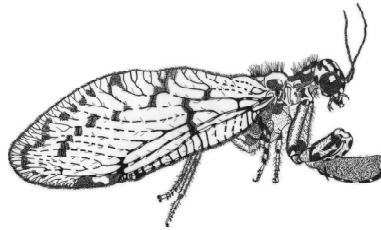


Lacewing News



NEWSLETTER OF THE INTERNATIONAL ASSOCIATION OF NEUROPTEROLOGY

No. 17

Autumn 2013

Presentation

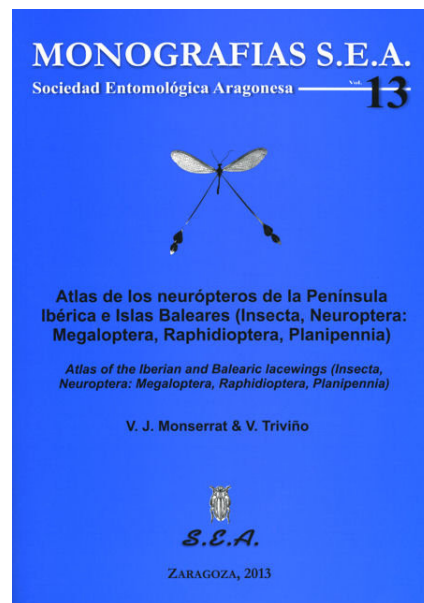
Hi all! Here's the 17th issue of *Lacewing News*. Leitmotiv of this issue is "travels and meetings": so, a lot of photos and useful opportunities for personal and professional contacts! I hope you will enjoy them. Thank to all colleagues who send photos, messages and contributions. Please, don't forget this is not a "formal" gazette, nor an official instruments of IAN, but only a "open space" to disseminate information, cues, jokes through the neuropterological community. So don't hesitate to send me any suggestions, ideas, proposal, information, for the next issue! Please send all communications concerning *Lacewing News* to agostino.letardi@enea.it (Agostino Letardi). Questions about the International Association of Neuropterology may be addressed to our current president, Dr. Michael Ohl (Michael.Ohl@mfn-berlin.de).

Ciao!



Recently published

From Victor J. Monserrat



A new book concerning Iberian Neuropterida has been recently published: Monserrat, V. J.; Triviño, V. 2013. Atlas of the Iberian and Balearic lacewings (Insecta, Neuroptera: Megaloptera, Raphidioptera, Planipennia) published by the Sociedad Entomologica Aragonesa. Monografias S.E.A. 13: 154 pp.

From David Penney

Honorary Lecturer, Faculty of Life Sciences (Preziosi Lab), University of Manchester, UK
<http://www.siriscientificpress.co.uk/Pages/DavidPenneyresearch.aspx>

Odonata, Hemiptera, Hymenoptera
and other insects
of the Seychelles islands

Edited by Justin Gerlach



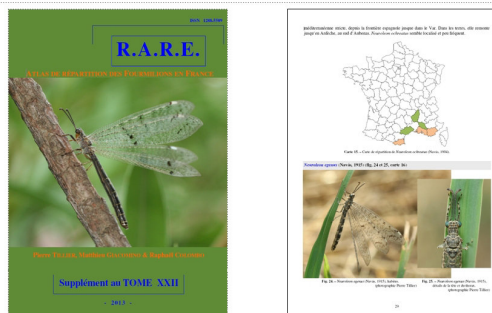
Siri Scientific Press

Although not apparent from the title, the following book: Gerlach, J. (ed) 2013. Odonata, Hemiptera and Hymenoptera of the Seychelles islands. Siri Scientific Press (ISBN 978-0-9567795-1-9, softback, 400 pp) includes a chapter on Neuroptera. The 33-page chapter includes an introduction including an historical account of Neuroptera research on the Seychelles fauna followed by a checklist of the four families (Coniopterygidae, Hemerobiidae, Chrysopidae and Myrmeleontidae), 14 genera and 16 species known from the islands. Keys to adults and larvae are provided in addition to species diagnoses, ecological notes, seasonal occurrence and island distribution (including endemic status) and specimen repository data for both historical and new records. The chapter is fully referenced. The volume is available directly from the publisher at: <http://www.siriscientificpress.co.uk/Pages/default.aspx>

From Pierre Tillier

Mapping of the Antlions of France (Neuroptera Myrmeleontidae).

Parution de l'ATLAS DE RÉPARTITION DES FOURMILIONS EN FRANCE



La cartographie à l'échelle départementale des 22 espèces de Fourmilions (Myrmeleontidae) recensées en France est établie à partir de données bibliographiques, de l'examen de diverses collections et d'observations inédites. Une analyse succincte de la répartition et de la distribution des espèces est présentée.

Ce supplément à R.A.R.E. (52 pages) est disponible gratuitement sur simple demande pour les membres de l'A.R.E. (r.a.r.e@free.fr), au prix de 15,00 Euros (port compris) pour les non adhérents.

The distribution of all 22 species of Antlions (Myrmeleontidae) known from France is mapped based on literature citations, data from various collections, and original data. A brief analysis about repartition and distribution of species is exposed.

To order it : r.a.r.e@free.fr

From Michel Canard

BIODIVERSITÉ ET RÉGULATION DES
RAVAGEURS EN ARBORICULTURE
FRUITIÈRE,

RICARD J.-M., GARCIN A., JAY M. & MANDRIN J.F. (Eds). Editions Centre Interprofessionnel des Fruits et Légumes, Paris. 2012. 471 pp.

Taking in account the importance of biodiversity raises in mind of people, particularly for all technicians of agriculture. Watching over the profit capacity both together with durability of their activity is now a pressing care for farmers. This volume devoted to orcharding gives first a look to agro-ecology. It focuses then on regulation of noxious organisms by means of natural auxiliaries as CTIFL does long ago. Diagnosis of the main orders, families and sometimes species of usefull arthropods in orchards are included. The book contains also a glossary and an abundant bibliography (about 600 references of articles, books, web sites ...) given by category of concerned organisms, harmful and/or beneficial. Neuropterida occupy 9 pages.

Neuropterida Species of the World catalogue updated.

From John D. Oswald



The Neuropterida Species of the World (<http://lacewing.tamu.edu/Species-Catalogue/>) module of the Lacewing Digital Library was formally updated to Version 3.0 on 11 September 2013. This is the first formally-documented update to the on-line catalogue since October of 2007 – although several “silent” data set-only updates have been made during the intervening years. For the most recent update, in addition to updating the catalogue’s searchable data sets, all of the various “front and back matter” pages have also been updated. Of particular interest to some users might be the updates to the Introduction page (which contains an update of the family-group classification used in the catalogue), and to the Version History page (which contains some simple statistical data on the catalogue). Between the release dates of versions 2 and 3, 568 new species-group name records have been added to the catalogue, together with approximately 2600 new searchable “combinations” (now 19,051 total combinations); there has been a net change of +317 valid species-group names, and a net change of +82 invalid species-group names. The new catalogue version contains updates to the relevant parts of the underlying catalogue database that have been entered up to 11 September 2013. Between versions 2 and 3 updates of one kind or another have been made to 9329 of the 10,209 total catalogue records (91%), including the addition of detailed primary type data for several thousand additional species-group names. The new version should include nearly all neuropterid species and subspecies described through 2012, together

with some 2013 names (although I do have a backlog of ca. 20 additional recently-described species that I am aware of and that I am in the process of entering into the database). My thanks to all of you who have and are continuing to send me copies of your new Neuropterida-related papers as they appear. I hope you find the new version useful, and please do let me know if you spot any errors.

Changes of addresses

From Jeff Aldrich

I have left the USDA and have moved to California; I've been here going on two years now. I formed a consultant company, an official affiliation with the Department of Entomology, UC Davis (see signature below). Fortunately, I am in contact with Shaun Winterton at CDFA, Sacramento, and I am trying to continue lacewing pheromone/development research. (Slow going so far; I am not used to the drastic microclimates here in CA, and I am still learning the insects and habitats here).

Best Regards,

Jeff Aldrich

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(301)503-8288

Meetings

From Agostino Letardi



SIEEC 23rd participants (Photo by courtesy Bozen Museum)

A couple of neuropterological talks has been presented during the 23rd Symposium Internationale Entomofaunisticum Europae Centralis hold in Bozen, Südtirol (Italy) between 9 and 13 of last September (see in the "Recent literature" section below).



Bolzano, 10 September 2013. From left to right: Agostino Letardi, Ulrike and Horst Aspöck.

I only attended the afternoon session of September 10 of the symposium. Nevertheless, it has been a very nice opportunity to spend some hours (and a lovely dinner) together with Horst and Ulrike Aspöck.



Bolzano, 10 September 2013. Ulrike Aspöck during her lecture.

Moreover, it is worth of notice the interesting lecture of Ulrike Aspöck concerning some faunal questions about Neuroptera in Central Europe. Although I'm not so familiar with German language (the actual official language of these Symposia...), I could feel the familiar atmosphere, peculiar feature of this Symposium

since the beginning, also in Bolzano, an odd Italian city usually *not so friendly* with Italian speaking people ☺ !

Proceedings of the Symposium will appear in the Bozen Museum's journal Gredleriana by the end of 2014. The next Symposium will be held in Bratislava (Slovak Republic) from September 7th to 11th, 2015



Bolzano, 9 September 2013. From left to right: Vito Zingerle (director of the Museum of Natural History of Bolzano), Horst Aspöck, Petra Kranebitter (engaged organiser of the symposium), Gerhard Tarmann (the well-known Austrian lepidopterist)

From Axel Gruppe
Freising (Germany)

Report on the 13th meeting of the work group „Neuropteren“ of the German Society for General and Applied Entomology (DGaaE) at Schwanbergcastel near Würzburg, Germany.

THE 13th meeting was held from June 21st to 23rd 2013. Twelve Entomologists from Austria, Germany and Switzerland participated in the congress and presented ten lectures. Three talks dealt with biogeography of several taxonomic groups, two with neuropteran in the public awareness and ecology. Other presentations were on the results of a German barcoding project, Neuroptera in Baltic amber and on the organization of the expected IAN Symposium in Berlin 2014 (which was canceled in between). Wilfried Wiechard gave in his talk

on aquatic neuropterans in Baltic amber a new and fascinating insight in earlier neuroptera . He also offered the opportunity to see some of the specimens as original objects. Abstracts of the presentations (in German language) will be available on the website of the DGaaE (<http://www.dgaae.de>).



Participants (from left): W. Wichard, Mrs. Wichard, K. van der Dunk, H. Aspöck, U. Aspöck, W. Weißmair, P. Duelli, S. Potel, J. Gepp, M. Fuchs, L. Kirschey, A. Gruppe, K. Meißner, L. Weltner (Foto: L. Weltner)

The round table discussion covered nutritional ecology and physiology of ant lions and competition between neuropterid larvae and the invasive species *Harmonia axyridis* (Col. Coccinellidae). Furthermore the group discussed joined projects. S. Potel will work on a simple and cheap key for Central European Neuropterida in which can be used also by non-experts. A. Gruppe intends to summarize the ecology and habitat preferences of Central European species.



Discussion during a break in the park of Schwanberg castle (from left): K. Meißner, W. Wichard, U. Aspöck, H. Aspöck, S. Potel (Foto: A. Gruppe)

The scheduled date of the next meeting was in spring 2015. However this might conflict with the 11th International Symposium for Neuropterology.

From Agostino Letardi



An “not so usual” concentration of Italian neuropterologists has been reported during the last edition of “Entomodena”, a semestral meeting of entomologists in Campogalliano (a small town near Modena, northern Italy).



From left: D. Badano, R. Poggi, R. A. Pantaleoni, and R. Nicoli Aldini Photo by courtesy of Rinaldo Nicoli Aldini

**From Ulrike Aspöck and Horst Aspöck
Wien (Austria)**

**6th Dresden Meeting on Insect Phylogeny,
September 27-29, 2013 (Dresden, Germany)**

A fantastic event, indeed, gathering together about 140 excited entomologists from all over the world, either presenting their most recent scientific results on insect phylogeny by talks or posters, or just by discussing and altogether



Dresden, 28 September 2013. From left to right: Rolf G. Beutel, Benjamin Wipfler, Niels P. Kristensen, Olivier Béthoux

producing the unique atmosphere of this meeting. Molecular and morphology based diverse analyses introducing brand-new techniques, algorithms, philosophies and results – either under the huge more general umbrella of the Arthropoda, or of the Hexapoda, or focused on single hot spot groups – made us really breathless. The 1KITE project, which will soon provide access to nucleotide sequence data of sequenced transcriptome libraries from more than 1,000 species of hexapods has once more been presented and ran through many talks. It will soon shed new light on the phylogeny of this mega-group. We, the Aspöcks, are very happy and proud that within the scope of this project a special Neuropterida subproject is running, the first results of which will be available soon.



Dresden, 27 September 2013. Another meeting after two years with the leading Chinese palaeontologists. From left to right: Yongjie Wang, Ulrike and Horst Aspöck, Dong Ren.

And – can you imagine! – all of a sudden and really surprisingly we discovered Dong Ren and Yongjie Wang in all the throng around the registration desk! These are the moments making life so wonderful.

The poster with the most amusing title: “O Sister, Where Art Thou? Conflicting hypotheses on basal branchings in Neuroptera“ came – not surprising at all – from the Natural History Museum Vienna, conflicts esthetically designed by Susanne Randolph, Dominique Zimmermann & U. A.



Dresden, 27 September 2013. S. Randolph (right) and U. Aspöck

In a final talk a semantic model for morphological description was presented opening a window into ontology languages – with the vision of standardization of morphological terminology to be shared broadly and to be computed across.



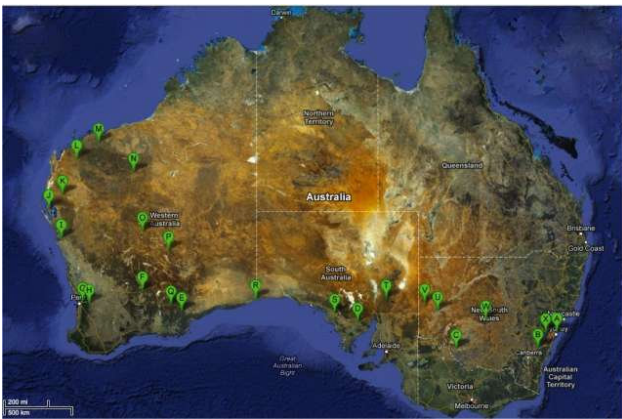
Dresden, 27 September 2013. Conference of the Neuropterida subgroup of the 1KITE project. From left to right: U. and H. Aspöck, O. Niehuis, Ralph S. Peters, Bernhard Misof, Karen Meusemann

To sum up: The Dresden meeting – as it always did – changed our entropy status completely by inducing chaos as a real challenge – great!

Travel Stories

From Ben Diehl, Renato Machado and John Oswald

During the 2012-2013 winter break at Texas A&M University, the resident NSF Antlion PEET group (John Oswald, Benjamin ‘Ben’ Diehl and Renato Machado) had the great good fortune to undertake a month-long collecting expedition to Australia (Fig. 1).



1. Locator map of collecting sites for the Antlion PEET expedition to Australia, 6 December 2012 – 7 January 2013. Sites are lettered in ascending chronological order.

We left Texas on December 6th (Fig. 2) and



2. Looking fresh and bright on the morning before leaving for the airport (left to right: Renato Machado, Ben Diehl, John Oswald). Oswald home, College Station, Texas, USA.

arrived in Sydney two days later – about one day in the air, and one pseudo-day lost crossing the

international dateline from east to west. After landing, we spent the first several days gathering supplies for the trip and meeting with contacts at the Australian Museum. After packing up our rental vehicle and planning our general route, we left Sydney and headed west on December 10th. Throughout the trip a typical travel day consisted of driving several (4-8) hours to reach a predetermined general collecting region, with the final collecting site selected after reaching that region. We tried (not always successfully...) to identify final collecting sites before sunset, in order to setup for collecting vespertine ascalaphids during their peak activity period. At each site we set up four light sheets and collected at Mercury vapor lights for several hours, typically from ca. 8:00PM to midnight or 1:00AM (Fig. 3).



3. Typical light sheet setup. 70 km W Gascoyne Junction, Western Australia.

Most nights we camped in the field at or near our collecting site. The following morning we took site photographs, field pinned specimens collected the previous night, and checking the site for evident antlion larvae (mostly for pit-builders). After a quick breakfast, we'd repack the van and continue on to our next collecting region. While we collected all across southern Australia, the majority of our collecting effort was focused in Western Australia, where we expected that the dry climate and sandy habitats would produce the highest overall diversity of antlions.

Our first few collecting nights took us west from Sydney across New South Wales and South Australia, where we had limited collecting success due to cooler temperatures during the evenings; but the scenery along the Great Australian Bight was pretty spectacular (Fig. 4).



4. The edge of the world – cliffs of the Great Australian Bight. Next land south (to the right) – Antarctica. Great Australian Bight, South Australia, east of Eucla.

After reaching Western Australia, our collecting generally improved. On December 16th we arrived in Perth and met up with Fred and Jean Hort (Fig. 5), amateur naturalists, who took us to



5. Hamming with the Horts (left to right: Renato Machado, Fred Hort, Jean Hort, Ben Diehl). Swanview, a suburb of Perth, Western Australia.

a local park and showed us where we could

collect the uncommon nemopterid *Chasmoptera huttii* (Fig. 6). After spending two nights collecting around Perth with the Horts, we headed north along the western coast. At the



6. Habitat of *Chasmoptera huttii* (Nemoptera: Nemopterinae). Talbot Road Nature Reserve, Swanview, Western Australia.

midpoint of our trip (two weeks in) we enjoyed a day off in Shark Bay, where we visited the stromatolites at Hamelin Pool (Fig. 7) and slept in a real bed in a tiny cottage with a view of the



7. Stromatolites – what the edge of the ocean may have looked like several hundred million years before the ancient ancestors of the insects crawled from the sea. Hamelin Pool, Shark Bay, Western Australia; one of only a handful of sites in the world where stromatolites are still known to grow.

Indian Ocean in Denham. Leaving Shark Bay, we continued to follow the coast north until we reached our northernmost collecting site near Port Hedland. On the trip north we collected specimens of the crocine genus *Austrocroce*, the first specimens of this nemopterid subfamily that any member of our party had ever collected – that first specimen was an exciting event (Fig. 8)! Although our collecting success continued to improve with latitude, so did the temperature, making tent camping quite unpleasant.



8. Late afternoon landscape of our first *Austrocroce longipennis* (Nemoptera: Crocinae) collecting site. The larvae probably live in recesses in the rocks of the ridge to the right. 13 km NE Nanutarra Roadhouse.

Swarming flies were also a major annoyance at a number of sites (Fig. 9). Despite some good collecting nights in central Western Australia, we also lost several nights of collecting due to



9. Innovation is key when combating pesky flies – and thus were born the ‘net heads’.



10. Dunes are picturesque, but evidence of strong winds. Near the 50-100m Eucla dunes our attempts to shelter our light sheets in the lee of the sparse shrubby vegetation proved less than effective, resulting in a poor catch in a promising habitat. Dunes SE of Eucla, near the southern border between Western Australia and South Australia.

regional monsoon rains, which were locally heavy in parts of the state during our stay. Turning back south through central Western Australia we eventually again reached the Eyre highway (the main [read “only”] east-west highway across southern Australia), which would take us back across the Nullarbor Plain (Fig. 10) and back into the cooler temperatures in the east.

Although we had left Western Australia behind, our best single night for collecting myrmeleontids came in New South Wales where we collected ca. 15 different antlion species at a site near the “village” [or maybe not that big...] of Mount Hope (Fig. 11). The last collecting night of our trip was also a very pleasant surprise. In an area of native forest located on the top of an isolated plateau (Fig. 12) we collected 11 neuropterid families at lights in a single night –



11. Habitat of the most diverse antlion collecting site of the trip (ca. 15 species) with clumpy spinifex grass (*Triodia* sp.) and short Eucalyptus trees. 18 km SE Mount Hope, New South Wales.



12. Prime Neuropterida habitat in the Blue Mountains of New South Wales – species of 11 different neuropterid families were collected at lights here on the night of 4.i.2013. Blue Mountains National Park, 7 km SW, Lawson.

Ascalaphidae, Berothidae, Chrysopidae,

Coniopterygidae, Corydalidae, Hemerobiidae, Mantispidae, Myrmeleontidae, Nymphidae, Osmylidae and Psychopsidae. There are not too many places in the world where that can be done! Three of these families – Nymphidae, Osmylidae and Psychopsidae – were taxa that we had not encountered elsewhere on our trip.



13. If we were better herpetologists we would have known what this monster meter-long lizard was – after all, how many meter-long lizard species can there be, even in Australia?

The next day we returned to Sydney and spent our last days in the city preparing our specimens for travel and recovering from a month in the field. On January 7th, we departed Australia and arrived back in Texas on the same day, and only a few hours later than it was when we left Australia (more mysteries of the dateline ...). Over the course of the month-long trip, we drove 13,940 km, limped through two flat tires, avoided several brush fires, survived a couple of impressive thunder, lightning and rain storms, and ran lights at 25 different localities. And, of course, since this was Australia, we saw lots of really amazing non-insectan animals along the



14. Non-insectan life was widely evident, both in the flesh and in effigy. At this roadhouse in the Nullarbor we saw our first of several wild dingo (alas, too far away for a good photo).

way (Figs. 13, 14). Emu's, in particular, were very common (Fig. 15) all across southern



15. Mother and subadult emu. Yanga State Conservation Area, near Balranald, New South Wales.

Australia. We are currently working our way through the 1070 field-pinned specimens and 303 vials (ca. 3000-4000 total specimens) of Neuropterida material that we brought back with us to the Texas A&M University Insect Collection. So far, we have confirmed taxa belonging to 12 of the 16 Neuropterida families known to occur in Australia, lacking only Ithonidae, Nevrorthidae, Sialidae and Sisyridae. Within the Myrmeleontidae, we have identified material in 16 genera (so far ...): *Acanthoplectron*, *Austrogymnocnemia*, *Bandidus*, *Ceratoleon*, *Cosina*, *Csiroleon*, *Distoleon*, *Distoplectron*, *Escura*, *Franzenia*, *Froggattisca*, *Glenoleon*, *Heoclisia*, *Myrmeleon*, *Periclystus*, *Protoplectron*. We expect to end up with ca. 40 species of antlions, and perhaps 70-80 neuropterid species overall, for the trip. Not a bad result for a month's work.

From Horst Aspöck and Ulrike Aspöck

Searching for Pseudimares in Morocco

In the early 1930s Douglas Eric Kimmins (1905-1985), at that time curator of the collections of Neuropterida at the Department of Entomology of the British Museum of Natural History, London, received a male specimen of a very unusual myrmeleontid taken at light in Masjid-i-Sulaimaniah (province of Khuzestan) in the south of Iran in August 1929. The large beautiful insect showed very prominent and conspicuous beautiful eye-spots with violet reflections on each wing. At first D. E. Kimmins was convinced



1) Morocco, Haut Atlas, Agadir, Paradise Valley, 7 August 2013. The Aspöcks light-trapping at the type locality of *Pseudimares aphrodite*.

that somebody had carefully painted these eye-spots on the wings in order to test the competence of the young curator or just to make a joke. However, shortly later D. E. Kimmins received a second (female) specimen from the same locality found dead on a veranda at the beginning of September 1932. Now he investigated the two specimens thoroughly and arrived at the conclusion that they represented an unknown species of unknown systematic position, possibly related to the South-American genus *Dimares*. Thus he described *Pseudimares iris* n. gen. n. sp. (Kimmins1933) [D. E. Kimmins told this story one of us (H. A.) in 1964, and again a few years later, Herbert Hölzel]. After the description of *Pseudimares iris* no further information about this species and this genus emerged. Decade after decade passed, and in 2004 Lionel Stange wrote in his comprehensive catalogue of the Myrmeleontidae of the world, "This is one of the mystery groups of the Myrmeleontidae".

In October 2008, Andreas Werno, a German entomologist, sent us a photograph of an unknown myrmeleontid which had been collected in Morocco at light in August 2008 by the German lepidopterists Rolf Bläsius and Axel Steiner. When we opened the attachment, it was like a flash of lightning: The photograph showed a wonderful *Pseudimares*! This was the first record of this genus 75 years after the discovery and description of *Pseudimares iris*, however, about 5500km west of the type locality, nevertheless approximately at the same latitude (around 30°30' to 31° N). Axel Steiner sent us and gave us the specimen (a male).



2) Morocco, Haut Atlas, Agadir, Paradise Valley, 9 August 2013, after midnight. Celebration of the first specimen of *Pseudimares aphrodite* with champagne. From left to right: Andreas Werno, Horst Aspöck, Ulrike Aspöck, Rolf Bläsius.

It was a new species, which we described as *Pseudimares aphrodite* (H. Aspöck & U. Aspöck 2009). In August 2009 Axel Steiner and Rolf Bläsius were again at the type locality (Haut Atlas, costal hills, ca. 20km N Agadir, Taghrat Ankrim, Vallée du Paradise, 230m) and collected a few specimens, which they gave us again for further studies.



3) Morocco, Haut Atlas, Agadir, Paradise Valley, 9 August 2013. A portrait of our first specimen of *Pseudimares aphrodite*.

Meanwhile two remarkable publications on *Pseudimares* have appeared, one of them (Pantaleoni & al. 2012), reporting the detection of *Pseudimares aphrodite* in another place in the south of Morocco, documented by photographs, the other (Nicoli Aldini & Pantaleoni 2012) dealing with a picture of the

Italian painter Giambattista Tiepolo (1696-1770), in which the zephyr is symbolised by the wings of a *Pseudimares*. Another mystery of this antlion!



4) Morocco, Haut Atlas, Oukaimeden, 2300 m, 17 August 2013. Ulrike Aspöck light-trapping high above the lights of Marrakesh.

In March 2013, at the annual meeting of the Bavarian entomologists in Munich, Rolf Bläsius offered us to organise a joint fieldtrip to Morocco in August 2013 with the particular aim to find *Pseudimares aphrodite*. We accepted with pleasure, and on 6 August 2013 the two Aspöcks together with Rolf Bläsius and Andreas Werno flew to Agadir, where two cars were rented for a fieldtrip to the High Atlas. In total we spent five nights (6-9 August and 18-20 August) in the Paradise Valley, where we put up our light-traps within the rocks. It was a great moment when the first (and for the next days the only) specimen of *Pseudimares aphrodite* came to the light on 8 August at 10 o'clock p.m. We will never forget the fantastic appearance of this beautiful insect with its large gleaming eyes, the big eye-spots on the wings and the long legs when it emerged from the darkness. Four more specimens were taken on August 18, again at or shortly after 10 o'clock p.m. We now have samples for all purposes, particularly also for PCR as well as for sequencing the transcriptome, so that hopefully the still enigmatic systematic position should be clarified soon.

Besides the Paradise Valley various other parts of the Haut Atlas (Tamalukt, Tizi-n-Test, Tizi-n-Fedrat, Oukaimeden) were explored for Neuroptera. Several light-traps were put up every night, which yielded a considerable



5) Morocco, Haut Atlas, Agadir, Paradise Valley, 18 August 2013. Ulrike Aspöck putting up a light-trap at the type locality of *Pseudimares aphrodite*.

number of Neuroptera of the families Coniopterygidae, Berothidae, Mantispidae, Hemerobiidae, Chrysopidae, Nemopteridae, Myrmeleontidae, and Ascalaphidae. A large part of the specimens was preserved for PCR on one hand and in RNA later for analysing transcriptomes on the other hand.



6) Morocco, Haut Atlas, Agadir, Paradise Valley, 18 August 2013. Rolf Bläsius light-trapping at the type locality of *Pseudimares aphrodite*.

Why did 75 years elapse since the discovery of *Pseudimares*, until it was found again, although in a different species and 5500km away? Are the species really so rare? More probably they are confined to special (rocky) biotopes and appear as adults only for a short period in August which is the hottest and driest period in the year. We had nights with 34°C at midnight, in the day-time sometimes up to 46°C; usually entomologists do not carry out fieldtrips in this period. Probably the adults of *Pseudimares* species are hidden in crevices of the rocks in the daytime and become active only for an hour before midnight. We have no idea where the larvae live. There are many possibilities in the richly structured rocky biotope at the type locality of *Pseudimares aphrodite*. Many open questions regarding *Pseudimares* are waiting for answers!



7) Morocco, Haut Atlas, Agadir, Paradise Valley, 8 August 2013. Ulrike Aspöck with her first specimen of *Pseudimares aphrodite*.

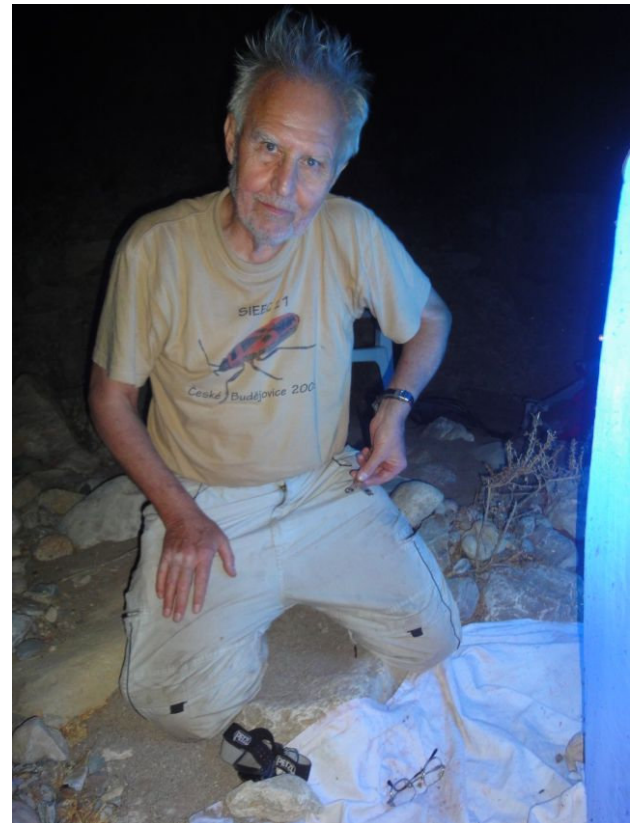
Finally a cordial thank you to Rolf Bläsius not only for having organized this unforgettable field-trip so perfectly, but also for having opened the houses and hearts of the hospitable people in the villages of the High Atlas. Last but not least, many thanks to Andreas Werno for his helpful company.

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NICOLI ALDINI R. & R. A. PANTALEONI (2012): Zephyr's wings: Tiepolo's imagination or the antlion *Pseudimares* Kimmins, 1933 (Neuroptera, Myrmeleontidae) as his model? –



8) Morocco, Haut Atlas, Agadir, Paradise Valley, 18 August 2013. Horst Aspöck with his first specimen of *Pseudimares aphrodite*.

PANTALEONI R. A., MARTÍNEZ DEL MÁRMOL MARÍN G. & R. L. VIGARA (2012): Second record of *Pseudimares aphrodite* H. Aspöck et U. Aspöck, 2009 (Neuroptera, Myrmeleontidae). – *Biodiversity Journal* 3(2): 129-131.

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Long Term researches

Bibliography of the Neuropterida, Version 10

From John Oswald

After two additional years of continual work since the official release of version 9 of the Bibliography of the Neuropterida (BotN) back in May of 2011, I am happy to announce here the release of BotN version 10, the latest offering in the series of formally-documented versions of the Bibliography. The new version contains citations to 14,668 Neuropterida-related publications—a number that I never would have thought possible when I started this project more

than 30 years ago. More than 1300 new citations have been added to version 10, and more than 5500 citations have been updated. In addition to trying to keep up with the taxonomic literature, the new version contains major additions to the citation set treating applied and economic neuropterology. Many users are particularly interested in the PDF files that are available through the Bibliography. The new version provides links to an additional 2660 files (now 12,840 total linked files). The new files represent more than 1600 works that were not previously available through the Bibliography (that's an average addition rate of ca. 4.4 new digital works per day, every day, for 2 years...). With the latest version, the digital file set of the BotN has reached two significant milestones. First, with digital files representing 7364 distinct works, more than half of all of the citations in the Bibliography are now linked to a digital file. And second, the BotN now provides access to >100,000 (ca. 108,600) distinct pages of Neuropterida-related text and figures.

My sincere thanks to all of you who have sent me citations and digital files over the past two years, or who have assisted with the project in a variety of other ways. An especially big thanks here to Sarah Bailey, Victoria Fielding, Kevin Henson, Chase Smolik and Jessi Sutton, the succession of undergraduate students here at Texas A&M University who have scanned and processed many of the new files that have been added to version 10. As with version 9, version 10 will to be updated episodically with undocumented/unannounced data set additions that are designed to keep the Bibliography reasonably up to date until the next formally-documented version is produced, perhaps in another two years. So, please continue to send me copies of your new Neuropterida-related works as they are published so that they can be included in the Bibliography with the next data update, be it documented or undocumented. Also, as each of you obtain literature to support your personal research interests, please keep the Bibliography project in mind. If you make or obtain PDF files of historical Neuropterida-related literature, and if digital copies of those works are not yet contained in the Bibliography (or your copies are of higher quality), please consider forwarding copies of those PDFs to me for inclusion in the Bibliography. That will help us continue to build depth in the PDF set of the

BotN. Remember, somebody else will eventually be looking for those PDFs too!

In order to continue to increase the international utility of the Bibliography, I would be especially interested to work with colleagues who have access to, or who can produce, digital files of Neuropterida-related works that were originally published in languages that use non-Roman scripts (e.g., Russian, Chinese, and Japanese). With the growing community of neuropterists in China, one goal for the next version of the Bibliography might be to make a concerted effort to better develop its Chinese-language citation and PDF sets. Currently, Chinese-language papers account for less than 1.5% of the citations in the Bibliography, which must certainly be a significant under-representation of the true number Neuropterida-related works published in Chinese. Can we put together a team of Chinese colleagues who would be interested in working with me toward the goal improving the representation of Chinese works in the Bibliography over the next several years?

Some final thoughts... The Bibliography has now gone through 10 major editions/versions since I started the project as a Masters student back in 1982. For its first decade or so it existed as a card-file set and later as a simple computer text file. In its second decade it moved to the internet as a citation-only resource, focusing primarily on documenting the primary and secondary scientific literature of the Neuropterida. Its third decade continued that focus, but its utility to our community was significantly enhanced by the addition of functionality and content that allowed it to actually distribute digital files of the literature that it cited. In its fourth decade, continued development of its citation and digital-file sets will continue to be a top priority, but are there other ways that the Bibliography can serve the neuropterological community?

One additional potential role that the BotN might play in the future is in the archiving of manuscript materials of substantial historical value. In addition to documenting and providing access formally-published materials, the Bibliography could also become a place where digital copies of significant manuscript materials relating to the Neuropterida could be archived and made widely available to neuropterists around the world. Materials that are likely to be of long-term interest to the neuropterological community—for example, historical collection

visit notes (see Smith r#10514), theses and dissertations, manuscript translations of Neuropterida papers into non-original languages—should be considered for archiving in the Bibliography in order to make them more widely available to our research community. The potential of the Bibliography to act as an archive for materials/works that are unpublished (and are unlikely to ever be published) has only begun to be realized. But, this represents a real opportunity expand the utility of the Bibliography as a focal point for distributing materials relating to the science and history of neuropterology. If you have manuscript materials that you think might be appropriate for archiving in the Bibliography, please contact me so that we can discuss those materials.

Antlions in Cameroon

From Leonard NGAMO TINKEU
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It is in Cameroon, I am working on the pit building antlion. The country is located in Central and West Africa, bordering the Bight of Biafra, between Equatorial Guinea and Nigeria. Cameroon is sometimes described as "Africa in miniature" because it exhibits all the major climates and vegetation of the continent: mountains, desert, rain forest, savannah grassland, and ocean coastland. Cameroon can be divided into five geographic zones. These are distinguished by dominant physical, climatic, and vegetative features.

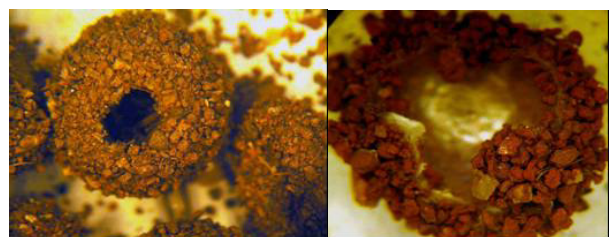
The university of Ngaoundéré where our lab is located is in the rugged Adamawa highlands that forms a barrier between the north (dominate by



Some pictures of the work done in laboratory: 1. larva of pit building ant lion (right) and cup fill with dry soil (experimental set up for larval rearing) (left).

the sahelian area) and south (hosting the rain forest zone). Its average elevation is 3,400 feet (1,036 m). The northern savannah plain extends from the edge of the Adamaoua to Lake Chad. Its characteristic vegetation is scrub and grass. This is region of sparse rainfall and high median temperatures has been included as part of the East Sudanian savannah ecoregion. The climate is semiarid and hot.

Our studies on pit building ant lion at the University of Ngaoundéré are focused during this first step on the rearing of larvae. In laboratory conditions, larvae are reared in cups fill with dried soils. Each larvae receive directly in its pit 1 to 3 ants (*Myrmecaria opaciventris*) per day. In this condition, larvae complete their development and form the silk cocoon. After some weeks adults emerged from the cocoons.



2. hatched silk cocoon before (right) and after (left) dissection.

I learnt two very good lessons from this first work: (a) within the hatched cocoon, the remains of the larva could be removed, it exhibits some important features of the larva that may help to identify it; (b) I observed that the soil used in the cup to help larvae to build their pit fall trap was not suitable for all larvae. According to their origin, some larvae had a very long lasting larval stage duration and others even died without

forming the cocoon. Chemical composition of soil may influence the growth of larvae.



3. the remain of the larva removed from the hatched cocoon in compacted form (right) and in extended form (left).

The best is still to come, more than 5 morphotypes of adults were obtained from the rearing, they have being send for identification, this step will, my colleague Jean Maoge and I are waiting for the result of the identification very soon. Soils where some larvae could not survived are under analysis.



Jean Maoge in lab

This is the first time in Cameroon a research is carried out on pit building ant lion, your comments and advices are waited. We will be grateful for all suggestions.



Jean Maoge on field

See also:

Ngamo Tinkeu L. S., Maoge J., Aminatou Boubakary A B., 2010. Predation of *Myrmeleon obscurus* (Navás, 1912) (Neuroptera: Myrmeleontidae) on the ground ant *Myrmecaria opaciventris* Emery (Formicidae: Myrmicinae). International Journal of Biological and Chemical Sciences 4(2) : 509-514.

Press News (in original language!)

Investigadores hallan en Coín un insecto acuático prehistórico único en la Península

<http://www.elaquijon.es/content/investigadores-hallan-en-coín-un-insecto-acuático-prehistórico-único-en-la-península>



Un grupo de cinco investigadores ha encontrado, en un arroyo de la Sierra Alpujata de Coín, una familia de insectos prehistóricos, únicos en la Península Ibérica. Este insecto acuático pertenece a una familia de los nevrórtidos, un extraño grupo de neurópteros con tan sólo 14 especies en todo el mundo.



Original size:

http://www.asociacionjara.com/jara/images/stories/noticia_descubrimiento_rio_grande.jpg

Recent Literature on the Neuropterida (2013)

Organized by Agostino Letardi, with the contribution of John Oswald's BotN

- Ábrahám, L. 2013. Ascalaphid Studies IX. The genus *Haploglenius* from South America (Neuroptera: Ascalaphidae). *Natura Somogyiensis* 23:173-188. [r#15422]
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- Aspöck, H.; Aspöck, U. 2013. Die Genese der Verbreitung der Raphidiopteren aus der Sicht der jüngsten phylogenetischen Analysen. *Nachrichten der Deutsche Gesellschaft für allgemeine und angewandte Entomologie e.V.* 27:16-18 [r#15081].
- Aspöck, H.; Aspöck, U. 2013. Biogeography and systematics: The genesis of the distribution of Raphidioptera in the world. In: Kroh, A. et al (Eds.): *BioSyst.EU 2013 - Global Systematics! 18-22 February 2013, Vienna, Austria. Abstract Volume:* 15-16.
- Aspöck, U.; Aspöck, H. 2013. Nevrothidae, Sisyridae, Coniopterygidae ... – Der Streit um die niederen Ränge im Stammbaum der Neuroptera. *Nachrichten der Deutsche Gesellschaft für allgemeine und angewandte Entomologie e.V.* 27:19-20 [r#15082].
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- Borysenko, N. N. 2013. Contribution to Neuroptera of north-eastern part of Cherchassy region. *Ukrainska Entomofaunistyka* 4(1): 43-47. [r#15423]
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- Camacho, A. A. 2013. First record of beaded lacewings (Neuroptera, Berothidae) from Colombia. *Zootaxa* 3669 (2): 159-164. [r#15424]
- Canard, M.; Thierry, D. 2013. Identification des *Chrysoperla* de France (Neuroptera: Chrysopidae). *Revue de l'Association Roussillonnaise d'Entomologie* 22(2): 75-84.

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- Dunk, K. von der 2013. Short notice on a new species of *Corydalus* from Venezuela. *Nachrichten der Deutsche Gesellschaft für allgemeine und angewandte Entomologie e.V.* 27:23.
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Courtship and mating sequences of *Sialis fuliginosa* in Lombardina (northern Italy). Photos Alida Piglia

Pictures of the semester



brachipterous female of *Stenorachus walkeri* (Neuroptera Nemopteridae) from Miller & Stange, 2012



Indian *Rapisma* sp. (Neuroptera Rapismatidae) from <https://www.facebook.com/photo.php?fbid=10152293794246632&set=gm.608308685873903&type=1>