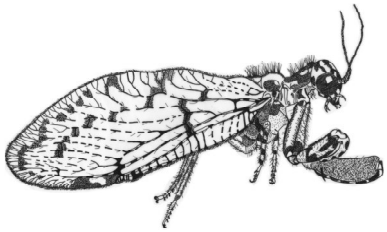
# Lacewing News



NEWSLETTER OF THE INTERNATIONAL ASSOCIATION OF NEUROPTEROLOGY

No. 24 Spring 2017

**Save the date now!**

Dear neuropterologists,
Almost exactly two years have passed by after we could enjoy the XII. International Symposium on Neuropterology in Mexico City. Atilano Contreras Ramos and his team have made a great job in organizing this meeting. On behalf of an organizing committee of German neuropterologists, I had the pleasure to invite the international neuropterologists to Germany for the XIII. symposium. There is hardly more than one year left, and it is high time to start preparing our next conference. The organizing committee consists of Axel Gruppe, Florian Weihrauch, Vroni Hierlmeier and myself, and you will learn more about us in this issue of the Lacewing News.

The symposium is scheduled for 17-21 June 2018, with a one-week post-symposium excursion, so please save the date now!
As a reminder, here are the current members of the board of the International Association of Neuropterologists:

Michael Ohl, President
Xingyue Liu, Vice-president
André Prost, Secretary
Dominique Thierry, Treasurer
John Oswald, past president
Agostino Letardi, editor newsletter
Horst Aspöck
Dusan Devetak
Brígida Souza
Maria Ventura

The organizing committee is closely collaborating with the IAN board, and we will very soon provide you with more information on registration, venue and excursions. For any questions and suggestions, feel free to contact the organizing committee.
A conference can only be as good and productive as its participants. Please spread the word and inform friends, colleagues and students. I am looking forward to the XIII. International Symposium on Neuropterology and to meeting you all in southern Germany in 2018!

Michael Ohl, president of the IAN

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). Concerns about the XIII International Symposium on Neuropterology (Laufen on River Salzach 2018) should be directed to Dr. Axel Gruppe (gruppe@wzw.tum.de).

**XIII. Symposium on Neuropterology**
**17-21 June 2018 in Laufen, Germany**

Dear Neuropterologists,
as announced in the last Lacewing News, the XIII. Symposium for Neuropterology 2018 will be convened in southern Germany, in the small town of Laufen on River Salzach, close to the Austrian border. The location will be the Academy for Nature Conservation and Landscape Management (ANL) [http://www.anl.bayern.de/english/anl/index.htm]. Here, we can offer accommodation close to the conference location. Laufen is a small town with about 7000 residents. However, Salzburg in Austria, which is only 15 km away and can easily be reached from Laufen via local trains, offers many cultural and touristic options, and Munich can also be reached by train.
The Symposium will start on Sunday evening 17 June with an opening lecture. From Monday, 18 June, to Thursday, 21 June, we will have a scientific program with a midterm excursion on Tuesday. On Friday, 22 June, we plan a one-day trip to the National Park Berchtesgaden, and after that there will be a collecting trip to interesting locations in southern Bavaria for one week.
The conference homepage will be accessible in the next days and we will also post information and updates on Facebook. We keep you updated.
The organizing committee, Axel Gruppe, Florian Weihrauch, Michael Ohl and Vroni Hierlmeier, is looking forward to welcome you in Germany next year!

Short biographies of the members of the organizing committee:

**Axel Gruppe**: I was trained as a agricultural-technical assistant and worked in this position at Ege University of Izmir, Turkey, for one year. Sad to say, I was not interested in collecting Neuroptera at that time. Back in Germany, I studied agricultural sciences (plant production) at the University of Giessen. Here, I also did my PhD, dealing with the ecology of a pest aphid of cherry trees. Although, I was interested in insects before, in that time I came in close contact with Neuroptera (and other aphidophagous insects) as natural enemies of aphids.
In 1988 we, me, my wife and two children, moved to Munich, where I got a job at the Chair of Applied Zoology at the faculty of Forest Sciences. Until now, and hopefully up to my retirement, I have held this position, but my academic environment changed (transfer to Technical University of Munich, renaming of the chair, transfer to another chair etc.). Starting with my position in Munich, my interest focused more and more on Neuroptera. In 1995 I joined the meeting of German speaking Neuropterologists organized by E.-J. Tröger and Wieland Röhricht. That was my starting point to become a Neuropterologist!
I dealed mainly with questions of neuropteran communities in forest ecosystems, in particular with the effect of forest management and conservation on communities. Neuroptera were not the target group in that projects of course, but brought out exciting results, too. As you all are aware, Neuroptera are none of the insect groups attracting great deal of general attention, not even for students. But I was lucky to find enthusiastic students studying symbionts of Neuroptera and the larval biology of Raphidioptera.
Beside my work on European fauna I visited Mongolia (2012, 2014) and Peru (2015), collecting Neuroptera, of course.
I have been organizing the working group Neuroptera of the German Society of General and Applied Entomology (DGaaE) for many years with biannual or annual meetings since 2002. Now, I am involved in the organization of the 13. International Symposium on Neuropterology in 2018.

**Florian Weihrauch**: I suppose one can call me one of the world's few specialists in hop entomology and organic hop cultivation. In 1993 I graduated in biology at the Ludwig-Maximilians-University in Munich and subsequently began working at the Hop Research Center of the Bavarian State

Research Center for Agriculture on various projects concerning arthropod pests of hops and their biological control. That was also the beginning of my interest in the Neuroptera, as green and brown lacewings are a significant factor in natural biological pest control in my crop and I worked on several projects to enhance the role of lacewings as predators of hop aphids and spider mites. In this context I came into contact with the group of German-speaking neuropterists and have been regularly attending the meetings of this fine little group. In 2011-2012 I also performed a large monitoring project for Myrmeleontidae, especially focused on Myrmeleon bore, in the region I am living in Bavaria.

In 2003 I earned my doctorate in natural sciences at the Technical University Munich with a dissertation on the development of a control threshold for two-spotted spider mites on hops and became deputy head of the working group 'Plant protection in hops'. In 2016 I was appointed head of the newly formed working group 'Ecological issues of hop cultivation'. Privately, besides my distinct interest in the Neuroptera, my scientific passion is focused on the Odonata. After 10 years as editor of the German journal 'Libellula' I meanwhile have become executive editor and publisher of the international, ranked journal 'Odonatologica' and have founded a publishing house named 'Osmylus Scientific Publishers' for the production of this and other journals (and, in the future, hopefully books).

**Michael Ohl**: I studied biology, philosophy and history of sciences at the universities Kiel and Göttingen. The supervisor of my Diploma thesis on the phylogeny of apoid wasps was already Rainer Willmann, and I also was his PhD student in Göttingen, after he became chair of zoology there. Besides empirically working on Hymenoptera, I was always interested in higher-level phylogeny of holometabolous insects, and I found Neuropterida most fascinating. After completing my PhD, I was hired as the curator for orthopteroid insects at the Museum für Naturkunde inn Berlin, and my responsibilities also included the Neuropterida collection. This was a great opportunity to develop a research program on Neuropterida, myself, with a focus in Mantispidae. The Berlin museum houses close to a third of all types in Mantispidae, so this collection was a great starting point for some serious work on this fascinating group of lacewings.

Besides my projects on Neuropterida, I continue working on the taxonomy and systematics of digger wasps (Apoidea), and I am also interested in the conceptual foundations of taxonomy and systematics,
In the occasion of the XI. International Symposium on Neuropterology in Ponta Delgada on 13-15 June 2011, I was elected president of the International Association of Neuropterology, which is a great honor. I am really proud to invite the international neuropterologists to a productive and pleasant meeting in Germany in 2018!

**Vroni Hierlmeier**: In October 2011 I began my education in Forestry and Resource management at the TU München, Freising Weihenstephan. At that time in my main interest was in forest ecology, timber production and social aspects of forestry, but I realized that I'm mostly interested in animal ecology.
Because of that I started my bachelor's thesis supervised by Axel at the Chair of Applied Zoology in 2014. This was the first time I worked intensely with insects, in particular with Lepidoptera. There after I started my master's also in Weihenstephan. In this time, I was involved in field work and the analysis of trapped insects in different projects at the Chair of Applied Zoology as a student worker.
In April 2016 I started my master's thesis again supervised by Axel and thus, I came in close contact with the fascinating order of Neuroptera. The aim of my work was to develop a system to cultivate Hemerobius micans in the lab. During this work, I learned about the importance of cytoplasmatic symbionts in insects and was able to prove that the symbiont Wolbachia is present in my target specie.
Until now, the connection between Neuroptera and cytoplasmatic symbionts has never left me and I'm going to do my PhD in this topic. Thus I can continue working with Neuroptera. Finally Axel asked me to join the group organizing the 13. International symposium for Neuropterology 2018 and I'm happy to meet leading neuropterologists.

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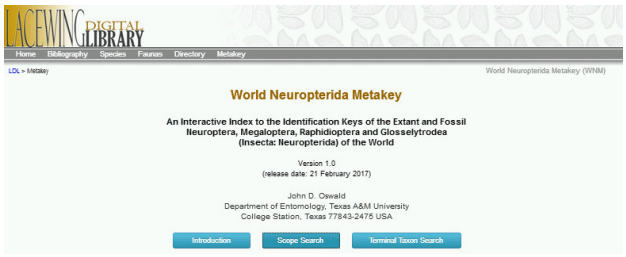
**From John D. Oswald**

**Looking for identification keys?**

When you need to make an identification of a neuropterid species not familiar to you, what do you do? Probably, you turn to an identification key. But, how do you find the right key? Indeed, how do you know if the 'right key' even exists? The most recent addition to the Lacewing Digital Library (LDL) web portal, the World Neuropterida Metakey (WNM), might be able to help. The Metakey is not a key itself; rather it is an interactive, searchable, index to thousands of keys to neuropterid insects that have been published around the world since the early 1800s. The Metakey contains two interfaces that allow data captured for individual keys to be easily searched, helping identifiers locate keys that could meet their specific needs. The metadata available for searching include information on the taxonomic and geographic scopes of keys; the sexes and life stages that they treat; their languages, formats, and numbers of couplets, and their locations in the literature (e.g., Bibliography of the Neuropterida reference number, bibliographic citation, date of publication, and first page of key). Direct links to PDFs of publications containing keys are also provided (where available and permissible).
In addition to the ability to search for keys through data that define a key's 'scope', the WNM also allows users to search for keys by the terminal taxa that they contain (both by the scientific names used in the keys themselves, and by their current scientific names as used in the LDL Neuropterida Species of the World catalogue). While at first it might seem odd that one would want to find keys by their terminal taxa—after all, we usually use keys to discover the scientific names of taxa—this functionality turns out to be very useful. For example, if you want to verify an existing identification on a specimen you can use this feature to locate keys that contain the identified taxon as a terminal taxon in a key, i.e., keys that you could use to check the identification. You can also use this functionality to trace the diagnostic features of a taxon (as expressed in key couplet texts), or to compare the traits used to distinguish that taxon from other taxa in different geographic areas, by different authors, or at different points in time.
The idea for the Metakey started years ago when I was having difficulties myself finding keys in the fragmented and poorly indexed world Neuropterida literature. About 2012 I decided to try to develop a solution to the problem of finding keys. Since then, I have checked >4400 books, book chapters, and scientific papers for the presence of Neuropterida identification keys. More than 840 of those publications contained keys (>3200 so far), and the data recorded from those keys form the datasets used in the metakey project. Most of the development of the WNM web site was undertaken in 2016, working in close association with LDL programmer Mr. Tian-jian Wang.
Although it is impossible to know with certainty what proportion these 3200+ keys represent of the total corpus of Neuropterida keys ever published, it seems clear that the current

Metakey datasets contain information on at least a substantial majority of the identification keys that have ever been published that attempt to identify Neuropterida taxa to the level of genus or below. However, no complex resource like the WNM that aspires to global scale can ever be entirely complete. So, I would love to hear from anyone who may know of additional keys that are not yet included in the Metakey. Any additional keys that are brought to my attention will be added to future Metakey updates. I would be particularly interested to hear from colleagues who are familiar with keys written in languages that do not use the Latin script (e.g., Russian, Chinese, Korean, Arabic), as that subset of keys is probably underrepresented (relative to Latin-script keys) in the current version of the Metakey.




To give the Metakey a try, visit lacewing.tamu.edu/Metakey/Main. Click 'Introduction' to read more about the World Neuropterida Metakey project, or click 'Scope Search' or 'Terminal Taxon Search' to begin searching for keys. As always, I'm very happy to hear back from the community about how this publication might be modified and improved for future versions. Please send any comments that you would like to share—good, bad, or mixed—to John Oswald at j-oswald@tamu.edu

## Readers' corner

**From Cristiano Pires**

Dear friends.

It's a pleasure to write again to the Neuopterology group. … Has the group of neuropterologists ever considered the possibility of holding a seminar or any other type of event in Mozambique? My university would be very supportive and such a scientific event would bring together the scientific and traditional aspects of the knowledge around the antlions.

We could also organize field trips to the Great Limpopo International Park to observe and investigate the antilions

Best regards

Cristiano Pires
cristo.pires@gmail.com

**From Edmund Jarzembowski**

In the latest issue of Deposits, there is a figure of Kalligramma

original plus by Fred Clouter

Edmund Jarzembowski
jarzembowski2@live.co.uk

**Nouvelles frontiers**

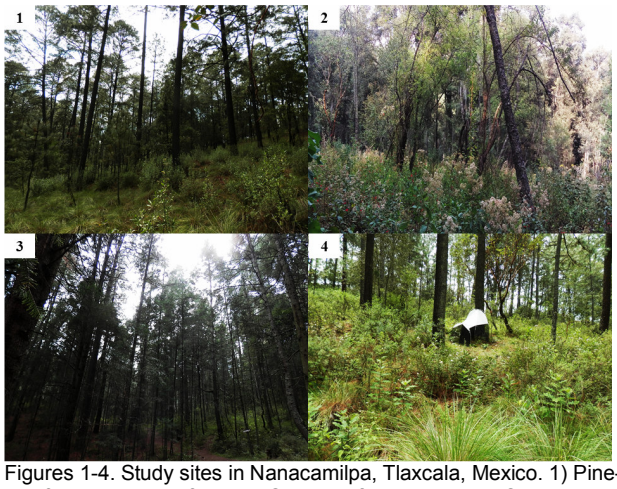
**Yesenia Marquez-López**

I am a master's student of the Universidad Autónoma Metropolitana-Iztapalapa in Mexico City. My thesis subject is the Diversity of

Coniopterygidae and Hemerobiidae at the municipality of Nanacamilpa, state of Tlaxcala, under the advise of Dr. Atilano Contreras-Ramos (Instituto de Biología, UNAM). I have not concluded the analysis of data, however I do have some preliminary results.

Tlaxcala is the smallest state of Mexico, with an extension of 4,016 km2, climate is temperate subhumid with rains in the summer; it has an elevation of 2,700 masl. It is within a biogeographic province of Mexico called the Neovolcanic Axis; Nanacamilpa is located on the north face of this mountain complex.
Previously, only two species of neuropterans had been recorded in the state of Tlaxcala: Hemerobius discretus Navás, 1917 (Hemerobiidae) and Meloma emuncta Fitch, 1855 (Chrysopidae). For my thesis project we proposed a hypothesis: changes are expected in abundance and diversity of species along the sampling period, as a result of seasonality in environmental conditions (e.g., temperature and precipitation), The main objectives are to determine the diversity of Coniopterygidae and Hemerobiidae in the study site. Our particular objectives are: a) to make a species list by family, b) to describe the pattern of abundance of selected species along the sampling regime in the study sites, and c) to estimate the alpha and beta diversity for the sampling sites.
We would like to have an assessment of the seasonality pattern of both families and observe the behavior of selected species in rainy and dry season.
Within Nanacamilpa, we sampled two locations, the first one was Ejido Los Búfalos, and the second one was Piedra Canteada.


The two sites had different types of vegetation, for example in Los Búfalos there is pine-oak forest with maize fields, while Piedra Canteada has oak-pine forest as main vegetation, but it also contains fir forest (*Abies religiosa*) with the presence of some oaks (Figures 1-4).
The sampling started on 25 September 2015 and was concluded on 03 March 2017; we collected with six Malaise traps (three in each locality), nets, as well as black and mercury vapor light.



Figures 1-4. Study sites in Nanacamilpa, Tlaxcala, Mexico. 1) Pine-oak forest in Los Búfalos; 2) Oak-pine forest in Piedra Canteada; 3) Fir forest in Piedra Canteada; 4) Malaise trap in Los Búfalos.

I have not examined all the specimens, yet the goal is to graduate and publish the ecological analysis as soon as possible, so at this time it would be premature to share concrete results. However, I can say that for Coniopterygidae there were no records for the family in Tlaxcala and now we will record eight species. Also, only one species of Hemerobiidae was known, and after this thesis, the number of records increases

to nine species.


**Current researches**

**From John Oswald**

**Lacewing Digital Library – Invitation to Collaborate**

For a number of years I have wanted to add two additional modules to the Lacewing Digital Library (LDL) web portal to further support the global neuropterological community – (1) a Social Media page, and (2) a Neuropterida Image Gallery module. Unfortunately, because of other projects, I have not been able to make much progress on either of these. With this note I would like to find out if there are any other neuropterists who would be interested in playing a major role in developing either of these projects. Below are some ideas on the potential scope and vision for these projects; but, what actually gets developed would be decided on in collaboration with any new collaborators.

Social Media Page

Over the past decade the number of social media technologies and web sites has grown tremendously, and many neuropterists are using these resources to communicate and interact with both colleagues and the broader public who have an interest in neuropterid insects. There is currently no resource that I am aware of that serves as a focal point for informing the global neuropterological community about the opportunities and possibilities of using Social Media to advance the study of neuropterology.

The new LDL Social Media page would be developed to fill that gap. The page would NOT seek to duplicate Social Media functionality that is already available and established on the web. Rather, its focus would be to serve as a centralized 'links page' whose goal is to identify, aggregate, and advertise to the neuropterological community any existing Social Media sites that can be used advantageously for the discussion of neuropterid-related topics (in any language, anywhere in the world). The new page would help foster the use of such sites to support our science and its interactions with the public.

The structure of this page on the LDL site would likely be relatively simple. What is needed is for one individual to take on the responsibility for developing the appropriate content, to actively engage with the neuropterology and diverse Social Media communities to identify what opportunities exist, then to synthesize that information in a format and manner that can be effectively shared with the rest of the neuropterology community.

Neuropterida Image Gallery

Digital images of neuropterid insects have proliferated on the web over the past 10-15 years. These images exist in a wide variety of contexts and sites scattered across the globe. But, image quality is highly variable, and associated image metadata (particularly identifications and photo locations) is unstandardized and often unreliable. Our community would benefit tremendously from a centralized gallery of high-quality, authoritatively-identified, neuropterid images, combined with other related image metadata (e.g., photographer data, and photographic time and place data), that could be flexibly integrated into a variety of digital resources. The Neuropterida Image Gallery could be developed as a new LDL module under the leadership of a new Editor; but, its images and data could also be integrated into other modules, such as the new and developing suite of country faunas modules.

Unfortunately, developing and maintaining an image gallery of what could become thousands to tens-of-thousands of images is not a trivial exercise. Some of the important functional tasks involved in developing such a resource include: (1) discovering new images [locating new images on the web and/or from known

photographers], (2) acquiring image-use permissions [requesting permissions for image use and maintaining permissions-related metadata], (3) soliciting and/or verifying taxon identifications [developing and maintaining an identification verification process, particularly through outreach to the global neuropterology community], (4) evaluating image quality [evaluating the quality and suitability of images and making decisions about which images meet the standards set for inclusion within the Gallery], (5) manipulating image files [processing image files to ensure that they are suitable for and optimized for web display, and/or other image gallery standards, e.g., cropping, file sizing, file type conversion], and (6) capturing and maintaining image metadata [this is critical for properly crediting photographers, for maintaining records where and when images were taken, and for enabling the programmatic linking of image-associated data – particularly place, time, and identification data – to new resources]. This is a BIG task; one that I have not been able to adequately address while also organizing and maintaining other LDL resources. I would really like to identify an energetic and proactive individual who would be interested in contributing to the community by making a long-term commitment (even if at a modest continuing level) to developing a high-quality neuropterid image resource for and by neuropterists. I am willing and able to assist such an individual with database support for developing some of the systems that would be needed to undertake this project more efficiently.
If either of these two projects sounds interesting and you would like to discuss developing a new collaboration around one of them (particularly by taking a leadership role in the development of one of these projects), please contact me and we can discuss things further.

## Social meetings

### From Horst Aspöck & Ulrike Aspöck

### Neuropterologists at various Meetings in Austria in autumn 2016

In autumn 2016 the following meetings took place in Austria, which were – for various reasons – also attended by neuropterologists:

- Symposium of the Austrian Entomological Society on "Zoological Nomenclature in Change?" in Graz (Styria), 22 October 2016 (for details see H. ASPÖCK 2017 at the end of this issue of Lacewing News);
- 83rd Entomological Meeting in Linz (Upper Austria), 5–6 November 2016;
- 10th Meeting of NOBIS Austria (= Network of Biological Systematics Austria) in Linz (Upper Austria), 2–3 December 2016;
- ABOL (= Austrian Barcode of Life)-Meeting in Linz, 3–4 December 2016.

Here are a few photographs of neuropterologists at these meetings:

22 October 2016. Styria, Graz. Group photograph of the participants of the Symposium on Zoological Nomenclature, among them several neuropterologists: Eyjolf Aistleitner (last row, left, with beard), Horst Aspöck, Ulrike Aspöck, Renate Rausch (first row), behind her Hubert Rausch, Susanne Randolf (third row from behind, right, with greyish shawl), Dominique Zimmermann (last row, right, with green shawl). The photograph is a valuable documentation of a large part of presently active entomologists in Austria. (Photo C. Komposch/ÖKOTEAM.)

22 October 2016. Styria, Graz. Round table discussion on current problems and challenges in Zoological Nomenclature. From left to right: Ulrike Aspöck, Frank Zachos (Natural History Museum Vienna), Christian Kropf (Natural History Museum Bern, Switzerland), Bernhard Seifert (Senckenberg Museum für Naturkunde Görlitz, Germany), Erna Aescht (member of the International Commission on Zoological Nomenclature,

Biologiezentrum Linz), Ivan Löbl (Muséum d'histoire naturelle de la Ville de Genève, Switzerland), Horst Aspöck. (Photo C. Komposch/ÖKOTEAM.)


5 November 2016. Entomological Meeting in Linz. From left to right: Hans Malicky, Bernhard Klausnitzer, Horst Aspöck. (Photo archive H. & U. Aspöck.)


5 November 2016. Entomological Meeting in Linz. In front, middle: Elisabeth Geiser (left) and Ulrike Aspöck, behind them Hubert and Renate Rausch. (Photo archive H. & U. Aspöck.)


6 November 2016. Entomological Meeting in Linz. Johannes Gepp giving a presentation on snow-insects. (Photo archive H. & U. Aspöck.)


3 December 2016. NOBIS-Meeting in Linz. E. Haring (Natural History Museum Vienna). She has been and is being involved in many Neuropterida projects from the side of molecular biology. (Photo archive H. & U. Aspöck.)

4 December 2016. Linz, ABOL-Meeting. N. Szucsich, ABOL-Manager (left), and A. Kroh, palaeontologist (both Naturhistorisches Museum Vienna). Barcoding of Neuropterida of Austria has begun. E. Haring (F.11) and H. Sattmann (both also Naturhistorisches Museum Vienna) are Project Leaders of ABOL. (Photo F. Gusenleitner.)

## From Horst Aspöck & Ulrike Aspöck

### Joint Meeting of the Entomological Societies of Germany (DGaaE), Switzerland (SEG), and Austria (ÖEG) in Munich and Freising, Bavaria, with several contributions on Neuropterida

From 13 to 16 March 2017 the Joint Meeting of three Entomological Societies of Germany, Switzerland, and Austria took place in Freising,

near Munich. It was opened at the Bavarian Academy of Sciences in Munich and continued at the Technical University of Freising. Among the many participants there were also several neuropterologists: H. Aspöck, U. Aspöck, M. Gerth, A. Gruppe with several students presenting Bachelor or Master works on Neuropterida: V. Abbt, V. Hierlmeier, D. Piemonte; M. Ohl, J. Gepp, W. Wichard.


15 March 2017. Freising, Bavaria. Neuropterologists at the Meeting. From left to right: F. Weihrauch, H. Aspöck, U. Aspöck, J. Gepp, V. Hierlmeier, A. Gruppe, M. Gerth. (Photo archive H. & U. Aspöck.)

Presentations were given on Raphidoptera of the Mediterranean Islands, on the phylogeny of Coniopterygidae, on Corydalidae of Panguana (Peru), on influence of temperature on the metamorphosis of Raphidioptera, on possible influence of endosymbionts on the sex ration in Neuroptera, on Neuropterida in winter and on fossil Neuroptera. In addition a poster dealing with prothetely in Raphididiidae was presented.


13 March 2017. Munich, Bavaria. Bavarian Academy of Sciences. From left to right: B. Misof, . Aspöck, and H. Aspöck discussing Neuropterida matters within the 1KITE project. (Photo archive H. & U. Aspöck.)


14 March 2017. Freising, Bavaria. Axel Gruppe and his MSc student Viktoria Abbt with her master thesis on a "Temperature model for the development of Raphidioptera larvae". (Photo archive H. & U. Aspöck.)


15 March 2017. Freising, Bavaria. Veronika Hierlmeier, MSc student of Axel Gruppe, giving a presentation on possible influence of cytoplasmatic endosymbionts on sex ratio in Neuropterida. (Photo archive H. & U. Aspöck.)

16 March 2017. Freising, Bavaria. A. Gruppe in his room at the Chair of Zoology–Entomology at the Technical University Munich. (Photo archive H. & U. Aspöck.)

**Recent Literature on the Neuropterida (2016-2017)**
Organized by Agostino Letardi with the support of John D. Oswald and BotN project
(http://lacewing.tamu.edu/Biblio/Main)


Aldrich, J. R.; Chauhan, K.; Zhang, Q.-h. 2016. Pharmacophagy in green lacewings (Neuroptera: Chrysopidae: *Chrysopa* spp.)? *PeerJ* 4: e1564. doi 10.7717/peerj.1564 [r#16175].

Alroy, J. 2017. Fossilworks. http://fossilworks.org [r#16169].

Andriollo, T.; Blanc, M.; Schönbächler, C.; Hollier, J. 2016. Données nouvelles de fourmilions (Neuroptera, Myrmeleontidae) pour le bassin genevois. *Entomo Helvetica* 9:13-18 [r#16042].

Aspock, H. 2016. Dokumente zum wissenschaftlichen Opus von Ulrike Aspöck für die Periode 2011-2016 anlässlich ihres 75. Geburtstags. *Linzer biologische beiträge* 48(2): 1011-1079. [r#16107].

Aspock, H. 2017. Zoologische Nomenklatur im Umbruch? *Entomologica Austriaca* 24: 115-137. [r#16176].

Aspöck, U.; Aspöck, H. 2016. Neuropterida mittendrin – ein Science-Paper macht Furore! *Nachrichten der Deutsche Gesellschaft für Allgemeine und Angewandte Entomologie* 29:8–10 [r#15919].

Badano, D.; Acevedo, F.; Pantaleoni, R. A.; Monserrat, V. J. 2016. *Myrmeleon almohadarum* sp. nov., from Spain and North Africa, with description of the larva (Neuroptera: Myrmeleontidae). *Zootaxa* 4196(2): 210-220. doi.org/10.11646/zootaxa.4196.2.2 [r#16007].

Badano, D.; Aspock, H.; Aspock, U. 2017. Taxonomy and phylogeny of the genera *Gymnocnemia* Schneider, 1845, and *Megistopus* Rambur, 1842, with remarks on the systematization of the tribe Nemoleontini (Neuroptera, Myrmeleontidae). *Deutsche Entomologische Zeitschrift, Berlin* 64(1):43-60. doi: 10.3897/dez.64.11704 [r#16159].

Canard, M. 2016. Les Chrysopes: auxiliaires discrets de le lutte contre les Pucerons. https://blog.defi-ecologique.com/chrysopes-auxiliaires-discrets-de-lutte-contre-pucerons/ [r#16177].

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Thank you SO much for the GREAT privilege Melvyn & I had in being able to spend time on your fantastic Galgeberg and being able to stay in No. 2 cottage! It was SO good seeing this amazing Lacewing again. It is called *Sicyoptera dilatata*. (The Galgeberg Spoon-wing Lacewing). It was described in 1836 by Klug from 1 male specimen - now in the Berlin Museum. It was not seen again till I rediscovered it about 37 years ago (with the Stander Gang!). It was collected or acquired by a Georg Krebs - somewhere between 1820 and 1836. The locality label given is 'Cap der guten Hoffnung,' (= Cape of Good Hope - in German). This is the first time I have seen it again since the big fire of Jan 2010.
This was the first time Melvyn has EVER seen it alive! He was SO chuffed. He saw 2 more today. I left early and am in Sedgefield with my wife Carolynn, daughter, son-in-law and 2 grandkids. Merv WILL settle the 'verblyf' account. He knows LOTS of birders - and will spread the word in Pretoria about your cottages.
Kindest regards, Jonathan Ball