dimeragrion_percubitalePhilogenia_cassandraPhilogenia_terrabaTeinopodagrion_venaleAmanipodagrion_gilliesiNesolestes_elizabethae
Argiolestes_ochrostomasPyrrhargiolestes_sidoniaCaledopteryx_maculataTrineuragrion_percostaleCaledargiolestes_uniseries
Podopteryx_roseonotataAustroargiolestes_icteromelasGriseargiolestes_albescensMiniargiolestes_minimusLestomima_flavostigma
Rhipidolestes_hiraoiRhipidolestes_aculeataParaphlebia_zoeThaumatoneura_inopinataHypolestes_clara_Hypolestes_spAgriomorpha_fusca
Miocora_peraltica
Cora_marinaCora_cyanePolythore_spPolythore_bolivianaEuthore_fasciataRimanella_arcanaPentaphlebia_stahliDevadatta_podolestoides
Amphipteryx_longicaudataPseudolestes_mirabilisPhiloganga_vetustaPhiloganga_robusta_Lestoidea_conjunctaDiphlebia_lestoides
Diphlebia_coerlescensBayadera_melanopteryxBayadera_brevicaudaDysphaea_gloriosaEuphaea_formosaAnisophaea_decorata
Disparocypha_biedermanniLibellago_semiopacaHeliocypha_biseriataPlatycypha_caligataAristocypha_fenestrellaRhinocypha_tincta
Heliocharis_amazonaHetaerina_americanaCaliphaea_confusaVestalis_beryllaeMatrona_basilarisAtrocalopteryx_atrataEcho_modesta
Neurobasis_ianthinipennisSapho_orichalceaCalopteryx_amataCalopteryx_aequabilisNubiolestes_diotimaPerilestes_kahli
Perissolestes_remotusChlorolestes_umbratus[sp]Euchlorolestes_tessellatus[sp]Phylolestes_ethelaeSynlestes_weyersii
Synlestes_tropicusChorismagrion_risiEpisynlestes_cristatusEpisynlestes_albicaudusMegalestes_micansMegalestes_kurahashii
Orolestes_octomaculatusAustrolestes_annulosusSympecma_paediscaAustrolestes_analisIndolestes_peregrinusChalcolestes_viridis
Archilestes_grandisLestes_rectangularisLestes_eurinusHemiphlebia_mirabilisEpiophlebia_superstesEpiophlebia_laidlawi
Archipetalia_auriculataAustropetalia_victoriaHypopetalia_pestilensRheopetalia_apicalisOdontopetalia_apolloOphiopetalia_diana
Gomphaeschna_furcillata
Austroaeschna_parvistigmaBoyeria_vinosaBoyeria_ireneEpiaeschna_herosCaliaeschna_microstigmaAnaciaeschna_isocelesOplonaeschna_sp
Aeshna_Aeshna_canadensisAeshna_Rhionaeschna_multicolorAeshna_Aeshna_grandisGynacantha_japonica_or_bullata Austrogynacantha_heterogena
Anax_juniusAnax_imperatorSinogomphidia_kruegeri[Gomphidia?]Ictinogomphus_australisLindenia_tetraphylla
Phyllogomphoides_stigmatusProgomphus_Neaprogomphus_obscurusProgomphus_Neaprogomphus_borealisHagenius_brevistylus[monotypicso
mustbebevistylus]Lanthus_vernalisNeogomphus_edenticulatusArmagomphus_armigerHemigomphus_heteroclytusHemigomphus_magela
Stylogomphus_albistylusStylogomphus_shirozui[sp]Davidioides_martiniBurmagomphus_collarisCyclogomphus_heterostylus
Dromogomphus_spinosusArigomphus_villosipesStylurus_intricatusStylurus_nagoyanusGomphus_Gomphurus_externus
Asiagomphus_melaenopsGomphus_Phanogomphus_exilisGomphus_Hylogomphus_adelphusGomphus_Gomphus_vulgatissimus
Onychogomphus_uncatusOnychogomphus_forcipatus_unguiculatusOnychogomphus_spOphiogomphus_Ophionurus_carolus
Ophiogomphus_Ophiogomphus_severusLeptogomphus_sauteriMicrogomphus_cheliferCeratogomphus_pictus[sp]Austrogomphus_guerini
Austrogomphus_amphiclitusAntipodogomphus_acolythusTanypteryx_hageniTanypteryx_pryeriTachopteryx_thoreyiPhenes_raptor
Phenes_centralisUropetalura_carovei[sp]
Petalura_hesperiaPetalura_giganteaPetalura_ingentissimaZoraena_bilineataKalyptogaster_erroneaPangaeagaster_maculata
Laurogaster_dorsalisCordulegaster_boltonii
Cordulegaster_pictaAnotogaster_sieboldiiNeopetalia_punctataChloropetalia_soarerSinorogomphus_nasutusChlorogomphus_brunneus
Synthemis_eustalactaEusynthemis_guttataEusynthemis_nigraChoristhemis_flavoterminataSynthemiopsis_gomphomacromioides
Gomphomacromia_chilensisGomphomacromia_paradoxaIdionyx_imbricataOxygastra_curtisiiCordulephya_pygmaeaHesperocordulia_berthoudi
Micromidia_convergensDidymops_transversaMacromia_illinoiensisMacromia_amphigenaMacromia_eurynomeMacromia_splendens
Phyllomacromia_bifasciata_or_nyanzana_or_spIdomacromia_proavitaTetragoneuria_cynosura[sp]Tetragoneuria_canisEpicordulia_princeps
Epitheca_marginataEpitheca_bimaculataSomatochlora_alpestrisSomatochlora_metallicaSomatochlora_tenebrosaHemicordulia_min_nipponica
Hemicordulia_australiaeProcordulia_jacksoniensisNotiothemis_robertsiTetrathemis_irregularisUrothemis_signataMacrodiplax_cora
Macrodiplax_balteataZyxomma_petiolatumZygonyx_torridus_or_idaNannophlebia_sp_or_risiBironides_sp_HOL_2010Huonia_epinephela
Rhyothemis_variegata_or_imperatrixRhyothemis_fuliginosaMiathyria_simplexTholymis_citrinaTramea_lacerataTramea_calverti
Sympetrum_Kalosympetrum_janeaeSympetrum_Sympetrum_vulgatumSympetrum_Sympetrum_sanguineumSympetrum_Tarnetrum_corruptum
Sympetrum_Tarnetrum_fonscolombiiSympetrum_danaeSympetrum_meridionaleLeucorrhinia_pectoralisCelithemis_elisaBrachymesia_herbida
Deielia_phaonErythemis_collocata_or_simplicicollis_or_spAcisoma_panorpoidesErythrodiplax_minusculaCrocothemis_erythraea
Rhodothemis_rufaNeurothemis_ramburiiDiplacodes_trivialisBrachydiplax_denticaudaBrachydiplax_chalybea_or_flavovittata
Chalcostephia_flavifronsMicrathyria_didymaUracis_imbutaNannophya_pygmaeaBrechmorhoga_praedatrixTrithemis_aurora
Trithemis_africanaPerithemis_teneraPerithemis_intensaPalpopleura_lucia
Diastatops_pullataZenithoptera_fasciataNeodythemis_preussiThermorthemis_madagascariensisAgrionoptera_insignis
Cratilla_metallicaOrthetrum_albistylumEurothemis_fulvaLibellula_Libellula_quadrimaculata
Tetrathemis_corduliformisDiplacina_ismenePerithemis_laisErythemis_vesiculosaNannophyopsis_claraOligoclada_amphinome
Idiataphe_sp[_HOL_2010]Idiataphe_sp[_HOL_2010]Elga_leptostylaFylgia_amazonicaHemistigma_albipunctumPorpacithemis_sp
Thermochoria_equivocataMalgassophlebia_bispinaMicromacromia_zygopteraArgyrothemis_argenteaPseudothemis_zonata

Oxythemis_phoenicoscelesOlpogastra_lugubrisMisagria_paranaEphemerella_spParaleptophlebia_vacivaAnthopotamus_spCaenis_luctuosa
Callibaetis_spCallibaetis_ferrugineusBaetis_spHexagenia_spLeucrocuta_maculipennisCentroptilum_luteolumStenonema_sp
Machilis_hrabeiDilta_littoralisCtenolepisma_longicaudataLepisma_spLepisma_saccharinaThermobia_domesticaTricholepidion_gertschi
Gromphadorhina_laevigataIsoperla_davisiIsoperla_spGomphocerinae;

TaxsetD7=Plathemis_lydiaLibellula_Holotania_luctuosaLibellula_Belonia_saturataPhilogenia_bereniceHesperagrion_heterodoxum
Micromacromia_camerunicaHadrothemis_infestaOrthemis_cultriformisOrthetrum_albistylumLyriothemis_elegantissimaPlatetrum_depressa
Libellula_Neotetrum_pulchellaAethriamanta_reziaAtoconeura_sp
Protosticta_spProtosticta_curiosaProtosticta_sanguinostigmaSinosticta_ogataiPalaemnema_paulicobaPalaemnema_melanostigma
Isosticta_robustiorAmphisticta_silvarumLabidosticta_vallisiPlatycnemis_pennipesCopera_annulataCopera_vittataCopera_marginipes [sp]
Coeliccia_albicaudaCoeliccia_cyanomelasCalicnemia_milesProdasineura_vittata[sp]Chlorocnemis_abbotti[sp]Nososticta_solida
Phylloneura_westermanniOnychargia_atrocyanaArgia_moestaArgia_nahuanaMortonagrion_aborense[sp]Agriocnemis_pygmaea
Austroagrion_watsoniCoenagrion_resolutumPseudagrion_cingillumPseudagrion_aureofronsPseudagrion_igniferAcanthagrion_quadratum
Amphiagrion_sauciumAmphiagrion_abbreviatumHesperagrion_heterodoxum[monotypicheterodoxum]Ishnura_barberiAnomalagrion_hastatum
Enallagma_spProtoneura_capillarisProtoneura_caraNeoneura_aaroniNeoneura_mariaCeriagrion_aeruginosumTelebasis_salvaLeptagrion_sp
Diceratobasis_melanogasterPyrrhosoma_nymphulaChromagrion_conditumNehalennia_gracilisMicrostigma_rotundatumMicrostigma_anomalum
Mecistogaster_ornataMecistogaster_linearisHaplostigma_modestaPseudostigma_aberransRhinagrion_mimaSciotropis_cyclanthorum
Heteragrion_mitratumHeteragrion_spOxystigma_cyanifronsDimeragrion_percubitalePhilogenia_cassandra
Teinopodagrion_venaleAmanipodagrion_gilliesiNesolestes_elizabethaeProtolestes_kerckhoffaeArgiolestes_ochrostomas
Pyrrhargiolestes_sidoniaCaledopteryx_maculataTrineuragrion_percostaleCaledargiolestes_uniseriesPodopteryx_roseonotata
Austroargiolestes_icteromelasGriseargiolestes_albescensGriseagriolestes_eboracus[sp]Miniargiolestes_minimusLestomima_flavostigma
Rhipidolestes_hiraoiRhipidolestes_aculeataParaphlebia_zoeThaumatoneura_inopinataHypolestes_clara_Hypolestes_spAgriomorpha_fusca
Cora_marinaCora_cyanePolythore_bolivianaEuthore_fasciataRimanella_arcanaPentaphlebia_stahliDevadatta_podolestoides
Amphipteryx_longicaudataPseudolestes_mirabilisPhiloganga_vetustaLestoidea_conjunctaDiphlebia_lestoidesDiphlebia_coerlescens
Bayadera_melanopteryxBayadera_brevicaudaDysphaea_gloriosaEuphaea_formosaAnisophaea_decorataAnisopleura_spLibellago_semiopaca
Heliocypha_biseriataPlatycypha_caligataAristocypha_fenestrellaRhinocypha_tinctaHeliocharis_amazonaHetaerina_americana
Caliphaea_confusaVestalis_beryllaeMatrona_basilarisAtrocalopteryx_atrataEcho_modestaNeurobasis_ianthinipennisSapho_orichalcea
Iridictyon_trebbauiNubiolestes_diotimaPerilestes_kahliPerissolestes_remotusChlorolestes_umbratus[sp]Euchlorolestes_tessellatus
[sp]Phylolestes_ethelaeSynlestes_weyersiiChorismagrion_risiEpisynlestes_cristatusEpisynlestes_albicaudusMegalestes_micans
Orolestes_octomaculatusAustrolestes_annulosusSympecma_paediscaSympecma_fuscaAustrolestes_analisIndolestes_peregrinus
Archilestes_grandisLestes_rectangularisLestes_eurinusHemiphlebia_mirabilisEpiophlebia_superstesEpiophlebia_laidlawi
Archipetalia_auriculataAustropetalia_victoria
Hypopetalia_pestilensRheopetalia_apicalisOdontopetalia_apolloOphiopetalia_dianaGomphaeschna_furcillata
Austroaeschna_parvistigmaTelephlebia_tillyardiBoyeria_vinosaBoyeria_ireneBrachytron_pratenseEpiaeschna_heros
Caliaeschna_microstigmaAnaciaeschna_isocelesOplonaeschna_spAeshna_Rhionaeschna_multicolorAeshna_Aeshna_grandis
Gynacantha_japonica_or_bullataAustrogynacantha_heterogenaAnax_juniusAnax_imperatorSinogomphidia_kruegeri[Gomphidia?]
Ictinogomphus_australisLindenia_tetraphyllaPhyllogomphoides_stigmatusProgomphus_Neaprogomphus_obscurus
Progomphus_Neaprogomphus_borealisHagenius_brevistylus[monotypicsomustbebevistylus]Lanthus_vernalisNeogomphus_edenticulatus
Armagomphus_armigerHemigomphus_comitansHemigomphus_heteroclytusHemigomphus_magelaStylogomphus_albistylusStylogomphus_shirozui
[sp]Davidioides_martiniBurmagomphus_collarisCyclogomphus_heterostylusDromogomphus_spinosusArigomphus_villosipes
Stylurus_intricatusStylurus_nagoyanusGomphus_Gomphurus_externusAsiagomphus_melaenopsGomphus_Phanogomphus_exilis
Gomphus_Hylogomphus_adelphusGomphus_Gomphus_vulgatissimusOnychogomphus_uncatusOnychogomphus_forcipatus_unguiculatusOnychogomphus_sp
Ophiogomphus_Ophionurus_carolusOphiogomphus_Ophiogomphus_severusLeptogomphus_sauteriEpigomphus_compactusMicrogomphus_chelifer
Ceratogomphus_pictus[sp]
Lestinogomphus_angustusAustrogomphus_gueriniAustrogomphus_amphiclitusAntipodogomphus_acolythusTanypteryx_hageni Tanypteryx_pryeri
Tachopteryx_thoreyiPhenes_raptorPhenes_centralisUropetalura_carovei[sp]Petalura_hesperiaPetalura_gigantea
Petalura_litorea[sp]Petalura_ingentissimaZoraena_bilineataTaeniogaster_obliquaKalyptogaster_erroneaPangaeagaster_maculata
Laurogaster_dorsalisCordulegaster_boltoniiCordulegaster_pictaAnotogaster_sieboldiiNeopetalia_punctataSinorogomphus_nasutus
Chlorogomphus_brunneusSynthemis_eustalactaArchaeosynthemis_leachiiEusynthemis_brevistylaEusynthemis_guttataEusynthemis_nigra
Choristhemis_flavoterminataSynthemiopsis_gomphomacromioidesGomphomacromia_chilensisGomphomacromia_paradoxaSyncordulia_serendipator
Syncordulia_venatorIdionyx_imbricataIdionyx_selysiMacromidia_rapidaOxygastra_curtisiiCordulephya_pygmaea

Pseudocordulia_circularisHesperocordulia_berthoudiLathrocordulia_metallicaMicromidia_convergensMicromidia_atrifrons
Austrophya_mysticaAustrocordulia_refractaDidymops_transversaMacromia_illinoiensisMacromia_amphigenaMacromia_eurynome
Macromia_splendensPhyllomacromia_bifasciata_or_nyanzana_or_spIdomacromia_proavitaAeschnosoma_forcipulaPentathemis_membranulata
Tetragoneuria_cynosura[sp]Tetragoneuria_canisEpicordulia_princepsEpitheca_marginataEpitheca_bimaculataRialla_villosa
Cordulia_aeneaCordulia_shurtleffiiSomatochlora_alpestrisSomatochlora_metallicaSomatochlora_tenebrosaHemicordulia_min_nipponica
Hemicordulia_australiaeProcordulia_jacksoniensisNotiothemis_robertsiTetrathemis_irregularisTetrathemis_polleniUrothemis_signata
Urothemis_assignataMacrodiplax_coraMacrodiplax_balteataZyxomma_elgneriZyxomma_petiolatumZygonyx_torridus_or_ida
Nannophlebia_sp_or_risiBironides_sp_HOL_2010Huonia_epinephelaHuonia_oreophilaOnychothemis_testacea
Rhyothemis_variegata_or_imperatrixRhyothemis_fuliginosaMiathyria_simplexTholymis_citrinaTholymis_tillargaPantala_flavescens
Tramea_lacerataTramea_calvertiSympetrum_Kalosympetrum_janeaeSympetrum_Sympetrum_vulgatumSympetrum_Sympetrum_sanguineum
Sympetrum_Tarnetrum_corruptumSympetrum_Tarnetrum_fonscolombiiSympetrum_danaeSympetrum_meridionaleLeucorrhinia_pectoralis
Leucorrhinia_glacialisCelithemis_elisaBrachymesia_herbidaBrachythemis_leucostictaDeielia_phaonPachydiplax_longipennis
Erythemis_collocata_or_simplicicollis_or_sp
Acisoma_panorpoidesErythrodiplax_minusculaCrocothemis_serviliaCrocothemis_erythraeaRhodothemis_rufaNeurothemis_ramburii
Diplacodes_trivialisBradinopyga_strachaniBrachydiplax_denticaudaBrachydiplax_chalybea_or_flavovittataChalcostephia_flavifrons
Micrathyria_aequalisMicrathyria_didymaUracis_imbutaNannophya_pygmaeaNannothemis_bellaBrechmorhoga_mendaxBrechmorhoga_praedatrix
Trithemis_auroraTrithemis_africanaPerithemis_teneraPerithemis_intensaPalpopleura_lucia
Diastatops_pullataZenithoptera_fasciataNeodythemis_afra_or_paulianiNeodythemis_preussi
Thermorthemis_madagascariensisAgrionoptera_insignisCratilla_metallicaOrthemis_ferrugineaOrthetrum_albistylumEurothemis_fulva
Ladona_juliaPlatetrum_depressa
Libellula_Libellula_quadrimaculata   Aethriamanta_reziaTetrathemis_corduliformisDiplacina_ismenePerithemis_lais
Erythemis_vesiculosaNannophyopsis_claraOligoclada_amphinomeIdiataphe_sp[_HOL_2010]Idiataphe_sp[_HOL_2010]Elga_leptostyla
Fylgia_amazonicaHemistigma_albipunctumPorpacithemis_spThermochoria_equivocataMalgassophlebia_bispinaMicromacromia_zygoptera
Argyrothemis_argenteaPseudothemis_zonataOxythemis_phoenicoscelesOlpogastra_lugubrisMisagria_paranaAnthopotamus_spCaenis_luctuosa
Callibaetis_spCallibaetis_ferrugineusBaetis_spHexagenia_spCentroptilum_luteolumStenonema_spMachilis_hrabeiDilta_littoralis
Lepisma_saccharinaThermobia_domesticaTricholepidion_gertschiGromphadorhina_laevigataIsoperla_davisiIsoperla_spGomphocerinae;

TaxsetD8=Libellula_Neotetrum_pulchellaLepisma_saccharinaAtoconeura_spAethriamanta_reziaLibellula_Libellula_quadrimaculata
Micromacromia_camerunicaOphiogomphus_Ophionurus_carolusAustroaeschna_parvistigmaDimeragrion_percubitaleRhinagrion_mima
Protosticta_spSinosticta_ogataiPalaemnema_paulicobaAmphisticta_silvarumLabidosticta_vallisiOrosticta_filicola[sp]
Platycnemis_pennipesCopera_annulataCopera_marginipes[sp]Coeliccia_albicaudaCalicnemia_milesProdasineura_vittata[sp]
Chlorocnemis_abbotti[sp]Nososticta_solidaOnychargia_atrocyanaArgia_moestaArgiocnemis_rubescensAgriocnemis_pygmaea
Austroagrion_watsoniArchibasis_violaPseudagrion_cingillumPseudagrion_igniferAcanthagrion_quadratumLeptobasis_vacillans
Amphiagrion_sauciumXiphiagrion_cyanomelasAnomalagrion_hastatumNeoneura_aaroniCeriagrion_aeruginosumLeptagrion_elongatum
Diceratobasis_melanogasterPyrrhosoma_nymphulaChromagrion_conditumSeychellibasis_alluaudi[sp]Nehalennia_gracilis
Microstigma_rotundatumMecistogaster_ornataHaplostigma_modestaPseudostigma_aberransHeteragrion_mitratumOxystigma_cyanifrons
Teinopodagrion_venaleTeinopodagrion_lepidumAmanipodagrion_gilliesiNesolestes_elizabethaeProtolestes_kerckhoffae
Argiolestes_ochrostomasPodopteryx_roseonotataAustroargiolestes_icteromelasMiniargiolestes_minimus
Lestomima_flavostigmaRhipidolestes_hiraoiParaphlebia_zoeThaumatoneura_inopinataHypolestes_clara_Agriomorpha_fusca
Sinocnemis_yangbingiMiocora_peraltica
Cora_marinaRimanella_arcanaPentaphlebia_stahliDevadatta_podolestoidesAmphipteryx_longicaudataPseudolestes_mirabilis
Philoganga_vetustaPhiloganga_robusta_Lestoidea_conjunctaDiphlebia_lestoidesDiphlebia_coerlescensBayadera_melanopteryx
Dysphaea_gloriosaAnisophaea_decorataAnisopleura_spDisparocypha_biedermanniPlatycypha_caligataChlorocypha_curta
Aristocypha_fenestrellaHeliocharis_amazonaHetaerina_americanaCaliphaea_confusaAtrocalopteryx_atrataSapho_orichalcea
Calopteryx_amataIridictyon_trebbauiNubiolestes_diotimaPerilestes_kahliChlorolestes_umbratus[sp]Euchlorolestes_tessellatus[sp]
Phylolestes_ethelaeSynlestes_weyersiiSynlestes_tropicusChorismagrion_risiMegalestes_micansOrolestes_octomaculatusSympecma_fusca
Austrolestes_analisIndolestes_peregrinusChalcolestes_viridisArchilestes_grandisLestes_rectangularisLestes_eurinus
Hemiphlebia_mirabilisEpiophlebia_superstesArchipetalia_auriculataAustropetalia_victoriaRheopetalia_apicalisOphiopetalia_diana
Gomphaeschna_furcillataTelephlebia_tillyardiBoyeria_vinosaBoyeria_ireneBrachytron_pratenseEpiaeschna_heros Caliaeschna_microstigma
Anaciaeschna_isocelesAeshna_Aeshna_canadensisAeshna_Aeshna_grandisGynacantha_japonica_or_bullata

Austrogynacantha_heterogenaAnax_juniusAnax_imperatorSinogomphidia_kruegeri[Gomphidia?]Lindenia_tetraphylla
Progomphus_Neaprogomphus_obscurus
Hagenius_brevistylusLanthus_vernalisNeogomphus_edenticulatusArmagomphus_armigerHemigomphus_heteroclytusStylogomphus_albistylus
Stylogomphus_shirozui[sp]Burmagomphus_collarisDromogomphus_spinosusArigomphus_villosipesStylurus_intricatusStylurus_nagoyanus
Gomphus_Gomphurus_externusAsiagomphus_melaenopsGomphus_Phanogomphus_exilisGomphus_Hylogomphus_adelphus
Gomphus_Gomphus_vulgatissimusOnychogomphus_uncatusOnychogomphus_forcipatus_unguiculatusOnychogomphus_sp
Ophiogomphus_Ophiogomphus_severusLeptogomphus_sauteriEpigomphus_compactusMicrogomphus_cheliferCeratogomphus_pictum[sp]
Austrogomphus_gueriniTanypteryx_pryeriTachopteryx_thoreyiPhenes_raptorPhenes_centralisUropetalura_carovei[sp]
Zoraena_bilineataKalyptogaster_erroneaPangaeagaster_maculataCordulegaster_boltoniiCordulegaster_pictaAnotogaster_sieboldii
Neopetalia_punctataChloropetalia_soarerChlorogomphus_brunneusSynthemis_eustalactaSynthemiopsis_gomphomacromioides
Gomphomacromia_chilensisGomphomacromia_paradoxaOxygastra_curtisiiDidymops_transversaMacromia_illinoiensisMacromia_amphigena
Macromia_splendensPhyllomacromia_bifasciata_or_nyanzana_or_spIdomacromia_proavitaTetragoneuria_cynosura[sp]Tetragoneuria_canis
Epicordulia_princepsEpitheca_marginataEpitheca_bimaculataSomatochlora_alpestrisSomatochlora_metallicaSomatochlora_tenebrosa
Hemicordulia_min_nipponicaNotiothemis_robertsiTetrathemis_irregularisMacrodiplax_coraZyxomma_petiolatumZygonyx_torridus_or_ida
Bironides_sp_HOL_2010Huonia_epinephelaRhyothemis_variegata_or_imperatrixRhyothemis_fuliginosaMiathyria_simplexTholymis_citrina
Tramea_lacerataTramea_calvertiSympetrum_Sympetrum_vulgatumSympetrum_Sympetrum_sanguineumSympetrum_Tarnetrum_fonscolombii
Sympetrum_danaeSympetrum_meridionaleLeucorrhinia_pectoralisCelithemis_elisaBrachymesia_herbidaDeielia_phaon
Crocothemis_erythraeaNeurothemis_ramburiiDiplacodes_trivialisBrachydiplax_chalybea_or_flavovittataChalcostephia_flavifrons
Micrathyria_didymaUracis_imbutaNannophya_pygmaeaBrechmorhoga_praedatrixTrithemis_auroraTrithemis_africanaPerithemis_tenera
Palpopleura_luciaDiastatops_pullataZenithoptera_fasciataNeodythemis_preussi
Tetrathemis_corduliformisDiplacina_ismenePerithemis_laisErythemis_vesiculosaNannophyopsis_claraOligoclada_amphinome
Idiataphe_sp[_HOL_2010]Idiataphe_sp[_HOL_2010]Elga_leptostylaFylgia_amazonicaHemistigma_albipunctumPorpacithemis_sp
Thermochoria_equivocataMalgassophlebia_bispinaMicromacromia_zygopteraArgyrothemis_argenteaPseudothemis_zonata
Oxythemis_phoenicoscelesOlpogastra_lugubrisMisagria_paranaCallibaetis_ferrugineusMachilis_hrabeiDilta_littoralis
Ctenolepisma_longicaudataGromphadorhina_laevigataIsoperla_spGomphocerinae;

TaxsetD8_2_missing=Rheopetalia_apicalisBoyeria_ireneBrachytron_pratenseCaliaeschna_microstigmaAnaciaeschna_isoceles
Aeshna_Aeshna_grandisGynacantha_japonica_or_bullataAnax_imperatorHemigomphus_heteroclytusStylogomphus_albistylus
Stylogomphus_shirozui[sp]Stylurus_intricatusStylurus_nagoyanusGomphus_Gomphurus_externusAsiagomphus_melaenops
Gomphus_Phanogomphus_exilisGomphus_Gomphus_vulgatissimusOnychogomphus_uncatusOnychogomphus_spOphiogomphus_Ophiogomphus_severus
Leptogomphus_sauteriMicrogomphus_cheliferTanypteryx_pryeriUropetalura_carovei[sp]Pangaeagaster_maculataCordulegaster_boltonii
Cordulegaster_pictaAnotogaster_sieboldiiChlorogomphus_brunneusGomphomacromia_paradoxaOxygastra_curtisiiHemicordulia_min_nipponica
Notiothemis_robertsiTetrathemis_irregularisZygonyx_torridus_or_idaRhyothemis_variegata_or_imperatrixTholymis_citrina
Sympetrum_Sympetrum_vulgatumSympetrum_Sympetrum_sanguineumLeucorrhinia_pectoralisAcisoma_panorpoidesRhodothemis_rufa
Brachydiplax_chalybea_or_flavovittataChalcostephia_flavifronsNannophya_pygmaeaTrithemis_auroraDiastatops_pullata
Neodythemis_preussiHadrothemis_infestaThermorthemis_madagascariensisAgrionoptera_insignisCratilla_metallica
Orthemis_cultriformisOrthetrum_albistylumLyriothemis_elegantissimaEurothemis_fulvaPlatetrum_depressa;

TaxsetD10=Aethriamanta_reziaAtoconeura_spPlathemis_lydiaLadona_juliaMicromacromia_camerunicaZenithoptera_fasciata
Petalura_hesperiaPhenes_centralisLestinogomphus_angustusAustrogomphus_gueriniAustroaeschna_parvistigmaHypopetalia_pestilens
Philogenia_bereniceOrosticta_filicolaLibellula_Neotetrum_pulchellaProtosticta_spSinosticta_ogataiPalaemnema_paulicoba
Palaemnema_dominaRhadinosticta_simplexAmphisticta_silvarumPlatycnemis_pennipesCopera_annulataCoeliccia_albicaudaCalicnemia_miles
Prodasineura_vittata[sp]Chlorocnemis_abbotti[sp]Nososticta_solidaArgia_moestaArgiocnemis_rubescensAustroagrion_watsoni
Pseudagrion_cingillumPseudagrion_ignifer
Paracercion_plagiosumAcanthagrion_quadratumAmphiagrion_sauciumIshnura_elegansAnomalagrion_hastatum
Aciagrion_borneenseNeoneura_aaroniDiceratobasis_melanogasterPyrrhosoma_nymphulaChromagrion_conditumSeychellibasis_alluaudi[sp]
Nehalennia_gracilisMicrostigma_rotundatumPseudostigma_aberrans
Rhinagrion_mimaHeteragrion_mitratumOxystigma_cyanifronsDimeragrion_percubitaleTatocnemis_malgassicaTeinopodagrion_venale
Teinopodagrion_lepidumAmanipodagrion_gilliesiNesolestes_elizabethaeProtolestes_kerckhoffaeArgiolestes_ochrostomas
Podopteryx_roseonotataAustroargiolestes_icteromelasMiniargiolestes_minimusLestomima_flavostigmaRhipidolestes_hiraoi
Paraphlebia_zoeThaumatoneura_inopinataHypolestes_clara_Agriomorpha_fuscaMiocora_peraltica

Cora_marinaPolythore_spEuthore_fasciataRimanella_arcanaPentaphlebia_stahliPseudolestes_mirabilisPhiloganga_vetusta
Philoganga_robusta_Lestoidea_conjunctaDiphlebia_lestoidesBayadera_melanopteryxDysphaea_gloriosaAnisophaea_decorataAnisopleura_sp
Platycypha_caligataAristocypha_fenestrellaHeliocharis_amazonaHetaerina_americanaCaliphaea_confusaAtrocalopteryx_atrata
Calopteryx_amataCalopteryx_aequabilisIridictyon_trebbauiNubiolestes_diotimaPerilestes_kahliChlorolestes_umbratus[sp]
Euchlorolestes_tessellatus[sp]Phylolestes_ethelaeSynlestes_weyersiiSynlestes_tropicusChorismagrion_risiEpisynlestes_cristatus
Megalestes_micansOrolestes_octomaculatusSympecma_fuscaAustrolestes_analisIndolestes_peregrinusArchilestes_grandis
Lestes_rectangularisLestes_eurinusHemiphlebia_mirabilisEpiophlebia_superstesArchipetalia_auriculataGomphaeschna_furcillata
Telephlebia_tillyardiBoyeria_vinosaEpiaeschna_herosAeshna_Aeshna_canadensisAustrogynacantha_heterogenaAnax_junius
Ictinogomphus_australisLindenia_tetraphyllaProgomphus_Neaprogomphus_obscurusHagenius_brevistylusLanthus_vernalis
Neogomphus_edenticulatusBurmagomphus_collarisDromogomphus_spinosusArigomphus_villosipesAsiagomphus_melaenops
Gomphus_Hylogomphus_adelphusOnychogomphus_uncatusOnychogomphus_forcipatus_unguiculatusOphiogomphus_Ophionurus_carolus
Leptogomphus_elegansCeratogomphus_pictus[sp]Tanypteryx_hageniTachopteryx_thoreyiPetalura_litorea[sp]Taeniogaster_obliqua
Kalyptogaster_erroneaChloropetalia_soarerSinorogomphus_nasutusSynthemis_eustalactaSynthemiopsis_gomphomacromioides
Gomphomacromia_chilensisMacromidia_rapidaDidymops_transversaMacromia_illinoiensisMacromia_amphigenaMacromia_splendens
Phyllomacromia_bifasciata_or_nyanzana_or_spIdomacromia_proavitaTetragoneuria_cynosura[sp]Tetragoneuria_canisEpicordulia_princeps
Epitheca_marginataEpitheca_bimaculataSomatochlora_alpestrisSomatochlora_metallicaSomatochlora_tenebrosaHemicordulia_min_nipponica
Macrodiplax_coraZyxomma_petiolatumBironides_sp_HOL_2010Huonia_epinephelaRhyothemis_fuliginosaMiathyria_simplexTramea_lacerata
Tramea_calvertiSympetrum_Kalosympetrum_janeaeSympetrum_Sympetrum_pedemontanumSympetrum_Tarnetrum_fonscolombii
Sympetrum_Sympetrum_infuscatumSympetrum_danaeSympetrum_meridionaleCelithemis_elisaBrachymesia_herbidaDeielia_phaon
Crocothemis_serviliaCrocothemis_erythraeaNeurothemis_ramburiiDiplacodes_trivialisMicrathyria_didymaUracis_imbuta
Nannothemis_bellaBrechmorhoga_praedatrixTrithemis_africanaPerithemis_teneraPalpopleura_lucia
Libellula_Libellula_quadrimaculataTetrathemis_corduliformisDiplacina_ismenePerithemis_laisErythemis_vesiculosa
Nannophyopsis_claraOligoclada_amphinomeIdiataphe_sp[_HOL_2010]Idiataphe_sp[_HOL_2010]Elga_leptostylaFylgia_amazonica
Hemistigma_albipunctumPorpacithemis_spThermochoria_equivocataMalgassophlebia_bispinaMicromacromia_zygopteraArgyrothemis_argentea
Pseudothemis_zonataOxythemis_phoenicoscelesOlpogastra_lugubrisMisagria_paranaCallibaetis_ferr
ugineusMachilis_hrabeiDilta_littoralisCtenolepisma_longicaudataLepisma_saccharinaGromphadorhina_laevigataIsoperla_sp
Gomphocerinae;

TaxsetD12=Libellula_Neotetrum_pulchellaAustrogomphus_gueriniArmagomphus_armigerOrosticta_filicolaProtosticta_sp Sinosticta_ogatai
Palaemnema_paulicobaPalaemnema_dominaAmphisticta_silvarumLabidosticta_vallisiPlatycnemis_pennipes
Copera_annulataCopera_marginipes[sp]Calicnemia_milesProdasineura_vittata[sp]Chlorocnemis_abbotti[sp]Nososticta_solida
Argia_moestaAgriocnemis_pygmaeaAustroagrion_watsoniPseudagrion_cingillumPseudagrion_igniferAcanthagrion_quadratum
Amphiagrion_sauciumAnomalagrion_hastatumNeoneura_aaroniCeriagrion_aeruginosumDiceratobasis_melanogasterPyrrhosoma_nymphula
Chromagrion_conditumNehalennia_gracilisPseudostigma_aberransHeteragrion_mitratumDimeragrion_percubitaleTeinopodagrion_lepidum
Amanipodagrion_gilliesiArgiolestes_ochrostomasPodopteryx_roseonotataAustroargiolestes_icteromelasLestomima_flavostigma
Rhipidolestes_hiraoiParaphlebia_zoeThaumatoneura_inopinataHypolestes_clara_Agriomorpha_fuscaCora_marinaPolythore_sp
Euthore_fasciataRimanella_arcanaPentaphlebia_stahliAmphipteryx_longicaudataPseudolestes_mirabilisPhiloganga_robusta_
Lestoidea_conjunctaDiphlebia_lestoidesDiphlebia_coerlescensBayadera_melanopteryxAnisophaea_decorataAnisopleura_sp
Disparocypha_biedermanniPlatycypha_caligataAristocypha_fenestrellaHeliocharis_amazonaHetaerina_americanaCaliphaea_confusa
Atrocalopteryx_atrataSapho_orichalceaCalopteryx_amataNubiolestes_diotimaChlorolestes_umbratus[sp]Synlestes_weyersii
Synlestes_tropicusChorismagrion_risiMegalestes_micansOrolestes_octomaculatusAustrolestes_analisIndolestes_peregrinus
Archilestes_grandisLestes_rectangularisLestes_eurinusHemiphlebia_mirabilisArchipetalia_auriculataAustropetalia_victoria
Ophiopetalia_dianaGomphaeschna_furcillataAeshna_Aeshna_canadensisAustrogynacantha_heterogenaAnax_juniusLindenia_tetraphylla
Progomphus_Neaprogomphus_obscurusHagenius_brevistylusLanthus_vernalisNeogomphus_edenticulatusBurmagomphus_collaris
Dromogomphus_spinosusArigomphus_villosipesAsiagomphus_melaenopsGomphus_Hylogomphus_adelphusOnychogomphus_uncatus
Onychogomphus_forcipatus_unguiculatusOphiogomphus_Ophionurus_carolusCeratogomphus_pictus[sp]Tanypteryx_hageni Tachopteryx_thoreyi
Phenes_raptorPhenes_centralisPetalura_hesperiaPetalura_litorea[sp]Petalura_ingentissimaTaeniogaster_obliqua
Kalyptogaster_erroneaNeopetalia_punctataChloropetalia_soarerSinorogomphus_nasutusSynthemis_eustalactaEusynthemis_brevistyla
Synthemiopsis_gomphomacromioidesDidymops_transversaMacromia_illinoiensisMacromia_amphigenaMacromia_splendens
Phyllomacromia_bifasciata_or_nyanzana_or_spIdomacromia_proavitaTetragoneuria_cynosura[sp]Tetragoneuria_canisEpicordulia_princeps
Epitheca_marginataEpitheca_bimaculataSomatochlora_alpestrisSomatochlora_metallicaSomatochlora_tenebrosaHemicordulia_min_nipponica

Macrodiplax_coraZyxomma_petiolatumBironides_sp_HOL_2010Huonia_epinephelaMiathyria_simplexTramea_calverti
Sympetrum_Kalosympetrum_janeaeSympetrum_Tarnetrum_fonscolombiiSympetrum_danaeSympetrum_meridionaleCelithemis_elisa
Brachymesia_herbidaDeielia_phaonCrocothemis_erythraeaNeurothemis_ramburiiDiplacodes_trivialisMicrathyria_didymaUracis_imbuta
Brechmorhoga_praedatrixTrithemis_africanaPerithemis_teneraPalpopleura_lucia
Tetrathemis_corduliformisDiplacina_ismenePerithemis_laisErythemis_vesiculosaNannophyopsis_claraOligoclada_amphinome
Idiataphe_sp[_HOL_2010]Idiataphe_sp[_HOL_2010]Elga_leptostylaFylgia_amazonicaHemistigma_albipunctumPorpacithemis_sp
Thermochoria_equivocataMalgassophlebia_bispinaMicromacromia_zygopteraArgyrothemis_argenteaPseudothemis_zonata
Oxythemis_phoenicoscelesOlpogastra_lugubrisMisagria_paranaCallibaetis_ferrugineusMachilis_hrabeiCtenolepisma_longicaudata
Gromphadorhina_laevigataIsoperla_spGomphocerinae;

TaxsetD12_end_missing=Libellula_Syntetrum_angelinaNeodythemis_preussiNeodythemis_afra_or_paulianiDiastatops_pullata
Atoconeura_spPyrrhosoma_nymphulaAtrocalopteryx_atrataLindenia_tetraphyllaDromogomphus_spinosusAsiagomphus_melaenops
Onychogomphus_uncatusOnychogomphus_forcipatus_unguiculatusMacromia_amphigenaMacromia_splendens
Phyllomacromia_bifasciata_or_nyanzana_or_spIdomacromia_proavitaTetragoneuria_canisEpicordulia_princepsEpitheca_marginata
Epitheca_bimaculataSomatochlora_alpestrisSomatochlora_metallicaHemicordulia_min_nipponicaMacrodiplax_coraZyxomma_petiolatum
Bironides_sp_HOL_2010Huonia_epinephelaMiathyria_simplexTramea_calvertiSympetrum_Tarnetrum_fonscolombiiSympetrum_danae
Sympetrum_meridionaleBrachymesia_herbidaDeielia_phaonCrocothemis_erythraeaNeurothemis_ramburiiDiplacodes_trivialis
Micrathyria_didymaUracis_imbutaBrechmorhoga_praedatrixTrithemis_africanaPalpopleura_luciaZenithoptera_fasciata
Micromacromia_camerunicaLibellula_Libellula_quadrimaculataAethriamanta_reziaTetrathemis_corduliformisDiplacina_ismene
Perithemis_laisErythemis_vesiculosaNannophyopsis_claraOligoclada_amphinome
Idiataphe_sp[_HOL_2010]Idiataphe_sp[_HOL_2010]Elga_leptostylaFylgia_amazonicaHemistigma_albipunctumPorpacithemis_sp
Thermochoria_equivocataMalgassophlebia_bispinaMicromacromia_zygopteraArgyrothemis_argenteaPseudothemis_zonata
Oxythemis_phoenicoscelesOlpogastra_lugubrisMisagria_paranaCtenolepisma_longicaudataGromphadorhina_laevigataIsoperla_sp;

TaxsetNo_12S_16S=Selysiothemis_nigraTetrathemis_corduliformisAtoconeura_spZoraena_bilineataUnaligned_gomphidIridictyon_myersi
Aciagrion_pallidumUnalignedUnaligned_ZygopteraArchibasis_viola Xiphiagrion_cyanomelasIshnura_elegansAmphiallagma_parvum
Azuragrion_grantiAzuragrion_nigridorsum
Enallagma_cyathigerumEnallagma_aspersumPsaironeura_remissaElattoneura_analis_or_glaucaLeptagrion_spPyrrhosoma_nymphula
Philogenia_terraba
Griseagriolestes_eboracusLestomima_flavostigmaSinocnemis_yangbingiPolythore_spAmphipteryx_longicaudataSundacypha_petiolata
Noguchiphaea_yoshikoaeUnaligned_lestoidMegalestes_kurahashiiHemiphlebia_mirabilisUnaligned_AnisopteraEpiophlebia_laidlawi
Unaligned_AeshnoidIctinogomphus_sp
Anisogomphus_pinrataniMegalogomphus_spOphiogomphus_Ophiogomphus_caeciliaMacrogomphus_parallelogrammaUnaligned_Petalurid
Tanypteryx_spChlorogomphus_spIdionyx_selysiAustrophya_mysticaUnaligned_LibellulidMiathyria_simplexBrachymesia_herbida
Brechmorhoga_praedatrix
Diplacina_ismeneErythemis_vesiculosaNannophyopsis_claraOligoclada_amphinomeIdiataphe_sp[_HOL_2010]Elga_leptostyla
Fylgia_amazonicaPorpacithemis_spThermochoria_equivocataMicromacromia_zygopteraArgyrothemis_argenteaOlpogastra_lugubris
Unaligned_OutgroupsLeucrocuta_maculipennisTrigonioptthalmus_alternMachilis_hrabeiLepisma_saccharinaIsoperla_sp;
;

taxsetNo_12S_16S_split=Selysiothemis_nigraIridictyon_myersiAnisogomphus_pinrataniTanypteryx_spIdiataphe_sp;

TaxsetComplete_12S_16S=Anisophaea_decorataPerithemis_laisTrithetrum_navasiProtosticta_spSinosticta_ogataiRhadinosticta_simplex
Amphisticta_silvarumLabidosticta_vallisiOrosticta_filicolaPlatycnemis_pennipesCopera_annulataCopera_marginipesCalicnemia_miles
Prodasineura_vittataChlorocnemis_abbottiNososticta_solidaOnychargia_atrocyanaArgia_moestaAgriocnemis_pygmaeaAustroagrion_watsoni
Pseudagrion_cingillumPseudagrion_igniferErythromma_lindeniiAcanthagrion_quadratumAmphiagrion_sauciumAnomalagrion_hastatum
Protoneura_caraNeoneura_aaroniCeriagrion_aeruginosumMetaleptobasis_manicariaDiceratobasis_melanogasterChromagrion_conditum
Nehalennia_gracilisMicrostigma_rotundatumMecistogaster_linearisMegaloprepus_coerulatusPseudostigma_aberransRhinagrion_mima
Heteragrion_mitratumHeteragrion_spAmanipodagrion_gilliesiNesolestes_elizabethaeArgiolestes_ochrostomasPodopteryx_roseonotata
Austroargiolestes_icteromelasRhipidolestes_hiraoiParaphlebia_zoeCora_marinaPolythore_bolivianaRimanella_arcana
Pseudolestes_mirabilisPhiloganga_vetustaPhiloganga_robustaLestoidea_conjunctaDiphlebia_lestoidesDiphlebia_coerlescens

Bayadera_melanopteryxDysphaea_gloriosaEuphaea_formosaAnisophaea_decorataAnisopleura_spDisparocypha_biedermanni
Platycypha_caligataAristocypha_fenestrellaHetaerina_americanaCaliphaea_confusaSapho_orichalceaCalopteryx_amata
Calopteryx_splendensNubiolestes_diotimaPerilestes_kahliEuchlorolestes_tessellatusPhylolestes_ethelaeSynlestes_weyersii
Synlestes_tropicusChorismagrion_risiEpisynlestes_cristatusMegalestes_micansOrolestes_octomaculatusSympecma_fusca
Austrolestes_analisIndolestes_peregrinusChalcolestes_viridisArchilestes_grandisLestes_rectangularisLestes_eurinus
Epiophlebia_superstesAustropetalia_victoria
Hypopetalia_pestilensRheopetalia_apicalisOphiopetalia_dianaGomphaeschna_furcillataOligoaeschna_pryeriAustroaeschna_parvistigma
Telephlebia_tillyardiBoyeria_vinosaBoyeria_ireneBrachytron_pratenseEpiaeschna_herosCaliaeschna_microstigmaAnaciaeschna_isoceles
Aeshna_Aeshna_canadensisAeshna_Aeshna_grandisGynacantha_japonica_or_bullata
Hemianax_ephippigerAnax_juniusAnax_imperatorSinogomphidia_kruegeriLindenia_tetraphyllaPhyllogomphoides_stigmatus
Progomphus_Neaprogomphus_obscurusHagenius_brevistylusLanthus_vernalisDavidius_nanusNeogomphus_edenticulatus
Hemigomphus_heteroclytusStylogomphus_albistylusStylogomphus_shirozuiBurmagomphus_collarisDromogomphus_spinosus
Arigomphus_villosipesArigomphus_cornutusStylurus_intricatusStylurus_amnicolaStylurus_nagoyanusGomphus_Gomphurus_externus
Gomphus_Phanogomphus_exilisGomphus_Gomphus_grasliniGomphus_Hylogomphus_adelphusGomphus_Gomphus_vulgatissimusOnychogomphus_uncatus
Onychogomphus_forcipatus_unguiculatusOnychogomphus_spOphiogomphus_Ophionurus_carolusOphiogomphus_Ophiogomphus_severus
Leptogomphus_elegansLeptogomphus_sauteriEpigomphus_compactusMicrogomphus_cheliferHeliogomphus_retroflexusLestinogomphus_angustus
Tanypteryx_hageniTanypteryx_pryeriTachopteryx_thoreyiPhenes_raptorUropetalura_caroveiPetalura_litoreaPetalura_ingentissima
Taeniogaster_obliquaCordulegaster_boltoniiCordulegaster_pictaAnotogaster_sieboldiiNeopetalia_punctataSinorogomphus_nasutus
Chlorogomphus_brunneusSynthemis_eustalactaEusynthemis_guttataSynthemiopsis_gomphomacromioidesGomphomacromia_chilensis
Macromidia_rapidaOxygastra_curtisiiMacromia_illinoiensisMacromia_magnificaMacromia_splendens
Phyllomacromia_bifasciata_or_nyanzana_or_spIdomacromia_proavitaTetragoneuria_cynosuraTetragoneuria_costalisTetragoneuria_canis
Epicordulia_princeps
Epitheca_marginataEpitheca_bimaculataCordulia_aeneaCordulia_shurtleffiiSomatochlora_alpestrisSomatochlora_flavomaculata
Somatochlora_metallicaSomatochlora_tenebrosaHemicordulia_min_nipponicaNotiothemis_robertsiTetrathemis_irregularis
Tetrathemis_polleniUrothemis_signataUrothemis_assignataMacrodiplax_coraMacrodiplax_balteataZygonyx_torridus_or_ida
Bironides_sp_HOL_2010Huonia_epinephelaOnychothemis_testaceaRhyothemis_variegata_or_imperatrixRhyothemis_fuliginosa
Miathyria_marcellaTholymis_citrinaTholymis_tillargaPantala_flavescensTramea_lacerataTramea_calverti
Sympetrum_Kalosympetrum_janeaeSympetrum_Kalosympetrum_obtrusumSympetrum_Sympetrum_vulgatumSympetrum_Sympetrum_pedemontanum
Sympetrum_Nesogonia_blackburniSympetrum_Sympetrum_sanguineumSympetrum_Tarnetrum_corruptumSympetrum_Tarnetrum_fonscolombii
Sympetrum_Tarnetrum_illotumSympetrum_Sympetrum_infuscatumSympetrum_danaeSympetrum_meridionaleLeucorrhinia_pectoralis
Leucorrhinia_glacialisCelithemis_elisaCelithemis_eponinaBrachymesia_gravidaBrachythemis_leucostictaDeielia_phaon
Pachydiplax_longipennisErythemis_collocata_or_simplicicollis_or_spAcisoma_panorpoidesErythrodiplax_basalisCrocothemis_servilia
Crocothemis_erythraeaRhodothemis_rufaNeurothemis_fulviaDiplacodes_lefebvriiDiplacodes_trivialisBradinopyga_strachani
Brachydiplax_chalybea_or_flavovittataChalcostephia_flavifronsMicrathyria_atraMicrathyria_didymaUracis_imbutaUracis_infumata
Nannophya_pygmaeaNannothemis_bellaPaltothemis_lineatipesBrechmorhoga_mendaxDythemis_fugaxTrithemis_auroraTrithemis_arteriosa
Perithemis_teneraDiastatops_pullataNeodythemis_afra_or_pauliani
Porpax_risiMicromacromia_camerunicaNeodythemis_preussiNeodythemis_klingiHadrothemis_infestaThermorthemis_madagascariensis
Agrionoptera_insignisCratilla_metallicaPseudoleon_superbusOrthemis_cultriformisOrthemis_ferrugineaOrthetrum_albistylum
Orthetrum_pruinosumOrthetrum_coerulescensLyriothemis_elegantissimaEurothemis_fulvaPlatetrum_depressaPlathemis_subornata
Libellula_Libellula_quadrimaculataLibellula_Belonia_saturata
Libellula_Neotetrum_pulchella
Malgassophlebia_bispinaOxythemis_phoenicoscelesMisagria_paranaEphemera_spBaetis_spThermobia_domestica
Tricholepidion_gertschiGomphocerinae;
;
Taxset12S_Only=Coenagrion_puella   Leptobasis_vacillansIschnura_graellsiiProtoneura_capillarisPhenes_centralis;

Taxset16S_Only=Indolestes_cyaneusPhilogenia_bereniceAciagrion_borneenseParacercion_plagiosumParacercion_hieroglyphicum
Leptagrion_elongatumAgriomorpha_fuscaHeliocharis_amazonaAeshna_Aeshna_cyaneaTrigomphus_sp
Archaeosynthemis_macrostigmaArchaeosynthemis_leachiiSyncordulia_serendipatorSyncordulia_venatorPseudocordulia_circularis
Lathrocordulia_metallicaMicromidia_atrifronsAustrocordulia_refractaArchaeophya_magnifica

Epophthalmia_elegansAeschnosoma_forcipulaPentathemis_membranulataRialla_villosaZyxomma_elgneriZyxomma_petiolatumHuonia_oreophila
Neurothemis_ramburiiMicrathyria_aequalisTrithemis_africanaLadona_juliaHemistigma_albipunctumPseudothemis_zonataAnthopotamus_sp
Callibaetis_ferrugineusAllomachilis_froggartLepisma_sp ;

TaxsetEF1a=Cora_marinaHemiphlebia_mirabilisSomatochlora_tenebrosaPhenes_centralisLestes_eurinusDiceratobasis_melanogaster
Rhadinosticta_simplexPalaemnema_paulicobaAmphisticta_silvarumLabidosticta_vallisiOrosticta_filicola[sp]
Copera_annulataCopera_marginipes[sp]Prodasineura_vittata[sp]Chlorocnemis_abbotti[sp]Argia_moestaAgriocnemis_pygmaea
Austroagrion_watsoniCoenagrion_resolutumPseudagrion_cingillumPseudagrion_igniferAmphiagrion_sauciumIshnura_elegans
Anomalagrion_hastatumEnallagma_cyathigerumEnallagma_aspersumNeoneura_aaroniCeriagrion_aeruginosumChromagrion_conditum
Coryphagrion_grandisMicrostigma_rotundatumMecistogaster_ornataMecistogaster_linearisMegaloprepus_coerulatusPseudostigma_aberrans
Heteragrion_spAmanipodagrion_gilliesiAustroargiolestes_icteromelasRhipidolestes_hiraoiParaphlebia_zoeHypolestes_clara_ Cora_marina
Rimanella_arcanaPentaphlebia_stahliLestoidea_conjunctaDiphlebia_lestoidesDiphlebia_coerlescensDysphaea_gloriosa
Euphaea_formosaAnisophaea_decorataPlatycypha_caligataAristocypha_fenestrellaHetaerina_americanaCaliphaea_confusaSapho_orichalcea
Calopteryx_amataCalopteryx_splendensChlorolestes_umbratus[sp]Euchlorolestes_tessellatus[sp]Synlestes_weyersiiSynlestes_tropicus
Chorismagrion_risiEpisynlestes_cristatusMegalestes_micansMegalestes_kurahashiiOrolestes_octomaculatus
Austrolestes_analisIndolestes_peregrinusArchilestes_grandisLestes_rectangularisEpiophlebia_superstesArchipetalia_auriculata
Austropetalia_victoriaHypopetalia_pestilensOphiopetalia_dianaGomphaeschna_furcillataAustroaeschna_parvistigma Telephlebia_tillyardi
Boyeria_vinosaBoyeria_ireneEpiaeschna_herosAeshna_Aeshna_canadensisAustrogynacantha_heterogenaAnax_junius
Sinogomphidia_kruegeri[Gomphidia?]Phyllogomphoides_stigmatusProgomphus_Neaprogomphus_obscurusHagenius_brevistylusLanthus_vernalis
Neogomphus_edenticulatus
Armagomphus_armigerHemigomphus_comitansBurmagomphus_collarisArigomphus_villosipesGomphus_Hylogomphus_adelphus
Ophiogomphus_Ophionurus_carolusEpigomphus_compactusCeratogomphus_pictus[sp]Austrogomphus_gueriniTachopteryx_thoreyi
Uropetalura_carovei[sp]Petalura_litoreaPetalura_ingentissimaZoraena_bilineataKalyptogaster_erroneaNeopetalia_punctata
Sinorogomphus_nasutusSynthemis_eustalactaSynthemiopsis_gomphomacromioides
Gomphomacromia_chilensisDidymops_transversaMacromia_illinoiensisMacromia_magnificaTetragoneuria_cynosura[sp]
Cordulia_shurtleffiiSomatochlora_flavomaculataUrothemis_assignataMacrodiplax_balteataRhyothemis_variegata_or_imperatrix
Miathyria_marcellaMiathyria_simplexTholymis_tillargaPantala_flavescensTramea_lacerataSympetrum_Kalosympetrum_janeae
Sympetrum_Kalosympetrum_obtrusumSympetrum_Sympetrum_vulgatumSympetrum_Sympetrum_pedemontanumSympetrum_Nesogonia_blackburni
Sympetrum_Sympetrum_sanguineumSympetrum_Tarnetrum_corruptumSympetrum_Tarnetrum_fonscolombiiSympetrum_Tarnetrum_illotum
Sympetrum_Sympetrum_infuscatumSympetrum_danaeSympetrum_meridionaleLeucorrhinia_glacialisCelithemis_elisaBrachymesia_gravida
Brachythemis_leucostictaBrachythemis_contaminataDeielia_phaonPachydiplax_longipennisErythemis_collocata_or_simplicicollis_or_sp
Acisoma_panorpoidesErythrodiplax_basalisCrocothemis_serviliaRhodothemis_rufaNeurothemis_fulvia_Diplacodes_lefebvrii
Diplacodes_trivialisBradinopyga_strachaniMicrathyria_atraUracis_infumataNannothemis_bellaPaltothemis_lineatipesDythemis_fugax
Trithemis_auroraTrithemis_arteriosaPerithemis_teneraTrithetrum_navasiPorpax_risiPseudoleon_superbusOrthemis_ferruginea
Orthetrum_pruinosumPlathemis_subornata
Plathemis_lydiaLibellula_Belonia_saturataLibellula_Eotainia_compositaLibellula_Neotetrum_pulchellaLibellula_Holotania_comanche
Ephemerella_spAnthopotamus_spEphemera_spBaetis_spHexagenia_spAllomachilis_froggartCtenolepisma_longicaudataLepisma_sp
Gromphadorhina_laevigataIsoperla_spOxythemis_phoenicosceles;

TaxsetEF1a_end_only=Agriocnemis_pygmaeaCoenagrion_resolutumCora_marinaHetaerina_americanaSapho_orichalcea
Euchlorolestes_tessellatus[sp]Chorismagrion_risiMegalestes_micansMegalestes_kurahashiiTelephlebia_tillyardi
Phyllogomphoides_stigmatusBurmagomphus_collaris;

TaxsetH3=Hagenius_brevistylusProtosticta_sanguinostigmaPalaemnema_melanostigmaIsosticta_robustiorRhadinosticta_simplex
Labidosticta_vallisiPlatycnemis_pennipesCopera_vittataCoeliccia_cyanomelasNososticta_solidaPhylloneura_westermanniArgia_nahuana
Mortonagrion_aborense[sp]Agriocnemis_pygmaeaCoenagrion_resolutumPseudagrion_aureofronsErythromma_najasAmphiagrion_abbreviatum
[monotypicheterodoxum]Ishnura_barberiEnallagma_spProtoneura_capillarisElattoneura_analis_or_glaucaNeoneura_maria Telebasis_salva
Microstigma_anomalumMecistogaster_ornataMecistogaster_linearisPseudostigma_aberransSciotropis_cyclanthorum
Heteragrion_spPhilogenia_cassandraTeinopodagrion_venalePyrrhargiolestes_sidoniaCaledopteryx_maculataTrineuragrion_percostale
Caledargiolestes_uniseriesAustroargiolestes_icteromelasGriseargiolestes_albescensRhipidolestes_aculeataHypolestes_spCora_cyane
Polythore_bolivianaEuthore_fasciataDevadatta_podolestoidesPseudolestes_mirabilisPhiloganga_vetustaLestoidea_conjuncta

Diphlebia_coerlescensBayadera_brevicaudaEuphaea_formosaLibellago_semiopacaHeliocypha_biseriataRhinocypha_tincta
Hetaerina_americanaVestalis_beryllaeMatrona_basilarisEcho_modestaNeurobasis_ianthinipennisCalopteryx_aequabilisPerilestes_kahli
Synlestes_weyersiiChorismagrion_risiEpisynlestes_albicaudusSympecma_paedisca
Austrolestes_annulosusArchilestes_grandisEpiophlebia_superstesOdontopetalia_apolloBoyeria_ireneBrachytron_pratenseOplonaeschna_sp
Aeshna_Rhionaeschna_multicolorAustrogynacantha_heterogenaAnax_juniusIctinogomphus_australisProgomphus_Neaprogomphus_obscurus
[monotypicsomustbebevistylus]Armagomphus_armigerHemigomphus_magelaDavidioides_martiniCyclogomphus_heterostylus
Ophiogomphus_Ophiogomphus_severusAustrogomphus_amphiclitusAntipodogomphus_acolythusTanypteryx_hageniPhenes_raptorPetalura_gigantea
Laurogaster_dorsalisChlorogomphus_brunneusArchaeosynthemis_macrostigmaEusynthemis_nigraChoristhemis_flavoterminata Idionyx_imbricata
Cordulephya_pygmaeaHesperocordulia_berthoudiMicromidia_convergensEpophthalmia_elegansMacromia_illinoiensis
Macromia_eurynomeCordulia_shurtleffiiSomatochlora_flavomaculataHemicordulia_australiaeProcordulia_jacksoniensis Macrodiplax_balteata
Nannophlebia_sp_or_risiPantala_flavescensTramea_lacerata
Sympetrum_Tarnetrum_corruptumErythemis_collocata_or_simplicicollis_or_spErythrodiplax_minusculaBrachydiplax_denticauda
Trithemis_auroraPerithemis_intensaLibellula_Belonia_saturataEphemerella_spParaleptophlebia_vacivaAnthopotamus_spCaenis_luctuosa
Ephemera_spCallibaetis_spCallibaetis_ferrugineusBaetis_spHexagenia_spCentroptilum_luteolumStenonema_spAllomachilis_froggart
Machilis_hrabeiLepisma_spThermobia_domesticaTricholepidion_gertschiGromphadorhina_laevigataIsoperla_davisiIsoperla_sp;

TaxsetCOII=Hagenius_brevistylusPalaemnema_melanostigmaIsosticta_robustiorPlatycnemis_pennipesCopera_annulataCopera_vittata
Coenagrion_resolutumErythromma_najasIshnura_elegansIshnura_barberiIschnura_graellsii[sp]Enallagma_cyathigerumEnallagma_sp
Microstigma_anomalumSciotropis_cyclanthorumHeteragrion_spPhilogenia_cassandraTeinopodagrion_venaleTrineuragrion_percostale
Caledargiolestes_uniseriesCora_cyanePolythore_bolivianaEuthore_fasciataDevadatta_podolestoidesPseudolestes_mirabilis
Philoganga_vetustaLestoidea_conjunctaBayadera_brevicaudaEuphaea_formosaAnisophaea_decorataLibellago_semiopaca
Hetaerina_americanaMatrona_basilarisEcho_modestaNeurobasis_ianthinipennisCalopteryx_aequabilisPerissolestes_remotus
Synlestes_weyersiiChorismagrion_risiEpisynlestes_albicaudusAustrolestes_annulosusSympecma_paediscaArchilestes_grandis
Lestes_rectangularisEpiophlebia_superstesOdontopetalia_apolloAeshna_Rhionaeschna_multicolorAnax_juniusIctinogomphus_australis
Progomphus_Neaprogomphus_borealis[monotypicsomustbebevistylus]Armagomphus_armigerHemigomphus_magelaDavidioides_martini
Cyclogomphus_heterostylusAustrogomphus_amphiclitusAntipodogomphus_acolythusTanypteryx_hageniPhenes_raptorPetalura_gigantea
Laurogaster_dorsalisAnotogaster_sieboldiiChlorogomphus_brunneusArchaeosynthemis_macrostigmaEusynthemis_nigra
Choristhemis_flavoterminataCordulephya_pygmaeaHesperocordulia_berthoudiMicromidia_convergensEpophthalmia_elegansMacromia_eurynome
Cordulia_shurtleffiiSomatochlora_tenebrosaHemicordulia_australiaeProcordulia_jacksoniensisMacrodiplax_balteataPantala_flavescens
Tramea_lacerataBrachythemis_contaminataAcisoma_panorpoidesErythrodiplax_minusculaCrocothemis_serviliaNeurothemis_fulvia_
Diplacodes_trivialisBrachydiplax_denticaudaTrithemis_auroraPerithemis_intensaOrthetrum_albistylumPlatetrum_depressa
Libellula_Belonia_saturataEphemera_spThermobia_domesticaTricholepidion_gertschiGromphadorhina_laevigataIsoperla_davisi Gomphocerinae;

TaxsetCOI=Trigomphus_spIndolestes_cyaneusCopera_annulataArgia_moestaAgriocnemis_pygmaeaErythromma_najas
Paracercion_hieroglyphicumIshnura_elegansIschnura_graellsii[sp]Enallagma_cyathigerumLeptagrion_elongatumChromagrion_conditum
Seychellibasis_alluaudi[sp]Nehalennia_gracilisCoryphagrion_grandisRhipidolestes_hiraoiRhipidolestes_aculeataBayadera_brevicauda
Euphaea_formosaPlatycypha_caligataAristocypha_fenestrellaHetaerina_americanaMatrona_basilarisAtrocalopteryx_atrata
Calopteryx_amataCalopteryx_splendensCalopteryx_aequabilisSympecma_paediscaAustrolestes_analisIndolestes_peregrinus
Epiophlebia_superstesBrachytron_pratenseAeshna_Aeshna_cyaneaAeshna_Aeshna_grandisGynacantha_japonica_or_bullataAnax_junius
Anax_imperatorHagenius_brevistylus
Davidius_nanusStylogomphus_albistylusStylogomphus_shirozui[sp]Stylurus_nagoyanusGomphus_Phanogomphus_exilis
Ophiogomphus_Ophionurus_carolusTanypteryx_pryeriKalyptogaster_erroneaPangaeagaster_maculataCordulegaster_picta
Anotogaster_sieboldiiChlorogomphus_brunneusSyncordulia_serendipatorSyncordulia_venatorIdionyx_selysiCordulephya_pygmaea
Epophthalmia_elegansMacromia_amphigenaTetragoneuria_canisEpitheca_marginataEpitheca_bimaculataSomatochlora_alpestris
Somatochlora_metallicaHemicordulia_min_nipponicaMacrodiplax_coraZyxomma_petiolatumRhyothemis_variegata_or_imperatrix
Rhyothemis_fuliginosaTholymis_tillargaPantala_flavescensTramea_lacerataSympetrum_Kalosympetrum_janeae
Sympetrum_Kalosympetrum_obtrusumSympetrum_Sympetrum_vulgatumSympetrum_Sympetrum_pedemontanumSympetrum_Sympetrum_sanguineum
Sympetrum_Tarnetrum_corruptumSympetrum_Tarnetrum_fonscolombiiSympetrum_Tarnetrum_illotumSympetrum_Sympetrum_infuscatum
Sympetrum_danaeSympetrum_meridionaleLeucorrhinia_pectoralisLeucorrhinia_glacialisBrachythemis_contaminataDeielia_phaon
Erythemis_collocata_or_simplicicollis_or_spAcisoma_panorpoidesCrocothemis_serviliaCrocothemis_erythraeaNeurothemis_fulvia_

```
Neurothemis_ramburiiDiplacodes_trivialisBrachydiplax_chalybea_or_flavovittataNannophya_pygmaeaTrithemis_auroraTrithemis_arteriosa
Agrionoptera_insignisCratilla_metallicaOrthemis_ferrugineaOrthetrum_albistylumOrthetrum_pruinosumOrthetrum_coerulescens
Lyriothemis_elegantissimaEurothemis_fulvaLadona_juliaPlathemis_subornataPlathemis_lydiaLibellula_Libellula_quadrimaculata
Libellula_Syntetrum_angelinaLibellula_Eolibellula_semifasciataLibellula_Belonia_saturataLibellula_Eotainia_composita
Libellula_Neotetrum_pulchellaLibellula_Holotania_comancheLibellula_Holotania_auripennisLibellula_Holotania_axilena
Libellula_Holotania_luctuosaEphemerella_spParaleptophlebia_vacivaCaenis_luctuosaEphemera_spCallibaetis_ferrugineusBaetis_sp
Hexagenia_spLeucrocuta_maculipennisCentroptilum_luteolumStenonema_spAllomachilis_froggartDilta_littoralisLepisma_sp
Thermobia_domesticaTricholepidion_gertschiGromphadorhina_laevigataIsoperla_spGomphocerinae;

 taxsetdelete=Ophiogomphus_Ophiogomphus_caeciliaLeptagrion_spLestomima_flavostigmaEusynthemis_nigraIdiataphe_spTrigomphus_sp
Syncordulia_serendipatorTanypteryx_spProtosticta_curiosaArchaeosynthemis_leachiiGomphocerinae         UnalignedUnaligned_Zygoptera
Unaligned_lestoidUnaligned_Anisoptera
         Unaligned_AeshnoidUnaligned_gomphidUnaligned_PetaluridUnaligned_OutgroupsUnaligned_LibellulidCoenagrion_puella
Iridictyon_myersiAciagrion_pallidumAmphiallagma_parvumAzuragrion_grantiAzuragrion_nigridorsum
 Davidius_nanusTrigomphus_spAnisogomphus_pinrataniMacrogomphus_parallelogrammaSinocnemis_yangbingiTrigoniopthalmus_altern
Lepisma_saccharinaAustrogynacantha_heterogenaEpitheca_marginata;

      taxsetlittle_data_separate=Iridictyon_myersiAciagrion_pallidumAmphiallagma_parvumAzuragrion_grantiAzuragrion_nigridorsum
 Davidius_nanusTrigomphus_spAnisogomphus_pinrataniMacrogomphus_parallelogrammaTanypteryx_sp;


outgroupTrigoniopthalmus_altern
Allomachilis_froggart
Machilis_hrabei
Dilta_littoralis
;


deletedelete;
wts1:1;wts1:2;wts1:3;wts1:4;wts1:5;wts1:6;wts1:7;wts1:8;wts0.078189:9;wts1:10;wts1
:11;wts1:12;wts1:13;wts1:14;wts1:15;wts1:16;wts1:17;wts1:18;wts1:19;wts1:20;wts1:21
;wts1:22;wts1:23;wts1:24;wts1:25;wts1:26;wts1:27;wts1:28;wts1:29;wts1:30;wts1:31;
wts1:32;wts1:33;wts1:34;wts1:35;wts1:36;wts1:37;wts1:38;wts1:39;wts1:40;wts1:41;wts
1:42;wts1:43;wts1:44;wts1:45;wts1:46;wts1:47;wts1:48;wts1:49;wts1:50;wts1:51;wts1:
52;wts1:53;wts1:54;wts1:55;wts1:56;wts1:57;wts1:58;wts1:59;wts1:60;wts0.04:61;wts1:
62;wts1:63;wts1:64;wts0.212121:65;wts1:66;wts0.104767:67;wts1:68;wts0.242925:69;wts1:70;wts
0.047619:71;wts0.128788:72;wts0.110672:73;wts0.485:74;wts0.17004:75;wts1:76;wts0:77;wts1:78;wts
0.047619:79;wts1:80;wts1:81;wts0.202778:82;wts1:83;wts1:84;wts1:85;wts1:86;wts1:87;wts1:
88;wts1:89;wts1:90;wts1:91;wts1:92;wts1:93;wts1:94;wts1:95;wts1:96;wts1:97;wts1:98;
wts1:99;wts1:100;wts1:101;wts1:102;wts1:103;wts1:104;wts1:105;wts1:106;wts1:107;wts1:
108;wts1:109;wts1:110;wts1:111;wts1:112;wts1:113;wts1:114;wts1:115;wts1:116;wts1:117; wts
1:118;wts1:119;wts1:120;wts1:121;wts1:122;wts1:123;wts0.144737:124;wts1:125;wts1:126; wts
1:127;wts0.444444:128;wts0.6875:129;wts0:130;wts0:131;wts0:132;wts1:133;wts0.121569:134;wts
0.296703:135;wts0.294118:136;wts0.297619:137;wts0.297619:138;wts0.147727:139;wts0:140;wts1:141;wts1
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wts1000:12324;wts1000:12325;wts1000:12326;wts1000:12327;wts1000:12328;wts1000:12329;wts1000:12330;
wts1000:12331;wts1000:12332;wts1000:12333;wts1000:12334;wts1000:12335;wts1000:12336;wts1000:12337;
wts1000:12338;wts1000:12339;wts1000:12340;wts1000:12341;wts1000:12342;wts1000:12343;wts1000:12344;
wts1000:12345;wts1000:12346;wts1000:12347;wts1000:12348;wts1000:12349;wts1000:12350;wts1000:12351;
wts1000:12352;wts1000:12353;wts1000:12354;wts1000:12355;wts1000:12356;wts1000:12357;wts1000:12358;
wts1000:12359;wts1000:12360;wts1000:12361;wts1000:12362;wts1000:12363;wts1000:12364;wts1000:12365;
wts1000:12366;wts1000:12367;wts1000:12368;wts1000:12369;wts1000:12370;wts1000:12371;wts1000:12372;
wts1000:12373;wts1000:12374;wts1000:12375;wts1000:12376;wts1000:12377;wts1000:12378;wts1000:12379;
wts1000:12380;wts1000:12381;wts1000:12382;wts1000:12383;wts1000:12384;wts1000:12385;
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CharsetUnaligned_Anisoptera=2736-27452853-28562862-28722958-29743106-31223278-32793282-32853314-33223330-33403346-3358
3366-3369
3800-38093837-38593864-39014192-42114464-45285069-51285136-51395688-57095851-58695904-59095924-59335945-59515956-5962
6643-66616724-67316837-68466853-68776881-68906895-69336946-69906995-69336946-69906994-70037008-7019
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8291-83028375-84098435-84508485-84978524-85338739-87988819-88268839-88579076-9090;

S2Phylip file

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213 10293
Protosticta_Consensus                GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAG
Palaemnema_Consensus                 -UAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAG
Copera_Consensus                     GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAG
Pseudagrion_Consensus                GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAG
Amphiagrion_Consensus                GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCUUUAAG
Neoneura_Consensus                   GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAG
Protoneura_Consensus                 GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAG
Microstigma_Consensus                --------------GUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCUUUAAG
Heteragrion_Consensus                GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAG
Rhipidolestes_Consensus              GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAG
Hypolestes_Consensus                 GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAG
Philoganga_Consensus                 GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAG
Diphlebia_Consensus                  GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACGAACCGCUUUAAG
Bayadera_Consensus                   GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACGAACCGCUUUAAG
Hetaerina_americana                  ??????????????????????????????????????UCUCAGUACUAACCGCCUUUAG
Caliphaea_confusa                    GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAG
Calopteryx_Consensus                 GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACUAACCGCUUUAAG
Synlestes_Consensus                  GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACCAACCGCUUUAAG
Austrolestes_Consensus               ---------------------------------------------------------AAG
Lestes_Consensus                     ------------------------------------------------------------
Epiophlebia_Consensus                GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGAAAUAAG
Archipetalia_auriculata              ?????????????????????AGAUUANGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAG
Austropetalia_victoria               ????????????????????????????????????????????????????????????
Hypopetalia_pestilens                ????????????????????????????????????????????????????????????
Rheopetalia_apicalis                 ????????????????????????????????????????????????????????????
Odontopetalia_apollo                 GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAG
Eurypetalia_altarensis               ????????????????????????????????????????????????????????????
Ophiopetalia_diana                   ????????????????????????????????????????????????????????????
Gomphaeschna_furcillata              ????????????????????????????????????????????????????????????
Oligoaeschna_pryeri                  ????????????????????????????????????????????????????????????
Austroaeschna_parvistigma            ????????????????????????????????????????????????????????????
Telephlebia_tillyardi                ????????????????????????????????????????????????????????????
Boyeria_Consensus                    GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGAAAUAAG
Brachytron_pratense                  ????????????????????????????????UGCAUGUCUCAGUACAAGCCGAAAUAAG
Epiaeschna_heros                     ????????????????????????????????????????????????????????????
Caliaeschna_microstigma              ???????????????????????????????????????????GUACAAGCCAAAAUAAG
Anaciaeschna_isoceles                ???????????????????????????????????????????GUACAAGCCGAAUUAAG
Oplonaeschna_sp                      GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGAAUUAAG
Aeshna_Rhionaeschna_multicolorGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGAAUUAAG
Aeshna_Aeshna_Consensus              --------------------------------UGCAUGUCUCAGUACAAGCCGAAUUAAG
Gynacantha_japonica_or_bullataGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGAAUUAAG
Hemianax_ephippiger                  GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGAAUUAAG
Anax_junius                          GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGAAUUAAG
Anax_imperator                       GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGAAUUAAG
Sinogomphidia_kruegeri               ????????????????????????????????????????????????????????????
Ictinogomphus_Consensus              GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAG
Lindenia_tetraphylla                 GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUAAUUAAG
Phyllogomphoides_stigmatus           ????????????????????????????????????????????????????????????
Progomphus_Neaprogomphus_ConseGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAG
Hagenius_brevistylus                 ???????????????????????????????????????????GUACAAGCCUCAUUAAG
Lanthus_vernalis                     ????????????????????????????????????????????????????????????
Neogomphus_edenticulatus             ????????????????????????????????????????????????????????????
Armagomphus_armiger                  GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAG
Hemigomphus_Consensus                GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAG
Stylogomphus_Consensus               ------------------------------------------------------------
Davidioides_martini                  GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUAAUUAAG
Burmagomphus_collaris                ????????????????????????????????????????????????????????????
Cyclogomphus_heterostylus            GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCAUAUUAAG
Dromogomphus_spinosus                ????????????????????????????????????????????UACAAGCCUCAUUAAG
Arigomphus_Consensus                 -------------------------------------------GUACAAGCCUCAUUAAG
Stylurus_Consensus                   -------------------------------------------GUACAAGCCUCAUUAAG
Gomphus_Gomphurus_externus           ????????????????????????????????????????????????????????????
Asiagomphus_melaenops                ????????????????????????????????????????????????????????????
Gomphus_Phanogomphus_exilis          ???????????????????????????????????????????GUACAAGCCUCAUUAAG
Gomphus_Hylogomphus_adelphus         ???????????????????????????????????????????GUACAAGCCUCAUUAAG
Gomphus_Gomphus_Consensus            GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAG
Megalogomphus_sp                     GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAG
Onychogomphus_uncatus                ????????????????????????????????????????????????????????????
Onychogomphus_forcipatus_unguiGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAG
Onychogomphus_sp             ????????????????????????????????????????????????????????????
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Ophiogomphus_Ophionurus_carolu???????????????????????AUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAG
Ophiogomphus_Ophiogomphus_seve???????????????????????AUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAG
Leptogomphus_Consensus                ------------------------------------------------------------
Epigomphus_compactus                  ????????????????????????????????????????????????????????????
Microgomphus_chelifer                 ????????????????????????????????????????????????????????????
Heliogomphus_retroflexus              ????????????????????????????????????????????????????????????
Ceratogomphus_pictus                  ????????????????????????????????????????????????????????????
Lestinogomphus_angustus               ????????????????????????????????????????????????????????????
Austrogomphus_Consensus               ---------------------------------GCAUGUCUCAGUACAAGCCGCAUUAAG
Antipodogomphus_acolythus             GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAUUAAG
Tanypteryx_Consensus                  GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAG
Tachopteryx_thoreyi                   GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAG
Phenes_Consensus                      ----------------------------------------UCAGUACAAGCCGCAAUAAG
Uropetalura_carovei                   ????????????????????????????????????????????????????????????
Petalura_Consensus                    GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAG
Zoraena_bilineata                     ????????????????????????????????????????????????????????????
Taeniogaster_obliqua                  ????????????????????????????????????????????????????????????
Kalyptogaster_erronea                 ????????????????????????????????????????????????????????????
Pangaeagaster_maculata                ????????????????????????????????????????????????????????????
Laurogaster_dorsalis                  GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAG
Cordulegaster_Consensus               GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAG
Anotogaster_sieboldii                 ????????????????????????????????????????????????????????????
Neopetalia_punctata                   ????????????????????????????????????????????????????????????
Chloropetalia_soarer                  ????????????????????????????????????????????????????????????
Sinorogomphus_nasutus                 ????????????????????????????????????????????????????????????
Chlorogomphus_Consensus               GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAG
Synthemis_eustalacta                  ????????????????????????????????????????????????????????????
Archaeosynthemis_Consensus            GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUAAGUACAAGCCGCAAUAAG
Eusynthemis_Consensus                 ------------------------------------------------------------
Choristhemis_flavoterminata           GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAG
Synthemiopsis_gomphomacromioid????????????????????????????????????????????????????????????
Gomphomacromia_Consensus              ------------------------------------------------------------
Syncordulia_venator                   ????????????????????????????????????????????????????????????
Idionyx_Consensus                     GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAAUAAG
Macromidia_rapida                     GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAG
Oxygastra_curtisii                    GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCUCAAUAAG
Cordulephya_pygmaea                   GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAG
Pseudocordulia_circularis             ????????????????????????????????????????????????????????????
Hesperocordulia_berthoudi             ?UAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAG
Lathrocordulia_metallica              ????????????????????????????????????????????????????????????
Micromidia_Consensus                  GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAAUAAG
Austrophya_mystica                    ????????????????????????????????????????????????????????????
Austrocordulia_refracta               ????????????????????????????????????????????????????????????
Archaeophya_magnifica                 ????????????????????????????????????????????????????????????
Epophthalmia_elegans                  ????????????????????????????????????????????????????????????
Didymops_transversa                   GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAGUAAG
Macromia_Consensus                    GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAGUAAG
Phyllomacromia_bifasciata_or_nGUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCACUAAG
Idomacromia_proavita                  ????????????????????????????????????????????????????????????
Aeschnosoma_forcipula                 ????????????????????????????????????????????????????????????
Pentathemis_membranulata              ????????????????????????????????????????????????????????????
Tetragoneuria_Consensus               ------------------------------------------------------------
Epicordulia_princeps                  ????????????????????????????????????????????????????????????
Epitheca_bimaculata                   GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCAAAAUAAG
Rialla_villosa                        ????????????????????????????????????????????????????????????
Cordulia_Consensus                    GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCAAUAAG
Somatochlora_Consensus                GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCAAUAAG
Hemicordulia_Consensus                GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCAAUAAG
Procordulia_jacksoniensis             GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAACCGCAAUAAG
Notiothemis_robertsi                  ????????????????????????????????????????????????????????????
Tetrathemis_Consensus                 ????????????????????????????????????????????????????????????
Urothemis_signata                     ????????????????????????????????????????????????????????????
Urothemis_assignata                   ????????????????????????????????????????????????????????????
Macrodiplax_cora                      ????????????????????????????????????????????????????????????
Macrodiplax_balteata                  GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAG
Zyxomma_Consensus                     ------------------------------------------------------------
Zygonyx_torridus_or_ida               GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAG
Nannophlebia_sp_or_risi               GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAG
Bironides_sp_HOL_2010                 ????????????????????????????????????????????????????????????
Huonia_Consensus                      ------------------------------------------------------------
Onychothemis_testacea         ????????????????????????????????????????????????????????????
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Rhyothemis_Consensus                  ------------------------------------------------------------
Miathyria_Consensus                   ------------------------------------------------------------
Tholymis_Consensus                    ------------------------------------------------------------
Pantala_flavescens                    ????????????????????????????????????????????????????????????
Tramea_Consensus                      GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAG
Sympetrum_Consensus                   GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAG
Leucorrhinia_Consensus                --------------------------------UGCAUGUCUCAGUACAAGCCGCAUUAAG
Celithemis_Consensus                  --------------------------------UGCAUGUCUCAGUACAAGCCGCACUAAG
Brachymesia_gravida                   ????????????????????????????????????????????????????????????
Brachymesia_herbida                   ????????????????????????????????????????????????????????????
Brachythemis_leucosticta              ????????????????????????????????????????????????????????????
Brachythemis_contaminata              ????????????????????????????????????????????????????????????
Deielia_phaon                         ????????????????????????????????????????????????????????????
Pachydiplax_longipennis               ????????????????????????????????????????????????????????????
Erythemis_Consensus                   -UAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAG
Acisoma_panorpoides                   GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAG
Erythrodiplax_Consensus               GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAG
Crocothemis_Consensus                 -------------------------------------------GUACAAGCCGCAUUAAG
Rhodothemis_rufa                      ????????????????????????????????????????????????????????????
Neurothemis_Consensus                 GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAG
Diplacodes_Consensus                  --------------GUCUNAAAGAUUAAGCCNUGCAUGUCUCAGUACAAGCCGCAUUAAG
Bradinopyga_strachani                 ????????????????????????????????????????????????????????????
Brachydiplax_Consensus                GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAG
Chalcostephia_flavifrons              GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAG
Micrathyria_Consensus                 ------------------------------------------------------------
Uracis_Consensus                      ------------------------------------------------------------
Nannophya_pygmaea                     ????????????????????????????????????????????????????????????
Nannothemis_bella                     ????????????????????????????????????????????????????????????
Paltothemis_lineatipes                ????????????????????????????????????????????????????????????
Brechmorhoga_Consensus                ------------------------------------------------------------
Dythemis_fugax                        ????????????????????????????????????????????????????????????
Trithemis_Consensus                   GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAG
Perithemis_Consensus                  GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAG
Palpopleura_lucia                     GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAG
Diastatops_pullata                    ????????????????????????????????????????????????????????????
Zenithoptera_fasciata                 ????????????????????????????????????????????????????????????
Neodythemis_afra_or_pauliani????????????????????????????????????????????????????????????
Selysiothemis_nigra                   GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAG
Trithetrum_navasi                     GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAG
Porpax_risi                           ????????????????????????????????????????????????????????????
Micromacromia_camerunica              GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAG
Neodythemis_Consensus                 GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUUUCAGUACAAGCCGCAUUAAG
Hadrothemis_infesta                   ????????????????????????????????????????????????????????????
Thermorthemis_madagascariensis????????????????????????????????????????????????????????????
Agrionoptera_insignis                 ????????????????????????????????????????????????????????????
Cratilla_metallica                    ????????????????????????????????????????????????????????????
Pseudoleon_superbus                   ????????????????????????????????????????????????????????????
Orthemis_Consensus                    ------------------------------------------------------------
Orthetrum_Consensus                   -------------------------------------------GUACAAGCCGCAUUAAG
Lyriothemis_elegantissima             ????????????????????????????????????????????????????????????
Eurothemis_fulva                      ???????????????????????????????????????????GUACAAGCCGCAUUAAG
Ladona_julia                          ????????????????????????????????????????????????????????????
Platetrum_depressa                    ????????????UUGUCUCAAAGAUUAAGCCAUGCAUGUGUCAGUACAAGCCGCAUUAAG
Plathemis_Consensus                   ------------------------------------------------------------
Libellula_Consensus                   GUAGUCAUAUGCUUGUCUCAAAGAUUAAGCCAUGCAUGUCUCAGUACAAGCCGCAUUAAG
Aethriamanta_rezia                    ????????????????????????????????????????????????????????????
Diplacina_ismene                      ????????????????????????????????????????????????????????????
Nannophyopsis_clara                   ????????????????????????????????????????????????????????????
Oligoclada_amphinome                  ????????????????????????????????????????????????????????????
Atoconeura_sp                         ????????????????????????????????????????????????????????????
Elga_leptostyla                       ????????????????????????????????????????????????????????????
Fylgia_amazonica                      ????????????????????????????????????????????????????????????
Hemistigma_albipunctatum              ????????????????????????????????????????????????????????????
Porpacithemis_sp                      ????????????????????????????????????????????????????????????
Thermochoria_equivocata               ????????????????????????????????????????????????????????????
Malgassophlebia_bispina               ????????????????????????????????????????????????????????????
Micromacromia_zygoptera               ????????????????????????????????????????????????????????????
Argyrothemis_argentea                 ????????????????????????????????????????????????????????????
Pseudothemis_zonata                   ????????????????????????????????????????????????????????????
Oxythemis_phoenicosceles              ????????????????????????????????????????????????????????????
Olpogastra_lugubris            ????????????????????????????????????????????????????????????
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Misagria_parana ??

G-CGAAACC-GCGAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAC G-
CGAAACC-GCGAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-ACACAC G-
CGAAACC-GCGAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAC G-
CGAAACC-GCGAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAU G-
CGAAACC-GCGAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACGC G-
CGAAACC-GCGAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAC G-
CGAAACC-GCGAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAC G-
CGAAACC-GCGAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAC G-
CGAAACC-GCGAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAC G-
CGAAACC-GCGAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAC G-
CGAAACC-GCGAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAU G-
CGAAACC-GCGAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAC G-
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UGAAACC-GCGAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAC
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UGAAACC-GCGAAUGGCUCAUUAAAUCANAUUAUGGUUCCUUGGAUCUUAC-CCACAC

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UGAAACC-GCGAAUGGCUCAUUAAAUCA-GUUAUGGUUCCUUGGAUCUUAC-CCACAC
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-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCCG-GUGCCCCGACCAGU
-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACCUG-GCGCCCCGACCAGA
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UUACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAACAUU-GCACCCCGACCAGA
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-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--
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-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUU-GUACCCCGACUU--
-UACAUGGAUAACUGUGGUAAUUCUAGAGCUAAUACAUGAAACUA-GUACCCCGACUU--
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G-AUGGAAGGGGUGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCG G-
AUGGAAGGGGUGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCG G-
AUGGAAGGGGUGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCG G-
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AUGGGAGGGGUGCUUUUAUUA-GAACAAA--ACCAAUCGGC---------UCGU-CCG G-
AUGGAAGGGGUGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG--UCUUCCGU-CCG G-
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G-AUGGAAGGGGUGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCG G-
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AUGGAAGGGGUGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCG G-
AUGGAAGGGGCGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG

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G-AUGGAAGGGGCGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCG
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AUGGAAGGGGCGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCG       G-
AUGGAAGGGGCGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCG       G-
AUGGAAGGGGCGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG       G-
AUGGAAGGGUCGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG       G-
AUGGGAGGGGCGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG
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AUGGGAGGGGCGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG       G-
AUGGRAGGGGCGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG
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AUGGAAGGGGUGCUUUUAKUA-GARCAAA--ACCAAUCGGUCGG-CUBGYCCGU-CCG
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AUGGAAGGGGCGCUUUAAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG
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AUGGAAGGGGCGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG
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AUGGAAGGGGCGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG       G-
AUGGAAGGGGCGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG       G-
AUGGAAGGGGCGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG       G-
AUGGAAGGUGCGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCG
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G-AUGGAAGGGGCGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG
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AUGGAAUGGGCGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG
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AUGGAAGGGGUGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG       G-
AUGGAAGGGGUGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG       G-
AUGGAAGAGGUGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCG
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AUGGAAGGGGUGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCG
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AUGGAAGGGGUGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG       G-
AUGGAAGGGGUGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG       G-
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AUGGAAGGGGCGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG
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GCGGAAGGGGUGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG       U-
GCGGAAGGGGUGCUUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG
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ACGGAAGGGGUGCUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG    U-
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ACGGAAGGGGUGCUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG    U-
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GCGGAAGGGGUGCUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG    U-
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GCGGAAGGGGUGCUUUAUUA-GAACAAA--ACCAAUCGGUCGG-UUCG-CCGU-CCG    U-
ACGGAAGGGGUGCUUUAUUA-GAACAAA--ACCAAUCGGGCGA-UUC-UUCGU-CCG    U-
ACGGAAGGGGUGCUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG
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ACGGAAGGGGUGCUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUCGUCCGU-CCG    U-
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GCGGAAGGGGUGCUUUAUUA-GAACAAA--ACCAAUCGGUCGG-CUUGUCCGU-CCG
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U--UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGAC    U--
UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCCAGCACCGGCGAC       U--
UGCCUUGGUGACUCUGAAUAAC-UUUUGGCUGAUCGCACGGUCCUAGCACCGGCGAC       U--
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CUUUAACGAGGAUCUAUUGGAGGGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCA
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CUUUAACGAGGAUCUAUUGGAGGGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCA      AWC-
CUUNAACGAGGAUHDRWUGGAGGGCAAGUCUGGUGCCAGCASMCSSGGUAAUUCCA
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CUUUAACGAGGAUCUAUUGGAGGGCAAGUCUGGUGCCAGCAGCCGCGGUAAUUCCA
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U--CAGAACU--CGAGGUAAUGAUUAAUAGGGACGGACGGGGGCAUYCGUAUUGCGACGU   U--
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CACGGG-ACACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUC
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CACGGG-AAACCUCACCAGGCCCAGACACCGGUAGGAUUGACAGAAUAAGAG-CUCUUUC  CAC-
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CACNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
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UU-GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU    UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUU-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCAGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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GAUUC-GGUGGGUGGUGGUGCAUGCCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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NNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN       NN-
NNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU       UU-
GAUUC-GGUGGGUGGUGGUGCAUG?CCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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UU-GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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??-?????-??? UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
-- UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU NN-
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NNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN UU-
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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GAYYC-?GUGGGUGGUGGNNCAAGGCCGUCCU?ANUUGGUGGAGC?A?UUGUYYGGU
??-?????-??? UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU

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??-?????-??? UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU UU-
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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??-?????-??? UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
-- UU-
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU UU-
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU   UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU   UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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UU-GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU   UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUCCUUAGUUGGUGGAGC????????????   UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU   UU-
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU   UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU   UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGSSAUUUGUCUGGU   UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU   UU-
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU   UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU   UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU   UU-
GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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UU-GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU   UU-
GAUUC-CGUGGGUGGUGGU-C-UGGCCG---UUA--UGGUGGAGCGA-UUGUCUGGU
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GAUUC-GGUGGGUGGUGGUGCAUGGCCGUUCUUAGUUGGUGGAGCGAUUUGUCUGGU
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----CGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAAC-AGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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NNNNNNNNNNNNNNNNNNNNNNNNUGGCCUGCUAACUAGGCGU----UGGAA------UC
NNNNNNNNNNNNNNNNNNNNNNNNUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGC----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGCCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGGA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
NNNNNNNNNNNNNNNNNNNNNNNNUGGCCUGCUAACUAGGCGU----UGGAA------UC
------------------------UGGCCUGCUAACUAGGCGU----UGGAA------UC
------------------------UGGCCUGCUAACUAGGCGU----UGGAA------UC
NNNNNNNNNNNNNNNNNNNNNNNNUGGCCUGCUAACUAGGCGU----UGGAA------UC
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NNNNNNNNNNNNNNNNNNNNNNNNUGGCCUGCUAACUAGGCGU----UGGAA------UC
NNNNNNNNNNNNNNNNNNNNNNNNUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGC----UGGAA------UC
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?AAUUCCGAUAACGAACGACACUCUGRCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAAC?AGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAAC-AGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
------------------------UGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGUCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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------------------------UGGCCUGCUAACUAGGCGU----UGGAA------UC
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NNNNNNNNNNNNNNNNNNNNNNNNUGGCCUGCUAACUAGGCGU----UGGAA------UC
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NNNNNNNNNNNNNNNNNNNNNNNNUGGCCUGCUAACUAGGCGU----UGGAA------UC
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UAAUUCCGAUAACGAACGAGACUCUGGCCUGCUAACUAGGCGU----UGGAA------UC
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 U-AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
   AUUACGCUUCCGACGUAGCUAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
   AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
   AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
   AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
   AUUAUGCUUCCGACGUAGCCAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
   AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
   AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
   AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
   AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
   AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
   AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
   AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
   AUUACGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
   AUUAUGCUUCCGACGUAGCUAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
   AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
   AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
   AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
    AUUAUGCUUCCGACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG
------------------------------------------------------------   U-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG     U-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG
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AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG
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AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG     U-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG
?-?????????????????????????????????????-????????????????????   U-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG     U-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG     U-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG     U-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG     U-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG     U-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG     U-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG     U-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG     U-
AUUACGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG
?-?????????????????????????????????????-????????????????????   U-
UUUAUGCUUCCAACGUAAUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG
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U-UUUAUGCUUCCAACGUAUUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG
?-?????????????????????????????????????-???????????????????? U-
UUUAUGCUUCCAACGUAAUCAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
UUUAUGCUUCCAACGUAG?CAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG
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?-?????????????????????????????????????-???????????????????? U-
UUUAUGCUUCCAACGUAAUCAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
UUUAUGCUUCCAACGUAAUCAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG
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UUUAUGCUUCCAACGUAAUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG
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UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACAUGGCGGCUCCU-AGCCGCACG U-
UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACAUGGCGGCUCCU-AGCCGCACG
U-UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACAUGGCGGCUCCU-AGCCGCACG
?-?????????????????????????????????????-???????????????????? U-
UUUANGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
UUUANGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
UUUAUGCUUCCAACGUACUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG
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UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG
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UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG

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UUUAUGCUUCCAACGUAGUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
UUUAUGCUUCCAACGUAAUAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG U-
AUUAUGCUUCCAACGUAGCAAUCUUCUUAGAGGGACA-GGCGGCUCCU-AGCCGCACG
?-?????????????????????????????????????-????????????????????
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CUACUACCGAUUGAAUGAUUU-AGUGAGGCCUUCGGACUGGUACGCGGCUCUC-GCAG-C
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UUAACCGC-GGCGGCGCCGCCGUU------------------------------------
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UUAACAGC-GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACU-GAUCAUU-AGAG-A
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UUCAUCGC-GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGA
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--AAUAGU-GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUU------
--AAUAGU-GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGA
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UAUAU-GC-GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGA
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UUCACCGC-GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGA
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UUCACCGC-GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGA
UUCACCGC-GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGA
UUCAU?GU-AGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGA
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UUCAUCGC-GGUGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGA
UUCAUCGC-GGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGA
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UUCAUCGC-UGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGA
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UUCAUCGC-UGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGA
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CUCACCGU-UGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGA
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UUCAUCGC-UGCGGUGCCGCCGUUGCCGGAAA-GAUGGCCAAACUUGAUCAUUUAGAGGA
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AGUAAAAGUCGUAAC?????????-----CCCAGACGGUGGAUCACUCGGCUCGUGGAUC
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AGUAAAAGUCGUAAC---------CAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUC
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AGUAAAAGUCGUAAC-----------AAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUC
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AGUAAAAGUCGUAAC---------------------------------------------
AGUAAAAGUCGUAAC---------UGAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUC
AGUAAAAGUCGUAAC---------GAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUC
AGUAAAAGUCGUAAC---------------------------------------------
AGUAAAAGUCGUAAC?????????GAAAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUC
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AGUAAAAGUCGUAAC---------GAUAUCCUAAACGGUGGAUCACUCGGCUCGUGGAUC
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AGUAAAAGUCGUAAC--------------------CGGUGGAUCACUCGGCUCGUGGAUC
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AGUAAAAGUCGUAAC??ACGAAAAAAUAUCCUAGACGGUGGAUCACUCGGCUCGUGGAUC
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AGUAAAAGUCGUAA?--------------CCUAGACGGUGGAUCACUCGGCUCGUGGAUC
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AGUAAAAGUCGUAAC??UUCGAGCANUUUCCUAGACGGNGGAUCACUCGGCUCGUGGAUC
AGUAAAAGUCGUA????CUAGAGCAAUUUCCUAGACGGUGGAUCACUCGGCUCGUGGAUC
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AGUAAAAGUCGUAAC?-AUCGAGCAAUUUCCUAGACGGUGGAUCACUCGGCUCGUGGAUC
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AGUAAAAGUCGUAAC---------AUUAUCCUAGACGGUGGAUCACUCGGCUCGUGGAUC
AGUAAAAGUCGUAAC??CUAAAAAAUUAUCCUAGACGGUGGAUCACUCGGCUCGUGGAUC
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AGUAAAAGUCGUAAC---
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AGUAAAAGUCGUAAC---------AAUAUCCUAGACGGUGGAUCACUCGGCUCGUGGAUC
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AGUAAAAGUCGUAAC??GGCAAAUUGCAUCCUAUAUGGUGGAUCACUCGGCUCGUGGAUC
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AGUAAAAGUCGUAAC---------CUAU-CCUAUGCGGUGGAUCACUCGGCUCGUGGAUC
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AGUAAAAGUCGUAAC-AGAAAAUCCUAU-CCUGUGCGGUGGAUCACUCGGCUCGUGGAUC
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AGUAAAAGUCGUAAC?AGAAAAUCCUAU-CCUAUGCGGUGGAUCACUCGGCUCGUGGAUC
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AGUAANA?????????AGAAAAUCCUAU-CCUAUGCGGUGGAUCACUCGGCUCGUGGAUC
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GGUCU-CGCCGCGCGUCGGGCGGCGC--CCGCGACC-AGAGAUGGCGUCUU--CGC-GGC
GGUCU-CGCCGCGCGUCGGGCGGCGG--CCGCGACC-AGAGAUGGCGUCUU--CGC-GGC
GGUCU-CGCCGCGCGUCGGGCGGCGG--CCGCGACC-AGAGAUGGCGUUUC--CGC-GGC
GGUCU-CGCCGCGCGUCGGGCGGCGG--CCGCGACC-AGAGAUGGCGUUUC--CGC-GGC
GGUCU-CGCCGCGCGUCGGGCGGCGG--CCGCGACC-AGAGAUGGCGUUUC--CGC-GGC
GGUCU-CGCUGCGCGUCGGGCGGCGC--CCGCGAUC-AGAGAUGGUGUUCU--CGC-GGC
------------------------------------------------------------
GGUCU-CGCCGCGCGUCGGGCGGCGC--CCGCGAUC-AGAGAUGGUGUUCU--CGC-GGC
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GGUCU-CGCUGCGCGUCGGGCGGCGC--CCGCGACC-AGAGAUGGUGUUCU--CGC-GGC
GGUCU-CGCUGCGCGUCGGGCGGCGC--CCGCGAUC-AGAGAUGGCGUUCU--CGC-GGC
GGUCU-CGCUGCGCGUCGGGCGGCGC--CCGCGAUC-AGAGAUGGUGUUCU--CGC-GGC
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GGUCU-CGCCGCGCGUCGGGCGGCGC--CCGCGACC-AGAGAUGGCGUUCU--CGC-GGC
GGUCUUCGCCGCGCGUCGGGCGGCGC--ACGCGAUC-CGAGAUGGUGUUCU--CGC-GGC
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GGUCU-CGCUGCGCGUCGGGCGGCGC--CCGCGAUC-AGAGAUGGUGUUCU--CGC-GGC
GGUCU-CGCCGCGCGUCGGGCGGCGC--CCGCGAUC-AGAGAUGGUGUUCU--CGC-GGC
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--UCU-CGCCGUGCGUAGGGCGUCGU--CCGCNAAU-GGGGAUGGCGUCUU--CGA-GUC
GGUCU-CGCCGUGCGCAGGGCGUCGC--UCGCGAAU-GGGGAUGGUGUCUU--CGA-GUC
GGUCU-CGCCGCGCGUCGGACGGCGC--CCGCGAAC-GGAGAUGGAGUCUG--CGC-AGC
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UCU-CGCCGCGCGCCGGGGCGCGC--CCGCGAUC-CGAGAUGGCGCUUU--CGC-GGC  G-UCU-
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CGCCGCGCGUCGGGACGCGC--CCGAAGCA-AGGGAUGGUGUUCU--CGC-GGC      RGUUU-
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GGUCU-CGCCGAGCGUCGGGCAGCGC--UCGCG----CGGGAUGGCACUCU--CGC-GGC
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GGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGACA-AGGGAUGGCGUUCU--CGC-GGC
GGUCU-CGCCGCGCGCCGGGCCGUUC--CCGCGAUU-AGGGAUGGCGUUUU--CGC-GGC
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---------------------------------CA-AGGGAUGGCGUUCU--MGC-GAC    G-
UCU-CGCCGYGCGCCGGGCCGYUC--CCGCGACA-AGGGAUGGUKUUCU--CGC-GGC  GGUCU-
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?????-?????-??????????????--?????-?????????????????--???-???
?????-?????-??????????????--?????-?????????????????--???-???
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GGUCU-CGCCGCGCGCCGGGCCGCGC--CCGCGAUGAAGGGAUGGCGUUUU--CGC-GGC
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UCU-CGCCGUGCGCCGGGCCGCGC--CCGCGACA-UGGGAUGGCGUUCU--CGC-GGC  GGUCU-
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CGCCGCGCGCCGGGCCGCGC--CCGCGAUGAAGGGAUGGCGUUUC--CGC-GGC

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------------------------------------------------------------ C-G-
  GGGG--GCAA---CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCCC-CCGCC C-G-
  GGGG--GUGA---CCCCCGUUCC---UCC-GCGCGUUACCCGGCG-UCCC-CCGCC C-G-
  GGGG--GUGA---CCCUCGUUCC---UCC-GCGCGUCACCCGGUG-UCUU-CCGCC C-G-
  GGUGU-GCAA---CUCCCG-UCC---CGG-GCGCGUCACCCGGCG-AUCC-CCGCC C-G-
  GGGG--GCAA---CUCCCG-UCC---CGG-GCGCGUCACCCGGCG-AUCU-CCGCC C-G-
  GGGG--GCAA---CCCUCG-UCC---CGG-GCGCGUCACCCGGCG-AUUC-UCGCC C-G-
  GGGG--GCAA---CCCCCG-GCC---CGG-GCGAGUCACCCGGCG-GCCC-CCGCC C-G-
  GGGGUGGCAA---CCCCCU-UCC---CGG-GCGCGUCACCCGGCG-GCCC-CCGYC CUG-
  GGGG--GCAA---CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GYCC-CCGCC C-G-
  GGGG--GCAA---CCCCCG-UCC---CGG-GCGCGUCACCCGGCG-GCCC-CCGUC U-G-
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  GGGG--GCAA---CCCUCG-GCC---CGU-GGGCGCCACCCCGCG-ACCG-UC-CU C-G-
  GGGG--GCAA---CCCUCG-GCC---CGU-GGGCGCCACCCCGCG-ACUG-UY-CC G-G-
  GGGG--GCAA---CCCUCC-GUC---CGG-GGGCGCCACUCCGCGGGCUG-CCGCC C-U-
     GGGG--GCAA---CCCUCG-AAC---CGG-AGGUGCCACUCCGCG-GCUG-CCGCC
?-???????-????---????????????????-?????????????????????????? C-G-
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-?-?????--????---??????-???---???-???????????????-????-????? C-G-
GGGG--GCAA---CCCUCG-AAC---CGG-AGGUGCCACUCCGCG-GCUG-CCGCC
?-???????-????---????????????????-??????????????????????????
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C-G-GGGG--GCAA---CCCUCG-AAC---CGG-AGGUGCCACUCCGCG-GCUG-CCGCC  C-G-
AGGG--GCAA---CCCUCG-UCC---CGG-AGGUGCCACUCCGCG-GCCG-CCGCC
-?-?????--????---??????-???---???-???????????????-????-?????  C-G-
GAGG--GCAA---CCUUCG-GCC---CGG-AGGUGCCACUCCGCG-GCCG-CCGCC
-?-?????--????---??????-???---???-???????????????-????-?????  C-G-
GAGG--GCAA---CCUUCG-GCC---CGG-AGGCGCCACUCCGCG-GCCG-CCGCC      C-G-
GAGG--GCAA---CCUUCG-GCC--CCGG-AGGAGCCACUCCGCG-GCCG-CCGCC      C-G-
GAGG--GCAA---CCUUCG-GCC---CGG-AGGAGCCACUCCGCG-GCCG-CCGCC      C-G-
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GGGG--GCAA---CCCUCG-GCC---CGG-AGGCGCCACUCCGCG-GCCG-CCGCC
-?-?????--????---??????-???---???-???????????????-????-?????  C-G-
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GAGG--GCAA---CCUUCG-GCC---CGG-AGGCGCCACUCCGCG-GCCG-CCGCC
-?-?????--????---??????-???---???-???????????????-????-?????
C-G-GAGG--GCAA---CCUUCG-GCC---CGG-AGGCGCCACUCCGCG-GCCG-CCGCC C-G-
    GAGG--GCAA---CCUUCG-GCC---CGG-AGGCGCCACUCCGCG-GCCG-CCGCC C-G-
    AGAG--GCAA---CUCUCG-UCU---CGG-AGGCGCCACUCCGCG-GCCG-CUGCC C-G-
    AGGG--GCAA---CCCUUG-UCC---CGG-AGCCACCACUCCGCG-GCCG-CUGUC A-U-
    AGAG--GCAA---CUCUAU-UCC---CGG-AGGCGCCACUCCGCG-GCCA-UUGUC C-G-
    UGGG--GCAA---CUUGCG-GUC---CGG-GCGCGACACUCCGCG-GCCG-CCGCC U-G-
    AGGG--GCAA---CUUUCA-ACC---CAG-SGUUGCCACUCCGCG-GCCG-CUGCC C-G-
    AGGG--GCAA---CUCCCG-GUC---CGG-AGGCGCCACUCCGCG-GCCG-CCGCC C-G-
    AGGG--GCAA---CUCUCG-UCC---CGG-AGGCGCCACUCCGCG-GCCG-CCGCC C-G-
    AGGG--GCAA---CUCUCG-GCC---CGG-AGGCGCCACUCCGCG-GCCG-CCGCC C-G-
    AGGG--GCAA---CUCUCG-UCC---CGG-AGGCGCCACUCCGCG-GCCG-CCGCC C-G-
    AGGG--GCAA---CCCUCG-GCC---CGG-AGGCGACACUCCGCG-GCCG-CCGCC C-G-
    AGGG--GCAA---CCCUCG-UCC---CGG-AGGCGCCACUCCGCG-GCCG-CCGCC C-G-
         AGGG--GUAA---CUCUCG-GCC---CGG-GGGUGCCACUCCGCG-GCCG-CCGCC
?-???????-????---????????????????-??????????????????????????  U-G-
AGGG--GCGA---CCCUUG-GUC-CGUGG-CAGCGCCACUCCGCG-GCCG-CUGCC      C-G-
AGGG--GUGA---CUCUCG-GCU-UGUGG-GAGCGCCACUCCGCG-GCCG-CCGCC      C-G-
AGGG--GCAA---CUCUUG-GCC-UGUGG-GAGCGCCACUCCGCG-GCCG-CUGCU      C-G-
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AGGG--GCAA---CUCUCG-GCUUUGCGG-GAGCGCCACUCCGCG-GCCG-CCGCC      C-G-
AGGG--GUGA---CUCUCG-GCU-CGCGG-GCGCGCCACUCCGCG-GCCG-CCGCC      C-A-
AGGG--GCAA---CUCUUGGUCU--GUGG-GAGCACCACUCCAUG-GCCG-CUGCU
-?-?????--????---??????-???---???-???????????????-????-?????
U-G-AGGG--GCAA---CUCUUG-GUC---CGG-GGGUUCCACUCCGCG-GCCG-CCGCC  U-A-
AGGG--GCAA---CUCUUG-GUC---CGG-GGGUUCCACUCCGCG-GCCG-CCGCC      U-A-
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AGGG--GCAA---CUCUUG-GUC---CGG-GGGUUCCACUCCGCG-GCCG-CCGCC      C-G-
AGGG--GCGA---CUCUCG-GUCCGUAGG-GUGAACCACUCCGCG-GCCG-CCGCC
?-???????-????---????????????????-??????????????????????????  C-G-
AAAG--GCAA---CUUUCG-GUUUGUCGG-GGAUACCACUCCGCG-GCCG-CCGCC
-?-?????--????---??????-???---???-???????????????-????-?????  C-G-
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-?-?????--????---??????-???---???-???????????????-????-?????
C-G-AGGG--GCAA---CUYUCG-GWC---CGG-GURCUCCACUCCGCG-ACUG-CCGCC C-G-
    AGGG--GAAA---CUCUCG-GCC---CGG-AGGCUCCACUCCGCG-ACUG-CCGCC C-G-
    GGGG--GCGA---CCCUCG-GCC---CGG-AGGUGCCACUCCGCG-GGCG-CCGCC C-G-
    GGGG--GCGA---CCCUCG-GCC---CGG-AGGUGCCACUCCGCG-GGCG-CCGCC C-A-
    GGGG--GCAA---CCCCUG-GUC---CGG-AGGCGCCACUCCGCG-GGUG-CCGCC C-C-
    GGGG--GCAA---CCCCGG-GUC---CGG-AGGUGCCACUCCGCG-GGCG-CCGCC C-C-
    GGGG--GCAA---CCCCGG-GUC---CGG-AGGUGCCACUCCGCG-GGCG-CCGCC C-G-
    GGGG--GCAA---CCCUCG-GAC---CGG-GGGCGCCACUCCGCG-GCCG-CCGCC C-G-
    GGGG--GCAA---CCCUCG-GAC---CGG-GGGCGCCACUCCGCG-GCCG-CCGCC C-G-
GGGG--GCAA---CCCUCG-GAC---CGG-GGGCGCCACUCCGCG-GCCG-CCGCC C-G-G---
  ------------------------------------------------- C-G-GGGG--
    GCAA---CCCUCG-GAC---CGG-GGGCGCCACUCCGCG-GCCG-CCGCC C-G-GGGG--
    GCAA---CCCUCG-GAC---CGG-GGGCGCCACUCCGCG-GCCG-CCGCC C-G-GGGG--
    GCAA---CCCUCG-GAC---CGG-AGGCGCCACUCCGCG-GCCG-CCGCC C-G-GGGG--
    GCAA---CCCUCG-GUC---CGG-GGGCGCCACUCCGCG-GCCG-CCGCC C-G-GGGG--
    GCGA---CCCUCG-GUC---CGG-GGGCGCCACUCCGCU-GCCG-CCGCC C-G-GGGG--
    GCGA---CCCUCG-GUC---CGG-GGGCGCCACUCCGCU-GCCG-CCGCC C-G-GGGG--
    GCGA---CCCUCG-GUC---CGG-GGGCGCCACUCCGCU-GCCG-CCGCC C-G-GGGG--
          GCGA---CCCUCG-GUC---CGG-GAGCUCCACUCCGCG-GGCG-CCGCC
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C-G-GGGG--GCGA---CCCUCG-GUC---CGG-GAGCUCCACUCCGCG-GGCG-CCGCC  C-G-
GGGG--GCGA---CCCUCG-GUC---CGG-GAGCUCCACUCCGCG-GGCG-CCGCC      C-G-
GGGG--GCGA---CCCUCG-GUC---CGG-GAGCUCCACUCCGCG-GGCG-CCGCC      C-G-
GGGG--GCAA---CUCUCG-GUC---CGG-GGGCUCCACUCCGCG-GGCG-CCGCC
-?-?????--????---??????-???---???-???????????????-????-?????  C-G-
GGGG--GCGA---CCCCCG-GUC---CGG-GAGCUCCACUCCGCG-GGCG-CCGCC      C-G-
UGGG--GCAA---CCCACG-GUC---CGG-GGGCUCCACUCCGCG-GGCG-CCGCC      C-G-
AGGG--GCGA---CCCUCG-GUC---CGG-GGGCCCCACUCCGCG-GGCG-CCGCC      C-G-
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GGGG--GCAA---CCCUCG-GUC---CGG-GGGCUCCACUCCGCG-G-CG-CCGCC      C-G-
GGGG--GCGA---CCCUCG-GUC---CGG-GAGCUCCACUCCGCG-GGCG-CCGCC      C-G-
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GGGG--GCAA---CCCUCG-GUC---CGG-GGGCUCCACUCCGCG-GGCG-CCGCC      C-G-
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-?-?????--????---??????-???---???-???????????????-????-????? C-G-
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  AGGG--GCGA---CCCUCG-GUC---CGG-GGGCGCCACUCCGCG-GGCU-CCGCC C-G-
  AGGG--GCGA---CCCUCG-GUC---CGG-GGGCGCCACUCCGCG-GGUU-CCUCC C-G-
  AGGG--GCGA---CCCUCG-GUC---CGG-GGGCGCCACUCCGCG-GGCG-CCGCC C-G-
  GGGG--GCGA---CCCCCG-GGC---CGG-AGGCUCCACUCCGCG-GGCG-UCGCC C-G-
  GGGG--GCGA---CCCCCG-GGC---CGG-AGGCCCCACCCCGCG-GGCG-GCGCC C-G-
  GGGG--GUAA---CCCUCG-GUCUCGCGG-GGGCUCCACUCCGCG-GGCG-UCUCC C-G-
  GGGG--GUUA---CCCUCG-GUCUCGCGG-GGGCUCCACUCCGCG-GGCG-UCUCC C-G-
  GGGG--GUUA---CCCUCG-GUCUCGCGG-GGGCUCCACUCCGCG-GGCG-UCUCC C-G-
  GGGG--GCAA---CCCCCG-GUC---CGG-GGGCCCCACUCCGCG-GGCG-UCUCC C-G-
  GGGG--GCGA---CCCCCG-GUCUCGCGG-GGGCUCCACUCCGCG-GGCG-UCUCC C-G-
  GGGG--GCAA---CCUCUG-GUUUCGCGG-GGGCUUCACUCCGCA-GGCG-UCUCC C-G-
  GGGG--GCGA---CCCCCG-GUCUCGCGG-GGSCUCCACUCCGCG-GGAG-UYUCC C-G-
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  UGGG--GCGA---CCCACG-GUC---CGG-GRGCGCCACUCCGCG-GGYG-CGGCC C-A-
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  YGGG--GCGA---CCCRCG-GAC---CGG-AGGCGCCACCCCGCG-GGGG-CGGCC C-U-
   UGGG--GCAA---CCCUCG-GUC---CGG-GAGCGCCACCUUUCGAGGCG-CUGCC C-
 GGUGGG--GUGA---CCCCCG-GUC---CGG-GAGCGCCACCCUUCGAGGCG-CUGCC C-G-
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CGGG--GCGA---CCCGCG-GUC---CGG-GGGGGCCACCCCGCG-AGCGCCUGCC
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  UGGG--GCAA---CCUACG-GUC---CGG-GAGUGCCACCCCGCG-GGUG-CGGCC C-G-
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  UGGG--GUAA---CCCUCG-GUC---CGG-GAGUGCCACCCCGCG-GGUG-CGGCC C-G-
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  UGGG--GCGA---CCCACG-GAC---CGG-GAGUGCCACCCCGCG-GGUG-CGGCC C-G-
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-?-?????--????---??????-???---???-???????????????-????-?????
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CGGACC-UGGUCCGAUCCCGUUCCC-UCCGU-GGGGCUGUU-UGCGAU-C--      UU---C--
CGGACC-UGGUCCGAUCCCGUWCCC-UCCGU-GGGGCUGUU-UGCGAA-C--      UU---C--
CGGACC-UGGUCCGAUCCCGUUCCC-UCCGU-GGGGCUGUU-UGCGAU-C--      UU---G--
CGGACC-CCGUCCGAUCCCGGUCCC-UCCGC-GGGGCUGUU-UGCGAC-U--      UU---A--
CGGACC-CGGUCCGAUCCCGUUCCC-UCCGC-GGGGCUGUU-UGCGAU-C--
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??---????????????????????????????????????????????-?????????-  UU--
-G--CGGACC-CGGUCCGAUCCCGUUCCC-UCCGC-GGGGCUGUU-UGCGAU-U--
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CGGACC-AGGUCUGAGCUCGUACCC-UCCGC-GGGGCUGUU-UGCGAU-C--      UU---A--
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-A--CGGACC-AGGUCUGAGCUCGCGCCC-UC-GC-GGGGCUGUU-UGCGAC-G--  UU---A--
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CGGGCC-CGGCCCGAUUCCGGUCC--UCCGC-GGGGCUGUU-UGCGAU-C--      UU---G--
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CGGGCC-CGGCCCGAUUCCGGUCCC-UCCGC-GGGGCUGUU-UGCGAU-C--      UU---G--
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CGGGCC-CGGCCCGAUUCCGGACCC-UCCGC-GGGGCUGUU-UGCGAU-C--      UU---G--
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CGGGCC-CGGCCCGAUUCCGGUCUC-UCCGC-GAGGCUGUU-UGCGAU-U--      UU---G--
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CCGGACC-CGGUCCGAUCCCGGACCC-UCCGC-GGGGCUGUU-UGCGAU-U--      CU---U-
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??---?--??????-??????????????????-?????-?????????-??????-?--  G---
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    ??---?--??????-??????????????????-?????-?????????-??????-?--
    ??---?--??????-??????????????????-?????-?????????-??????-?--
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??---?--??????-??????????????????-?????-?????????-??????-?-- G---
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   GCGGGCC-CGGCCCGGCUUCCU-UCU-UCAGC-GGGGCUGUU-UGCGAU-C-- G----A-
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   CCGGGCC-CGGCCCGGCUUCCU-UCU-UCAGC-GAGGCUGUU-UGCGAU-G-- G----U-
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    -A-GGAG-GUGUCCUCGGACGGCGUCUCUCCAGUCC-GCGACGC-UA-CGGCUUGGAUGG
    -A-GGAG-GUGUCCUCGGACGGCGUCUCUCCAGUCC-GCGACGC-UU-CAGCUUGGAUGG
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   CUCGCGGG-GCC----GAGGGAGGASGUGGG-------CC-CA-------GGCCCCCC-G
   CUCGCGGG-GCC----GAGGGAGGACGGGGG-------CC-UA-------GGCCCCCC-G
   CUCGCGGG-ACC----GAGGGAGGACGGAGG-------UC-CC-------CGCCUCCC-G
   CUCGCGGG-ACC----GAGGGAGGACGGAGG-------UC-CC-------CGCCUCCC-G
   CUCGCGGG-ACC----GAGGGAGGACGGAGG-------CU-CU-------CGCCUCCC-G
   CUCGCGGG-ACC----GAGGGAGGACGGAGG-------CUUUA-------CGCCUCCC-G
   CUUGCGGG-ACC----GAGGGAGGACGGAGG-------CA-UU-------UGCCUCCC-G
   CUCGCGGG-ACC----GAGGGAGGACGGAGG-------GC--U--------GCCUCCC-G
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   CUCGCGGG-ACC----GAGGGAGGACGGAGG----------CA-------CGCCUCCC-G
 CUCGCGGG-ACC----GAGGGAGGACGGAGG-------CA-UC-------CGCCUCCC-G C-
    CGCGGG-ACC----GAGGGAGGACGGAGG-------------------CGCCUCCU-G
   CUAGCGGG-ACC----GAGGGAGGACGGAGG-------CU-AG-------CGCCUCCC-G
   CUUGUGGG-ACC----GAGGGAGGACGGAGG-------GAUUA--------GCCUCCC-G
   CUCGCGGG-ACC----GAGGGAGGACGGAGG-------CU-GC-------CGCCUCCC-G
   CUAGCGGG-ACC----GAGGGAGGACGGAGG-------CU----------CGCGUCCC-G
   CUUGCGGG-ACC----GAGGGAGGAAGGAGG-------CU-GA-------CKCCUCCC-G
   CUCGAGGG-ACC----GAGGGAGGACGGAGG-------CU-CG-------CGUCUCCC-G
   CUCGCGGG-ACC----GAGGGAGGACGGAGG-------SYWCG-------CGCCUCCC-G
   CUUGCGGGG-ACC----GAGGGAGGACGGAGG------CG-YG-------GGCCUCCU-G
   CUCGCGGG-ACC----GAGGGAGGACGGAGG-------CGCUC-------SGCCUCCC-G
   CUYGCGGG-ACC----GAGGGAGGACGGAGG-------CGCUC-------CGCCUCCC-G
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CUAGCGGG-ACC----GAGGGAGGACGGAGGN--N---C------------GCCUCCC-G
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CUCGCGGG-ACC----GAGGGAGGACGGUGG-----------U-------CACCACCC-G
CUCGCGGG-ACC----GAGGGAGGACGGAGG-----------C-------CGCCUCCC-G
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CCCGCGGG-ACC----GAGGGAGGACGGUGG--------GCCC-------CUCCACCC-G
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   AAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG-AAGCCGU-----UGUU
   AAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-----UGUU
?????-????????--???-???????????????-???????--??????-----????
?????-????????--???-???????????????-???????--??????-----????
?????-????????--???-???????????????-???????--??????-----????
NNNNNNN-NNNNNN--NNN-NNNNNNNNNNNNNNN-NNNNNNN--NNNNNN-----NNNN
AAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-----UGUU
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN-----NNNN
AAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-----UGUU
AAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-----UGUU
AAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-----UGUU
?????-????????--???-???????????????-???????--??????-----????
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AAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-----UGUU
AAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-----UGUU
AAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-----UGUU
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AAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-----UGUU
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AAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-----UGUU
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AAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-----UGUU
AAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-----UGUU
AAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--ARCCGU-----UGUU
AAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-----UGUU
AAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-----UGUU
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AAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-----UGUU
AAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGG-----UGUU
AAAGG-GAAUCCGG--UUC-CUAUUCCGGAACCCG-GCAGCGG--AACCGU-----UGUU
```

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YGRGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
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CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGAGCCCGG-AGACGUC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC
-----------------------------------------------------------  UGU-
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CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
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CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACNCC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC
???-??????????--????????????????????????????????????-???????  UGU-
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CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC
???-??????????--????????????????????????????????????-???????  UGU-
CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCUUC--------GGGUUCGUCAGGGUUACCUAUAUGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---NNAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
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CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC
???-??????????--????????????????????????????????????-???????
UGU-CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC  UGU-
CGGGCCUUC--------GGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
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CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC
???-??????????--????????????????????????????????????-???????  UGU-
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CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC
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UGU-CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC  UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
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CGGGCCCUC---CAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC
???-??????????--?????????????????????????????????????-???????  UGU-
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CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
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CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAUGGGCCCGG-AGACGCC
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CGGGCCCUC---AAAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC----CAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
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CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
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CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
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CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
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CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC
???-??????????--?????????????????????????????????????-???????
???-??????????--?????????????????????????????????????-???????  UGU-
CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CNGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC
-------------------------------------------------------------  UGU-
CGGGCCCUC---AAAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
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CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
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CGGGCCCUC---GCAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      NNN-
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CGGGCCCUC---GCAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC
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UGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC  UGU-
CGGGCCCUC---GCAAGGGGUUCGUCAGGGUACCUAAAA-GGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
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CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC
???-??????????--?????????????????????????????????????-???????  UGU-
CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC
???-??????????--?????????????????????????????????????-???????  UGU-
CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCU----GAAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCUCUC---GCAAGGAGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
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-------------------------------------------------------------  UGU-
CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---RCAAGGGGUUCGUCAGGGUAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---ACAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
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???-??????????--?????????????????????????????????????-???????
???-??????????--?????????????????????????????????????-???????
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CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGGAAGACGCC
NNNNNNNNNNNNN---N---------------------UAAAAGGGCCCGG-AGACGCC  UGU-
CGGGCCUUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC
???-??????????--?????????????????????????????????????-???????  UGU-
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CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC      UGU-
CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC
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UGU-CGGGCCCUC---GCAAGGGGUUCGUCAGGGCAACCUAAAAGGGCCCGG-AGACGCC

GU-CGGGAGCCCCGGAAAGAGUUUU-CUUUUCUGCAUGAGCG--UUCGAGUUCCC-UGGA   GU-
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-CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
-CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCG
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-CCGUGCCUUGGCCACCCACGGACCUUCUUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCG
-CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCG
-CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCG
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-CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCG
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-???????????????????????????????????????????????????????????
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGUUCCCG
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-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCG
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-CCGUGCCUUGGCCUCCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCG
-???????????????????????????????????????????????????????????
-???????????????????????????????????????????????????????????
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
-???????????????????????????????????????????????????????????
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCG
-CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
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-???????????????????????????????????????????????????????????
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGY-GGCGGUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCUUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCG
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-CCGUGCCUUGGCCACCCACGGACUUUCCUUGCAUGCGAGGGCGCGCGU-GGCGGUCCCG
-???????????????????????????????????????????????????????????
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGC-GGCGGUCCCG
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-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
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-CCGUGCCUUGGCCACCCGCGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
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-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCG
-???????????????????????????????????????????????????????????
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GACGGUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCG
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-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
-???????????????????????????????????????????????????????????
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-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
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-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
-CCGWGCCUUGGCCWCCCACGGACCUUYCUUGC-UGCGAGGGCACGYGY-GGCGGYCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
-???????????????????????????????????????????????????????????
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
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-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCG
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-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGUGUGU-GGCGGUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGC-GGCGGUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGUGAGGGCUGGCGU-GGCGGUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCG
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-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGUUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGUGU-GGCGGUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGUGCGU-GGCGGUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGUUCCCG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCUG
-CCGUGCCUUGGCCACCCACGGACCUUCCUUGC-UGCGAGGGCGCGCGU-GGCGGUCCCG

G-UGUCGG-UUUCGGC-UC-UCGG-GCCG--UG--CCGCCCGGGGUCACCGCUCGCUCGC    G-
UGCCGG-CG-CGGCCCC-AUGG-GUCG--CG--UCGUCCGGGGCCACCGCCCGCGCGC      G-
YGUGGG-CG-CGGC-YUU-CSG-GUCG--YG--UCGCCCGGGGCCACCGCCCGYGCGC      G-
UGUCGGUUU-CGGC-UCU-CGG-GCCG--UG--CCGCCCGGGGUCACCGCUCGCGCGC      G-
UGUCGGUCG-CGGC-UCU-CGG-GUCG--CGCGCCGCCCGGGGUCACCGCUCGCGCGC      U-
UGUCGG-CG-CGGC-UCU-UGG-GUCG--CG--CCGCC-GGGGCAACCGCUCGUGCGC
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G-UGUCGG-CG-CGGC-CUC-CGG-GUCG--CG--UCGCCUGGGGUCACCGCUCGCGCGC    G-
UGUCGG-CG-CGGC-UCU-CGG-GUCG--UG--UCGCCUGGGGUCACCGCUCGUGCGC      G-
CGUUGG-CG-UGGC-UUU-CGG-GUCG--CG--UCGCCCGGGGCCACCGCCCGCGCGC      G-
UGUUGG-CG-CGGCCAG--CAG-GUCG--CG--UGCCCCGGGGCCACCGCCCGCGCGC      G-
UGUSGG-CK-CGGC-UUU-CGG-GUCG--YG--UCGCCCGGGGUCACCGCYCGYGCGC      G-
CGUUGG-CG-CGGC-CUC-CGG-GUCG--CG--UCGCCCGGGGCCACCGCCCGCGCGC      A-
CGUGGG-CG-GGGC-CUC-CGG-GUCU--CG--UCGCUCGGGGCCACCGCGCGCGCGC
-----UGG-UA-CG-----U-CGU--UCG--UG--CCAUUUGGGGCCACCGCCCGCGCGC    G-
CGUUGG-CG-CGGCUUU--CGG-GUCG--UG--UCGCUCGGGGCCACCGCCCGUGCGC      A-
CGUUGG-CA-CGGCUUU--CGG-GUCG--UG--UCGCCCGGGGCCACCGCCCGCGCGC      G-
UGYCGG-YG-UGGC--U--UCG-GUCG--CG--CCGCCCGGGGCCACCGCCCGCGCGC      G-
AAACGG-CG-CGAU--U--UCG-GUCG--CG--UCGCCCGGGGCCACCGCCCGUGCGC      G-
AUACGG-CG-UGGC--Y--ACG-GCUG--CG--UCGCCCGGGGCCACCGCCCGUGCGC      G-
UGCUGG-CG-UGGC--U--UCG-GCUG--CG--UCGCCCGGGGUCACCGUCCCCGCGC      G-
UGCCGG-CG-CGGC--U--UCG-GUCG--UG--UCGUCCGGGGUCACCGUCCCCGCGC      G-
UGCCGG-CG-CGGC--U--UCG-GUCG--UG--UCGUCCGGGGUCACCGUCCCCGCGC
?-?????????-?????????????????--???-??????????????????????????   G-
UGCCGG-CG-CGGC--U--UCG-GUCG--UG--UCGUCCGGGGUCA????????????
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?-?????????-?????????????????--???-??????????????????????????   G-
UGCCGG-CG-CGGC--U--UCG-GUCG--UG--UCGUCCGGGGUCACCGUCCCCGCGC      G-
UGCCGG-CG-CGAC--U--UCG-GUCG--CG--UCGCCCGGGGUCACCGUCCCCGCGC
?-?????????-?????????????????--???-??????????????????????????   G-
UGCCGG-CG-UGGC--U--UCG-GUCG--CG--UCUCCCGGGGUAACCGUCCCCGCGC      G-
UGCCGG-CG-UGGC--U--UCU-GUCG--CG--UCUCCCGGGGUAACCGUCCCCGCGC      G-
UGCCGG-CG-UGGC--U--UCK-GCCG--CG--UCUCCCGGGGUWACCGUCCCCGCGC      G-
UGCCGG-CG-UGGC--U--UCG-GUCG--CG--UCUCCCGGGGUUA????????????      G-
UGUCGG-CG-UGGC--U--UCG-GUCG--CG--UCUCCCGGGGUUACCGUCCCCGCGC      G-
UGCCGG-CG-UGGC--U--UCG-GUCG--CG--UCUCCCGGGGUAA????????????      G-
UGUCGG-CG-UGGC--U--UCG-GUCG--CG--UCUCCCGGGGUUA????????????      N-
NNNNNN-NN-NNNN-NNN----NNNNN--NN--NNNNNNNNNNNNN????????????
----------------------------------------------????????????      G-
UGUCGG-CG-UGGC--U--UCG-GUCG--CG--UCUCCCGGGGUUACCGUCCCCGCGC      G-
UGUCGG-CG-UGGC--U--UCG-GUCG--CG--UCUCCCGGGGUUA????????????
?-?????????-?????????????????--???-??????????????????????????   G-
UGUCGG-CG-UGGC--U--UCG-GUCA--CG--UCUGCUGGGGUCCCCGUCCCCGCGC      G-
UGUCGG-CG-UGGC--U--UCG-GUCA--CG--UCUGCUGGGGUUC????????????      G-
UGCCGG-CG-CGGC--U--UCG-GUCG--UG--UCGCCUGGGUGCAUCGUCCCCGCGC
----------------------------------------------------------      G-
UGACGG-CG-CGGC--U--UCG-GCCG--UG--UCGCCUGGGUGCAUCGUCCCCGCGC
 ?-?????????-?????????????????--???-?????????????????????????? G-
  UGCCGG-CG-CGGC--U--UCG-GCCG--UG--UCGCCCGGGUUCAUCGUCCCCGUGC G-
  UGUCGG-CU-CGUC--U--UCG-GUCG--AG--UCGCCCGGGUUCAUCGUCCCCGCGC G-
  UGUCGG-CG-CGGC--U--UCG-GUCG--GG--UCGCCCGGGUUCAUCGUCCCCGCGC G-
  UGUCGG-CG-AGGC--U--UCG-GCCC--CG--UCGCCCGGGUUCAUCGUCCCCGCGC G-
  UGCCGG-CG-AGGC--U--UCG-GCCG--AG--UCGCCCGGGUUCAUCGUCCCCGCGC G-
  UGCCGG-CG-CAGC--U--UCG-GCCG--CG--UCGCCCGGGUUCA------------ G-
  UGUCGG-CA-CGGC--U--UCG-GUCG--GG--UCGCCCGGGUUCA------------ N-
  NNNNNN-NN-NNNN--N--NNN-NNNN--NN--NNNNNNNNNNNNN???????????? G-
  UGUGGG-CG-AGGC--U--CCG-GCCG--AG--UCGCCCGGGUUCAUCGUCCCCGCGC N-
  NNNNNN-NN-NNNN--N--NNN-NNNN--NN--NNNNNNNNNNNNN???????????? G-
  CGUGGG-CG-AGGC--U--UCG-GCCG--AG--UCGCCCGGGCUCAUCGUCCGCGCGC G-
  CGUUGG-CG-AGGC--U--UCG-GCUG--AG--UCGCCUGGGCUCAUCGUCCGCGCGC G-
    YGUGGR-CG-AGGY--U--UCG-GCCG--AG--UCGCCCGGGYUCA------------
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G-CGUGGG-CG-AGGC--U--CCG-GCCG--AG--UCGCCCGGGCUCA????????????    G-
UGUGGG-CG-AGGC--U--UCG-GCCG--AG--UCGCCCGGGCUCA????????????      G-
CGUGGG-CG-AGGC--U--UCG-GCCG--AG--UCGCCCGGGCUCA????????????      G-
CGUGGG-CG-AGGC--U--CCG-GCCG--AG--UCGCCCGGGCUCAUCGUCCGCGCGC      G-
UGUGGG-CG-AGGC--U--UCG-GCCG--AG--UCGCCCGGGCUCA------------
?-?????????-?????????????????--???-?????????????????????????    G-
UGUCGG-CA-CGGC--U--UCG-GCCG--AG--UCGCCCGGGUUCAUCGUCCCCGCGC      G-
UGUCGG-CA-CGGC--U--UCG-GCUA--AG--UCGCCCGGGUUCAUCGUCCCCGCGC      G-
UGUCGG-CA-CGGC--U--UCG-GCUA--AG--UCGCCCGGGUUCAUCGUCCCCGCGC      G-
UGUCGG-CA-CGGC--U--UCG-GCCG--AG--UCGCCCGGGUUCAUCGUCCCCGCGC      G-
UGUCGG-CA-CGGC--U--UCG-GCCG--AG--UCGCCCGGGUUCA????????????      G-
UGAC---UC-UGGC--U--UCG-GUCG--UG--UCGCUUGGGUUCA------------      G-
UGUCGG-CG-UGGC--U--CCG-GCCG--CG--UCGCCCGGGUUCAUCGUCCCCGCGC      G-
UCCCGG-UC-AGGC-CUA-UCG-GUCU--GG--CCGCCUGGGUUCA????????????
?-?????????-?????????????????--???-?????????????????????????    G-
UGCCGG-CG-CGAC--U--UCG-GUUG--CG--UCGCCCGGGUUCACCGUCCCCGCGC
?-?????????-?????????????????--???-?????????????????????????    G-
UGUCGG-CG-UGGC--U--UUA-GUUG--CG--UCGCCCGGGUUCAUCGUCCCUGCGC
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G-UGUCGG-CG-------------------------------------------------    G-
UGUCGG-CG-CGGC--U--CCG-GCCG--UG--UCGCCCGGGGUCAUCGUCCCCGCGC      G-
UGUCGG-CU-CGGC--C--CCG-GUCG--GG--UCGCCCGGGGUCUCCGUCCGCGCGC      G-
UGUCGG-CU-CGGC--U--CCG-GUCG--GG--UCGCCCGGGGUCU????????????
-----------------------------------------------------------     G-
UGUCGG-CG-UGGC--U--UCG-GUCG--CG--UCGCCCGGGGUCACCGUCCCCGCGC
?-?????????-?????????????????--???-?????????????????????????    G-
UGCCGG-CG-UGGC--U--UCG-GUCG--CG--UCGCCCGGGGUCACCGUCCCCGCGC      G-
UGUCGG-CG-UGGC--U--UCG-GUCG--CG--UCGCCCGGGGUCA????????????
-----------------------------------------------????????????     G-
UGCCGG-CG-UGGC--U--UCG-GUCG--CG--UCGCCCGGGGUCA------------      G-
UGCCGG-CG-UGGC--U--UCG-GUCG--CG--UCGCCCGGGGUCA????????????   GUUG-
CGG-UG-CGGC--C--UCG-GUCG--UG--CCGCCCGGGGUCACCGUCCCCGCGC  G-UGCCGG-
UG-CGGC--C--UCG-GUCG--UG--CCGCCCGGGGUUACCGUCCCCGCGC
?-?????????-?????????????????--???-?????????????????????????
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UGCUGG-CG-CGGU--U--UCG-GUCG--CG--UCGCCCGGGGUCACCGUCCGCGCGC
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?-?????????-?????????????????--???-?????????????????????????    G-
UGCUGG-CG-CGGC--U--UCG-GUCG--UG--UCGCCCGGGGUCACCGUCCGCGCGC      G-
UGCUGG-CG-CGGC--U--UCG-GUCG--UG--UCGCCCGGGGUCACCGUCCGCGCGC
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CGCCGG-CG-CGGC--U--UCG-GCCG--CG--UCGCCCGGGGUCACCGUCCGUGCGC      G-
MGCCGR-CG-CGGC--U--UCG-GCCG--CG--UCGCCCGGGGUCACCGUCCGCGCGC      G-
CGCCGG-CG-CGGCCGU--ACG-GCCG--CG--CCGCCCGGGGUCACCGUCCGCGCGC      G-
UGCUGG-CG-CGGC--U--UCG-GCCG--UG--UCGACCGGGGUCACCGUCCGCGCGC
?-?????????-?????????????????--???-?????????????????????????
?-?????????-?????????????????--???-?????????????????????????    G-
CGCUGG-CU-CGGUCGAUCCCG-GCCG--UG--UCGCCCGGGGUUCCCGCUCGCGCGC      G-
CGUCGA-CU-CGGUCGGUUUCG-GCUG--GG--UUGCCCGGGGUCCCCGCCCGUGCGC      G-
CGUCGA-CU-CGGUCGGUUUCG-GCUG--GG--UUGCCCGGGGUCCCCGCCCGUGCGC
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CGUUGA-CU-CGGUCGGUUUCG-GCCG--GG--UCGCCCGGGGUCCCCGCCCGUGCGC
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CGCCGG-CU-CCGCCUCCAAGGGGCGG--CG--UCGCCCGGGGUCCGCGCCCGCGCGC
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CGCUGG-CU-CCGCCUCUACCG-GCGG--UG--UCGCCCGGGGUCCCCGCCCGCGCGC
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UGCCGG-CU-CCGCCUAUCC-G-GUGG--UG--UCGCCCGGGGUCCCCGUCCGCGCGC
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CGCUGG-CA-GCGUCUUCGCGG-UCGC--UG--UCGCCCGGGGUCCCCGCCCGCGCGC      G-
CGCUGG-CA-GCGCCUUCGCGG-GCGG--UG--UCGCCCGGGGUCCCCGCCCGCGCGC
?-?????????-?????????????????--???-?????????????????????????    G-
CGCUGG-CU-CGGCCAUUCCCG-GUCG--UG--UCGCCCGGGGUCCCCGCCCGCGCGC      G-
CGCCGG-CU-CCGCCUUCGCCG-GCGG--UG--UCGCCCGGGGUCCCCGCCCGCGCGC
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?-?????????-?????????????????--???-?????????????????????????    G-
CGCUGG-CU-CCGCCUUYACCG-GCGG--UG--UCGCCCGGGGUYCCCGCYCGCGCGC      G-
CGCUGG-CU-CGGUCGAUCCCG-GCCG--UG--UCGCCCGGGGUUCCCGCUCGCGCGC
------------------------------------------------------------    G-
CGCUGG-CU-CGGCCGAUCCCG-GUCG--UG--UCGCCCGGGGUCCCCGCCCGCGCGC
?-?????????-?????????????????--???-?????????????????????????    A-
CGCUGG-CU-CCGCCUUAACGG-GUGG--UG--UCGCUCGGGGUCCCCGCCCGCGCGC
?-?????????-?????????????????--???-?????????????????????????
?-?????????-?????????????????--???-?????????????????????????    G-
AGCCGG-CU-CCCCCUAUCC-G-GGGG--GG--UCGCCCGGGGUCCCCGUCCGCGCGC
?-?????????-?????????????????--???-?????????????????????????    G-
CGCUGG-CU-CCGCCUCUGACG-GCGG--UG--UCGCCCGGGGUCCCCGCCCGCGCGC
?-?????????-?????????????????--???-?????????????????????????
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CGCUGG-CU-CCGCCUUCGCGG-GUGG--UG--UCGCCCGGGGUCCCCGCCCGCGCGC
?-?????????-?????????????????--???-?????????????????????????    G-
CGCUGG-CU-CCGCCUUAACGG-GUGG--UG--UCGCCUGGGGUCCCCGCCCGCGCGC      G-
CGCUGG-CU-CCGCCUUCACCG-GCGG--UG--UCGCCUGGGGUCCCCGCCCGCGCGC
?-?????????-?????????????????--???-?????????????????????????
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?-?????????-?????????????????--???-?????????????????????????    G-
CGCUGG-CU-CGGCCUAUCCCG-GUCG--UG--UCGCCCGGGGUCCCCGCCCGUUCGC      G-
CGCUGG-CU-CCGCCUUCACGG-GCGG--UG--UCGCCUGGGGUACCCGCUCGCACGU
?-?????????-?????????????????--???-?????????????????????????
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?-?????????-?????????????????--???-?????????????????????????    G-
CGCUGG-CU-CGGCCUAUCCCG-GUCG--UG--UCGCCCGGGGUCCCCGCCCGCGCGC
?-?????????-?????????????????--???-?????????????????????????    G-
CGUCGG-CA-CUGCCUUCGCGGGUUGG--UG--UCGCCCGGGGUCCCCGCUCGUGCGC
MGYKSUSGGCU-SCGCCUYWMSGG-GYGKU-USG-UCGCUCSGGGUKYCCGCWYGCGUGC    G-
CGCCGG-CU-CCGCCUUCGCGG-GCGG--UG--UCGCCCGGG-UCCCCGCUCGCGCGC
?-?????????-?????????????????--???-?????????????????????????    G-
CGCUGG-CU-CGGCCUGUCCCG-GUCG--UG--UCGCCCGGGGUCCCCGCCCGCGUGC
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CGCUGG-CU-CCGCCCCUACCG-GCGG--UG--UCGCCCGGGGUCCCCGCCCGCGCGU
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CGCUGG-CU-CCGCCUCUACCG-GCGG--UG--UCGCCCGGGGUCCCCGCCCGCGCGC      G-
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GGCGCCACUGGGGCGU--GGGCG----UCGG--GAG-U-CGGUCGGG-CCG-GGGG-CCC
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GGCGCCACUGGGAUGC--GGGCG----UCGG--GGG-U-CGGUCGGG-CCG-GGGG-CCU
GGCGCCACUGGGACGC--GGGCG----UCGG--GGG-U-CGGUCGGG-CUG-GAGG-CCU
GGUGCCACUGGGACGC--AGGCA----UUGG--GGG-U-CGGUCGGGACCA-GGGG-CCU
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GGCGCCACUGGGACGC--GGGCG----UCGG--GGG-U-CGGUCGG-ACCG-GGGG-CCU
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GGCGCCACUGGGACGA--GGGU--G--CCGG--GGG-G-CGGCCGAU-CCG-GGGG-CCU
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GGCGCCACUGGGACGA--GGGUG----CCGG--GGG-U-CGGCCGGU-CCG-GGGG-CCU
GGCGCCACUGGGACGA--GGGUG----CCGG--GGG-U-CGGCCGGU-CUG-GGGG-CCU
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GGCGCCACUGGGACGA--GGGUG----CCGG--GGG-U-CGGCCGGU-CCG-GGGG-CCU
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GGCGCCACUGGGACGA--GGGCG----CCGG--GGG-U-CGGCCGGU-CCG-GGGG-CCU
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GGCGCCACUGGGAUGC--GAGCG----UCGG--GAG-U-CGGUCGGG-CCG-GGGG-CCU
GGCGCCACUGGGAUGC--GAGCG----UCGU--GAG-U-CGGUCGGG-CCG-GGGG-CCU
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GGCGCCACUGGGAUGC--GAGC--G--UCGG--GAG-U-CGGUCGGG-CCG-GGGG-CCU
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GGCGCCACUGGGACGU--GGGCG----UCGG--GGG-A-CGGUCGGG-CCG-GGG--UCU
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GGCGCCACUGGGACGU--GGGCG----UCGG--GAG-U-CGGUCGGG-CCG-GGGG-CCU
GGCGCCACUGGGACGU--GGGCG----UCGG--GAG-U-CGGUCGGG-CCG-GGGG-CCU
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GGCGCCACUGGGACGC--GGGC--G-UACGG--GGG-A-CGGCCGGG-CCG-GGGG-CCU
GGCGCCACUGGGACGC--GGGC--G-UACGG--GGG-A-CGGCCGGG-CCG-GGGG-CCU
GGCGCCACUGGGUCGC--GGGC--G-U-CGA--GGG-A-CGGCCGGU-CCG-AGGG-CCU
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GGCGCCACUGGGACGC--GGGC--G-CACGG--GGA-U-CGGCCGGG-CCG-GGGG-CCU
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GGCGCCACUGGGACGG--GGGC--G--UCGG--GGG-A-CGGUCGGG-CCG-GGGG-CCC
GGCGCCACUGGNNNNN--NNNN--N--NNNN--NNN-N-NNNNNNNN-NNN-NNNN-NNN
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GGCGCCACUGGGACGU--GGGC--G--UCGG--GGG-A-CGGUCGGG-CCG-GCGG-CCC
GGCGCCACUGGGACGU--GGGC--G--UCGG--GGG-A-CGGUCGGG-CCG-GCGG-CCC
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GGCGCCACUGGGACGC--GGGG--G--UCGG--GGG-A-CGGUCGGG-CCG-GGGG-UCU
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GGCGCCACUGGGACGU--GGGC--G--UCGG--GAG-A-CGGUCGGG-CCG-GGGG-CCU
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GGCGCCACUGGGACGC--GGGG--G--UCGG--GGG-A-CGGUCGGG-CCG-GGGG-UCC
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GGCGCCACUGGGGCGA--GGUG--G--UCGG--GGG-A-CGGUCUUA-CCA-GGGG-ACC
GGCGCCACUGGGGCGA--GGUG--G--UCGG--GGG-A-CGGUCGGG-CCG-GGGG-UCC
GGCGCCACUGGGGCGA--GGUG--G--UCGG--GGG-A-CGGUCGGG-CCG-GGGG-UCC
GGCGCCACUGGUACGC--GGGA--G--UCGG--GGG-A-CGGUCGGG-CCG-GGGG-UCC
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GGCGCCACUGGGAGGU--GGGC--G--UCGG--GGG-U-CGGUCGGG-CCG-GGGA-UUC
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GGCGCCACUGGGAGGU--GGGC--G--UUGG--GGG-U-CGGUCGGG-CUG-GGGA-UUC
GGCGCCACUGGGAGGU--GGGC--G--UUGG--GGG-U-CGGUCGGG-CUG-GGGA-UUC
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GGCGCCACUGGGAGGC--GGGC--GUCUCCGUGGGG-U-CGGUCGGU-UUG-CGGA-UCC
GGCGCCACUGGGACGC--GGGC--G--UCGG--GGG-G-CGGUCGGG-CCG-GGGG-UUU
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GGCGCCACUGGAGCGC--GGGA--G--UCGA--GGG-A-CGGUCGGG-CCG-GGGG-UYU
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GGCGCCACUGGAGCGC--GGGA--A--ACGA--GGG-U-CGUUCGGGCCGG-GGGA-UCC
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GGCGUCACUGGAGCGC--GGGA--G--UCGA--GGG-A-CGGUCGGG-CCG-GGGU-UYU
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GGCGCCACUGGAGCGC--GGGA--A--UCGA--GGG-A-CGGUCGGG-CCG-GGGG-UUU
GGCGCAACUGGAGCGC--GGGA--A--UCGA--GGG-A-CGGUCGGG-CCG-GGGG-UCC
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GGCGCCACUGGAGCGC--GGGA--A--ACGA--GGG-A-CGGUCGGG-CCG-GGGG-UUU
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GGCGCCACUGGAGCGC--GGGA--A--ACGA--GGG-A-CGGUCGGG-CCG-GGGG-UCU
GGCGCCACUGGAGCGC--GGGA--G--UCGG--GGG-A-CGGUCGGG-CCG-GGGG-UCU
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GGCGCCACUGGAGCGC--GGGA--G--UCGG--GGG-A-CGGUCGGG-CCG-GGGG-UCU
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GGCGCCACUGGAGCGC--GGGA--G--UCGG--GGG-A-CGGUCGGG-CCG-GGGG-UUU
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GGCGCCACUGGAGCGC--GGGA--G--UCGU--GGG-A-CGGUCGGG-CCG-GGGG-UYU
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GGCGCCACUGGAGCGC--GGGA--G--UCGU--GGG-A-CGGUCGGG-CCG-GGGG-UYU
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GGCGCCACUGGAGCGC--GGGA--G--UCGA--GGG-A-CGGUCGGG-CCG-GGGG-UUU
GGCGCCACUGGAGCGC--GGGA--G--UCGA--GCG-G-CGGUCGGG-CCG-GGGG-UUU
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GGCGCCACUGGAGCGC--GGGA--A--UCGA--GGG-A-CGGUCGGG-CCG-GGGG-UCU
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GGCGYCACUGGRRCGY--GGGA--A--UCGA--GGG-U-CGGUCGGG-CCG-GGGRGYCG
GGCGCCACUGGAGCGC--GGGA--G--UCGG--GGG-A-CGGUCGGG-CCG-GGGA-UUU
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GGCGCCACUGGAGCGC--GGGA--G--UCGA--GGG-A-CGGUCGGG-CCG-GGGG-UUU
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GGCGCCACUGGAGCGC--GGGA--C--UCGG--GGG-G-CGGUCGGG-CUG-GGGG-UCU
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GGCGCCACUGGAGCGC--GGGA--C--UCGG--GGG-G-CGGUCGGG-CUG-GGGG-UCU
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    GGCGCCACUGGAGCGC--GAGG-AG--UCGA--GGG-G-CGGUCGGG-CCG-GGGU-UYU
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    GGCGCCACUGGAGCGC--GGGA--G--UCGA--GGG-A-CGGUCGGG-CCG-GGGG-UCC
    GGCGCCACUGGAGCGA--GGGC--G--UCGA--GGG-A-CGGUCGGG-CCG-GGGG-UYU
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    GGCGUCACUGGAGCGC--GGGA--G--UCGA--GGG-A-CGGUCGGG-CCGGGGGGGCCU
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    GGCGCCACUGGAUCGC--GGGA--A--UCGA--GGG-A-CGGUCGGG-CCG-GGGG-UCC
    GGCGCCACUGGAGCGC--GGGA--C--UCGG--GGG-G-CGGUCGGG-CUG-GGGG-UCU

CCGAUCCGGCCGCCUUCGGC--CGCCU--CG--GCCCUAGCCCGUGUUUAUCCCACCCGA
CCGGCCCGGCCGCCUUCGGC--CGCCC--CG--GCCCUAGCCCGUGUUUAUCCCACCCGA
UCGGCCCGGCCGCCUUCGGC--CGCUC--CG--UCCCUAGCCCGUGUUUAUCCCACCCGA   GC-
CGCGUCUUCCGGCGCGU-CUGCUC--CG--UCCCUAGCCCGUGUUUAUCCCACCCGA
GCCGCGCGCUUCCGGCUCGU-UCGCUC--CG--UCCCUAGCCCGUGUUUAUCCCACCCGA
UCGGCCCGGCCGCCUUCGGC--CGCUC--CG--UCCCUAGCCCGUGUUUAUCCCACCCGA
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-------------------------------------------UGUUUAUCCCACCCGA
CCGGCCCGGCCGCCUUCGGC--CGGCU--CG--UCCCUAGCCCGUGUUUAUCCCACCCGA
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UCGGCCCGGCCGCUCUCGUC--CGCUC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
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UCGGCCCGGCCGCUCUCGUC--CGCUC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
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UCGGACCGGCCGCUCUCGUC--CGCUC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
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UCGGACCGGCCGCUCUCGUC--CGCUC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
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UCGGACCGGCCGCUCUCGUC--CGCUC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
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UCGGACCGGCCGCUCUCGUC--CGCUC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
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UCGGACCGGCCGCUCUUGUU--CGCUC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
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UCGGACCGGCCGCUCUCGUC--CGCUC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
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UCGGCCCGGCCGCUCUCGUC--CGCUC--CG--UUCCUAGCUCGUGUUUAUCCCUCCCGA
UCGGCCCGGCC-CUCUCGUC--CGCUC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
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UCGGCCCGGCCGCUCUCGUC--CGCUC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
UCGGCCCGGCCGCUCUCGUC--UGCUC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
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UCGGCCCGACCACUCUCGUU--CACUC--UG--UCCCUAGCUCGUGUUUAUCCCUCCUGA
UCGGCCCGGCCGCUUUCGUC--CGCUC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
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UCGGAUCGGCCGCUCUCGUC--CGCUC--CG--UCCCUAGCCCGUGUUUAUCCCUCCCGA
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UCGGAUCGGCCGCUCUCGUC--CGCUC--CG--UCCCUAGCCCGUGUUUAUCCCUCCCGA
UCGGAUCGGCCGCUCUCGUC--CGCUC--CG--UCCCUAGCCCGUGUUUAUCCCUCCCGA
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UCGGAUCGGCCGCUCUCGUC--CGCUC--CG--UCCCUAGCCCGUGUUUAUCCCUCCCGA
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UCGGAUCGGCCGCUCUCGUC--CGCUC--CG--UCCCUAGCCCGUGUUUAUCCCUCCCGA
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UCGGCCCGGCCGUUCUCGUC--AGCUU--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
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UCGGCCCGGCCGCCCUCGUC--CGCUC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
UCGGACCGGCCGCUCUCGUC--CGCUC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
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UCGGCCCGGCCGCCCCCGUG--CGCUC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
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UCGGCCCGGCCGCUCUCGUC--CGCUC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
NNNNNNNNNNNNNNNNCGUC--CGCUC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
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UCGGCCCGGCCGCUCUCGUC--CGCCC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
UCGGCCCGGCCGCUCUCGUC--CGCCC--CG--UCCCUAGCUCGUGUUUAUCCCUCCCGA
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UCGGCCCGGCCGCUCUCGUC--CGCUC--CG--UUCCUAGCCCGUGUUUAUCCCUCCCGA
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UCGGCCCGGCCGCUCUCGUC--CGCUC--CG--UCCCUAGCCCGUGUUUAUCCCUCCCGA
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UCGGCAGGGCCGCUCUCCUC--CG-CC--CG--UCCCUAGCCCGUGUUUAUCCCUCCCGA
UCGGCCCGGCCGCUCUCGUC--CGCCC--CG--UCCCUAGCYCGUGUUUAUCCCUCCCGA
UCGGCCCGGCCGCUCUCGUC--CGCCC--CG--UCCCUAGCCCGUGUUUAUCCCUCCCGA
UCGGCCCGGCCGCUCUCGUC--CGCCC--CG--UUCCUAGCCCGUGUUUAUCCCUCCCGA
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UCGGCCCGGCCGCUCUCGAU--UGCCC--CG--UCCCUAGCCCGUGUUUAUCCCUCCCGA
UCGGACCGGCCGCUCUCGAU--UGCCC--CG--UCCCUAGCCCGUGUUUAUCCCUCCCGA
UCGGACCGGCCGCUCUCGAU--UGCCC--CG--UCCCUAGCCCGUGUUUAUCCCUCCCGA
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UCGAGCCGGCCGUCCUCGGU--CGCCC-AAU--UCCCUAGCCCGUGUUUAUCCCUCCCGA
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CACCAAUAGGG-AACGUGAGCUGGGUUUA???????????????????????????????
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CUGAUGAC--CG-GUCGUUGCGAUAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUC
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CUGAUGAC--UG-GUCGUUGCGAUAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUC
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CUGAUGAC--UG-GUCGUUGCGAUAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUC
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CUGAUGAC--UG-GUCGUUGCGAUAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUC
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CUGAUGAC--UG-GUCGUUGCGAUAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUC
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CUGAUGAC--UG-GUCGUUGCGAUAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUC
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CUGAUGAC--UG-GUCGUUGCGAUAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUC

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CUGAUGAC--UG-GUCGUUGCGAUAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUC
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CUGAUGAC--CA-GUCGUUGCGAUAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUC
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CUGAUGAA--CA-GUCGUUGCGAUAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUC
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CUGAUGAA--UU-GUCGUUGCGAUAGUAAUCCUGCUCAGUACGAGAGGAACCGCAGGUUC
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AGGAGACCCGAGGGCCGGGAGGCUUGAAACACAUCGGCGCCCCUCG--CA--CAG-U-GG
AGGAGACCCGAGGGCCGGGAGGCUCGARAMACGUCGGCGCCCCWCGCCCYUUCAG-G-GG
AGGAGACCCGAGAGCCGGGAGGCUCGAGACACGUCGGCGCCCCACG--CU--YAG-C-GG
AGGAGACCCGAGAGCCGGCAGGCUCGAGACACGUCGUCGCCCCACG--CU--CAG-G-GG
AGGAGACCCGAGAGCCGGCAGGCUCGAGACACGUCGACGCUCCUCG--CU--CAG-G-GG
AGGAGACCCGAGGGCCGGGAGGCUCGAGACACGUCGGUACCCCACG--CUU-CAG-G-GG
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AGGAGACCCGAGAGCCGGGAGGCUCGAGACACGUCGGCACACCACG--UC--CAG-G-GA
AGGAGACCCGAGGGCCGGGAGGCUCGAGACACGUCGGCGCCCCACG-CUU--CAG-G-GG
AGGAGACCCGAGAGCAGGGAGGCUCGAGACACGUCGGCGCCUCACG--UC--CAG-G-GG
AGGAGACCCGAGGGCCGGGAGGCUCGAGACACGUCGGCGCCCCACG--CU--CAG-G-GG
AGGAGACCCGAGAGCCGGGAGGCUCGAAACACGUCGGCGCCCCUCG--CU--CAG-G-GG
AGGAGACCCGAGAGCCGGGAGGCUCGAGACACGUCGGCGCCCCGCG--CU--CAG-G-GG
AGGAGACCCGAGAGCCGGGAGGCUCGAGACACGUCGGCGCCCCACG--CU--UAGGG-GG
AGGAGACCCGAGAGCCGGGAGGCUCGAGACACGUCGGCGCCCCACG--CU--UAG-G-GG
AGGAGACCCGAGAGCCGGGAGGCUCGAGACACGUCGGCGCCCCACG---U--CAG-G-GG
AGGAGACUCGAGAGCCGGGAGGCUCGAGACACGCGGGCGUCUCGCG-UUC--GCG-G-GA
AGGAGACUCGAGAGCCGGGAGGCUCGAGACACGCGGUCGUCUCGCG-UUC--GCG-G-GG
AGGAGACUCGAGAGCCGGGAGGCUCGAGACACGCGGGCGYCWCSCG-UUC--GCG-G-GK
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AGGAGACACGAGAGCCGGGAGGCUCGAGACACGCU-GCGACUUCCG-AUC--AAG-G-GG
AGGAGACACGAGAGCCGGGAGGCUCGAGACACGCU-GCGACUUCCG-AAC--AAG-G-GG
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AGGAGACACGAGAGCCGGGAGGCUCGAGACACGCU-GCGACUUCCG-AUU---AG-G-GG
AGGAGAUUCGACAGCCGGGAGGCAUGAGACACGGU-GCGACUUCCG-UCU--AAG-G-GG
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AGGAGAUCCGACAGCCGGGAGGCAUGAGACACGCU-GCGACUUCCG--UU--UAG-G-GG
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AGGAGAUCCGACAGCCGGGAGGCAUGAGACACGCU-GCGACUUCCG--CU--CAG-G-GG
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AGGAGACCCGAGAGUCGAAAGGCUUGAGAUACGCG-GCGGCUUCCG-AUU--UAG-G-GU
AGGAGACCCGAGAGCCGGAAGGCUCGAGAUAUGCG-GCGGCUUCCG-AUU--AAG-G-GG
AGGAGACCCGAGAGCCGGAAGGCUUGAGAUAUGCG-GCGGCUUCCG-AUU--CAG-G-GG
AGGAGACCCGAGAGCCGGAAGGCUUGAGAUAUGCG-GCGGCCUCCG-ACU--CAG-G-GG
AGGAGACCCGAGAGCCGGAAGGCUCGAGAUAUGCG-GCGGCCUCCG-ACU--CAG-G-GG

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AGGAGACCCGAGGGCCGGAAGGCUUGAGAUAUGCG-GCGGCUUCCG-ACA--UAG-G-UG
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AGGAGACCCGAGAGCCGGAAGGCUCGAGAUAUGCG-GCGGCUUCCG-AUU--CAG-G-UU
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AGGAGACCCGAGAGCCGGGAGGCUCGAGACAUGCG-GCGACCUCCG-UCC---AG-G-GG
AGGAGACCCGAGAGCCGGGAGGCUCGAGACAUGCG-GCGACCUCCG-AUU---AG-G-GG
AGGAGACCCGAGAGCUGGGAGGCUCGAGACAUGCG-GCGACUUCCG-UUC--GCG-G-GG
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AGGAGACCCGAGAGCCGGGAGGCUCGAGACAUGCG-GCGACUUCCG-UUC--GCG-G-GG
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AGGAGACCCGAGAGCCGGGAGGCUCGAGACAUGCG-GCGACUUCCG-ACC---AG-G-GG
AGGAGACCCGAGAGCCGGGAGGCUCGAGACAUGCG-GCGACUUCCG-ACC---AG-G-GG
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AGGAGACCCGAGAGCCGGGAGGCUCGAGACAUGCG-GCGACUUCCG-AAU---AG-G-GG
AGGAGACCCGAGAGCCGGGAGGCUCGAGACAUGCG-GCGACUUCCG-AAU---AG-G-GG

AGGAGACCCGAGAGCCGGGAGGCUCGAGACACGCG-GCGACCUCCG-UUU--ACG-G-GG

AGGAGACCCGAGAGCCGGGAGGCUCGAGACACGCG-GCGACCUCCCCUUCG-CGGGGGGG
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AGGAGACCCGAGAGCCGGGAGGCUCGAGACACGCG-GCGACCU-CCGUUU--ACG-G-GG

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AGGAGACCCGAGAGCCGGGAGGCUCGAGACACGCG-GCGACCU-CCCUUC--GGG-G-GG
AGGAGACCCGAGAGCCGGGAGGCUCGAGACACGCG-GCGACUU-CCCUUC--GGG-G-GG
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AGGAGACCCGAGGGCCGGGAGGCUCGAUUUACGUG-GCGGUUU--CCUUC--CGG-G-GG
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AGGAGACCCGAGGGCCGGGAGGCUCGAUUUACGCG-GCGG-CU-UCCUUC--CGG-G-GG

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AGGAGACCCGAGAGCCGGGAGGCUCGAGACACGCG-GCGACCU-CCGUCC---AG-G-GG
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AGGAGACCCGAGAGCCGGGAGGCUCGAGACACGCG-GCGACCU-CCGUCU--CAG-G-GG
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GGCGUCGGCAUCCGAGCCCACUUGCCGCACGGGGGGGGCACCCGGGGGGUAUCCAGCCCC
GGCGUCGGCAUCCGAGCCCRCUUGCCGMWCGGGGGGGGCWCCCGGGGGGUAUCYAGCCCC
GGCGUCGGCAUCCGUGCCCACUUGCCGAAUGGGGGGGRYUCCCGGGGGGGAUCUAGCCCC
GGCGACGGCAUCCGAGCCCACUUACCGAUCGGGGGGGGCUCCCGGGGCGUAUUCAGCGCC
AGCGUCGGCAUCCGAGCCCACUUGCCGAUCGGGGGGGGCUCCCGGGGCGUAUCCAGCGCC
GGUGCCGGCAUCCAAGCCCAUUAGCCGAACGGGGGGGGCUCCCGGGGGGUAUCCAGCCCC
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GGUGCCGGCAUCCGAGCCCACUAGCCGAACGGGGGGGGCUCCCGGGGGGUAUCCAGCCCC
GGUGUCGGCAACCGAGCCCACUAGCCGAAUGGGGGGGGCUCCCGGGGGGUAUCCAGCCCC
GGCGUCGGCAUCCGAGCCCAAUUACCGAACGGGGGGGGCUCACGGGGGGUAUCCAGCCCC
GGCGUCGGCAACCGUACCCACUCGCCGAAUGGGGGGGG----------------------
GGCGUCGGCAACCGAGCCCACUAGCCGAACGGGGGGGGCUCCCGGGGGGUAUCCAGCCCC
GGCGUCGGCAACCGAGCCCACUAGCCGAAUGGGGGGGGCUCCCGGGGGGUAUCCGGCCCC
GGCGUCGGCAUCCGAGCCCACUUGCCGAAUGGGUGGGGCUCCCGGGGGGUAUCCAGCCUC
GGCGUCGGCAUCCGAGCCCACUUGCCGAAUGGGGGGGGCUCCCGGGGGGUAUCCAGCCCC
GGAGUCGGCAUCCGAGCCCACUUGCCGAAUGGGG-GGGCUCCCGGGGGGUAUUCAGCCCC
GACGUCCGCAUCUGAGCCCGCUAGCCGAAUGGGGGGGGCCCCCGGAGGGUAUUCAGCCCU
GACGACCGCAUCUGAGCCCGCUUGCCGAAUGGGGGGGGCCCCCGGAGGGUAUCCAGCCCU
RRCGACCGCAUCUGAGCCCRCUAGCCGAAUGGGGGGGGCCCCCGGAGGGUAUUCAGCCCU
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GUCGCUAGCCUCUGAGCCCAAUUGCCGAAAGGGGGGGGCGCCCGGAGGGUAUCCAGCCCU
GUCGCUAGCCUCUGAGCCCAAUUGCCGAAAGGGGGGGGCGCCCGGAGGGUAUCCAGCCCU
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GUCGUUAGCCUCUGAGCCCAAUUGCCCAAUGGGGGGGGCGCCCGGAGGGUAUCCAGCCCU
GUCGCACGCCUCUAAGCCCAAUUGCCGAAUGGGGGGGGCUCUCGGAGGGUAUCCAGCCCU
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GUCGCACGCCUCUAUGCCCAAUUGCCGAA-GGGGGGGGCUCUCGGAGGGUAGACAGCCCU
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GUCGCACGCCUCUAUGCCCAAUUGCCGAA-GGGGGGGGCUCCCGGAGGGUAGACAGCCCU
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GUCGCUCGCCUCUGAGCCCAAUUGCCGGUCGAGGGGAGCGCCCGGAGGGUAUUCAGCCCU
GUCGCUCGCCUCCGAGCCCAAUUGCCGAGUGAGGGGGGCGCUCGGAGGGUAUUCCGCCCU
GUCGCUCGCCUCUGAGCCCAAUUGCCGAGUGAGGGGGGCGCUCGGAGGGUAUUCAGCCCU
GUCGCUCGCCUCUGAGCCCAAUUGCCGAGCGAGGGGGGCGCUCGGAGGGUAUUCAGCCCU
GUCGCUCGCCUCCGAGCCCAAUAGCCGAGCGGGGGGGGCGCUCGGAGGGUAUUCAGCCCU

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GUCGCUCGCCUCUGAGCCCAAUAGCCGAGUGAGGGGGGCACUCGGAGGGUAUCCAGCCCU
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GUCGCUCGCCUCUGAGCCCAAUAGCCGAGCGAGGGGGGCACUCGGAGGGUAUCCAGCCCU

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GCCGCACGCCUCCGAGCCCAAUUGCCGGACGGGGGGGGCGCCCGGAGGGUAUACAGCCCU
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GCCGCUCGCCUCUGAGCCCAAUUGCCGGACGGGGGGGGCGCCCGGAGGGUAUACAGCCCU
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GCCGCACGCCUCUGAGCCCAAUUGCCGGACGGGGGGGGCGCCCGGAGGGUAUCCAGCCCU

GCCGAUCGCCUCUGAGCCCAAUUGCCGGACGGGGGGGGCGCUCGGAGGGUAUCCAGCCCU

GCCGAUCGCCUCUGAGCCCAAUUGCCGGACGGGGGGGGCGCUCGGAGGGUAUCCAGCCCU
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GACG-GG-ACGCCCCCCCCUAGCGGUCGAACAUGGGUGACCAACCGAGGACGGCGUCGGG
GACG-GG-ACGCCCCCCCCYAGCGGUCGAACAUGGRUGACSAACUGASGACGGCGUCGGG
GACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUGGGUGACGAACUGAGGACGGCGUCGGG
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GACG-GG-AUGCCUCCCCCAAGCGGUCGAACAUGGGUGACCGACUGAGGACGGCGUCGGG
GACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUUGGAGACUAACUGAUGACGGCGUUGGG
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GACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUGGGUGACGAACUGAGGACGGCGUCGGG
GACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUGGGUGACCAACUGAGGACGGCGUCGGG
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GACG-GG-AUGCCUCCCCCUAGCGGUCGAACAUGGGUGAC????????????????????
GGCG-GG-AUGCCUACCCCUAGCGGUCGAACAUGGGUGACGAAUUAAGGACGGCGUCGGG
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GACG-GG-AUGCYYCCCYAUAGMGSYCKAACAYGGGUGACGAACAAAGUUCGACGUCGGG
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GACG-GG-AUGCCCCCCUCCAACGGUCGAACAUGGGUGACGGUUACAGGACGGCGUCGGG
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GGCG-GG-AAGCCCCCCUCCAACGGUCGAACAUGGUCGACGGUUACCGGACGGCGUCGGG
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GGCG-GG-ACGCCCCCCUCUAACGGUCGAAUAUGGUCGACGGUUACCGGACGGCGUCGGG
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CGCG-AG-AUGCCUCCCUCAGGCGGUCGAACAUGGGUGACUGUUUAAGUACGGCGUCGGG
CGCG-AG-AUGCCUCCCUCAAGCGGUCGAACAUGGGUGACUGUUUAAGUACGGCGUCGGG
CGCG-GG-AUGCCCCCCUCAAGCGGUCGAACAUGGGUGACUGUUUAAGUACGGCGUCGGG
CGCG-AG-AUGCCCCCCUCAAGCGGUCGAACAUGGGUGACUGUUUAAGUACGGCGUCGGG
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CUCG-AG-ACGCCUCCCUCAAGCGGUCGAACAUGGGUGACUGUUUACGUAAGGCGUCGGG
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CUCG-AG-ACGCCUCCCUCAAGCGGUCGAACAUGGGUGACUGUUUCAGUACGGCGUCGGG
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CUCG-GG-ACGCCUCCCUCAAGCGGUCGAACAUGGGUGACUGUUUCAGUACGGCGUCGGG
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CGCG-AG-ACGCCUCCCUCAAACGGUCGAAUAUGGGUGUCUGUUUCAGUACGGCGUCGGG
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CGCG-AG-AUGCCUCCCUCAAGCGGUCGAAUAUGGGUGACUGUUUAAGUUCGACGUCGGG
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CGCG-AG-ACGCCUCCCUCAAGCGGUCGAACAUGGGUGACUGUU-CA-UACGCGGUCCGG
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GUCG-GG-AUGCCUCCCUCCAACGGUCGAACAUGGGUGAAGGUUCAAGUACGGCGUCGGG
GUCG-GG-AUGCCUCCCUCCAACGGUCGAACAUGGGUGAAGGUUACAGUACGGCGUCGGG
GUCG-GG-AUGCCUCCCUCCAACGGUCGAACAUGGGUGACGGUUACAGUUCGACGUCGG-
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GUCG-GG-AUGCCUCCCCCAUCGGUCGAACAUGGGUGACGGUUACAGUACGGCGUCGGG
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GUCG-GG-AUGCCCCCCCCUAACGGUCGAACAUGGGUGACGGUUACAGUUCGACGUCGG?
GUCG-GG-AUGCCCCCCCCUAACGGUCGAACAUGGGUGACGGUUACAGUACGGCGUCGGG
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GUCG-GG-AUGCCCCCCCCUAACGGUCGAACAUGGGUGACGGUUACAGUACGGCGUCGGG
GUCG-GG-CU-CCCCCCAUACCGGUCGAACAUGGGUGACGGUUACAGUUCGACGUCGGG
GUCG-GG-CU-CCCCCCAUACCGGUCGAACAUGGGUGACGGUUACAGUUCGACGUCGG?
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GUCG-GG-AUGCCCCCCUCUACCGGUCGAACAUGGGUGACGGUUAUAGUACGGCGUCGGG
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GUCG-GG-AUGCCCCCCUCUAACGGUCGAACAUGGGUGACGGUUACAGUUCGACGUCGG-
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GUCG-GG-AUGCCCCCCUCUACCGGUCGAACAUGGGUGACGGUUACAGUACGGC??????
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GUCG-GG-AUGCCCCCCUCAAACGGUCGAACAUGGGUGCACGUACUAGUACGGCGUCGGG
GUCG-GG-AUGCCCCCCUCAAACGGUCGAACAUGGGUGCACGUAAAAGUACGGCGUCGGG
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GUCG-GG-AUGCCUCCCUCUAUCGGUCGAACAUGGGUGACGAUUAUAGUGCGGCGUCGGG
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GUCG-GG-AUGCCUCCCUCUAACGGUCGAACAUGGGUGACGAUUACAGUUCGACGUCGGG
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GUCG-AG-AUGCCCCCCUCUAACGGUCGAACAUGGGUGACGUUUGCAGUACGGCGUCGGG
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GUCG-GG-AAGCCCCCCUCUAACGGUCGAACAUGGGUGACGUUUGCAGUACGGCGUCGGG
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GUCG-GG-AAGCCCCCCUCUAACGGUCGAACAUGGGUGACGUUUGCAGUACGGCGUCGGG
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GUCG-GG-AAGCCCCCCUCUACCGGUCGAACAUGGGUGACGUUUGCAGUACGGCGUCGGG
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U-CUCGGAAU?????????UACG-ACAGCA-GUUUUAGGUGAAACUGCUUAAGACGAGGA     U-
CUCGGAAU?????????UACG-AGGUUA-GUUUUAGGUGAAACUAUUGAAAACGAGGA       U-
CUCGGAAU?????????UACG-UGGUUA-GUUUUAGGUGAAACURYUUGAAACUAGGA       U-
CUCGGAAU?????????????-?GGUUA-GUUUUAGGUGAAACUGCUUGAGACAAGGA       U-
CUCGGAAU?????????UACG-AGGUUA-GUUUUAGGUUAAACUAUUUAAAACAAGGA       U-
CUCGGAAA?????????------AGAUA-GUUUUAGGUAAAACUACUUAAGACAAGGA
----------?????????UACG-AGGUUA-GUUUUAGGUGGAACUGCUUUAAACAAGGA
----------?????????------AGUUA-GUUUUAGGUAAAACUACCUGAAACAAGGA     U-
CUCG----????-????UACG-AGGUUAAGUUUUAGGUGAAACUACUUAAAACAAGGA       U-
CUCGGAAU?????????????-?GGUUA-GUUUUAGGUGAAACUAUUUAAAACAAGGA       U-
CUCGGAAU?????????CACG--GGCUA-GUCUUUGGUGAAACUACUUUGGACAAGGA
----------????-????UGCG-AUGUUA-GUUUUAGGUGAA-CUAUAUUAAACAAGGA     U-
CUCGGAAU?????????UACG-UGGUUA-GUUUUAGGUGAAAWUACUURARACAAGGA       U-
CUCGGAAU????-????------GGUUA-GUUUUAGGUGAUACUACUUGAGACAAGGA
?-????????????-????UACG-AGGCCA-GUUUUGGGUGAAACUGCUUAAAACAAGGA
?-????????????-????UACU-AGGUUA-GUUUUAGGUGAAACUACUUUAGACAAGGA     U-
CUCGGAAU????-????UACG-AGGUCA-GUUUUAGGUGAAACUGCUUAAGACUAGGA       U-
CUCGGAAU???-?????UACG-AGGUUA-GUUUUAGGUGGAACUACUUAAAACAAGGA       U-
CUCGGAAU?????????UACG-AGGCUA-GUUUUAGGUGGAACUACUUAAAACAAGGA       U-
CUCGGAAU?????????UACG-AGGCUA-GUUUUAGGUGGAACUACUUAAAACAAGGA
---------????-?????GACG-AGGUCA-GUUUUAGGUGGAACUGUUUAAAACGAGGA     U-
CUCGGAAUCUUC-UG-AUACG-AGGUUA-GUUUUAGGUGAAACUAUUUAAGACGAGGA       U-
YYYGGAAUCUUC-UG??UACG-AGGUUA-GUUUUAGGUGAAACUAUUUAAGACGAGGA
?-????????????-????U-CGGAGGUUA-GUUUUAGGUGAAACUAUUUAAGACAAGGA
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?-????????????-????NNNN-NNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
?-????????????-????UACG-AGGUUA-GUUUUAGGUGAAACUAUUUAAGACAAGGA     U-
CUCGGAAUCGUC-UGUAUACG-AGGUUA-GUUUUAGGUGAAACUAUUUAAGACAAGGA       U-
CUCGGAAUGGCC-UGUAUACG-AGGUUA-GUUUUAGGUGAAACUAUUUAAGACAAGGA
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?-????????????-????------GGUUA-GUUUUAGGUGAAACUAUUUAAAACAAGGA
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CUCGGAAUCCUU-CCGAUACG-AGGUUA-GUUUUAGGUGAAACUAUUUAAGACAAGGA
?-????????????-????------GGUUA-GUUUUAGGUGAAACUAUUUAAGACAAGGA
?-????????????-????------GGUUA-GUUUUAGGUGAAACUAUUUAAAACAAGGA
U-CUCGGAAUGGCC-UGUAUACG-AGGUUA-GUUUUAGGUGAAACUAUUUAAAACAAGGA
?-????????????-????------GGUUA-GUUUUAGGUGAAACUAUUUAAAACAAGGA
?-????????????-????UACG-AGGUCA-GUUGUAGGUGAAACUGUUCAAGACAAGGA
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?-????????????-????------GGUCA-GUUGUAGGUGAAACUGUUCAAGACGAGGA
?-????????????-????UACG-AGGUCA-GUUGUAGGUGAAACUGUUUAAGACAAGGA    U-
CUCGGAAUCUUC-UGUAUACG-AGGCCA-GUUUUGGGUGAAACUGCUUAAAACAAGGA    U-
CUCGGAAUCUUC-UGUA------GGUUA-GUUUUAGGUGAAACUAUUUAAAACAAGGA    U-
CUCGGAAUCGCC-UGUAUACG-GGGUUA-GUUUUAGGUGAAACUAUUUAAAACAAGGA    U-
CUCGGAA?????-????------GGUUA-GUUGURGGUGAAACUAUUUAAAACAAGGA    U-
CUCG-AAUC???-????AACG-GGGUUA-GAUAUAGGUGAAACUAUUUAAGACAAGGA
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?-????????????-????NNNN-NNNNNN-NNNNNNNNNNNNNNNNNNNNNNNNNNNN    U-
CUCGGAAUCUUC-UG??GGAC-GGGUUA-GUUUUAGGUGAAACUAUUUGAAACGAGGA
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CUCGGAAUCUUC-UGUNGACG-GGGUUA-GUAUUAGGUGAAACUAUUUAAGACGAGGA
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?-????????????-????------GGUUA-GUUUUAGGUGAAACUAUUUAAGACGAGGA
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CUCGGAAUCUUC-UGUAGACG-GGGUUA-GUUUUAGGUGAAACUAUUUAAGACGAGGA
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?-????????????-????------GGUUA-GUUUUAGGUGAAACUAUUUAAAACAAGGA    U-
CUCGGAAUCUUC-UGUAUACG--GGUUA-GUUUUAGGUGAAACUAUUUAAAACAAGGA
?-????????????-????UACG-GGGUUA-GUUUUAGGUGAAACUAUUUAAAACAAGGA
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?-????????????-????------GGCUA-GUUUUGGGUGAAACUAUUUAAGACAAGGA
?-????????????-????GACG-GGGUCA-GUUUUAGGUGAAACUGUUUAAAACAAGGA
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CUCGGAAU????????UACG-GGGUUA-GUUUUAGGUGAAACUAUUUAAAACAAGGA
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CUCGGAAU????-????-----AGGUUA-GUUUUAGGUGAAACUACUCAAAACGAGGA
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?-????????????-????------GGUUA-GUUUUAGGUGAAACUAUUCAAAACGAGGA    U-
CUCGGAAUCUUC-UGNAUACG-AGGUUA-GUUUUAGGUGAAACUAUUUAAAACGAGGA
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?-????????????-????AACG-AGGUUA-GUUUUAGGUGAAACUAUUUAAAACAAGGA    U-
CUCGGAAUCUUC-UGUAAACG-AGGUUA-GUUUUAGGUGAAACUAUUUAAAACAAGGA
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CUCGGAAUCUUC-UGUAAACG-AGGUUA-GUUUUAGGUGAAACUAUUUAAAACAAGGA    U-
C???????????-????UACG-AGGUCA-GUUUUAGGUGAAACUGUCUUAAACAAGGA
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CUCGGAAUCUUC-UGUAUACG-UAGUCA-GUUUUGGGUGAAACUGUUUAAAACAAGGA
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AGUAUUAGCAGGUGCUAUUACCAUACUUCUUACUGAUCGAAAUAUCAAUACAUCUUUCUU
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UGUAUUAGCAGGUGCUAUCACCAUACUCUUAACAGAUCGAAAUAUUAAUACAUCCUUUUU
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UGAUCCUGCAGGGGGAGGAGACCCUAUUUUAUA
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CGAUCCUGCAGGUGGAGGAGACCCAAUUUUAUA
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UGAUCCUGCAGGAGGAGGAGAUCCUAUUUUAUA
UGAUCCAGCCGGAGGGGGUGAUCCAAUUCUAUA
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UGAUCCAGCAGGAGGAGGUGACCCAAUUCUAUA
YGAUCCUGCWGGAGGAGGAGAUCCUAUUUUAUA
UGAUCCUGCAGGGGGGGGAGACCCUAUCUUAUA
UGAUCCUGCAGGAGGAGGAGAUCCUAUUUUAUA
UGAUCCCGCAGGAGGAGGAGAUCCCAUUUUAUA
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UGAUCCUGCAGGAGGGGGRGAYCCCAUCUUAUA
YGAYCCHGCNGGRGGRGGWGAYCCYAUYYUAUA
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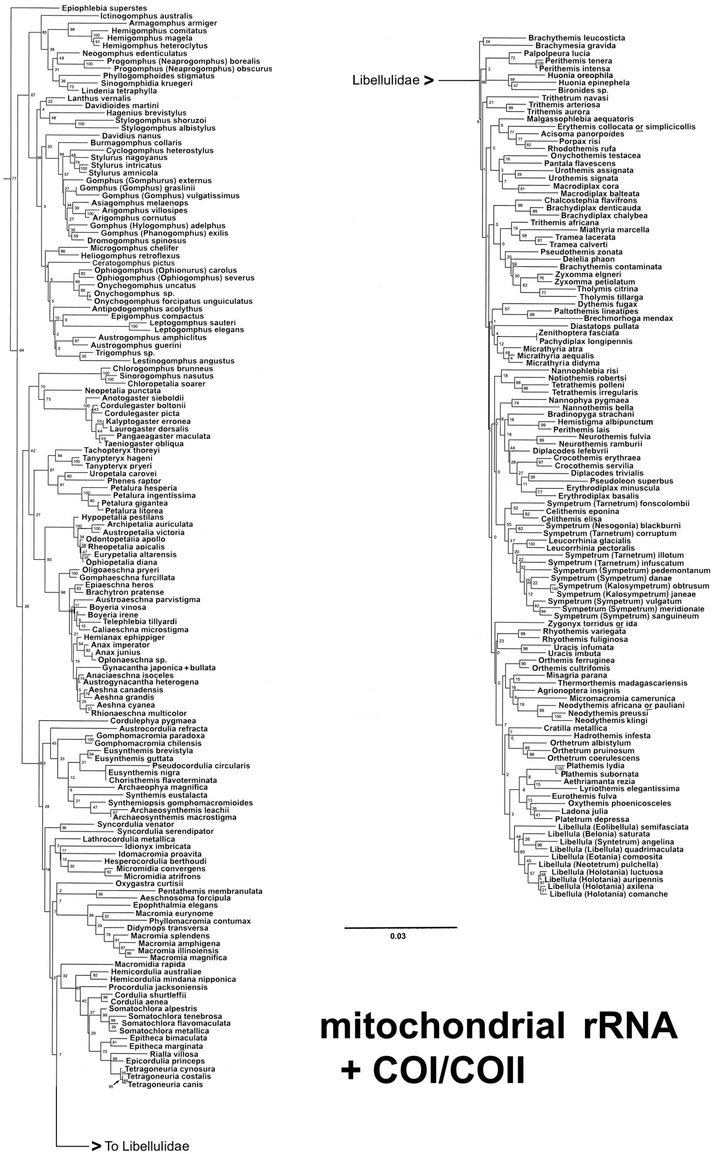
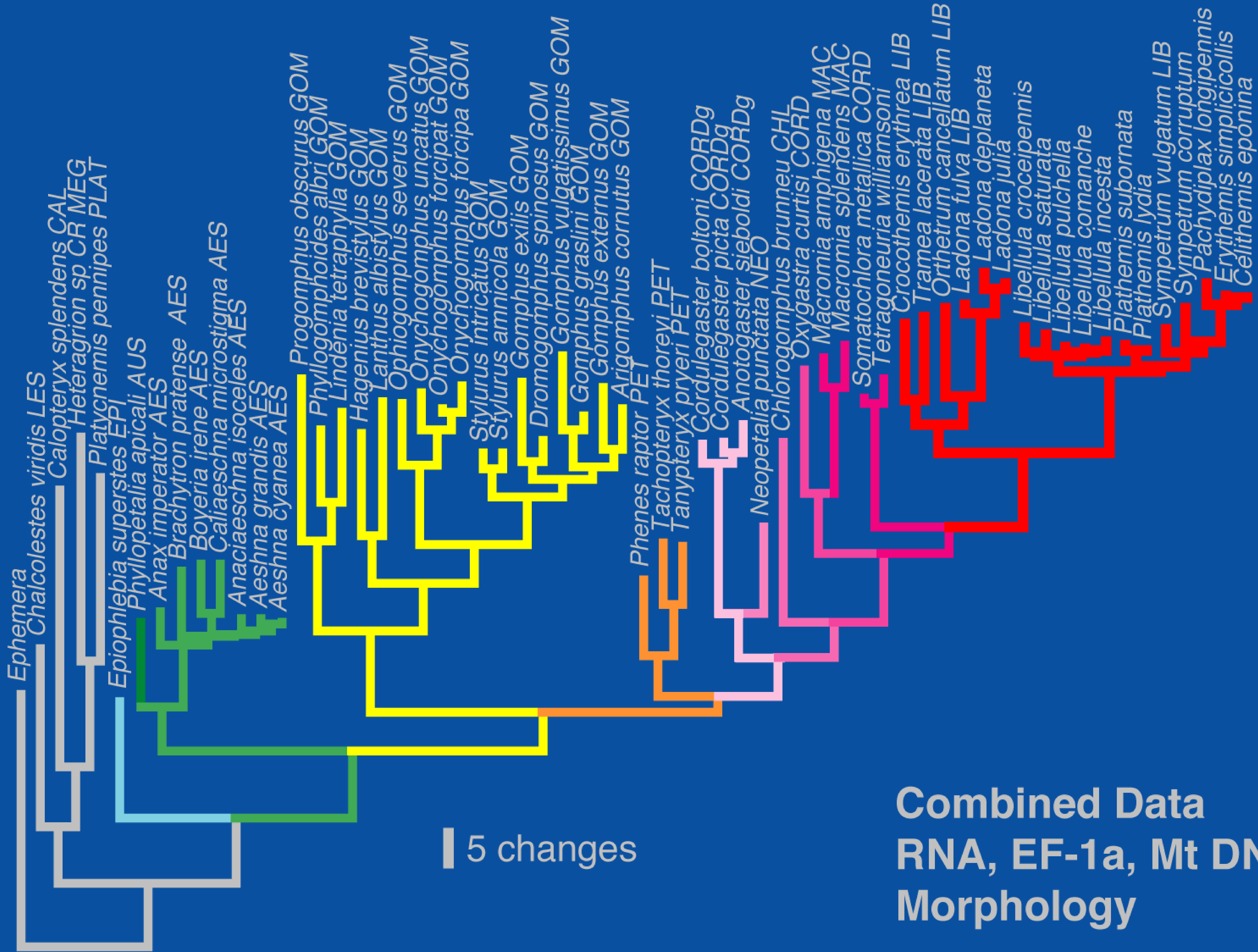


mitochondrial rRNA + COI/COII



Combined Data
RNA, EF-1a, Mt DNA
Morphology

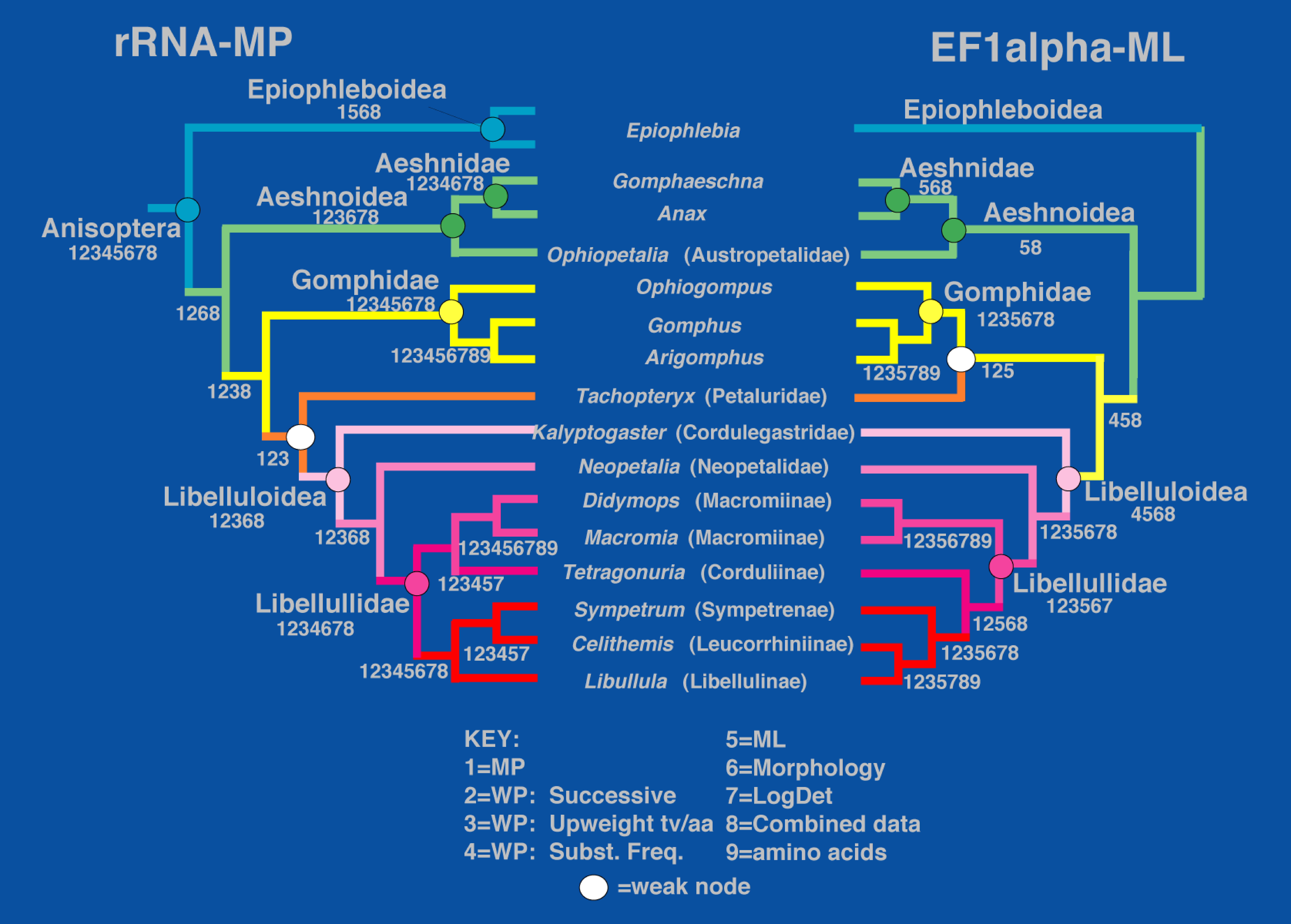

rRNA-MP
EF1alpha-ML
Epiophleboidea
1568
Anisoptera
12345678
Aeshnidae
1234678
Aeshnoidea
123678
Gomphidae
12345678
123456789
1268
1238
123
Libelluloidea
12368
12368
123456789
123457
Libellullidae
1234678
123457
12345678
Epiophlebia
Gomphaeschna
Anax
Ophiopetalia (Austropetalidae)
Ophiogompus
Gomphus
Arigomphus
Tachopteryx (Petaluridae)
Kalyptogaster (Cordulegastridae)
Neopetalia (Neopetalidae)
Didymops (Macromiinae)
Macromia (Macromiinae)
Tetragonuria (Corduliinae)
Sympetrum (Sympetrenae)
Celithemis (Leucorrhiniinae)
Libullula (Libellulinae)
Epiophleboidea
Aeshnidae
568
Aeshnoidea
58
Gomphidae
1235678
1235789
125
458
Libelluloidea
4568
1235678
12356789
Libellullidae
123567
12568
1235678
1235789
KEY:
1=MP
2=WP: Successive
3=WP: Upweight tv/aa
4=WP: Subst. Freq.
5=ML
6=Morphology
7=LogDet
8=Combined data
9=amino acids
=weak node

Table S9. Selected sequencing Primers designed for 18S, 28S, 12S&16S, and EF-1α. Primer name lists the following information: Gene, fragment, direction, year, series letter. UP = Forward Primer. DN = Reverse Primer. Amplicon length is approximate and for EF-1α includes introns.

Primer Name	Primer Sequence 5′- 3′	Amplicon Length
18sV4UP95a	**CGT ATA CTA AAG TTG TTG CGG**	
18sV4DN95a	**GCC CTT CCG TCA ATT CCT TT**	**610bp**
28sD1UP95b	**AGG GGA GGA AAA GAA ACT AAC**	
28sD1DN95a	**CAA CTT TCC CTC ACG GTA CT**	**345bp**
28sD2UP95g	**GCT TGA GAG TGC AGC CCA**	
28sD2DN95d	**CCC AAC GAC TYG CGC GCA TGT T**	**660-730bp**
28sD3UP95a	**ACC CGT CTT GAA ACA CGG AC**	
28sD3DN95a	**CGG AGG GAA CCA GCT ACT AGA TG**	**300-310bp**
28sD46UP95a	**TGG GTA TAG GGG CGA AAG AC**	
28sD46DN95a	**TTG CTA CTA CCA CCA AGA TCT**	**595-675bp**
28sD7UP95a	**GCS GCG ACG AGT AGG AGG G**	
28sD7DN95a	**CTT CAG AGC CAA TCC TTA T**	**645bp**
28sD8UP96b	**GGT AAG GGA AGT CGG CAA**	
28sD8DN96c	**GCT CCC ACT TAT GCT ACA C**	**615bp**
28sD10UP96b	**GAA AGA AGA CCC TGT TGA GC**	
28sD10DN96a	**GGC CGC CAC AAG CCA GTT AT**	**600bp**
28sD12UP96b	**GAG GTG TCA GAA AAG TTA C**	
28sD12DN96e	**ATT CCG AGA CCC GAC GCC G**	**600bp**
28sD12DN97b	**CCG GTA CTY AAG TCG T**	**625bp**
12sM1UP97c	**GAC AAA ATT CGT GCC AGC**	
12sM1DN97a	**TGA GAG CGA CGG GCG AT**	**560bp**
12sM1DN97d	**TAC TAT GTT ACG ACT TAT C**	**590bp**
16sM2aUP97a	**AAA UAU GCA CAY AUC GCC**	
16sM2bDN97d	**GGU AGC AUA AUC AUU AGU CT**	**910bp**
16sM2aUP97a	**AAA UAU GCA CAY AUC GCC**	
16sM2aDN97a	**ATA GAG CTT ATC CCC TA**	**565bp**
16sM2bUP97b	**GGT ATC TRG TTT TTY AAG**	
16sM2bDN97d	**GGU AGC AUA AUC AUU AGU CT**	**450bp**
16sM3UP97b	**GAA GTC TGA CCT GCC CRG TG**	
16sM3DN97a	**CGC CGG TCT GAA CTC AGA TCA TGT A**	**535bp**
EF1UP97a	**TCC TTC AAG TAY GCN TGG GT**	
EF1DN97a	**CCR ATC TTC TTR ATR TAR TT**	**400bp**
EF2UP97a	**GGA GAR TTY GAA GCY GGT ATY TC**	
EF2DN97a	**TCA ACR GAY TTR ACY TCA GT**	**520bp**
EF3UP97a	**ATY GGT GGT ATY GGA ACR GT**	
EF3DN97a	**CCA CRC ACA TGG GCT TGC T**	**460bp**