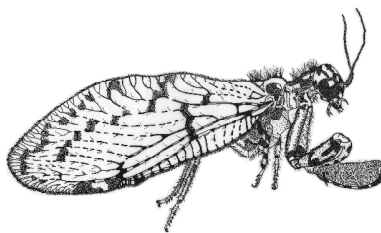


Lacewing News



NEWSLETTER OF THE INTERNATIONAL ASSOCIATION OF NEUROPTEROLOGY

No. 27

Autumn 2018

A new IAN board is born!

During the XIII International Symposium on Neuropterology, the participating neuropterologists elected a brand new IAN board: see the minutes of the meeting of the past IAN board at Laufen, Germany, 20 June 2018 in this issue of LN.

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. Xingyue Liu (xingyue_liu@yahoo.com).



From right to left, the new IAN president Xingyue Liu and the LN editor Agostino Letardi (photo Rinaldo Nicoli Aldini)

OBITUARY

CÉSAR FREIRE CARVALHO
(8.12.1949–8.10.2018)
Rosangela Marucci
Maria Fernanda Peñaflor
Brígida Souza

On October 8, 2018, we said good-bye with much regret to our dear Professor César Freire Carvalho (Figure 1).



Figure 1. César Freire Carvalho working at Universidade Federal de Lavras, MG, Brazil.

He was a person extremely dedicated to everyone around him in his work environment. We, as co-workers, had the privilege of living with a fun, generous, hardworking and honest friend. The dedicated work of Prof. César brought enormous contributions to UFLA (Universidade Federal de Lavras), MG, Brazil, specially to the Department of Entomology. César dedicated more than 40 years of his life to the Federal University of Lavras and the Department of Entomology, where he began the work at the invitation of Prof. Luiz Onofre in 1975, shortly after completing his Undergraduate Degree in Agronomy at the former ESAL. He completed his master's degree in 1981 at Universidade de São Paulo – ESALQ (Escola Superior de Agricultura "Luiz de Queiroz"), and his doctorate at Université Paul Sabatier in France in 1994, both in Entomology. During his career, he advised several undergraduate students, 34 students of Masters degrees and 18 doctoral students, as well as supervised one post-doc fellow and numerous students under short-term training programs. César also contributed to the training in Entomology of all the students who passed through UFLA in these more than 40 years, where he taught the subjects General Entomology, Apiculture and Sericulture for the courses of Agronomy, Biology and Zootechny.

The research area of Prof. César was the insect biology with emphasis on two important groups of beneficial insects: green lacewings and bees. He had numerous publications, including five book chapters, more than 90 scientific papers – of which half were on the Neuroptera family, especially Chrysopidae –, and more than 150 presentations at scientific events.

Professor César accompanied and participated actively in the transformation that UFLA passed during these years and contributed very actively to the consolidation of the Department of Entomology. In this period he was deputy chief of Entomology Department from 1996 to 2000 and head of this same department of 2004 to 2012, being responsible for the physical structuring of the department.

Always very active, participatory and enthusiastic in these 40 years of his career, César had recently participated in the XXVII Brazilian Congress of Entomology in Gramado, RS, where he published among the entomologists of Brazil the International

Symposium on Neuropterology, which UFLA will host in 2021. He left us the memory of a fun personality and a unique dedication to the teaching, research and extension of the Universidade Federal de Lavras and Entomology.

The Neuropterology, Brazilian Entomology and the UFLA community lost a grand professional and friend. We are very sad, but certain that the contribution of professor César was great and will never be forgotten.

A bientôt, Cesar.

Current researches

From Franc Janžekovič, Boža Janžekovič and Dušan Devetak

Field work in Macedonia 2018 Eighth Slovenian Neuropterological and Birdwatching Expedition to the Balkans

Zoologists from the Department of Biology, University of Maribor, in cooperation with Slavčo Hristovski from the Department of Biology, Ss. Cyril and Methodius University of Skopje, organized the eighth field trip to the Balkan Peninsula.



From left to right: Aleksej Anovski, Slavčo Hristovski, Boža Janžekovič and Franc Janžekovič, participants of the field trip in eastern Macedonia. Photo S. Hristovski.

In the middle of June 2018, Franc and Boža Janžekovič carried out a 6-day collecting trip. This was our third visit to the Republic of Macedonia. In 2011, we explored the protected Nature reserve Jasen. In 2017, we were

collecting in the central and western Macedonia and, in 2018, continued in the eastern and



Steppe near Štip in the eastern Macedonia, a habitat of antlions and owlflies. Photo F. Janžekovič.

southern Macedonia. We travelled from Skopje to Štip and Kočani, with wonderful rice fields and artificial lakes. In the surroundings of Veles, dry meadows were characterized by breath taking spoonwings *Nemoptera sinuata*.



Spoonwing *Nemoptera sinuata*. Photo B. Zlatković.

In the thermophilic pine forest above the Kočansko jezero lake (Lake Gratce), we found numerous *Coniopteryx* specimens and other lacewings including *Dilar turcicus*. Unexpected was a finding of *Drepanopteryx phalaenoides* there.



Antlion pits at the sand bank of the Vardar river. Photo F. Janžekovič.

Our main focus was a steppe, warm temperature habitat between the village Kadrifakovo and river Bregalnica. This area is famous for its rich flora and numerous fossils. We observed interesting bird species, among them the European bee-eater (*Merops apiaster*) and calandra lark (*Melanocorypha calandra*). The rich neuropteran fauna was characterized by antlion *Macronemurus bilineatus*, owlfly *Libelloides macaronius* and mantidfly *Mantispa aphavexelte*.

We continued our journey along the Vardar River to the town Demir Kapija (Demir Kapi in Turkish or Iron Gate), where the highest temperatures (45 oC) in Macedonia have been recorded. The Demir Kapija zone is a national monument of nature and an ornithological reserve (different vulture species). We were

extremely lucky to observe also the javelin sand boa (*Eryx jaculus*). In the spectacular gorge of



Javelin sand boa (*Eryx jaculus*), observed at Demir Kapija. Photo F. Janžekovič.

Demir Kapija interesting green lacewing *Pseudomallada clathratus* occurred. We completed the field trip with a visit to the Prespa and Ohrid Lake as well as Galičica, a mountain between the two lakes. In the Galičica mountain, a huge number of snakeflies were collected.



Reconstruction of a pile-dwelling settlement – Museum on Water at Ohrid Lake. Photo F. Janžekovič.

Lake Prespa is rich in fish, including nine endemic species, but the most impressive animals were the great white pelicans (*Pelecanus onocrotalus*). At Ohrid Lake, a developed tourist destination, we were not successful in collecting neuropterans. However, we took a look of a pile-dwelling reconstruction a prehistoric settlement in the Bay of Bones – Museum on Water.

From John D. Oswald

Lacewing Digital Library Updates

Following the release of version 6.0 of the Neuropterida Species of the World (NSW) in March, 2018 has continued to be an active year working on various Lacewing Digital Library (LDL) projects. This note reviews some of those activities, including: announcements for two new publications in the LDL World Neuropterida Faunas series, notes on new recent data releases, a request for feedback on possible functionality changes to the NSW and Bibliography of the Neuropterida (BotN), and a user tip.

New Country Faunas. We are pleased to announce the recent release of two new country fauna publications in the LDL World Neuropterida Faunas series, which brings the number of publically available publications in that series to four (Italy and Slovenia were released earlier, in 2017). Following the recent International Symposium on Neuropterology in Germany, James Jepson indicated an interest in developing a work on the compact neuropterid fauna of Ireland, at the extreme western end of the well-known European fauna. He was able to put that work together in pretty short order, and the Neuropterida of Ireland fauna (<http://lacewing.tamu.edu/Ireland/Main>) was released on the public LDL site in early September. Most recently (late September), we have released the first public version of Mervyn Mansell's Neuropterida of South Africa (<http://lacewing.tamu.edu/SouthAfrica/Main>). Reflecting Mervyn's decades of study and knowledge of the neuropterid fauna of South Africa, this is the first LDL fauna to be completed for a country outside of Europe, and represents a significant new contribution to the literature for the vast and fascinating neuropterid fauna of the

southern end of Africa, which contains many significant endemic elements. Mervyn and I have been working on this project for almost two years – so it is very nice to finally be able to make this work available to the global neuropterid community. There are a number of other authors who are working on LDL faunas projects for additional countries (see the World Neuropterida Faunas “About” page at: <http://lacewing.tamu.edu/Faunas/Main>), and we hope to have several additional faunas in this series ready for public release in 2019. If you are interested in participating in the LDL World Neuropterida Faunas project, by either developing a new country fauna or by contributing to an existing project, please contact either me (j-oswald@tamu.edu) or one of the lead authors listed on the LDL faunas About page.

We are also continuing to slowly expand the functionality available through the various country faunas publications. The latest faunas contain a new feature that links each species displayed in each faunal list to its corresponding Monograph Record page in the Neuropterida Species of the World. This, in essence, turns each fauna publication into its own mini catalogue/monograph of the country’s fauna. We hope that this will be a useful feature for both faunas authors and users. We will incorporate this feature into all future faunas in the LDL series, and will retroactively add this feature to previously published faunas. We are currently working to implement another new feature, which will allow users to conveniently display distributions at the level of secondary political units within countries, i.e., lists of the states/provinces within a country in which a species occurs. We are also considering ways to implement links within the Neuropterida Species of the World out to the country faunas modules; this will help direct interested NSW users out to the different country faunas that are currently available.

Recent New Data Releases. Since March, five new data set releases have been made to the Neuropterida Species of the World, adding ca. 50 additional species. Interestingly, extinct species continue to be described at a faster rate than extant species. The large number of species currently being described from exquisite

fossil material preserved in Cretaceous Burmese amber is particularly notable. Please continue to let me know if you run across any Neuropterida species that are not yet included in the NSW. The Bibliography of the Neuropterida continues to grow as well. The latest dataset release (version 11.14) in September contains ca. 17,350 citations, and 17,900 digital files (covering 9,970 discrete publications). My thanks to all who continue to include me in their e-mailings that attach PDFs of new publications. I am also continuing to update data for the World Neuropterida Metakey. The latest dataset update for that work, version 1.5 released in late July, contains data on >3800 different identification keys (from 936 of 5149 examined publications) with a total of ca. 27,716 key terminal taxa.

Request for Feedback. In order to simplify future maintenance of the Bibliography of the Neuropterida and the Neuropterida Species of the World, we are currently considering the possibility of eliminating from those publications a few features that we believe are not currently being actively utilized by the neuropterology community. We request here direct feedback from anyone who is actively using any of the features discussed below, and who would like to see support for those features continued in the future. This is your opportunity to speak up. If we don’t hear from anyone about the possible changes discussed below, we will assume that our assessments are correct, i.e., that those features are not being actively utilized, and we will move forward with plans to remove the discussed features.

“Help” pages.— The original implementations of the Bibliography of the Neuropterida (BotN) and the Neuropterida Species of the World (NSW) both incorporate a “Help” link in the bottom navigation bar. Those links jump to a detailed set of interactive Help pages for these two modules. The Help pages for these modules have proven to be difficult and time-consuming to maintain, and have grown out of date. Based on (1) the current familiarity now of all users with the general operation and navigation of web sites, (2) our efforts to design all LDL pages so that their layout, navigation, and functionality is [hopefully] mostly self-evident, (3) the addition of page-specific help functionality on many pages,

e.g., the addition of “Table Key” texts below tables, (4) the fact that no one has asked where the “Help” pages are for more recently developed LDL modules, and (5) our perception that the NSW and BotN Help pages have very low rates of user utilization, we believe that these “Help” pages have outlived their usefulness and we propose to eliminate them in the next major version updates of the NSW and BotN. If you regularly use the “Help” pages in either of these modules, and find the information there useful, and would like to see those “Help” pages maintained, please let us know.

Selected BotN Search Functionality.— In BotN version 9.0 we implemented functionality that allows users to search for publications that contain figures pertaining to specific taxa or subjects, and publications that contain text data pertaining to specific taxa. These search elements are implemented in the “Restriction” block fields for “Figure Taxon”, “Figure Subject”, and “Taxon Citation” on both the BotN Simple and Advanced Search pages. These searches are tied to two special datasets that were developed as supplements to the basic bibliographic dataset. The “figures” search dataset has not been updated since 2016, and the “taxon citation” dataset has not been updated since ca. 2013. We implemented this functionality in the BotN prior to the development of the NSW Monograph Record page as one way that users could search for papers that contained text or figure data that pertained to particular species. But, because the searches don’t give any specific information on what kinds of information is available, or where that information is located within each publication, we recognized that those kinds of searches aren’t especially useful, and we always planned to replace that functionality with a different, more detail-rich, approach.

We have begun development of that new approach with the NSW Monograph Record page set. With the new Monograph Record pages, you can navigate to a particular species and display a list of all of the figures (for which we have entered data) that pertain to that species – complete with various information about those figures, links to the Bibliographic Records of the papers in which those figures occur, and (where available and permissible) links to copies of the papers themselves. This is a much richer approach than the “Figure Taxon”

search in the BotN. We are now working on another data display for the Monograph Record pages that will augment the current “Synonyms” table to display subject-coded annotation data for individual chresonyms; this will effectively replace the BotN “Taxon Citation” search functionality. The “Figure Subject” search functionality will probably eventually be included as part of a more general new “Neuropterida Images” module. So, effectively, we either have replaced, or are working to replace all three of the BotN search elements noted above. The fact that we have not yet actually replaced all of that functionality is one argument to retain the existing functionality for still awhile longer. However, the fact that we are no longer devoting time or development effort to maintaining or expanding the search datasets means that those dataset are increasingly out of date. Also, as we believe that these particular search options are not widely used, we would prefer to begin work dismantling them as we make other updates to the BotN module. If you regularly use any of the three BotN search options – “Figure Taxon”, “Figure Subjects”, or “Taxon Citation” – and you would like to see that functionality retained, please let us know.

A Tip. Do you ever find yourself needing a citable source for the current number of neuropterid species? You can find counts for the numbers of valid neuropterid species and subspecies in Table 5 on the Versions page of the Neuropterida Species of the World at <http://lacewing.tamu.edu/SpeciesCatalog/Versions>. These counts are updated with each new NSW release, so they remain fairly current.

Social meetings

From Horst Aspöck & Ulrike Aspöck

Beautiful memories of the 13th International Symposium of Neuropterology in Laufen (Germany, Bavaria), 17–25 June 2018

The symposium took place in a romantic old building, originally a monastery, now a congress centre, in the old town of Laufen situated at the river Salzach, which forms the border between the Free State of Bavaria (Germany) and the Austrian province of Salzburg, in the Alpine

region of Central Europe. This extraordinary



17 June 2018. Laufen, Germany. Axel Gruppe (left) and John Oswald. (Photo archive H. & U. Aspöck.)

place had been found and chosen for the symposium by Florian Weihrauch (Freising, Bavaria) and Axel Gruppe (Freising, Bavaria), our local managers were Christian Stettmer and Marianne Krause, who were the troubleshooters of the symposium and helped whenever they were requested. Unfortunately and unexpectedly our president, Michael Ohl, fell ill a few days before the symposium and could therefore not come to Laufen. The other members of the organising committee, Lukas Kirschey (Berlin), Florian Weihrauch, and Axel Gruppe managed, however, the symposium perfectly.



17 June 2018. Laufen, Germany. From left to right: Christian Stettmer, Horst Aspöck and Florian Weihrauch. (Photo archive H. & U. Aspöck.)

Altogether 39 neuropterologists – established scientists, young researchers of Neuropterida, and students working on Neuropterida – and five accompanying persons attended the

symposium; they came from 16 countries (in alphabetic order): Austria, Brazil, China, France, Germany, Hungary, Ireland, Italy, Poland, Russia, Slovenia, South Korea, Switzerland, Turkey, UAE, and USA.



17 June 2018. Laufen, Germany. In front, from left to right: Horst Aspöck, Bruno Michel, Xingyue Liu, Chaofan Shi, Yongjie Wang and John Oswald. (Photo archive H. & U. Aspöck.)

The symposium started with an ice-breaker in the evening of 17 June, which gave us the opportunity to meet old friends again, to see colleagues so far known only from literature and correspondence for the first time, and to socialise and network with new colleagues.



17 June 2018. Laufen, Germany. From left to right: Odile Frank, Bruno Michel and André Prost. (Photo archive H. & U. Aspöck.)

The symposium was opened by Xingyue Liu, vice-president of the International Association of Neuropterologists (IAN), on Monday, 18 June 2018. He also presented the first keynote on the phylogeny and evolution of Megaloptera. The whole day was devoted to presentations, given by: Laura C.V. Breitkreuz (on phylogeny of Chrysopidae), Han Xu (on systematics of



18 June 2018. Laufen, Germany. Participants of the 13th IAN Symposium of Neuropterology in the lecture hall. (Photo archive H. & U. Aspöck.)

Osmyliidae), Kim Seulki (on molecular trees of Korean Coniopterygidae), James E. Jepson (on evolution of wing patterns in fossil Neuroptera),



18 June 2018. Laufen, Germany. Horst Aspöck (left) and Johannes Gepp. (Photo archive H. & U. Aspöck.)



18 June 2018. Laufen, Germany. Ulrike Aspöck (left) and Davide Badano. (Photo archive H. & U. Aspöck.)

Xiumei Lu (on the Neuropterida from mid-

Cretaceous of Myanmar), Yanan Lyu (on new fossil Raphidioptera in the Mesozoic of north-eastern China), Alexander Khramov (on Mesozoic Chrysopidae), Caleb Califre Martins (on the “Catálogo Taxômico da Fauna do Brasil”), Joshua R. Jones (on his experiences in setting up a Neuropterology research lab), and Agostino Letardi (on lacewing and citizen science in Italy).



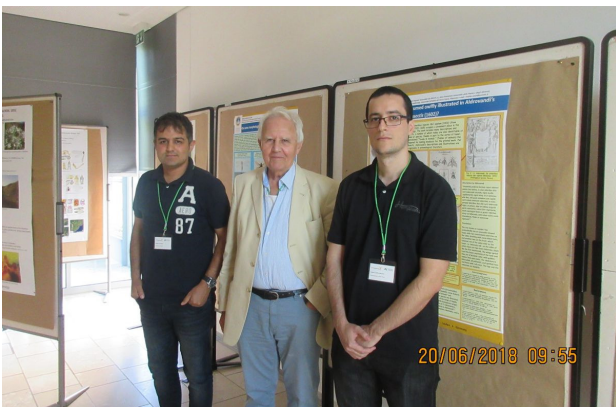
19 June 2018. Laufen, Germany. Group photograph of the participants of the 13th IAN Symposium of Neuropterology. 1 = Anitha Saji (UAE), 2 = Xingyue Liu (China), 3 = Xu Han (China), 4 = Hakan Bozdoğan (Turkey), 5 = Christian Stettmer (Germany), 6 = Felix Fenzl (Germany), 7 = Bruno Michel (France), 8 = Axel Gruppe (Germany), 9 = Alexander Khramov (Russia), 10 = Rinaldo Nicoli Aldini (Italy), 11 = Werner Weissmair (Austria), 12 = Caleb Califre Martins (Brazil), 13 = Sándor Koczor (Hungary), 14 = Dong Ren (China), 15 = Yongjie Wang (China), 16 = Jan Podlesnik (Slovenia), 17 = Xiumei Lu (China), 18 = Dominique Thierry (France), 19 = Seulki Kim (South Korea), 20 = James E. Jepson (Ireland), 21 = Lukas Kirschey (Germany), 22 = Laura Breitzkreuz (Germany), 23 = Chaofan Shi (China), 24 = Dušan Devetak (Slovenia), 25 = Yanan Lyu (China), 26 = Vesna Klokočevnik (Slovenia), 27 = Florian Weihrauch (Germany), 28 = Agostino Letardi (Italy), 29 = Johanna Villenave-Chasset (France), 30 = Joshua R. Jones (USA), 31 = Peter Duelli (Switzerland), 32 = Roland Dobosz (Poland), 33 = Davide Badano (Italy), 34 = Ferenc Szentkirályi (Hungary), 35 = Zhiqi Liu (China), 36 = Horst Aspöck (Austria), 37 = Ulrike Aspöck (Austria), 38 = Johannes Gepp (Austria), 39 = John Oswald (USA). (Photo archive H. & U. Aspöck.)

On Tuesday, 19 June, the scientific programme was continued and opened by a keynote by Ulrike Aspöck on an attempt at the homologization of the male genital sclerites of Coniopterygidae. Presentations followed by: Horst Aspöck (on “Metathetely and its implications for the distribution for Raphidioptera”), Sándor Koczor (on chemical attractants for Chrysopidae), and Axel Gruppe (on the dimensions of the dust of dustywings). In the afternoon we went to Weitsee-Lödensee, an Alpine biotope in an altitude of 750m a.s.l. for collecting, and in the evening we had light-trapping (and dinner) in the Schönrainer Filz.



19 June 2018. Schönrainer Filz, Germany. Mid-congress tour, light trapping. From left to right: Bruno Michel, Dominique Thierry, Rinaldo Nicoli Aldini, Horst Aspöck and André Prost. (Photo archive H. & U. Aspöck.)

The whole Wednesday was again devoted to the scientific programme. It was opened by a keynote by Davide Badano on the evolution, diversity and biology of the larvae of Myrmeleontidae. Further presentations were given by: Florian Weihrauch (on Myrmeleon bore in Bavaria), Vesna Klokočovnik (on predatory behaviour of antlions), André Prost (on the Myrmeleontid genus *Nosa*), and John Oswald (on anchored phylogenomics and a revised phylogenetic classification of the antlions).



20 June 2018. Laufen, Germany. From left to right: Hakan Bozdoğan, Horst Aspöck and Caleb Califre Martins. (Photo archive H. & U. Aspöck.)

The afternoon was devoted to a poster session with 13 posters on different topics presented by Dominique Thierry, Roland Dobosz, James Jepson, Agostino Letardi, Caleb Califre Martins, Axel Gruppe, Rinaldo Nicoli Aldini (3 posters), Anitha Saji, Johanna Villenave-Chasset, Yongjie Wang and Zamzam Alrashdi.

Due to the dense schedule the IAN board had its

meeting unfortunately during the poster session to discuss current issues, challenges and future tasks of IAN and to prepare a proposal for the composition of the board for the period until the next symposium, which will take place in Brazil.



20 June 2018. Laufen, Germany. The newly elected IAN board for the period 2018–2021. From left to right: Davide Badano, Chaofan Shi, André Prost (secretary), John Oswald (past president), Horst Aspöck, Xingyue Liu (president), Vesna Klokočovnik (vice-president), Caleb Califre Martins, Agostino Letardi (editor of the newsletter), Dušan Devetak and Dominique Thierry (treasurer). Not present in Laufen: Michael Ohl (past president), ex officio: Césaire Freire de Carvalho (who had agreed to organize the next symposium in Lavras, Minas Gerais, Brazil in 2021). On 9 October 2018 – after this article had been written – we received the shocking message of the tragic death of Prof. Carvalho. (Photo archive H. & U. Aspöck.)

The proposals for the next board were presented at the subsequent general assembly of IAN and were accepted unanimously.



20 June 2018. Laufen, Germany. Horst Aspöck (left) and Dušan Devetak. (Photo archive H. & U. Aspöck.)

On Thursday, 21 June, the whole day was devoted to presentations. Caleb Califre Martins was the keynote speaker of this day. He gave a lecture on “Neuropterida of South America: large diversity, largely unknown”. The following presentations were given by: Agostino Letardi (on “Fantastic lacewings and where to find

them”), Peter Duelli (on “The impact of forest fire and wind-throw on Neuroptera, Raphidioptera and Mecoptera”), Dušan Devetak (on Neuropterida in the National Parks in the Balkan Peninsula), Bruno Michel (on “Neuroptera of the region of Missouri, Morocco”), Dušan Devetak (on “Neuroptera in two protected sand dune areas... in the Pannonian Plain”), Johannes Gepp (on “Ascalaphidae larvae from Costa Rica”), Hakan Bozdoğan (on Chrysopidae in the Amanous Mountains, Turkey), Florian Weihrauch (on Neuroptera in high altitudes in the Bavarian Alps), Dominique Thierry (on *Chrysoperla carnea nanceiensis* SÉMÉRIA, 1980), and Peter Duelli (on the current revision of the *Pseudomallada prasinus* group (Chrysopidae) in Europe).



21 June 2018. Laufen, Germany. From left to right: Peter Duelli, Davide Badano, Ulrike Aspöck. (Photo archive H. & U. Aspöck.)

The scientific part of the symposium was closed by Xingyue Liu.



22 June 2018. Laufen, Germany. From left to right: Joshua Jones, James Jepson and Chaofan Shi. (Photo archive H. & U. Aspöck.)

On Friday, 22 June, the majority of the participants left Laufen for the post-congress field-trips to a rural hostel in Haidmühle-

Frauenberg (48.79°N 13.76°E, 850–870m a.s.l.) near the border to the Czech Republic, from where we made excursions to the Bavarian Forest (“Bayerischer Wald”) (48.94°N 13.54°E, 920–1,000m a.s.l.) on 23 June, and to the Jochensteiner Hänge (48.52°N 13.71°E, 290–520m a.s.l.), slopes above the river Danube near



23 June 2018. Nature Reserve Bayerischer Wald, Germany. Group photo of the participants of the post-congress excursion. 1 = Xiumei Lu, 2 = Axel Gruppe, 3 = André Prost, 4 = Lukas Kirschey, 5 = Xu Han, 6 = Seulki Kim, 7 = Caleb Califre Martins, 8 = Peter Duelli, 9 = Horst Aspöck, 10 = Davide Badano, 11 = John Oswald, 12 = Ren Dong, 13 = Yongjie Wang, 14 = Odile Frank, 15 = James Jepson, 16 = Chaofan Shi, 17 = Zhiqi Liu, 18 = Ulrike Aspöck, 19 = Yanan Lyu, 20 = Xingyue Liu. (Photo archive H. & U. Aspöck.)

Passau, on 24 June. Unfortunately the nights were cold and rainy so that efforts for light-trapping were not successful.



24 June 2018. Nature Reserve Jochensteiner Hänge, Germany. Post-congress excursion, searching for larvae of *Osmylus fulvicephalus*. From left to right: Chaofan Shi, Caleb Califre Martins, Ulrike Aspöck, Joshua Jones, Xu Han and Seulki Kim. (Photo archive H. & U. Aspöck.)

On Monday, 25 June, we had to take leave from one another to reach trains and airplanes in

Salzburg or Munich, respectively.



24 June 2018. Haidmühle-Frauenberg Hostel, Germany. Post-congress excursion. Ulrike Aspöck (left) and Caleb Califre Martins discussing future joint research projects. (Photo archive H. & U. Aspöck.)

The 13th International Symposium on Neuropterology was a wonderful event in our field: many valuable, impressive presentations, with a lot of new information on results of recent research, stimulating and challenging discussions, everything embedded in a harmonic atmosphere. We were, in particular, impressed by the high level of the research carried out by the young generation.



24 June 2018. Nature Reserve Jochensteiner Hänge, Germany. Post-congress excursion. From left to right: Seulki Kim, Ulrike Aspöck, Caleb Califre Martins, Horst Aspöck and Xu Han. (Photo archive H. & U. Aspöck.)

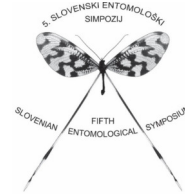
When we – together with Herbert Hölzel and Johannes Gepp – founded the symposia on Neuropterology 40 years ago and organised the first symposium in Graz (Austria) in September 1980, we did not dare to expect that these

scientific meetings would develop so successfully and internationally throughout the following decades. We are looking gratefully and confidently into the future of Neuropterology.

[Note of Editor: Horst and Ulrike Aspöck sent for this note a huge number of beautiful photos that I can not insert in LN27 BUT which are available *on demand*]

From Dušan Devetak, Vesna Klokočovnik and Jan Podlesnik, Maribor

FIFTH SLOVENIAN ENTOMOLOGICAL SYMPOSIUM WITH INTERNATIONAL ATTENDANCE, 21st and 22nd September 2018, Maribor, Slovenia



Logo of the 5th Slovenian Entomological Symposium (5SES) with International Attendance. The logo contains a figure of the spoonwing species *Nemoptera sinuata* Olivier, 1811.

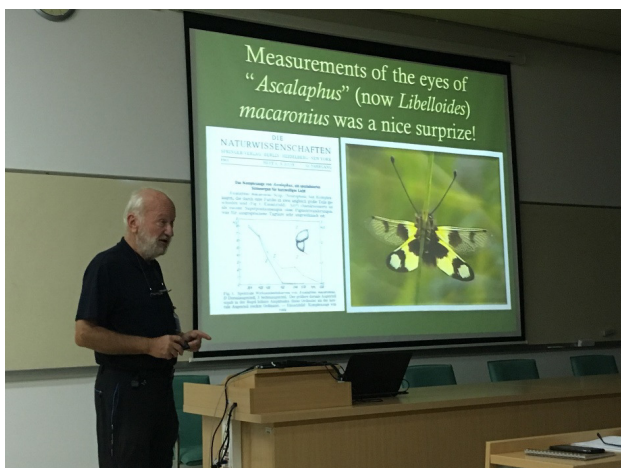
Slovenian entomologists organized the Fifth Slovenian Entomological Symposium with International Attendance (5SES), dedicated to academician Prof. Dr. Matija Gogala on the occasion of his 80th birthday (in December 2017) and 50th anniversary of the death of Prof. Dr. Štefan Michieli.



Participants of the Fifth Slovenian Entomological Symposium with International Attendance. Maribor, 21 September 2018. Photo V. Klokočovnik.

Matija (Matjaž) Gogala is an outstanding entomologist and physiologist, a specialist for bioacoustics and systematics of heteropterans and cicadas who was in the past also involved in

the study of lacewings. In 1965 Gogala – together with Štefan Michieli as a co-author published the first evidence of extreme ultraviolet sensitivity in an insect – the owlfly *Libelloides macaronius*. Later, he – together with German colleagues – isolated an ultraviolet visual pigment in the owlfly compound eye, which was the first UV pigment studied in detail in invertebrates. Today is Gogala at his age still active in field – collecting singing cicadas and analysing their high pitched songs.



Matija Gogala presenting one of his three lectures. 5SES, Maribor, September 2018. Photo J. Podlesnik.

The other important figure in Slovenian entomology and animal physiology was Štefan Michieli (1933-1968). Slovenian entomological society is bearing his name. Despite of the fact that late Štefan Michieli was well known as



Participants of the 5SES: from left to right: first row: Susana Cherchesova, Ignac Sivec, Tomi Trilar; second row: Gabrijel Seljak, Matija Gogala. 5SES, Maribor, 21 September 2018. Photo J. Podlesnik.

lepidopterist, his focus was also on small insect orders, among them embiopterans and lacewings.



From left to right: Slavcho Hristovski, Vesna Klokočevnik and Dušan Devetak. 5SES, Maribor, 21 September 2018. Photo F. Janžekovič.

The meeting was organized by the Slovenian Entomological Society Štefan Michieli, Faculty of Natural Sciences and Mathematics, and the Department of Biology, University of Maribor. The goal of this symposium was to bring together a diverse assemblage of entomologists from Slovenia and European countries who are interested in insects in order to share recent knowledge and ideas with each other. The Symposium hosted 50 participants from ten countries (Austria, Bosnia and Hercegovina, Croatia, France, Hungary, Kosovo, Macedonia, Russia, Slovenia and United Kingdom). The official languages were Slovenian and English. The accompanying Abstract Book comprises scientific program, abstracts of oral and poster presentations, and a list of participants. More information on the meeting is available on the website of the symposium

<https://5ses.fnm.um.si/index.php/en/home-2/>



Cover of the Abstract Book of 5SES with *Nemoptera sinuata* in the background.

Oral presentations and posters were devoted to different areas of entomology such as systematics, evolution, faunistics, ecology, ethology, physiology, applied entomology, nature protection and history of entomology. Regarding taxonomic groups, ten insect orders were represented in the symposium.



Vanessa Martinez, 5SES, Maribor, 21 September 2018. Photo V. Klokočovnik

Thirteen participants were or still are involved in the study of Neuropterida and eight of them presented five talks and one poster presentation devoted to Neuropterida:

Oral presentations:

- Pit-building antlions are sensitive to sub-nanometer amplitude vibrations of sand (Vanessa Martinez, Elise Nowbahari, David Sillam-Dussès & Vincent Lorent, France).
- Predator-prey interactions in antlions: transmission of vibrational signals deep into sand (Dušan Devetak, Jan Podlesnik & Vesna Klokočovnik, Slovenia).



Eva Veler, 5SES, Maribor, 21 September 2018. Photo V. Klokočovnik.

- Interactions between larvae of two sympatric antlion species (Eva Veler, Dušan Devetak & Vesna Klokočovnik, Slovenia).
 - The power of odours: the example of *Chrysoperla carnea* species complex (Neuroptera: Chrysopidae) (Sándor Koczor, Ferenc Szentkirályi & Miklós Tóth, Hungary).
 - Lacewings (Neuropterida) of the Natura 2000 protected area in Slovenia: Ličenca near Poljčane – Petelinjek ponds as an example (Eva Langerholc & Dušan Devetak, Slovenia).
- A poster presentation:
- Lacewings (Insecta: Neuropterida) in the Štefan Michieli's entomological collection (Dušan Devetak, Slovenia).

The symposium was a good opportunity to meet entomologists from Slovenia and other



Eva Langerholc, 5SES, Maribor, 21 September 2018. Photo J. Podlesnik.

European countries, to share the knowledge and discuss current and future projects. Researchers discussed very different fields of insect science, and some talks were devoted also to lacewings. In the evening of the first symposium day, participants spent some pleasant hours together with a wonderful Slovenian cuisine.

From Dušan Devetak, Maribor

Antlion's behaviour in Paris and Maribor

In May 2018, I spent two weeks as a visiting professor in the Université Paris 13 Sorbonne Paris Cité, Villetaneuse, France. After a short stay including a lecture presenting my work in November 2017 for master students in Ethology, it was my second visit of the Paris University in May this year. That time again, I accepted kindly invitation by Professor Elise Nowbahari from the Laboratory of Experimental and Comparative Ethology (LEEC - Laboratoire d'Ethologie Expérimentale et Comparée).

This visit was devoted to a common research on the antlion behaviour, with the emphasis on an experimental approach in the study of substrate vibrations as key signals for prey detection. The doctorate student Vanessa Martinez conducted measurements on subnanometer amplitude vibrations. The experimental setup using laser velocimetry and micro-controlled piezo electric



Elise Nowbahari with antlion pits in front of the Laboratory building. Photo D.Devetak.

transducers was developed by Professor Vincent Lorent from the Institut Galilée, Laboratory of Laser Physics. Vanessa Martinez, supervised by Vincent Lorent and Elise Nowbahari has studied *Myrmeleon inconspicuous* larvae in their capacity to detect vibrations generated by the locomotion of an ant outside the pit.



Elise Nowbahari and Vincent Lorent. Photo D. Devetak.



Director of the Laboratory, Heiko Rödel was an excellent host. Photo D. Devetak.

Besides my activities in the laboratory, I spent two nice days together with my hosts, Vincent and Thérèse Lorent, exploring the wonderful nature in the surrounding of Chaumontel near the forest of Chantilly (North of Paris). In an unspoiled forest, we observed antlion larvae and inspection with a binocular revealed that they belonged to *Euroleon nostras*. Because the train strike in spring time in Paris affected my travelling abilities, I had enough time also for sightseeing in Paris, including tourist visits of the most important places in the French metropolis.

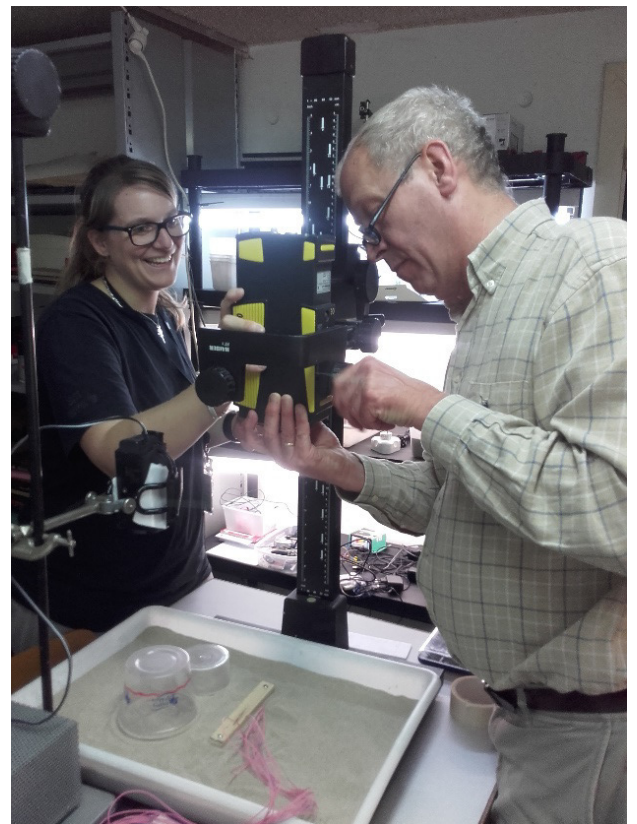


Vincent and Thérèse Lorent, in front is an antlion habitat. Photo D. Devetak.



From left to right: Anastasia Antonevich, Dušan Devetak, and Robyn Hudson. Paris, May 2018. Photo Heiko Rödel.

The visit gave me also the opportunity to encounter the other visiting researchers in the LEEC laboratory: Robyn Hudson, senior researcher at UNAM, Mexico, and Anastasia Antonevich, senior scientist at the Russian Academy of Sciences, Moscow. In the last day of my stay, the director of the Laboratory, Professor Heiko Rödel kindly invited us and his co-workers to his home where he organized an excellent party with an unforgettable barbecue in the garden. It was an outstanding “culinary evening”.



Vanessa Martinez and Vincent Lorent with laser velocimeter. Photo D. Devetak.

In the second half of September, the Fifth Slovenian Entomological Symposium with International Attendance was organized in Maribor, Slovenia and this was an occasion to invite French colleagues to participate it. Vanessa Martinez and Vincent Lorent participated the Symposium and presented the results of their study of the vibrations involved in the predatory behaviour in antlions. During the pre-symposium period, it was opportunity to visit our Laboratory for Animal Physiology and Ethology in the Department of Biology of the University of Maribor. It was a good chance to see the equipment, to exchange the knowledge and to plan a possible co-operation in the near future. In our laboratory, we have been studying biophysical and ethological aspects of vibrational communication in antlions for a long time.



Vincent Lorent in front of the oldest vine in the World, Maribor, 20 September 2018. Photo D. Devetak.

After the Symposium was finished, we spent a couple of days in sightseeing in Slovenia. Among others, we visited an over 400-years old vine in Maribor, which won it a place in the Guinness Book of Records as the oldest noble vine in the World still bearing grapes. During the last day of Vincent Lorent's stay in Slovenia, we travelled to Ljubljana and to Nova Gorica to visit the Franciscan monastery, where the last French king and several other members of the Bourbon family found their final resting places in the church crypt. We made there also a short visit of Gabrijel Seljak, an entomologist who is a specialist for leafhoppers, scale insects, and other homopterans.

The both visits – the visit of Paris and the visit of Maribor will contribute to the start of co-operation between two laboratories. One can

say that the antlion's predatory behaviour, a topic extensively studied in Maribor, becomes quite popular in the ethological lab in Paris. There is still a large extend of open questions in that field that we are keen to investigate with our complementary methodologies and approaches.

From David Bowles

David Bowles, Missouri State Universtiy, and Greg Courtney, Iowa State University, served as co-editors for a special issue of the journal *Aquatic Insects* that soon will be published. This special issue is titled '**Advances in aquatic insect systematics and biodiversity in the Neotropics**'. This volume contains two papers on Neuropterida that may be of interest to our group. The complete list of titles follows.

- Naucoridae of Belize. Robert W. Sites, Rachel Carrie & Bill Shepard
- The Megaloptera (Insecta: Neuropterida) of Colombia. Adrian Ardila-Camacho; Atilano Contreras-Ramos
- Notes on Neotropical Osmyliidae Larvae (Insecta, Neuroptera): Description of Habitats and Morphology. Caleb Califre Martins, Adrian Ardila-Camacho & Gregory W. Courtney
- The Hydroptilidae (Insecta: Trichoptera) of Panama: biodiversity comparisons and projections. Brian Armitage & Steven Harris
- The Trichoptera of Panama IX. Preliminary comparison of caddisfly assemblages for two proximate watersheds in western Panama. Brian J. Armitage and Steve Harris
- Three new species of *Parhydraenida* (Coleoptera: Hydraenidae) from southeastern Brazil. M.A. Jäch & J.A. Delgado
- A New Genus of Neotropical Dryopidae, *Platyparnus* Shepard and Barr, containing three species of *Helichus* Erichson (Coleoptera: Byrrhoidea). William D. Shepard and Cheryl B. Barr
- A review of the net-winged midges (Diptera: Blephariceridae) of the West Indies. Gregory W. Courtney and Charles L. Hogue
- A new species of *Neoderus* Alexander

(Diptera, Tanyderidae) from southern Chile, with a first description of a male and redescription of the genus, and a key to extant genera of the family. R. Isai Madriz, Anna Astorga, Targe Lindsay, and Gregory W. Courtney

Minutes of the Meeting of the Board of the International Association of Neuropterology Laufen, Germany, 20 June 2018

Present: Horst Aspöck, Dusan Devetak, Agostino Letardi, Xingyue Liu, John Oswald, André Prost, Dominique Thierry
Absent: Michael Ohl, Maria Ventura,
In the absence of the President, the vice-President Xingyue Liu took the chair.

Item 1. Future composition of the board of the IAN

Outgoing members present in the room expressed their desire to continue serving the association.

Several Board members endorsed the submission to the General Assembly of the names of new colleagues to join the Board. It was decided to propose Vesna Klokočovnik as vice-president, Davide Badano, Caleb Califre-Martins, and Chaofan Shi.

For the next three year period, the Board would therefore consist, if the Assembly agrees, of Xingyue Liu, President; Vesna Klokočovnik, vice-president; André Prost, secretary; Dominique Thierry, treasurer; Michael Ohl, past President; John Oswald, past President; Agostino Letardi, editor of the newsletter; Horst Aspöck; Dusan Devetak; Davide Badano; Caleb Califre-Martins; Chaofan Shi, members; and Cesar Carvalho ex-officio as host of the next symposium

Agostino Letardi expressed regrets at the absence of more female candidates; the board recommended the subject for future consideration.

Item 2. Financial matters

The Association contributed 1550 euros to the organization of the current symposium, with a view to support three participants.

The current cash amount is 2236.08 euros.

The subject of reintroducing membership fees was discussed. The treasurer stressed that last

time contributions were invited, IAN had 28 paying members. Several members were in favor of a limited membership fee, linked to the participation in the symposia.

Board members stressed that visible benefits should be associated with membership, although participation in the symposia as well as reception of the Newsletter could not be restricted to paying members only.

It was decided to introduce -reintroduce in fact- a membership fee of 10 euros per year to be either paid to the treasurer or collected with the financial participation to the next symposium; the decision will be announced when possible in the newsletter

Item 3. Venue for the next symposium

A confirmed invitation was received from Brasil, with Cesar Carvalho as the organizer, due to take place in Lavras, Minas Gerais, in 2021. The proposal is transmitted to the Assembly for decision. The board is grateful to Brazilian colleagues for initiating this invitation.

A major issue is the collecting permit for insect catches by participants. The board recommended that administrative authorizations be sought as early as possible to secure participation of the larger possible number of neuropterologists for whom restrictions would be a deterrent.

A member of the board raised the question of security issues in Brazil.

The board stressed the importance to issue extended abstracts in advance as well as proceedings, although no consensus existed to make it a precondition to the organizers. A volume of proceedings is a documentation for participants, a recognition of young talents, and a link with members unable to attend.

The past meeting in Mexico was briefly mentioned as a costly meeting with an absence of output, e.g. the Proceedings, until the opening of this symposium.

For the proceedings of the current symposium, John Oswald was asked to prepare an obituary of Norman Penny and N. Mochizuki, and Agostino Letardi to ask Rinaldo Nicoli Aldini and Roberto Pantaleoni an obituary of Maria Matilde Principi, to be forwarded to Florian Weihrauch, editor of the proceedings, before the end of October.

Recent Literature on the Neuropterida (2018)

Organized by Agostino Letardi with the support of John D. Oswald and BotN project

(<http://lacewing.tamu.edu/Biblio/Main>)

- Akhtar, S.; Ashfaq, M.; Zia, A.; Ali, S.; Ali, G. M.; Farhatulla; Zafar, Y. 2018. First report and redescription of five species of genus *Myrmeleon* (Neuroptera: Myrmeleontidae) from Pakistan. *Journal of Biodiversity and Environmental Sciences* 13:180-190. [BotN ref#18233]
- Ardila-Camacho, A.; Calle Tobón, A.; Wolff, M.; Stange, L. A. 2018. New species and new distributional records of Neotropical Mantispidae (Insecta: Neuroptera). *Zootaxa* 4413(2): 295-324. doi: 10.11646/zootaxa.4413.2.4 [BotN ref#18051]
- Aspöck, H.; Abbt, V.; Aspöck, U.; Gruppe, A. 2018. The phenomenon of metathetely, formerly known as prothetely, in Raphidioptera (Insecta: Holometabola: Neuropterida). *Entomologia Generalis* 37:197-230. [BotN ref#18279]
- Badano, D.; Engel, M. S.; Basso, A.; Wang, B.; Cerretti, P. 2018. Diverse Cretaceous larvae reveal the evolutionary and behavioural history of antlions and lacewings. *Nature Communications* 9(3257):1-14. [BotN ref#18250].
- Badano, D.; Miller, R.; Stange, L. A. 2018. Rediscovery and revision of the antlion genus *Ripalda* Navás within a phylogeny of Nemoleontini (Neuroptera, Myrmeleontidae). *Invertebrate Systematics* 32:933-949. [BotN ref#18249]
- Breitkreuz, L. C. V. 2018. Systematics and evolution of the family Chrysopidae (Neuroptera), with an emphasis on their morphology. *Ph.D. dissertation. University of Kansas, Lawrence, Kansas, U.S.A.* xxix + 661 pp. [BotN ref#18127]
- Dobosz, R.; Popov, A. 2018. New data about the distribution of Neuropterida in Bulgaria and Romania. *Annals of the Upper Silesian Museum in Bytom, Entomology* 27:1-39. [BotN ref#18337]
- Freitas, L.; Mello, B.; Schrago, C. G. 2018. Multispecies coalescent analysis confirms standing phylogenetic instability in Hexapoda. *Journal of Evolutionary Biology* X:1-9. doi: 10.1111/jeb.13355. [BotN ref#18338]
- Henry, C. S.; Brooks, S. J.; Johnson, J. B.; Mochizuki, A.; Mirmoayedi, A.; Duelli, P. 2018. Distinctive but functionally convergent song phenotypes characterize two new allopatric species of the *Chrysoperla carnea*-group in Asia, *Chrysoperla shahrudensis* sp. nov. and *Chrysoperla bolti* sp. nov. (Neuroptera: Chrysopidae). *Journal of Natural History* 52(25-26): 1603-1635. doi: 10.1080/00222933.2018.1478011
- Hollier, J.; Oswald, J. D. 2018. An annotated list of the type specimens of Megaloptera, Neuroptera and Raphidioptera in the collection of the Muséum d'histoire naturelle de Genève. *Revue Suisse de Zoologie* 125:249-261. [BotN ref#18336]
- Jandausch, K.; Beutel, R. G.; Pohl, H.; Gorb, S. N.; Büsse, S. 2018. The legs of "spider associated" parasitic primary larvae of *Mantispa aphavexelte* (Mantispidae, Neuroptera) - Attachment devices and phylogenetic implications. *Arthropod Structure & Development* (2018): 1-8. doi: 10.1016/j.asd.2018.06.002 [BotN ref#18341]
- Jepson, J. E.; Khramov, A. V.; Ohl, M. 2018. A substitute name for a genus of fossil mantispid (Insecta: Neuroptera: Mesomantispinae) from the Jurassic of Kazakhstan. *Zootaxa* 4455:400. [BotN ref#18314]

- Kemal, M.; Koçak, A. Ö. 2018. Revised synonymus list of the pterygot insects in Van Province (East Turkey). *Priamus* 17(1):1-112. [BotN ref#18342]
- Kerimova, I. G.; Krivokhatsky, V. A. 2018. Current composition of the fauna of antlions (Neuroptera: Myrmeleontidae) of Azerbaijan. *Caucasian Entomological Bulletin* 14:55-66. [BotN ref#18251]
- Kim, S.-k.; Koo, J.-m.; Cho, S.-w. 2018. Genus *Conwentzia* (Neuroptera: Coniopterygidae: Coniopteryginae) new to Korea. *Korean Journal of Entomology* 57:39-41. [BotN ref#18119]
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- Letardi, A.; Scalercio, S. 2018. Nuovi dati su Neuropterida della Calabria (Megaloptera, Raphidioptera, Neuroptera). *Rivista del Museo civico di Scienze Naturali "E. Caffi" di Bergamo* 31: 71-88. [BotN ref#18345]
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Picture of the semester



Neuropterologists on field

Foto Rinaldo Nicoli Aldini

Back cover



Our new vice-president of IAN with an *our antlion* on her hand...

<https://www.facebook.com/photo.php?fbid=1026757580824002&set=g.453040944791943&type=1&theater&ifg=1>

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Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

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