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Catalogue of type specimens of Stick- and Leaf-Insects in the Naturhistorisches Museum Wien (Insecta: Phasmida)
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Abstract

Type specimens of 784 taxa of Phasmida have been located in the Naturhistorisches Museum Wien (NHMW), which is the most important collection in the world for phasmid taxonomy. The species are listed alphabetically, with the number of specimens, sex and locality data, which, excepting very few instances, have never been recorded before. The most important material relates to species described by Brunner von Wattenwyl and Redtenbacher (mainly published in their monograph, between 1906-1908) and the majority of Stäl’s types. There are a number of discrepancies in the literature, relating to the whereabouts of type specimens, which are commented on; in particular, a number of specimens recorded from other museums are only present in the NHMW and data labels invariably refer to the other museum(s) and, in some instances, are known to have been 'loaned' especially for the monograph. Additionally, the known whereabouts of the remaining type series (where applicable) is recorded and, wherever possible, has been personally verified by reference to the collections concerned; Brunner von Wattenwyl exchanged some type material without any reference being made in the literature. Comment is also made on the likely number of synonyms yet to be recorded; a high percentage were identified by Brock (1995, and in press) when undertaking a full review of the phasmid fauna from Peninsular Malaysia and Singapore. Lectotypes are designated for the following species present in NHMW: Marmessoida conspersa Redtenbacher, 1908, a new synonym of Trachythorax atrosisignatus (Brunner, 1893); Eurycnema stenocerca Redtenbacher, 1908 and Abrosoma virescens Redtenbacher, 1906. In addition, lectotypes of twelve species are designated for specimens in MCSN [relating to species where paralectotypes are present in NHMW]: Calvisia aeruginosa Redtenbacher, 1908; Phaeophasma alatum Redtenbacher, 1906; Oreophasma exilis (Brunner, 1907); Autolyca flavolimbata Redtenbacher, 1906; Carausius granulatus Brunner, 1893; Paranevroscia longicollis Redtenbacher, 1908; Paraphasma marginale Redtenbacher, 1906; Dimorphodes miles Redtenbacher, 1908; Parapachymorpha nigra Brunner, 1893; Neopromachus simulator (Brunner, 1907); Lonchodes spectatus Brunner, 1907 and Neopromachus vepres (Brunner, 1907). Acrophylla aliena Redtenbacher is transferred to the genus Ctenomorpha Gray (from Ctenomorphodes Karna). Bacterial redtenbacheri is given as a replacement name for Bacteria innocens Redtenbacher, 1908.

Key Words: Phasmida, new combinations, new name, new synonyms, new lectotypes, replacement name, type species, Brunner von Wattenwyl, Redtenbacher, Stäl, Naturhistorisches Museum Wien.

Zusammenfassung


liche Anzahl der Synonyme kommentiert. Ein hoher Prozentsatz davon wurde von Brock (1995, und in Druck) während der Überprüfung der Phasmidenfauna der malayischen Halbinsel und Singapur festgestellt. Für folgende Arten werden Lectotypen (aus dem NHMW) designiert: Marmessoidea conspersa Redtenbacher, 1908, ein neues Synonym von Trachythora atrosignatus (Brunner, 1893); Eurycnema stenocerca Redtenbacher, 1908 und Abrosoma virescens Redtenbacher, 1906. Zusätzlich werden für zwölf Arten Lectotypen aus dem MCSN designiert: Calvisia aeruginosa Redtenbacher, 1908; Phaeophasma alatum Redtenbacher, 1906; Oreophasma exilis (Brunner, 1907); Autolyca flavolineata Redtenbacher, 1906; Carausius granulatus Brunner, 1893; Paraneocroscia longicollis Redtenbacher, 1908; Parasphasma marginale Redtenbacher, 1906; Dimorphodes miles Redtenbacher, 1908; Parapachymorpha nigra Brunner, 1893; Neopromachus simulator (Brunner, 1907); Lonchodes spectatus Brunner, 1907 und Neopromachus vepres (Brunner, 1907). Acrophylla aliena Redtenbacher wird in die Gattung Ctenomorpha Gray gestellt (von Ctenomorphodes KARNY). Bacteria redtenbacheri wird als Ersatzname für Bacteria innocens Redtenbacher, 1908 eingeführt.

Introduction

The Naturhistorisches Museum Wien (NHMW) collection contains type material of 784 species of Phasmida. These include the majority of Brunner von Wattenwyl & Redtenbacher's type material, mainly described in 1906-1908, 27 [excluding 2 species not traced] of the 50 species described by Stål (1875) and a small number of species described by several other authors. As authors of a monograph on the Phasmida, Brunner von Wattenwyl & Redtenbacher's work is a vital reference point for the taxonomist studying the fauna from all geographical zones and this collection is easily the most important in the world for the phasmid taxonomist.

Until the early 1990's there was little information on the contents of the phasmid collection to assist the specialist; this was helped by the compiling of two (unpublished) listings, as follows:

i) A list of material in alcohol, with data, which was initiated in 1992 by Dr. U. Aspöck, present curator of the Orthoptera collection of the NHMW.

ii) A complete numerical listing of species in the dried collection, which I completed by reference to labelling in the collection. The majority of species are types and the collection runs in sequence with the monograph. Very few specimens have been added to the collection since 1908.

The set specimens are housed in 230 cabinet drawers, with only the last few drawers including unclassified material. However, some species within the main part of the collection, arranged in numerical species order, are only identified to genus, presumably because Brunner von Wattenwyl or Redtenbacher decided not to describe them. There are a number of species preserved in alcohol, many in poor condition.

In older publications it was rare to state how many type specimens were used for the description and much of the information in this catalogue has never been recorded; in particular, precise type localities [rather than just the name of the country] and collectors names, are given.

Acknowledgements

I wish to thank Dr. U. Aspöck and Dr. A.P. Kaltenbach (both NHMW) for kindly allowing access to the collection, dealing with loan requests and providing constructive comments on a draft of the introductory sections of this paper. The Deutsches Entomologisches Institut, Eberswalde, Germany, kindly gave per-
mission for me to use photographs of Brunner von Wattenwyl & Redtenbacher. I would also like to thank the curators of several other museums listed, where I have been allowed full access to collections and literature. Dr. Wolfgang Schawaller (Staatliches Museum für Naturkunde, Stuttgart, Germany) kindly provided information on species omitted from Hennemann & al. (1995) and Mr. O. Zompro (Kiel, Germany) sent notes he had made on the collection in Dresden, relating to type material he was unable to trace, in addition to informing me about likely type specimens on display in the public gallery in Vienna; type material of nine species has now been transferred to the relevant cabinet drawers.

Methods

Neither Brunner von Wattenwyl or Redtenbacher selected any holotypes, nor gave an indication of the number of type specimens; their measurements were most likely recorded at random, as my sampling indicates that it is unlikely all specimens in the type series were measured. It is important to note that where species possess an ovipositor, invariably the length given includes this. I compared data labels of specimens in the collection with the type descriptions.

Many of the data labels refer to the species name or, "det. Brunner von Wattenwyl" or "det. Redtenbacher" The majority of specimens also have a reference number, which may be compared with Brunner von Wattenwyl's inventory list, contained in a large handwritten volume. The inventory list is simple, referring to the collector and locality e.g. Staudinger - Peru. Samples have been made on approximately 100 species (and found to be 100% accurate). In some cases, inventory numbers have not been allocated to specimens e.g. Grubauer, 1902 who collected a number of species from Kuala Kangsar [Perak], Malaysia.

The following example is typical of the handwritten labelling system used in the collection:

_Calvisia punctulata_ **Redtenbacher**, 1908 is the first species of the genus represented in the collection; thus the first and largest label, above the specimens, is "Calvisia Stål" An identification label is present for all species; this is a slightly smaller label immediately beneath the genus label (where applicable). In this example, it is marked "C. punctulata m." ("m" refers to "my collection", as recorded by Brunner von Wattenwyl. However, it is inconsistently used within the collection; i.e. several other new _Calvisia_ species have Redt. [= Redtenbacher] after the species name. Redtenbacher described all the new _Calvisia_ species in 1908). This second label also has a collection reference number - 1148, in the bottom left corner. A third, smaller label [blue] is labelled with the locality - Borneo [note - these locality labels vary in colour, depending on geographical origin i.e. whilst Asian countries have blue labels, African countries have a yellow label, and South American pink]. To illustrate a variation on the labelling for localities: where an Inventory number is held, a number is added to the locality label e.g. collection number 1015 _Aruanoidea inconspicua_ has a [blue] label "20.755 S.Celebes" The Inventory list described above confirms the data label information i.e. S. Celebes, collected by Fruhstorfer. The collection numbers were introduced by Max Beier [a later curator of the collection], probably in the late 1940's or 1950's.

A series of small handwritten data labels are present beneath each pin; typically two or three per specimen; these record 1) the species name and det. [= determined]
"Br.v.W." [= Brunner von Wattenwyl] or "Redt." [= Redtenbacher]; 2) Locality and collector's name (where known) and coll. [= collection] Br.v.W. [note - in some cases, other museum labels are present e.g. "Mus. Paris"]; 3) Inventory number. The first two labels are often white; the Inventory number matches the colour of the locality label above specimen(s). Other labels may have been added later e.g. a lectotype or paralectotype label; the type of label differing according to the author. It is apparent that some authors have not labelled/seen all the type series. In some cases, data labels state "Mus.Caes.Vind." or "Mus.Caes.Vindobon", Latin for Vienna Museum.

The Personalities

**Carl Brunner von Wattenwyl** (1823-1914) (Fig. 1) was born at Bern, Switzerland on June 13, 1823, a member of one of the oldest Swiss families, but early in life changed his home to Vienna, where the remainder of his life was largely spent. He was known as a man of distinction aside from his scientific work, publishing observations on several subjects.

Best known to the orthopterist for major studies such as "Prodromus der Europäischen Orthopteren" (1882) and "Révision du Système des Orthoptères" (1893), Brunner von Wattenwyl's last great monograph was "Die Insektenfamilie der Phasmiden", based largely on his collection in NHMW. Josef Redtenbacher also spent many years of study on Brunner's collection and many species obtained on loan from other Museums. The result is usually seen bound in one volume, but published as follows: Redtenbacher (1906: pp. 1-180, 1908: pp. 339-589) and Brunner von Wattenwyl (1907: pp. 181-338). Subsequent authors have been critical of the omission of many species and even genera, as well as established synonymies and variational data; as a consequence, many species were redescribed. However, the monograph is an essential reference point for anyone interested in phasmid taxonomy.

Bibliographies on Brunner von Wattenwyl give a useful insight into his work and extracts from two of these are quoted, in view of the comments relating to the Orthoptera collection. Burr (1900: 2), writing prior to the phasmid monograph's publication, stated that the collection "is probably the finest in existence; it includes among other noteworthy things, the great majority of Stål's types of the Phasmodea [the remainder are mainly in NHRS, Stockholm]. The great Swedish entomologist based all his work on this group upon the specimens in Brunner's collection, but Brunner himself defies the student to follow out Stål's work in detail without the possession of his types. The fact that Brunner is now engaged in completing a monograph of the Phasmodea is, there-
fore, the more interesting. His vast collections are contained in a great number of cabinets, and very many species are represented also by examples in spirits."

REHN (1915) considered the "Phasmiden" work "comparitively crude and unworthy of comparison with certain of his other papers - a lack of appreciation, or a disregard, of the variations of the forms before him, a tendency which sometimes completely nullified the value of pages of tables on account of the use of variable characters for major divisional criteria. The other tendency noticed is one which, unfortunately, was not peculiar to him. This is a disregard of the work of other authors whose papers may not be within the four walls of the study." However, in recognising the extraordinary studies made by Brunner von Wattenwyl, who was eighty-three years of age when the first section of the phasmid monograph was published, REHN added "Beloved by all who knew him and respected by those who appreciate the gigantic pioneer work he did in a previously little studied branch of knowledge....We shall never see his like again."

Josef Redtenbacher (1856 1926) (Fig. 2) was born at Kirchdorf in Krems, Austria, on 27 March 1856. He studied at the University of Vienna and took up various teaching posts in Natural History, Mathematics and Science. He was fortunate enough to be able to study the Orthoptera under the guidance of Brunner von Wattenwyl and, of course, examine his unrivalled collection in Vienna. A grammar school teacher in Vienna between 1896-1915, Redtenbacher's several publications included important contributions on fossil insects and Orthoptera, which all appeared before publication of the phasmid monograph.

A critical assessment of Brunner & Redtenbacher's monograph was published by KARNY (1923), which referred to quotes from Rehn and Hebard.

Fig. 2: Josef Redtenbacher
List of type specimens

The following is a complete list of phasmid type material known to be in the NHMW collection (up to November 1996). Names are listed alphabetically by species, as originally published, with reference to the author, page number and illustration (where applicable). The data given in the list follows an examination of data labels, with a reference to details in the original publication in the event of a discrepancy. In many cases where a collector's name is mentioned, details were not mentioned in the original publication. I have referred to the collector's name as e.g. "leg. Staudinger" or "leg. Fruhstorfer". In this example, it is likely that some of these specimens originated from Staudinger's & Fruhstorfer's own collections and they did not personally collect material. However, collector's names were rarely recorded on the data labels for specimens originating from either of these two entomologists.

Where the name of a locality has changed, the modern name has been added in square brackets, except in the following instances, where I have used the terms: Malaysia for 'Malacca', Sri Lanka for 'Ceylon', Vietnam for 'Tonkin' and Sabah for 'Borneo', where appropriate e.g. Kina-Balu. Otherwise, 'Borneo' is still used, where no locality is recorded; in such cases, specimens could originate from Kalimantan, Sabah or Sarawak. 'North Borneo' could refer to Sabah or Sarawak. Similarly, North has been used for 'Nord'. Some of Fruhstorfer's specimens do not state the year of collection, believed to be in the late 1800's; these are included in the listings as e.g. XI. - XII., as stated on the data label. If another museum is recorded on the data label, details are given as e.g. "Mus. Paris"; the NHMW collection reference number is given in square brackets at the end of the text on the type specimen(s) in Brunner von Wattenwyl's collection. Finally, where the current valid name for each species is different to the original described name, the current name is given, based on published literature, which has been scanned from my manual record cards and a detailed examination of literature. Manuscript names used by Brunner von Wattenwyl, Redtenbacher, Günther, and Klante have been ignored, as the species descriptions have not been published.

Where applicable, the presence of additional type material in other collections is indicated using codens of Arnett & al. (1993); material in museums marked has been personally examined. During some visits, I may only have recorded partial information from data labels e.g. in Paris, which has mainly been treated as ? within the text, where I could not trace specimens. However, a detailed search of that collection may reveal specimen(s) overlooked:

ANSP* Academy of Natural Sciences, Philadelphia, USA
BMKB Brunei Museum, Kota Baru, Brunei
BMNH* Natural History Museum, London, UK
ETHZ Entomologisches Institut, Eidgenössische Technische Hochschule-Zentrum, Zürich, Switzerland
HNHM Hungarian Natural History Museum, Budapest, Hungary [types destroyed in fire]
ISNB* Institut Royal des Sciences Naturelles de Belgique, Brussels, Belgium
MCSN* Museo Civico di Storia Naturale "Giacomo Doria", Genova, Italy
MHNG* Museum d'Histoire Naturelle, Geneva, Switzerland
MNHN* Museum National d'Histoire Naturelle, Paris, France
MNMS* Museo Nacional de Ciencias Naturales, Madrid, Spain
NHMB Naturhistorisches Museum, Basel, Switzerland
NHRS* Naturhistoriska Riksmuseet, Stockholm, Sweden
NLHD Niedersächsisches Landesmuseum, Hannover, Germany
NZSI National Zoological Collection, Zoological Survey of India, Calcutta, India
OXUM* University Museum, Oxford, UK
RMTO* Museo Regionale di Scienze Naturali, Torino, Italy
SMNS Staatliches Museum für Naturkunde, Stuttgart, Germany
SMTD* Staatliches Museum für Tierkunde, Dresden, Germany
UMBB Übersee-Museum, Bremen, Germany
ZMAS Zoological Museum, Academy of Science, St. Petersburg, Russia
ZMUH Zoologisches Institut und Zoologisches Museum, Universität Hamburg, Hamburg, Germany
ZRC* Zoological Reference Collection, National University of Singapore, Singapore
ZSMC Zoologische Staatssammlung, München, Germany

**aberrans REDTENBACHER, 1906** *Pachyphloea*: 64. Holotype ♀, Ecuador: Baños, leg. R. Haensch S. [67].


**abbreviata REDTENBACHER, 1906** *Xylica*: 30, pl. 3: 3 - 4. Syntype series: ♀, German East Africa "Deutsch O.Afrika": Ukami-Berge, leg. Staudinger [88 mm, well above 75 mm given by author]; ♀, German East Africa, leg. Reiner [75 mm] [16]. ♂ not traced - ♂♂ likely to represent two species.


**acanthonotus REDTENBACHER, 1906** *Phasma*: 122. Syntype series: ♂, ♀, Peru: Guaramaco, leg. Staudinger [193]. Also in Fruhstorfer coll. not traced [unless Redtenbacher should have stated 'Staudinger']. Valid name: *Pseudophasma acanthonotus* (REDTENBACHER).

aculeata Brunner, 1907 [Ocnophila]: 315. Syntype ♂, Ecuador: Paramba, leg. Burr 'Sta. Inez' [627]. Also ♀♀ in MNMS: Ecuador: Coca. HNHM material from South America was destroyed in fire.


adspirans Redtenbacher, 1908 [Asceles]: 499. Syntype ♂, Java: Buitenzorg [Bogor], 1901, leg. Pedaschenko [963]. Also in ZMAS.


agathocles Stål, 1875 [Metriotes]: 100. Syntype series: 2 ♀♀, Australia, leg. Thorey [locality likely to be in error - Stål believed the locality should be "America", in view of related taxa] [232]. Valid name: Metriophasma agathocles (Stål).


albifrons Redtenbacher, 1906 [Autolyca]: 96. Holotype ♂, New Caledonia ?, 1893 [140].

albogeniculata Redtenbacher, 1906 [Anisacantha]: 176. Syntype ♂, Madagascar: Antongil, leg. Mocqueris [Redtenbacher did not refer to any type material in NHMW, or give Antongil as a locality, but this specimen appears to be part of the type series] [273]. Also in MNHN: Madagascar: Maroancetra, St. Marie [?].

albogeniculata Redtenbacher, 1908 [Sipyloidea]: 549. Holotype ♂, Java: Is. Soemba, leg. Staudinger [1086].


albosignata Redtenbacher, 1908 [Calvisia]: 569. Holotype ♂, North Borneo, ex. coll. Fruhstorfer [1159]. [Also doubtfully recorded as Calvisia sangarius (Westwood) 'varieties' from Sarawak, of which there is a ♂, ♀ in OXUM, No. 681 [part]].


alliaceus Stål, 1875 [Rhaphiderus]: 85. Holotype ♂, India, leg. Deyrolle [754].


analis REDTENBACHER, 1908 [Aruanoidea]: 520. Holotype ♂, Java, "Mus. Brussels" [1023]. Valid name: Necroscia analis (REDTENBACHER) [The specimen in ISNB from Java is a ♀, which has not been described].


angustior BRUNNER, 1907 [Clitumnus]: 192. Syntype series: 2 ♂♂, No locality; ♂, Java, leg. Baron Warsberg [321]. [No specimens were traced from 'India', the only locality mentioned by Brunner]. Valid name: Baculum angustior (BRUNNER).

annamensis BRUNNER, 1907 [Cuniculina]: 205. Syntype series: 8 ♀♀, 7 nymphs, Vietnam: Phuc-Son, Annam, XI. - XII., leg. Fruhstorfer [359]. 5 ♀♀, same data in ISNB are likely syntypes [2 ♂♂, which were not described, are also present]. Valid name: Baculum extradentatum (BRUNNER, 1907: 193).


aquatilis Stål, 1875 [Leosthenes]: 102. Holotype ♀, New Caledonia, leg. Boucard [841].

arcuata Redtenbacher, 1908 [Bostra]: 408. Holotype ♀ nymph, Brazil: Espirito Santo, leg. Fruhstorfer [790].


armata Brunner, 1907 [Ocnophila]: 314. Holotype ♀, Brazil: Espirito Santo [625].

armatus Redtenbacher, 1906 [Metriotes]: 139. Syntype ♀, Colombia: Medellin, 6,000 ft., leg. Dämel [229]. Also in SMTD: ♂, Brazil. Valid name: Metriophasma armatus (Redtenbacher).

arrogans Brunner, 1907 [Prosentoria]: 207, pl. 11: 1a-c. Syntype series: 4 ♂♂, 3 ♀♀, Sabah: Kina-Balu, leg. Staudinger [368]. Also in ZMAS.


atrosignata Redtenbacher, 1908 [Ocellata]: 554. Lectotype ♀, Borneo [designated by Bragg, 1993: 38] [1113]. HNHM material was destroyed in fire. Valid name: Orthonecroscia pulcherrima Kirby, 1904: 436.

atrosignata Brunner, 1893 [Calvisia]: 85, pl. 3: 27. Paralectotype series: 3 ♀♀, Nicobar Is., Novara Reise, 1857 1859 & 3 further ♀♀ without meaningful data probably same locality; ♂, ♀, Moluccas, leg. Deyrolle; ♀, Key Tual, leg. Ronde, ex. coll. Fruhstorfer; ♀, Sumatra, 1889, Dr. Moörh; ♂, ♀, Burma: Bhamō [991]; ♂, Thailand: Bangkok, 1882, "Mus. Paris" [alcohol coll. 038/7]. Lectotype ♀ in MCSN: Burma: Meetan, Tenasserim, IV.1887, leg. L. Fea [designated by Brock in press]; paralectotype ♂, same data. Further specimens in ISNB are possible paralectotypes. [Note - the type description only referred to Burma: Bhamō, Meetan & Sumatra, but all the above appear to be part of type series]. Valid name: Trachythorax atrosignatus (Brunner).

attenuata Pantel, 1890 [Leptynia]: 402, pl. 4: 20, 21, 23-27. Syntype series: ♂, ♀, possibility of several specimens [429]. Also in MNMS: 7 syntypes in all, ♂♂ & ♀♀ from Portugal: San Fiel & Spain: Talavera; Urda & Cepeda; and in MNHN.

atticus Brunner, 1882 [Bacillus]: 75. Syntype series: ♀♀, possibility of several specimens from Greece: Athens [24].


auriculatus Redtenbacher, 1906 [Batycharax]: 31. Syntype series: 3 ♂♂, ♀, Cameroons: Mundame, leg. Rhode [19]. [Other examples from Ebner collection and det. Holdhaus, are not type material]. Also in MNHN: ♀, Congo: Mayumba. HNHM material was destroyed in fire. Valid name: Batycharax auriculatus (Redtenbacher).

australis Redtenbacher, 1908 [Parasosibia]: 482. Holotype ♀, Australia: Lord Howe Island, leg. Stevens [893].

australicus Brunner, 1907 [Carausius]: 273. Syntype series: 2 ♀♀, Australia: Rockhampton, leg. Thorey [519]. Also in ZMUH: 3 ♀♀, same data.


bellangeri Redtenbacher, 1908 [Bacteria]: 420. Holotype ♂, Martinique, leg. V. Bellanger, "Mus. Paris" [819]. Not traced in MNHN [specimen believed to have been retained in NHMW].
bellicosus Redtendarcher, 1908 [Dimorphodes]: 365. Syntype series: 2 \( \delta \delta \), Celebes: Pic von Bouthain, leg. Sarasin [728]. Valid name: Dimorphodes prostasis sarasini (Redtendarcher), see Günther (1934: 88).


biaculeata Redtendarcher, 1908 [Sosibia]: 535. Holotype \( \delta \), Sri Lanka: N. Eliya, leg. Dr. Sarasin [1067].

biceps Redtendarcher, 1908 [Pharnacia]: 451. Syntype series: 3 \( \delta \delta \), Java: Malang, leg. Staudinger; \( \delta \), Java: Soetabaia, leg. Fruhstorfer; 6 \( \varphi \varphi \), Java, leg. Dr. Dohrn; 2 nymphs, Java: Tengger-Geb, leg. Fruhstorfer [861]. Also in SMNS: \( \varphi \), India: Assam; MNHN: \( \delta \), \( \varphi \), Vietnam; and from Java: ZMUH: \( \varphi \), Mt. Tengger; MNHN; ZMHB: \( \varphi \), Java; 2 further \( \varphi \varphi \), Java & nymph are also possibly part of the type series; ZMAS; MHNG: \( \delta \), Java: Soekaboemi, leg. M. E. Walsh; \( \delta \), Java: Passeroean; 2 \( \varphi \varphi \), Java. HNHM material was destroyed in fire.

bicolor Brunner, 1907 [Dixippus]: 279. Syntype \( \delta \), North Borneo, leg. Alverett, ex. coll. Fruhstorfer [541]. Also in ANSP: \( \delta \), North Borneo, leg. Waterstradt. Valid name: Carausius bicolor (Brunner).

bicolor Brunner, 1907 [Lonchodes]: 259. Syntype series: 2 \( \delta \delta \), 2 \( \varphi \varphi \), & nymph, Formosa: Takoa, leg. Sauter; \( \delta \), Formosa: Regenzeit, leg. Fruhstorfer; \( \varphi \), China: Kiang-si, 1869, leg. A. David, "Mus. Paris" [484]. Valid name: Phraortes bicolor (Brunner).

bicorne Redtendarcher, 1906 [Euphasma]: 126. Syntype \( \varphi \), Locality not recorded, "Mus. Dresden" [208]. Also in ZMHB; and in SMTD: \( \delta \), \( \varphi \), "Amer. Mer" [Colombia according to Redtendarcher].


bifida Redtendarcher, 1908 [Bostra]: 412. Holotype \( \varphi \), Venezuela, leg. Staudinger [798].


bifrons Stål, 1875 [Dyme]: 77. Syntype series: 4 \( \delta \delta \), \( \varphi \), Peru, leg. Staudinger; \( \delta \), Peru: Cumbase, leg. Staudinger [639]. Valid name: Bacteria bifrons (Stål).


bistriolata REDTENBACHER, 1908 [Sipyloidea]: 547. Syntype series: 2 ♂♂, 2 ♀♀, Sri Lanka: Kandy, leg. Burr; ♂, Malaysia: Penang [misidentified; det. as Sipyloidea meneptolemus (WESTWOOD, 1859: 141) see BROCK (1995: 92)] [1095]. [Redtenbacher only described the ♀ and only recorded specimen(s) from Penang (a ♂, not ♀) in NHMW. It is therefore unclear whether Burr’s specimens are part of the type series]. Also in MNHN: Sri Lanka: Kandy.

bisulca REDTENBACHER, 1908 [Sosibia]: 537. Holotype ♀, Borneo: Labuan, leg. Schlisther [1070].


brasiliensis BRUNNER, 1907 [Dyme]: 322. Holotype ♂, Brazil, leg. Fruhstorfer [643]. Valid name: Bacteria brasiliensis (BRUNNER).

breitensteini REDTENBACHER, 1906 [Dares]: 55. Syntype series: 2 ♂♂, 2 ♀♀, Borneo [58]. [Designation of lectotype believed to be in press].


brevipennis REDTENBACHER, 1908 [Sipyloidea]: 550, pl. 27: 1. Syntype ♀, Borneo: Balabac, leg. Staudinger [1091]. [♂ & ♀ specimen(s) from Philippines not traced in alcohol coll.]

brevipennis REDTENBACHER, 1908 [Xeroderus]: 359. Holotype ♀, Solomon Is., Isabel Is., Albatros, 15.II.1897 [721].

brevipes REDTENBACHER, 1908 [Asystata]: 533. Holotype ♀, North Borneo, leg. Fruhstorfer [1058].

brevipes REDTENBACHER, 1906 [Isagoras]: 134, pl. 5: 7. Syntype series: 2 ♀♀, Brazil: Espirito Santo, leg. Fruhstorfer [216].

brevipes REDTENBACHER, 1908 [Stephanacris]: 441, pl. 21: 4 a-b. Syntype series: 3 ♂♂, 2 ♀♀, New Guinea: Sattelberg, Huon Gulf, 1899, leg. Biró; ♀, New Guinea: Sattelberg, leg. Staudinger:[847]. Also in ZMUH: ♂, New Guinea: Sattelberg. HNHM material was destroyed in fire, although eggs "Mus. Budapest" are present in NHMW.


brocki Hausleithner, 1987 [Calynda]: 178. Holotype ♂, Costa Rica. Paratype series: 2 ♂♂, 3 ♀♀, same data [no ref. number allocated].


brunneri Stål, 1875 [Neanthes]: 90. Holotype ♀, New Caledonia, leg. Deyrolle [710]. [♂, described by Brünner (1907: 349) also present]. Valid name: Asprenas brunnieri (Stål).


camposi Hebard, 1924 [Libethra]: 143. Paratype ♂, Ecuador, leg. F. Campos Ribadeneira [612]. In ANSP: Holotype ♂, Ecuador: Tambillo, Pichincha, 9186 ft., leg. F. Campos Ribadeneira; and paratypes with same data: 3 ♂♂, ♀♀.


**caudatum Redtenbacher, 1906** [Phyllium]: 177. Syntype φ, New Guinea, 1899, leg. Biró [299]. HNHM material was destroyed in fire.


**cercata Redtenbacher, 1908** [Parasipyloidea]: 479. Holotype φ, Australia: Sydney, leg. Dämel [896].

**cervinum Redtenbacher, 1906** [Parectatosoma]: 166. Syntype φ nymph, Madagascar: Sakavalana [278]. [Redtenbacher did not refer to specimen(s) in NHMW, but this specimen is from the type locality and appears to form part of the type series]. Also in MNHN [?].


**chilensis Redtenbacher, 1908** [Clonistria]: 406. Holotype φ & nymph, Chile, leg. Dr. Baden [787].


**chinensis Brunner, 1907** [Lonchodes]: 259. Syntype series: φ, China: Kiang-si, 1869, leg. A. David, "Mus. Paris"; φ, Formosa: Regenzeit, leg. Fruhstorfer; φ, Formosa, [18]92, leg. F. Hirth [485]. [not mentioned from Formosa by Brunner and no reference made to specimens in NHMW. However, these specimens appear to form part of the type series]. Also in MNHN: 3 φφ, China: Kiang-si, 1869, leg. A. David.


**circe Redtenbacher, 1908** [Canachus]: 347. Syntype φ, Singapore, 1893, "Weltreise Erzh. Franz Ferd" [704]. Recorded as Singapore [?] [reference to a 'false label' is indicated on a curator's label i.e. the locality is believed to be in error]. Also in MHNG: φ, New Caledonia.

**cirsum Redtenbacher, 1906** [Mirophasma]: 64. Syntype φ, Colombia, leg. Steinheil [68]. Not traced in ZMHB.

**clarissima Redtenbacher, 1908** [Calvisia]: 568. Lectotype φ, Malaysia: Kuala Kangsar, (Perak), 1902, leg. Grubauer [designated by Brock (1995: 88) in view of
doubt over type material] [1150]. Also in collection: ♀, Malaysia: (Kelantan), leg. Rolle, probably not part of type series and a misidentified specimen with a label _punctulata_.


**clavigera REDTENBACHER, 1908 [Bacteria]:** 415. Syntype ♂, locality not known. leg. Lefebure, "Mus. Paris" [799]. Also in MNHN: Guyana [?].


**commutata REDTENBACHER, 1908 [Calvisia]:** 568. Holotype ♂, Malaysia: Kuala Kangsar, (Perak), 1902, leg. Grubauer [1164]. [Redtenbacher also linked this species with the ♂ paralectotype of _Calvisia sangarius_]. Valid name: _Calvisia sangarius_ (WESTWOOD, 1859: 155).

**compacta REDTENBACHER, 1908 [Necroscia]:** 562. Syntype series: 2 ♂♂, Java: Mt. Gede, 4,000 ft., 1896, leg. Fruhstorfer; 2 ♂♂, Java, leg. Fruhstorfer; 7 ♂♂, 3 ♀♀, Sumatra, leg. Plason; 3 ♂♂, 5 ♀♀, Sumatra; ♂, Sumatra, leg. Rolle [1140]. [Specimens from Java appear to be part of the type series, even though Redtenbacher did not refer to this locality. No specimens were traced from North Borneo]. HNHM material was destroyed in fire. Valid name: _Nescicroa compacta_ (REDTENBACHER).

**concolor REDTENBACHER, 1906 [Orobia]:** 71. Syntype ♂, Madagascar, leg. Deyrolle [79]. Also in MNHN: several ♂♂, ♀♀, Madagascar e.g: Bourbon. Valid name: _Leiophasma concolor_ (REDTENBACHER).


**confusa BRUNNER, 1907 [Libethra]:** 308. Syntype ♀, Guatemala, leg. Dr. Candeza [614]. Also in MCSN - not traced.

**conspersa Redtenbacher, 1908** [Calвисia]: 568, pl. 27: 7. Syntype series: 2 ♀♀, Sabah: Kina-Balu, leg. Staudinger [1157].

**conspersa Redtenbacher, 1908** [Marmessoidea]: 515. Lectotype ♂, India: Nicobar, Novara, 1857 – 1859, leg. Reise, here designated [length - 52 mm]. Paralectotype ♂, same data [1002]. [note - this is the same species included in the type series of *Trachythorax atrosignatus* (Brunner), 1893] syn.n.


**cornucervi Brunner, 1907** [Phenacephorus]: 292. Holotype ♀, Sabah: Kina-Balu, leg. Staudinger [573].

**cornuta Brunner, 1907** [Ocnophila]: 314. Syntype series: ♀, Brazil: Espirito Santo, leg. Fruhstorfer; ♀, Brazil: Minas Geraês, leg. Fruhstorfer [626].

**coronata Redtenbacher, 1908** [Eurycantha]: 344. Holotype ♀, British New Guinea, leg. Fruhstorfer [701].


**crassespinosa Brunner, 1907** [Libethra]: 307. Syntype series: ♂, ♀, small nymph, Colombia, leg. Steinheil [611].

**cristata Brunner, 1907** [Gratidia]: 227. Holotype ♀, South Africa, leg. Dr. Penther [& 2 nymphs] [420].
cristatus Brunner, 1907 [Carausius]: 270. Syntype series: 2 ♀♀, Sabah: Kina-Balu, leg. Staudinger; ♀, Brunei, leg. Staudinger [514].
cristatus Redtenbacher, 1906 [Ceroys]: 60, pl. 1: 21 22. Syntype series: δ, ♀, Brazil, "Mus. Berlin" [63].
debilis Redtenbacher, 1906 [Xera]: 146. Syntype series: 5 δ♂, 4 ♀♀, Venezuela: Merida, leg. Boucard; δ, 2 ♀♀, Locality not known, "Mus. Dresden" [242]. Not traced in ZMHB: Colombia. HNHM material was destroyed in fire, but δ, ♀, Venezuela: Briceno, Merida "ex. Mus. Hung." are in MHNG.
debilitata Redtenbacher, 1908 [Sipyloidea]: 549. Holotype δ, Australia: Cooktown, leg. Staudinger [1087].
decolyanus Brunner, 1907 [Lonchodes]: 260. Syntype series: 2 δ♂, India: Kurseong, ex. coll. Pantel [496]. [Not mentioned in NHMW by Brunner, possibly specimen retained, or obtained at a later date]. Also in MNHN: 3 δ♂, 2 ♀♀, same data.
dentata Stål, 1875 [Anisomorpha]: 95. Holotype ♀, Brazil: Santa Catharina, leg. Puls [131].
dentata Redtenbacher, 1908 [Diardia]: 487. Holotype δ, W.Java: Sukabuni, leg. Fruhstorfer [926].
dentata Stål, 1875 [Macella]: 70. Holotype δ, Cochinchina, leg. Deyrolle [436].
denticornis Stål, 1875 [Entoria]: 72. Holotype ♀, Philippines, leg. Thorey [370].


difformis Redtenbacher, 1906 [Anisacantha]: 163, pl. 6: 6-7. Syntype series: 14 ♂♂, 12 ♀♀ (including several nymphs), Madagascar: Antongil, leg. Mocqueris [271]. Also in MNHN - coll. Finot; and in ZMUH: 3 ♂♂, ♀, same data.

dilutevenosa Redtenbacher, 1908 [Necroscia]: 559. Holotype ♂, Borneo [1124]. Valid name: Nescicroa dilutevenosa (Redtenbacher).


discolor Redtenbacher, 1906 [Abrosoma]: 84, pl. 4: 5 - 6. Syntype series: ♂, Java, leg. Dr. Dohrn; 3 ♂♂, 2 ♀♀, Java: Pengalengan, 4,000 ft., 1893, leg. Fr. Dahl; 2 ♂♂, ♀, West Java: Sukabuni, leg. Fr. Dahl; ♂, 4 ♀♀, Java, leg. Fr. Dahl [112]. Also in ISNB: 7 specimens: Java: Pengalengan, 4,000 ft., 1893, leg. Fr. Dahl; MNHN: 2 ♂♂, ♀, Java: Pengalengan, 4,000 ft., 1893, leg. Fr. Dahl; ♂, ♀, Java:
Volcan Gede; ZMHB: 2 ♂♂, Java: Pengalengan, 4,000 ft., 1893, leg. Fruhstorfer; and in in coll. Staudinger from Sabah: Kina-Balu - not traced. [Designation of lectotype believed to be in press].


**divergens** REDTNBACHER, 1908 [Diardia]: 485. Syntype ♂, Key Is., leg. S. Semper [936]. Also in ZMHB. Valid name: *Leprocaulinus vipera praestantior* (BRUNNER, 1907), see GUNTHER (1934: 83).


**doleschali** REDTNBACHER, 1908 [Sipyloidea]: 547. Syntype series: 2 ♂♂, Amboina, 1859, leg. Dr. Doleschal [1100]. Also in MNMS: Obi.


**dolorosa** REDTNBACHER, 1908 [Sipyloidea]: 547. Syntype series: 4 ♂♂, 4 ♀♀, Java: Tengger-Geb.; 2 ♂♂, Java; ♂, New Guinea: Key Is., leg. H. Kühne; ♀, Missol., leg. H. Hübn [1096]. 2 specimens from Java, leg. Fruhstorfer in ISNB are likely to be syntypes. HNHM material from Java was destroyed in fire.

**dorsalis** REDTNBACHER, 1908 [Asceles]: 501. Holotype ♀, Sabah: Kina-Balu, leg. Staudinger [971].

**dorsuaria** STÅL, 1875 [Bostra]: 79. Syntype series: 2 ♂♂, Panama: Chiriqui, leg. Staudinger [789].


elongatus REDTENBACHER, 1908 [Asceles]: 500. Holotype ♂, India, 1866 [967].


erinaceus REDTENBACHER, 1906 [Acanthoclonia]: 62. Syntype: ♀, Colombia: Medellin, 6000 ft., leg. Dämel. [Type locality only recorded as "Antioquia", but specimen believed to be part of type series]; ♀, Colombia, leg. Staudinger [65]. Also in ZMHB: ♀, Colombia: Antioquia, leg. Wallis.

erosus REDTENBACHER, 1906 [Chitoniscus]: 179. Syntype ♀, New Caledonia, leg. Deyrolle [302]. Also in MNHN: New Guinea. HNHM material was destroyed in fire.


extradentatus BRUNNER, 1907 [Clitumnus]: 193. Syntype series: 12 ♂♂, Vietnam: Annam, Phuc-Son, XI. - XII., leg. Fruhstorfer; only 5 specimens properly labelled, but all appear to be part of type series [329]. Valid name: Baculum extradentatum (BRUNNER).


**fasciata Redtenbacher, 1906** [Anisomorpha]: 91. Syntype series: 2 ♂♂, Bolivia: Chacao, leg. Staudinger; ♀, Bolivia, leg. Staudinger [125].

**fasciata Redtenbacher, 1908** [Aruanoidea]: 525. Holotype ♀, Java: Mt. Gede, 4,000 ft., 1896, leg. Fruhstorfer [1031]. Valid name: *Necroscia fasciata* (Redtenbacher).


**femoratus Stål, 1875** [Asprenas]: 89. Holotype ♂, New Caledonia, leg. Boucard [709].

**ferruginea Redtenbacher, 1908** [Calvisia]: 569. Syntype series: 2 ♀♀, North Borneo, ex. coll. Fruhstorfer; 2 ♀♀, Borneo, leg. Boucard [1156]. Also in ISNB: 2 ♀♀, North Borneo, leg. Fruhstorfer; and in ZMAS.

**festinatum Brock & Seow-Choen, 1995** [Abrosoma]: 22 [new name for *Perisceles modestus* Redtenbacher, 1908: 481 and redescription]. Holotype ♀, Malaysia: (Perak), leg. Jachau [909].

**fiebrigi Brunner, 1907** [Calynda]: 329. Holotype ♀ nymph, Paraguay: San Bernardino, leg. Staudinger [670]. [The collection also includes an adult later identified as this species].

**filiformis Redtenbacher, 1908** [Sipyloidea]: 548. Syntype ♂, Australia: Port Curtis, (Queensland), leg. Dämel [1104]. Also in ZMUH: ♂, ♀, Australia: Gayndah, (Queensland).


finoti REDTENBACHER, 1906 [Cirsia]: 22, pl. 2: 7. Syntype φ, Madagascar: Sikora [3]. Also in MNHN [?].


flavicorne REDTENBACHER, 1906 [Phasma]: 119. Syntype series: 9, Brazil: Espirito Santo, leg. Fruhstorfer; 9, Brazil ?, leg. Schmidt [182]. Also in ZMHB: Brazil: Bahia; and in ZMUH δ, φ, Brazil: Espirito Santo. Valid name: Pseudophasma flavicorne (REDTENBACHER).


foliata REDTENBACHER, 1908 [Bacteria]: 418. Holotype φ, Mexico [alcohol coll. 028/14].


foliculatus REDTENBACHER, 1906 [Paraprisopus]: 156. Holotype φ, Ecuador: Guayaquil, 1855, leg. Iva Pfeiffer [260].


frontalis REDTENBACHER, 1908 [Necrocia]: 559. Syntype series: 2 ♂♀, Amboina, 1859, leg. Dr. Doleschal; ♀, Amboina; ♂, Indonesia: Is. Buru, leg. H. Kühne [Although only "Amboina" mentioned] [1127]. Also in ZMHB: Amboina; and in SMTD: ♀, Java, leg. Schiczb; ♀, No locality. Valid name: Nescicroa frontalis (REDTENBACHER).


frustans REDTENBACHER, 1908 [Bacteria]: 421. Holotype ♀, Mexico: Colima [817].

frustans BRUNNER, 1907 [Cuniculina]: 200. Holotype ♀, India: Mercara, "Mus. Stuttgart" [342]. [Brunner recorded the locality as "? India" Not traced in SMNS and specimen believed to have been retained in NHMW]. Valid name: Baculum frustans (BRUNNER).


**furcata Brunner, 1907 [Diapheromera]**: 338. Syntype ♂, Mexico: Venta de Zopilote, Guerrero, 2,800 ft., VI., leg. H.H. Smith [690]. [Brunner did not refer to a specimen in NHMW]. Also in BMNH: 2 ♂♂, ♀, same locality [The smaller ♂ is clearly of a different species, but Brunner has included it in the description i.e. ranging in size 56 - 106 mm].


**fusca Redtenbacher, 1908 [Paradiacantha]**: 506. Holotype ♂, North Borneo, leg. Fruhstorfer [990].


**fuscoalata Redtenbacher, 1908 [Calvisia]**: 561. Holotype ♂, India: Sikkim [1153].


**giganteum Hausleithner, 1984 [Phyllium]**: 39. Holotype ♀, Malaysia: Cameron Highlands [probably the Tapah Hills (Perak)]. Paratype series: 2 ♀♀, 2 ♀ nymphs, same data [no ref. number allocated].


**gracillimus Werner, 1934 [Asceles]**: 3. Holotype ♂, Sumatra [961].

**gracilitarsis Redtenbacher, 1908 [Diardia]**: 487. Holotype ♂, Sumatra: Mt. Battak, leg. Fruhstorfer [929].


**granulosum Redtenbacher, 1906 [Neophasma]**: 125. Holotype ♂, Peru: Marcapata, leg. Staudinger [203].

**granulosus Redtenbacher, 1908 [Lamachus]**: 483. Syntype ♀, Philippines: Mindanao, Dapitan [939]. Also in SMTD: 2 ♀♀, same data.


**grubaueri Redtenbacher, 1908 [Nearchus]**: 448. Holotype ♀, Malaysia: Kuala Kangsar, (Perak), 1902, leg. Grubauer [857].

**guadeloupensis Redtenbacher, 1908 [Clonistria]**: 404. Syntype ♂, Guadeloupe, leg. Steinheil [784]. Also in SMNS: 2 ♂♂, 3 nymphs, Guatemala; and in MHNG: 2 ♀♀, Guadeloupe, leg. Saussure.

**haemorrhoidalis Redtenbacher, 1908 [Marmessoidea]**: 514. Holotype ♂, Vietnam: Mt. Mauson, IV. V., 2,000 3,000 ft., leg. Fruhstorfer [1004]. [Note 3 ♂♂ in ISNB from Than-Moi, do not appear to be part of a type series].


herwaardeni HENNEMANN, GEHLER & CONLE, 1996 [Phaenopharos]: 153. Paratypes: 2 ♂♂, 2 ♀♀, Thailand, culture stock, V.1995 [1170]. Holotype ♂ in ZMHB: Thailand, ex. A. Gehler; paratypes in ZMHB: 2 ♂♂, 3 ♀♀; ZMUH: 2 ♂♂, 2 ♀♀; NLHD: 2 ♂♂, 2 ♀♀; SMNS: 2 ♂♂, 2 ♀♀; and in private collections.


honestus REDTENBACHER, 1908 [Oxyartes]: 475. Holotype ♀, Vietnam: Mt. Mauson, 2,000 - 3,000 ft., IV. - V., leg. Fruhstorfer [913]. [The collection also includes 4 ♂♂].

horni REDTENBACHER, 1908 [Asceles]: 496. Holotype ♀, Malaysia [949]. Valid name: Presbistus horni (Redtenbacher).

horni REDTENBACHER, 1908 [Bacteria]: 419. Syntype series: ♂, ♀ nymph, Mexico, leg. Procoppi; ♀ nymph, Mexico: San Geronimo, leg. Horn [809]. Also in coll. Horn - not traced. HNHM material was destroyed in fire.


imitator BRUNNER, 1907 [Dixippus]: 279, pl. 12: 7a - b. Syntype series: 3 ♂♂, 2 ♀♀, Sabah: Kina-Balu, leg. Staudinger; ♂, Borneo, leg. Boucard; ♂, Borneo, leg. Frivaldsky [540]; No locality, leg. Thorey [alcohol coll. 024/06]. [Designation of lectotype believed to be in press]. Valid name: Carausius imitator (Brunner).


**imperialis Redtenbacher, 1906 [Eucles]:** 101. Syntype series: 2 ♀♀, Peru: Iquitos, leg. Staudinger [148]. [♂ not traced. Redtenbacher also recorded this species from Colombia].


**impigra Brunner, 1907 [Cuniculina]:** 204. Syntype series: 3 ♀♀, Vietnam: Than-Moi, leg. Fruhstorfer [357]. Also in MNHN: 2 ♀♀; 8 specimens, same data, in ISNB are possible syntypes. Valid name: Baculum impigrum (Brunner).


**incerta Redtenbacher, 1908 [Parasosibia]:** 482. Holotype ♂, Sri Lanka ?, "Mus. Budapest" [892]. ["coll.m, Mus. Budapest" appears to relate to the specimen retained in NHMW].

**incertus Brunner, 1907 [Dixippus]:** 280. Syntype series: ♂, ♀, Malaysia [?], leg. Schneider [537]. [unlikely to originate from Peninsular Malaysia]. Valid name: Carausius incertus (Brunner).


inermis Redtenbacher, 1906 [Canuleius]: 68, pl. 2: 1-2. Syntype series: 2 ♂♂, 2 ♀♀, ♀ nymph, Brazil: Espirito Santo, leg. Fruhstorfer [also ♂ winged nymph, clearly not belonging to this species]; 2 ♂♂, Brazil: Theresopolis, leg. Michaelis; ♀ nymph, Brazil: Espirito Santo, leg. Michaelis [74]. Also in ZMUH: ♂, ♀, Brazil: Theresopolis; ♂, 3 ♀♀, nymph, Brazil: Espirito Santo; and in ZMHB not traced. Valid name: Acanthoderus inermis (REDTENBACHER).


inferior Redtenbacher, 1908 [Parasosibia]: 482. Holotype ♀, India: Trichinopoly, leg. Pantel [891].


infrequans Brunner, 1907 [Lonchodes]: 261. Syntype series: ♂, Borneo, leg. Grabowsky; ♂, Borneo [499].


innocens Redtenbacher, 1908 [Bacteria]: 420. Holotype ♂, Peru: Callanga, leg. Staudinger [815]. Valid name: Bacteria redtenbacheri nom.n. (see that entry).


localities did not refer to Malaysia, but specimens appear to be part of type series].
Valid name: *Asceles larunda* (Westwood, 1859: 140).


*integra* Redtenbacher, 1908 [Bacteria]: 421. Holotype ♀, Trinidad, leg. Boucard [811].


*interruptelineatus* Brunner, 1907 [Clitarchus]: 236, pl. 10: 4a ♂, 2 ♀♀, New Zealand [445]. Also in ZMUH: ♂, New Zealand: Great Barrier Island; and in ZMHB: 2 ♀♀, New Zealand, leg. Finsch. [Although Brunner did not refer to material in ZMHB, they are amongst specimens identified prior to publication of the monograph]. Valid name: *Clitarchus hookeri* (White, 1846: 24).


*involutecercata* Redtenbacher, 1908 [Aruanoidea]: 523. Holotype ♂, Brunei, leg. Staudinger [1012].


*irregularis* Brunner, 1907 [Bactricia]: 330. Holotype ♀, Cape of Good Hope "Cap d.g.h.", leg. Thorey [673].

irregularis Redtenbacher, 1906 [Pseudooleosthenes]: 160. Holotype ♀, Madagascar: Isaka, "Mus. Paris" [266]. Not traced in MNHN, type specimen appears to have been retained in NHMW.

irregulariterlobatus Brunner, 1907 [Carausius]: 273. Syntype series: 2 ♀♀, Java, leg. Staudinger; ♀, Java: Plasun, 1872 [520]. Also in ETHZ - coll. Schulthess: Java: Tjibodab; a ♀, Java, leg. Fruhstorfer in ISNB is a likely syntype.

jamaicana Redtenbacher, 1906 [Anisomorpha]: 94. Syntype series: 3 ♀♀, Jamaica, leg. Burr [132]. [Likely to be part of type series. Only listed from ISNB, which has a ♂, Jamaica. Both sexes were described, indicating that NHMW specimens are part of type series].


kaiman Redtenbacher, 1908 [Trapezaspis]: 348, pl. 16: 5. Syntype series: ♂, ♀, New Guinea, leg. Stroll [707]. HNHM material was destroyed in fire.

kaupii Stål, 1875 [Myronides]: 63. ? Holotype ♂, Moluccas, leg. Depuiset [96 mm] [479]. [The description is of an 83 mm specimen; as Stål's measurements are otherwise 100% accurate, it is uncertain whether this is the type specimen].


lacteipennis Redtenbacher, 1906 [Brizoides]: 113. Lectotype ♂, Alto-Amazonas, leg. Staudinger [designated by Shelford, 1908: 372, sex not recorded];


laetissima REDTENBACHER, 1908 [Ocellata]: 555. Syntype ♂, Brunei, leg. Staudinger [1120]. HNHM material from Java was destroyed in fire. Valid name: Orthonecroscia laetissima (REDTENBACHER).

laevicollis REDTENBACHER, 1908 [Diapherodes]: 435. Holotype ♂, Jamaica, leg. Staudinger [839].


laevis REDTENBACHER, 1908 [Lamarchodes]: 482. Holotype ♂, Cochinchna, 1861, leg. Deyrolle, "Mus. Paris" [902]. Not traced in MNHN, specimen believed to have been retained in NHMW.


linearis REDTENBACHER, 1908 [Sipyloidea]: 544. Syntype ♀, Sabah: Kina-Balu, leg. Staudinger [1080]. Also in ZMAS; and in MNMS.


lobipes Redtenbacher, 1906 [Chitoniscus]: 178, pl. 6: 15. Holotype ♀, Fiji Is.: Viti, "ex Mus. Lübeck" [300].


longipes Brunner, 1907 [Clitarchus]: 236. ♂, ♀ nymph, ♀, Australia: Port Denison, (Western Australia), leg. H. Weyers; ♀, Western Australia, leg. Deyrolle [445].


lurida Redtenbacher, 1906 [Anisomorpha]: 93. Syntype series: 3 ♀♀, Paraguay; ♀, Paraguay: S.Bernardino, leg. Dr. Jordan [also an undescribed ♂] [134]. [NHMW types said to be from Brazil, presumably in error]. Also in ZMUH: ♀, Paraguay missing. HNHM material was destroyed in fire

lyratus Redtenbacher, 1908 [Anarchodes]: 493. Holotype ♂, Borneo [980].


macerrimus Brunner, 1907 [Carausius]: 275. Holotype ♂, Australia: Cooktown, (Queensland), leg. Staudinger [526].


magistralis Redtenbacher, 1908 [Neocles]: 505. Lectotype ♀, West Sumatra: Padang Pandjang, leg. H. Rolle [designated by BROCK (1995: 91)] [985]. Also in


**magnus Brunner, 1907 [Clitumnus]:** 190. Syntype ♂ & ♀ nymph, India: Silhet, leg. Deyrolle [311]. [No specimen(s) were traced from "Moluccas"]. Also in MNHN coll. Pantel: Java. Valid name: *Baculum magnum* (BRUNNER).


**marginale REDTENBACHER, 1906 [Paraphasma]:** 115. Paralectotype series: 3 ♂♂, 3 ♀♀, Paraguay; ♂, ♀, Paraguay: Pto 14 de Mayo, I. 1897, leg. G. Boggianni, "Mus. Genova"; 2 ♂♂, ♀, Paraguay: S.Bernardino, leg. Fieburg; ♀, Paraguay, leg. Dr. Jordan; ♂, Brazil: St. Paul, leg. Staudinger; ♀, Brazil, leg. Fruhstorfer; ♂, Brazil: Cuyaba, Matto Grosso, leg. Staudinger; 3 ♂♂, Brazil: Iatahy, Pr. Goyaz, Ch. Pujol; ♀ no locality, leg. Fischer; 2 ♂♂, ♀, Brazil: Bahia, leg. Sommer; 2 ♂♂, Brazil: Bahia, 1820, leg. Kammerlacher [175]. Also in numerous other collections. From Brazil: SMTD - not traced; SMNS; MNHN; ZMAS; ZMUH and HNHM - destroyed in fire. From Paraguay: ZMUH; MNMS; MNS (see below) and HNHM - destroyed in fire. **Lectotype ♂** in MNS is from Paraguay, Puerto 14 de Mayo, I.1897, leg. G. Boggianni, here designated. Paralectotypes in MCSN: ♂, 2 ♀♀, same data.

**marginata REDTENBACHER, 1908 [Diacanthoidea]:** 532, pl. 26: 6. Syntype series: 3 ♂♂, 4 ♀♀, Borneo, leg. Grabowsky [1056]. [No specimen(s) from Java traced]. Also in ISNB: 2 ♂♂, North Borneo, leg. Alverett, ex coll. Fruhstorfer; and in MNHN: Borneo [?].

**marginatus REDTENBACHER, 1906 [Presbistus]:** 81. Syntype series: ♂, 2 ♀♀, Sabah: Kina-Balu, leg. Staudinger [104]. Also in MNMS; MNHN: ♂, Borneo: Lohiban, leg. R. Oberthur; and in ZMUH: ♀, Sabah: Kina-Balu. [Designation of lectotype believed to be in press].


maximum Redtenbacher, 1908 [Bactridium]: 401. Holotype ♀, Brazil, leg. Fruhstorfer [778]. [Description states type locality is "Bahia"]. Valid name: Cladoxerus maximus (Redtenbacher).

maxwelli Redtenbacher, 1908 [Bacteria]: 420. Syntype series: 3 ♂♂, 2 ♀♀, Martinique, leg. Maxwell Lefroy [813]. [Not recorded in NHMW]. Also in MNHN: ♂, same data.


medorina Redtenbacher, 1908 [Calvisia]: 572. Syntype series: ♂, ♀, Borneo, leg. Grabowsky [1163]. Also in ZMHB: Borneo.


michaelis Redtenbacher, 1908 [Phibalosoma]: 427. Holotype ♀, Brazil: Bahia, ex. coll. Sommer [831].

michaelis Redtenbacher, 1906 [Xerosoma]: 145. Syntype ♀, Brazil: Espirito Santo, leg. Fruhstorfer [241] [Not recorded by Redtenbacher in NHMW]. Also ♀ in ZMUH.


monilicornis Redtenbacher, 1906 [Dajaca]: 162. Lectotype ♀, Borneo, leg. Bormans [designated by Hennemann et al, 1996: 330] [270]. HNHM material was destroyed in fire [Presumably this included ♂ specimen(s)].

montana Redtenbacher, 1908 [Bacteria]: 415. Holotype ♂, Alto-Amazonas, leg. Staudinger [800].


montana Redtenbacher, 1908 [Parasipyloidea]: 479. Holotype ♂, India: Darjeeling, VI., leg. Fruhstorfer [895].


multidentatus BRUNNER, 1907 [Clitarchus]: 237. Holotype ♀, New Caledonia, leg. Deyrolle [444].


nigra Brunner, 1907 [Stheneboea]: 250, pl. 12: 1. Syntype series: ♀, Borneo, leg. Grabowsky; ♂, Sabah: Banguey, leg. Staudinger [472]. Also in ZMHB. HNHM material was destroyed in fire. Valid name: Prisomera nigra (Brunner).

nigricans Redtenbacher, 1908 [Sosibia]: 537. Holotype ♂, North Borneo, leg. Fruhstorfer [1071].

nigricornis Redtenbacher, 1906 [Brizoides]: 112. Syntype series: ♂, ♀, Panama: Chiriqui, leg. Staudinger; ♂, Panama: Bugaba, 800 - 1,500 m, leg. Champion [166]. Also in BMNH: 2 ♀♀, Panama: Bugaba, leg. Champion; ♀, Panama: V. de Chiriqui, leg. Champion. [Note - although Shelford (1908: 371) stated that the type [no sex specified] was in "Mus. Vienna", no specimen had been designated by Redtenbacher; it is apparent that Shelford was unaware of the full extent of the type material].


nigrogeniculatus Redtenbacher, 1906 [Presbistus]: 80, pl. 4: 4. Holotype ♀, Sabah: Kina-Balu, leg. Staudinger [100].


nitens Brunner, 1907 [Diapheromera]: 338. Syntype ♂, Mexico, leg. Procopp [691]. HNHM material was destroyed in fire.
nitidus Redtenbacher, 1906 [Isagoras]: 134. Holotype ♀, Brazil, leg. Sommer [218].
nossibianus Brancsik, 1893 [Xerantherix]: 183, pi. 4: 1. Syntype ♀, Madagascar: Sikora [267]. [Unlike to be part of type series from Is. Nossibé in coll. Brancsik, but mentioned because Brancsik was in contact with Brunner and an exchange of material cannot be ruled out].
nudiceps Redtenbacher, 1906 [Canuleius]: 68. Syntype ♂, Brazil: Sta. Catharina [76]. [The only locality recorded was "Espírito Santo" and no reference was made to a specimen in NHMW, but it is likely to be part of the type series]. Also in ZMUH: ♂, Brazil: Espírito Santo. Valid name: Acanthoderus nudiceps (Redtenbacher).


obliteratum Redtenbacher, 1908 [Centema]: 490. Holotype ♂, Java, leg. Staudinger [943]. Valid name: Centrophasma obliteratum (Redtenbacher).


obocensis Brunner, 1907 [Gratidia]: 224. Syntype series: 2 ♀♀, Massana, leg. Hildebrandt; ♀, Sudan: Palmé, VIII.1882; ♂, ♀, Obok, VII [1897], leg. Joussemaume, "Mus. Paris". Also, possible syntype ♀, Arabia, leg. Simony, which appears to be a different species [and is not included in the localities given by Brunner, which includes Bab-el-Mandeb] [407]. Also in MNHN: Obok & Djibuti [?].


obstrictus Brunner, 1907 [Lonchodes]: 260. Holotype ♂, Java: Malang [492].


operculata Redtenbacher, 1908 [Paranecroscia]: 557. Syntype series: 2 ♂♂, 2 ♀♀, North Borneo, leg. Fruhstorfer; ♀, Sabah: Kina-Balu, leg. Staudinger; 2 ♂♂, 3 ♀♀,
Brunei, leg. Staudinger; φ, Borneo [1123]. Also in coll. Fruhstorfer: Sumatra: Mt. Battak - not traced. HNHM material from Java and New Guinea: Stephansort [A likely misidentification] was destroyed in fire. A specimen from North Borneo, ex. coll. H. Fruhstorfer in ISNB is a possible syntype.


**oppositifolia** **Brunner, 1907** [*Stheneboea*]: 251. Holotype φ, No locality [474]. Valid name: *Prismoptera oppositifolia* (Brunner).


**pachycerca** **Redtenbacher, 1908** [*Bacteria*]: 415. Holotype δ, Peru: Marcapata, leg. Staudinger [801]. [Locality not recorded by Redtenbacher].


**pallidenotata** **Redtenbacher, 1908** [*Bacteria*]: 415. Holotype δ, Brazil: Para, via Higgins [804].

**pallidicornis** **Stål, 1875** [*Autolyca*]: 95. Syntype series: 2 δδ, 7 φφ, nymphs, Guatemala, leg. Dr. Candeza [137].


parasanguinolenta Brunner, 1907 [Dyme]: 325. Holotype ♂, Brazil, leg. Fruhstorfer [656]. Valid name: Bacteria parasanguinolenta (BRUNNER).


pedestris Brunner, 1907 [Ocnophila]: 313. Holotype ♀, Brazil, leg. Fruhstorfer; also nymph, Brazil: Theresopolis, leg. Fruhstorfer [623].

penicillatus Redtenbacher, 1908 [Asceles]: 497. Syntype series: 2 ♀♀, Brunei, leg. Staudinger; ♀, Sabah: Kina-Balu, leg. Staudinger; ♀ nymph, North Borneo, leg. Fruhstorfer [955].


perillus Stål, 1875 [Planudes]: 98. Holotype ♀, Locality not known, leg. Boucard [213].


philippina Redtenbacher, 1908 [Necroscia]: 563. Holotype ♂, Philippines [alcohol coll. 041/03].


**plagiatus Redtenbacher, 1906 [Isagoras]**: 135. Syntype series: ð, Brazil, "Mus. Berlin"; ð, Brazil: Bahia; ð, Brazil; ð, Brazil: Espirito Santo, leg. Fruhstorfer (& nymph); ð, Brazil: Espirito Santo, leg. Staudinger; ð, Brazil: Espirito Santo, leg. Michaelis; ð nymph, Brazil: Sta Catharina, leg. Staudinger [222]. Also in MNNS; ZMAS: Brazil: Rio de Janeiro & Espirito Santo; ZMUH: 3 ð, Brazil: Espirito Santo; MNHN: Colombia: Bogota; and in ZMHB: ð, Colombia: Bogota; BMNH: Panama: Vide Chiriqui, leg. Champion; coll. Rolle from Bolivia - not traced.

**planiceps Redtenbacher, 1908 [Trachythorax]**: 508. Holotype ð, India: Sikkim, leg. Staudinger [993].


**pleuracantha Redtenbacher, 1908 [Otocrania]**: 424. Syntype series: 2 ð, Brazil: Espirito Santo, leg. Fruhstorfer [822].


prolixa Stål, 1875 [Donusa]: 94. ? Syntype series: 5 ♂♂, 4 ♀♀, Chile, do not appear to form part of [type] series [144]; Chile [alcohol coll. 117/15]. Also in NHRS: 3 specimens, Chile: Valparaiso [currently on loan not examined]. Valid name: Bacunculus prolixa (Stål).

proximus Redtenbacher, 1906 [Isagoras]: 133. Holotype ♀, Ecuador: Paramba [215].

pruinosa Redtenbacher, 1908 [Bostra]: 411, pl. 19: 3. Holotype ♀, Brazil: Belmonte, leg. Thorey [795].

pseudosipylus Redtenbacher, 1908 [Sipiloidea]: 546. Likely syntype series: 2 ♀♀, New Guinea, North central coast, leg. Dr. Pöch, [19]04 - 05 [1108]. [Only recorded in ZMHB, but these specimens appear to form part of the type series]. Also in ZMHB: 4 ♀♀, New Guinea, leg. S. Lauterbach. ["Kaiser-Wilhelmsland"].


pulcher Redtenbacher, 1906 [Damasippus]: 148. Holotype ♂, Brazil: Espirito Santo, leg. Fruhstorfer [244].

punctulata Redtenbacher, 1908 [Calvisia]: 568. Syntype series: ♀, Brunei, leg. Staudinger; 2 ♀♀, Sabah: Kina-Balu, leg. Staudinger; ♀, no data, leg. Burr [det. as Malaysian by Brock (1995: 98) a specimen of Calvisia clarissima Redtenbacher, 1908: 568; Label may have been written in error] [1148].


quadrispinosus REDTENBACHER, 1906 [Ceroys]: 61. Holotype ♂, Colombia, leg. Staudinger [64].


rarospinosa BRUNNER, 1907 [Dyme]: 327. Syntype series: ♀, Peru: Santo Domingo, 6,000 ft., leg. Rosenberg; ♀, Peru: Marcapata, leg. Staudinger; ♀, Chile, leg. Staudinger [666]. HNHM material from Bolivia: Yungas de la Paz was destroyed in fire. Valid name: Bacteria rarospinosa (BRUNNER).


recessum REDTENBACHER, 1908 [Centema]: 490, pl. 24: 6. Syntype ♀, Java: Mt. Gede, 4000 ft., 1896, leg. Fruehistorfer [944]. Also in ZMAS; and in SMNS not traced. Valid name: Centrophasma recessum (REDTENBACHER).

reclusa BRUNNER, 1907 [Dyme]: 327. Syntype series: 2 ♀♀, Mexico, leg. Deyrolle; 2 ♀♀, Mexico: Bileneke [665]. Also in MHNG: ♀, Mexico. Valid name: Bacteria reclusa (BRUNNER).


redemptus BRUNNER, 1907 [Clitumnus]: 190. Syntype ♂, Moluccas, leg. Depuiset [312]. Also in MNMS: Obi Is. Valid name: Baculum redemptum (BRUNNER).

redtenbacheri nom.n. [Bacteria]: replacement name for Bacteria innocens REDTENBACHER, 1908; secondary homonym of Bacteria innocens (BRUNNER, 1907) [Dyme].


**regularis Brunner, 1907 [Libethra]:** 308. Syntype ♀, Trinidad: Port of Spain, "Mus. Hamburg" [615]. Also in ZMUH: 2 ♀♀, Trinidad: Port of Spain. HNHM material from Mexico was destroyed in fire.

**relicta Redtenbacher, 1908 [Diardia]:** 486. Syntype ♂, Sumatra, 1889, leg. Dr. Mösrh [925]. Also in ETHZ: Schullthess coll: Sumatra [Presumably including the ♀]; and in ISNB: 2 ♂♂, Java: Malang, leg. Wiederhald.


**repudiosa Brunner, 1907 [Stheneboea]:** 249. Holotype ♀, Malaysia: (Kelantan), leg. Rolle [469]. Valid name: *Prisomera repudiosa* (Brunner).


**roseipennis REDTENBACHER, 1906** [Stratocles]: 107. Holotype δ, Colombia, leg. Steinheil [158].

**roseonotata REDTENBACHER, 1908** [Sipyloidea]: 544. Syntype series: 2 δδ, Moluccas, leg. Depuiset [1082]. Also in ZMUH: 3 δδ, Is. Roon.


**rotundatogibbosa REDTENBACHER, 1908** [Marmessoidea]: 511. Syntype series: δ, φ, Sarawak: Baramfluss, leg. Kükenthal [alcohol coll. 014/01].

**rotundatolobatus BRUNNER, 1907** [Carausius]: 275. Syntype δ, India: Trichinopoly, Madura, leg. Pantel [525]. Also in MNHN: δδ, same data.

**rubella REDTENBACHER, 1908** [Aruanoidea]: 527. ? Holotype δ, Borneo, leg. Grabowsky [1040]. [The description refers to "Mindai", casting doubt on whether the specimen is the type]. Valid name: *Necroscia rubeola* (REDTENBACHER).


**rubripes REDTENBACHER, 1908** [Leosthenes]: 438. Syntype φ & φ nymph, New Guinea, Sattelberg, Huon Gulf, 1899, leg. Biró [842]. Also in coll. Staudinger - not traced. HNHM material was destroyed in fire.

**ruficornis REDTENBACHER, 1906** [Dina]: 86. Syntype series: 2 δδ, 2 φφ, Sabah: Kina-Balu, leg. Staudinger [120]. Also in ZMAS from Sabah: Kina-Balu; and in MNHN: φ, India: Balasore. [Designation of lectotype believed to be in press]. Valid name: *Dinophasma ruficornis* (REDTENBACHER).

rufipes Redtenbacher, 1906 [Stratocles]: 103. ? Holotype ♀, Colombia: Medellin, 6,000 ft., leg. Damel [150]. [Locality recorded as 'Antioquia', but no specimen(s) traced].


rusticus Redtenbacher, 1908 [Asceles]: 499. Holotype ♀, Java, leg. Staudinger [964].

saginata Redtenbacher, 1906 [Dina]: 86. Syntype series: ♂, Sabah: Kina-Balu, leg. Staudinger; ♀, Borneo, leg. Dr. Dohrn [121]. Also in MNHG: ♂, Brunei, leg. Staudinger. [Designation of lectotype believed to be in press]. Valid name: Dinophasma saginata (Redtenbacher).


salamandra Stål, 1875 [Canachus]: 91. Holotype ♂, New Caledonia, leg. Boucard [706]. [Also ♀, New Caledonia, leg. Andre, described by Redtenbacher (1908: 347)].

sanctuluciae Redtenbacher, 1908 [Clonisia]: 405. Holotype ♀, St. Lucia, "Mus. Paris" [785]. Not traced in MNHN, specimen believed to have been retained in NHMW.


sansibara Stål, 1875 [Gratidia]: 70. Syntype series: 2 ♂♂, 3 ♀♀ & nymph, Zanzibar, leg. Hildebrandt [392].

sarasini Redtenbacher, 1908 [Dimorphodes]: 367. Holotype ♀, Central Celebes, leg. Dr. Sarasin [732]. Valid name: Dimorphodes prostasis sarasini (Redtenbacher), see Günther (1934: 88).

saussurei REDTENBACHER, 1906 [Heteropteryx]: 171. Syntype ♀, Brunei, 1871 [listed as "Borneo" by REDTENBACHER] [285]. Also in MHNG ♀, "Sunda Is."; leg. Guerin; MCSN: ♀, Sarawak, 1865, leg. Doria. HNHM material from Borneo was destroyed in fire. Valid name: Haaniella saussurei KIRBY, 1904: 397.


semihilaris REDTENBACHER, 1908 [Calvisia]: 571. Syntype ♀, Sabah: Kina-Balu [1149]. HNHM material was destroyed in fire.


semoni BRUNNER, 1907 [Hyrtacus]: 302. Syntype series: ♂, ♂, New Guinea, leg. Semoni; ♀, New Guinea: Sattelberg, leg. Staudinger [601]. HNHM material was destroyed in fire, but an egg from "Mus. Budapest" is present in NHMW.

semoni BRUNNER, 1907 [Promachus]: 294. Syntype series: 2 ♂♂, New Guinea: Simbang, Huon Golf, 1899, leg. Biró; ♀, New Guinea, leg. Semoni; ♂, New Guinea, leg. Fenichel; and ♀, New Guinea [575]. [according to GÜNTHER (1929: 722), there were 2 ♀♀ from New Guinea]. Also in SMTD - not traced; and in ZMHB. HNHM was destroyed in fire. Valid name: Neopromachus semoni (BRUNNER).
**senticosa** Stål, 1875 [*Xerosoma*]: 99. Holotype ♀, Brazil: Bahia, leg. Sommer [239].


**sericeum** Redtenbacher, 1906 [*Abrosoma*]: 85. Syntype series: 9, North Sumatra: Sibulangit, XI. XII., leg. Fruhstorfer; 9, Palawan, leg. Staudinger [117]. Also in MNHN from India: Madras [?].

**serratorius** Stål, 1875 [*Tisamenus*]: 92. Holotype ♀, Philippines, leg. Thorey [38]. Valid name: *Hoploclonia serratoria* (Stål).


**serrulatus** Brunner, 1907 [*Clitumnus*]: 190, pl. 7: 3a-b. Syntype series: 4 ♂♂, 4 ♀ ♀ & 1 nymph, Java: Tengger-Geb, leg. Fruhstorfer; ♂, Malaysia: Penang, VIII.1889, leg. Fruhstorfer [misidentified ♂ of *Baculum nematodes* (De Haan, 1842) det. Brock] [315]. Also in ANSP: ♀, Java; ISNB: ♀, Java, leg. Fruhstorfer; RMTO: 2 ♂♂, Java; and in ZMAN: ♂, Java: Tengger-Geb [18]98, leg. Drescher. HNHM material from Borneo was destroyed in fire. Valid name *Baculum serrulatum* (Brunner).

**setosipes** Redtenbacher, 1908 [*Diesbachia*]: 488. Holotype ♂, India: Coru Aurora [920].


signatus Brunner, 1907 [Arphax]: 235. Holotype ♀, Australia: (Queensland), leg. Staudinger [441]. Undescribed ♂, same data, also present.


similis Redtenbacher, 1906 [Canuleius]: 68. Holotype ♀, Brazil: Theresopolis, leg. Michaelis [115 mm] [75]. Valid name: Acanthoderus similis (Redtenbacher).


simplex Redtenbacher, 1908 [Aruanoidea]: 524. Holotype ♂, North Borneo, leg. Alverett, ex. coll. Fruhstorfer [1029].


singulare Redtenbacher, 1906 [Abrosoma]: 85. Syntype series: ♂, ♀, Kod, 189?, leg. Decoly [118]. Also in MNMS; and in MNHN ♂, 3 ♀♀ [Only listed from MNMS, but specimens mentioned appear to be part of the type series].


specifica Brunner, 1907 [Gratidia]: 224. Holotype δ, Mozambique, [18]92, leg. Dr. Fischer [402]. [A further δ and φ, from South Africa, leg. Dr. Penther, appear to have been excluded from the description].


sphaltara Redtenbacher, 1908 [Cercophylla]: 531. Holotype φ, φ nymph, Vietnam: Than-Moi, VI. VII., leg. Frühstorfer [1053].

spinicollis Redtenbacher, 1906 [Damasippoides]: 159. Holotype φ, Madagascar: Antongil [263].


spinosus Brunner, 1907 [Carausius]: 274. Holotype φ, Malaysia: Kuala Kangsar (Perak), 1902, leg. Grubauer [521].


spurcata Redtenbacher, 1908 [Calvisia]: 570. Syntype series: 2 φφ, Java: Malang, leg. Staudinger [1162].


stigmata Redtenbacher, 1908 [Sipyloidea]: 546. Holotype φ, India: Mercara, "Mus. Stuttgart" [1094]. Not traced in SMNS, specimen believed to have been retained in NHMW.

striatus Redtenbacher, 1906 [Damasippus]: 149. Syntype series: δ, φ, Colombia: Chiriqui, leg. Fröisch; φ, Colombia: Murzo, leg. Steinheil [250]. Also in ZMH: Colombia: Bogota.


strumosa Redtenbacher, 1908 [Parasipyloidea]: 480. Syntype series: δ, 2 φφ, Australia: Richmond River [898].

strumosus Stål, 1875 [Carausius]: 64. Syntype series: φ, Java, leg. Meyer Dürr [507]. [Stål appears to have excluded a larger φ from the type series, in addition to 2 φφ, leg. Dr. Candèza].

strumosus Brunner, 1907 [Promachus]: 298, pl. 13: 5a-d. Syntype series: δ, φ, New Guinea: Is. Roon, leg. Fruhstorfer [588]. [GüntHER (1929: 723) referred to a further φ from New Guinea: Sorong, 1875, leg. Bruijn, "Mus. Genova" in NHMW [593], under a 'manuscript' name of postfactus as this species. He also linked it with the δ holotype of modestus]. Also in MNHN, but not traced in MCSV, as the specimen was retained in NHMW. Valid name: Neopromachus strumosus strumosus (Brunner).


**submutica Redtenbacher, 1908 [Bostra]:** 409. Holotype ♂♂, Venezuela [793].


**subtilis Redtenbacher, 1908 [Parasipyloidea]:** 480. Holotype ♀, Malaysia: (Perak), leg. Jachau [899].


terminalis Redtenbacher, 1908 [Nicroscia]: 561, pl. 27: 6. Syntype series: δ, North Borneo, leg. Fruhstorfer; δ, ♀, Borneo, leg. Grabowsky; δ, 2 ♀, Brunei, leg. Staudinger; δ, 2 ♀, Sabah: Kina-Balu, leg. Staudinger; ♀, Borneo: Labuan, leg. Schlüter [1145]. Although not recorded in the type localities, material from Sarawak: Baramfluss, leg. Kükenthal [alcohol coll. 041/02], may be part of the type series. Valid name: Nescicroa terminalis (Redtenbacher).


transvaalensis Redtenbacher, 1908 [Palophus]: 396. Syntype ♀, Transvaal, leg. Hartmann [766]. [Specimen is 140 mm, other specimen 130 mm not traced].


tripinnatus Redtenbacher, 1908 [Pericentrus]: 352. Holotype ♀, Celebes, leg. Dr. Sarasin [713].

tristis Redtenbacher, 1908 [Sipyloidea]: 548. Holotype ♂, Philippines [Whilst "Borneo" is recorded on the data label, the locality is Balabac, not "Balabe"]: Balabac, leg. Staudinger [1088].


tuberculata Brunner, 1907 [Ocnophila]: 313. Holotype ♀, Brazil: Bahia, "Mus. Dresden" [624].

tubulata Redtenbacher, 1908 [Bacteria]: 416. Holotype ♂, Chile: Valparaíso, ex. Mus. Godeffroy [alcohol coll. 020/06].

tumescentes Brunner, 1907 [Dixippus]: 279. Syntype ♂, Borneo, leg. Xántus [542]. HNHM material was destroyed in fire. Valid name: Carausius tumescens (Brunner).


undulatipes Redtenbacher, 1908 [Asceles]: 497. Holotype ♀, West Sumatra [954].


unidentata Brunner, 1907 [Libethra]: 307. Holotype ♂, Brazil, leg. Tarnier [608].

unilineatus Redtenbacher, 1906 [Damasippus]: 149. Syntype series: 2 ♂♂, Brazil: New Freiburg, leg. Thorey [247].

unilobata Brunner, 1907 [Calynda]: 330. Syntype series: 1♀, Bolivia: Onotio, leg. Staudinger [Not traced from "Songo", the only locality mentioned by Brunner] [671].


vacca Redtenbacher, 1908 [Bostra]: 408. Holotype 1♀, Locality not known [792].

vaginata Redtenbacher, 1906 [Orobia]: 70. Syntype series: 1♂, 2♀, Madagascar: Antongil, leg. Mocqueris [78]. Also in MNHN: several specimens, Madagascar: Maroancetra; ANSP: 1♀, Madagascar: Maroancetra, XII.1897; ZMUH: 1♂, 1♀, Madagascar, Antongil; and in ISNB: 1 example, Madagascar, Maroancetra, XII.1897, ex. coll. Finot. Valid name: Leiophasma vaginata (Redtenbacher).


validispinus Stål, 1875 [Dares]: 93. Syntype series: 2♂♂, Borneo, leg. Boucard [53].

validus Redtenbacher, 1908 [Asceles]: 498. Holotype 1♀, Malaysia: (Perak), leg. Jachau [958].


verecunda Brunner, 1907 [Cuniculina]: 203. Syntype series: 4♀♀, 2 nymphs, Java: Tengger-Geb, leg. Fruhstorfer; 1♀, Java, "Mus. Zürich" [353]. Also in ETHZ - coll. Schulthess. HNHM material was destroyed in fire. Valid name: Baculum verecundum (Brunner).


versicolor Redtenbacher, 1906 [Setosa]: 66. Syntype φ, Colombia: Popayan, Cauca, "Mus. Dresden" [69]. [The description indicates at least two specimens, but only one is present in NHMW].


vicinissima Redtenbacher, 1908 [Diardia]: 485. Syntype δ & δ nymph, New Guinea: Simbang, Huon Golf, 1899, leg. Biró [935]. Also in ANSP: δ, New Guinea: Sattelberg, Huon Golf; φ, New Guinea: Berlinhafen; and in MNMS: δ, Moluccas. HNHM material was destroyed in fire. [Note only recorded from HNHM, but specimens obviously retained in NHMW and later exchanged with Hebard in ANSP]. Valid name: Leprocaulinus insularis (Kirby, 1896: 460).


violascens Redtenbacher, 1908 [Ocellata]: 554, pl. 27: 5. Syntype series: 3 δδ, 3 ϕϕ, Borneo, leg. Boucard. Eggs also present [1116]. Valid name: Orthonecroscia violascens (Redtenbacher).

virescens Redtenbacher, 1906 [Abrosoma]: 83. Lectotype δ, Sri Lanka, leg. Dr. Haly, here designated [36mm, complete except for broken antennae]. Paralectotype series: δ, Sri Lanka, leg. Dr. Haly; ϕ, Sri Lanka. The δ from India: Andaman Is., II.1878, is a different species [Brock in progress] [110]. Also in MHNG from Sumatra - not traced.
virga Redtenbacher, 1908 [Hermarchus]: 446. Holotype ♂, Fiji, leg. Daimel [855]. Not traced in MNHN and believed to have been retained in NHMW.


werneri Ebner, 1933 [Gratidia]: 221, fig. 15. Holotype ♂, Sudan: Kadugli, 29.III.1914, leg. Ebner [413].


xanti Redtenbacher, 1906 [Ascepsama]: 76. Syntype ♂, Borneo, "Mus. Budapest" [90]. [Redtenbacher did not refer to any material in NHMW, but this specimen has clearly been retained from HNHM]. HNHM material was destroyed in fire. Valid name Aschiphasma xanti (Redtenbacher).

xenia Redtenbacher, 1908 [Clonistria]: 405. Syntype series: 3 ♂♂, 2 ♀♀, Locality not known [786].


zehntneri Redtenbacher, 1908 [Parasipyloidea]: 479. Syntype ♂, Sri Lanka: Kandy, leg. Humbert, "Mus. Geneva" [894]. Not traced in MHNG, although it is possible that specimen(s) collected by Zehntner may have been present once.

Very few type species recorded from NHMW have not been traced. These are listed below and may eventually be traced in other museum collections. There is a possibility that some specimens are present in the alcohol collection, although they are not properly labelled e.g. there are unidentified species from Mexico, Australia and Calcutta which may be carefully checked against the relevant descriptions.

List of species not traced:

brevialata Redtenbacher, 1908 [Sipyloidea]: 545. India: Calcutta [in alcohol].

lineatus Redtenbacher, 1908 [Mesaner]: 538, pl. 27: 3. Australia: Cape York [in alcohol]. Valid name: Mesaner sarpedon (Westwood, 1859: 139).


mirum Redtenbacher, 1908 [Parabactridium]: 403. Madagascar. Also in MNHM [?].

nova Redtenbacher, 1908 [Bacteria]: 417. Mexico [in alcohol]. Also in SMNS from Guatemala.


spinipes Redtenbacher, 1908 [Gargantuoidea]: 502. Borneo [in alcohol - possibly the species labelled "Gargantuoidea n.sp."].


sutoria Stål, 1875 [Libethra]: 75. Colombia: Bogota.


Discussion

The full list provided should serve the taxonomist and it may also highlight hitherto unknown type material in other museums; a summary of taxonomic problems faced by the specialist is given below:

i) Until publication of this list, most of the type localities and the number of type specimens have not been known. As a result, one cannot rely on localities listed in Brunner & Redtenbacher’s monograph (1906-08), without examination of all the type series. Whilst occasional errors in such a large manuscript are understandable, many type localities have been excluded, or only the country quoted, instead of precise localities.

ii) The extent of other museum specimens has, until now, been difficult to interpret, due to Brunner's tendency to record e.g. "coll. m., Mus Amsterdam", which could refer to specimen(s) in NHMW, ZMAN or both museums. In some instances, where descriptions and measurements agree fully, it is likely that specimens were retained in NHMW.

iii) Males and females have often been separately described and links have yet to be made, resulting in further errors when taxonomists publishing new descriptions do not personally examine relevant type material. The brief descriptions given by Brunner von Wattenwyl and Redtenbacher cannot be relied upon without examination of material.
iv) Detailed studies on regions e.g. Brock (1995, and in press) on Peninsular Malaysia and Singapore may reveal numerous new synonyms. This is partly because Brunner and Redtenbacher had not had the opportunity to examine some important collections e.g. BMNH and OXUM, in addition to their tendency to regard slight variation as sufficient to warrant differentiation of species. It is also important to know that some important literature published within 10 years prior to the publication of the monograph has been excluded - in particular the Catalogue of species by Kirby (1904). As a consequence of the above and my searches of many museum collections, I believe that numerous new synonyms have not yet been reported.

v) Brunner exchanged type material and other specimens with other museums and well known collectors e.g. I traced several type specimens in ANSP, which had been exchanged with Hebard, who had labelled them as paratypes [= syntypes, as no holotype had been designated]. Further specimens are worth looking for, especially in European museums; indeed, Weidner (1966) identified some unreported type material in ZMUH and likewise Vanschuytbroeck & Cools in ISNB [I have indicated several more likely type species in the listings]. Type specimens are labelled in Brunner's handwriting or with his determination labels in many instances; these need to be checked, when possible, to establish whether they were donated or exchanged, as this is rarely recorded in the literature.

vi) Exactly how many species were loaned by museums to Brunner is poorly known, hence it is difficult to confirm whether insects are part of a type series. However, the MCSN has the advantage of holding a full numbered list of specimens borrowed by Brunner, prior to publication of the monograph. The museum also holds Brunner's handwritten notes on the names he intended using in the monograph, which has enabled specimens to be accurately associated as type specimens (Poggi & Brock in progress. Lectotype designations, where appropriate, have been made by Brock on a visit to the collection).

vii) Sometimes part of the type series has been misidentified and relates to other species; I have already corrected those relating to the Malaysian fauna. Particular caution should be exercised with specimens from different geographical areas.

viii) Where "coll. Fruhstorfer" or "coll. Staudinger" is mentioned in the monograph, it is unclear whether this only refers to specimen(s) in Brunner's collection or elsewhere. For instance, Fruhstorfer's labels are frequent in NHMW, MHNG and ISNB and this implies that there could be further type specimens.

ix) Users of this list will at least be able to check the location of some type material; particularly useful where specimens are missing in other museums, or indeed destroyed - such those originally in HNHM, which were destroyed by fire.

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In addition, numerous works were examined to establish the 'valid names' of taxa.
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