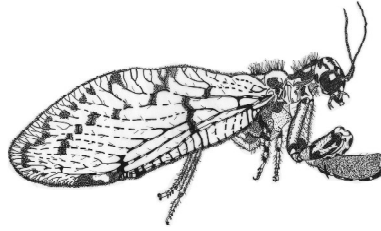


Lacewing News



NEWSLETTER OF THE INTERNATIONAL ASSOCIATION OF NEUROPTEROLOGY

No. 20

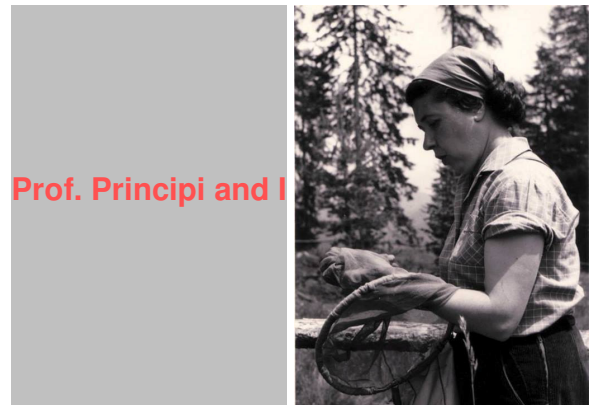
Spring 2014

Presentation

Hi all! Here's the 20th issue of *Lacewing News*. Once again, I remember to all of you that this is NOT a formal journal for sharing scientific researches!

Only few weeks before next neuropterological symposium in Mexico: I have unsuccessfully tried to get contributions for "Who is who in neuropterology" and "Nouvelles frontières" sections from the organizers of this important appointment, so this time that sections are not present. Any voluntary and willing contributions for next issue of LN will be greatly appreciated! So don't hesitate and go on to send any kind of pleasant and informal news 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). Questions about the XII IAN Symposium (<http://www.neuropterology.unam.mx/>) may be addressed to Atilano Contreras-Ramos (acontreras@ib.unam.mx).

Ciao!



Prof. Principi and I

From Rinaldo Nicoli Aldini



I remember my first meeting with Prof. Maria Matilde Principi, on 9 March 1977. Back then I was a medical student at the local University in my hometown, Bologna. When I was not in class, I would spend time at the Institute of Entomology, located in the park surrounding the School of Agriculture. I would consult the

volumes of its very rich library and cultivate the passion for insects I'd had since childhood, which, at the time, mostly took the form of amateur collecting and studying. My entomological interests were mostly focused on Neuroptera; I wanted to deepen my knowledge of their systematics and faunistics. Everything in the Institute emanated feelings of austerity: the high ceiling corridor and rooms, the stately wooden armoires, the glass case containing a big nest of hornets in the corridor, the semidarkness or the dim light, the silence only rarely broken by human voices, the bas-relief medallion - which I sometimes glanced at in a room through the half-open door - with the effigy of Guido Grandi, founder and 'tutelary deity' of the Institute as well as, near the front door, on the wall, the Latin inscription "*verum stabile cetera fumus*", the lapidary motto which world-renowned Prof. Grandi had envisioned for his creature.



Prof. Guido Grandi (1886-1970)

That morning I had asked the librarian for, in addition to the Killington's monograph of the British Neuroptera, a volume of a magazine containing a work by Prof. Principi. But the library was not carrying that periodical. I was busy consulting the Killington, when Prof. Principi turned up in the doorway of the reading room, where other students were also studying: "Who has the Killington?", she asked loudly. A little edgy, I put up my hand, nodding to her. I didn't know that the librarian, a very kind woman, had acted as mediator. Prof. Principi moved closer to me, holding the offprint of her work; she asked me why I was interested in that publication and said she would give it to me for free. She told me she had been studying Neuroptera for forty years, and that she would

be very happy to help me. She asked me to follow her to her office, to talk about my interest in lacewings. She showed to me her personal collection, her card catalogues, the lacewing collection of the Institute, the climatic chambers for the rearing of green-lacewings. She suggested I write to the European scholars researching Neuroptera to get in touch with them and ask them for their publications, and she also immediately gave me some names and addresses: Aspöck, Hölzel, Ohm, Tjeder, Zelený, Séméria... She showed me useful publications for lacewing identification, especially for chrysopids, the family that was her main subject of research.

During subsequent meetings Prof. Principi gave me her publications on Neuroptera – all very remarkable and fascinating for their scope and scientific rigour, as well as for the highest iconographic quality; she taught me how to make microscopic preparations and checked my identifications of chrysopid specimens which I was collecting mostly during summer months, and encouraged me to write some scientific notes, which she said she would be very happy to publish on the magazine of her Institute. Unfortunately, in spite of the complete helpfulness she had shown since our first meeting, my relationship with Prof. Principi became less frequent as a result of my other several commitments and the increasing difficulty in conciliating university lectures and studying with an interest that was becoming very engaging, but also required time and dedication and risked slowing down the completion of my university studies. I must also admit that I often felt hesitant to 'disturb' Prof. Principi, whom I knew was often very busy. Nevertheless I think I can say now, some decades later, that the meeting with Prof. Principi was not only decisive for my entomological training, but also overall important for my life at large.

I would like to close these reflections by quoting some words that Maria Matilde Principi wrote in memory of Guido Grandi, her Master and predecessor as Director of the Institute of Entomology in Bologna. "His charm – Prof. Principi wrote in 1971 - derived, mostly, from the fact that the people who approached him felt that they were understood and valued for who they were, at least in some aspects of their work, and they were able to find again, or rediscover, the meaning of their lives which seemed to be lost in

the mists that sometimes darken our existence. Perhaps he was a real Master just for this ability to vivify. He would inspire with faith and courage the people who embarked on the strenuous path of research and instil in them enthusiasm, which turned into awareness of the purpose and importance of the work” (my translation). When I read these words for the first time a few years later, I felt that they reflected the same feelings that Prof. Principi had inspired in me during our first meetings. My warmest thanks, Prof. Principi, and my most sincere wishes on the occasion of your one hundred years on this upcoming 4th of May!

Rinaldo Nicoli Aldini

Field explorations and current researches

From Bob Allen

In Search of Lost Lacewings: a Short Foray into California's Mojave Desert

Back in 1957, Phil Adams established the genus *Pimachrysa* (Chrysopidae) and placed within it a single species, *Pimachrysa grata* Adams.

In a later paper (1967), he described 4 more new species as members of the genus. One of these, *P. fusca* Adams, was taken at Lower and Upper Covington Flat, Joshua Tree National Park (then designated a National Monument), Mojave Desert. The area has rolling hills, none considered tall, and rocky-sandy soils. Elevations range from approximately 1,555 m (5,100 ft) at Upper Covington Flat to 1,402 m (4,600 ft) at Lower Covington Flat.



Adult of *Chrysoperla comanche* (Banks) taken on *Encelia farinosa*. Whitewater Canyon, California. Photo by Bob Allen.

Vegetation in the area included *Yucca brevifolia* (Joshua tree, Agavaceae), *Quercus* sp. (scrub oak, Fagaceae), and *Larrea tridentata* (creosote, Zygophyllaceae), scattered among various sorts of other drought-adapted shrubs and cacti. Flowing/standing water was largely non-existent. Another lacewing species, *P. intermedia* Adams, was taken in Whitewater Canyon, also in the Mojave Desert. The data do not indicate exactly where the specimens were taken. The canyon runs north to south, with its south-facing mouth at an elevation of about 436 m (1,430 ft). Only the first 6.4 km (4 miles) north of the canyon's mouth are accessible by vehicle. The road ends at the Whitewater Preserve, at an elevation of 701 m (2,300 ft, wildlandsconservancy.org/preserve_whitewater.html). The uppermost reaches of the canyon drain the San Bernardino Mountains, a very tall mountain range whose summit is Mount San Gorgonio, the tallest peak in southern California at 3,506 m (11,503 ft). The canyon receives runoff and snowmelt from the mountain. The lower reaches of the canyon's steep slopes are covered in plants typical of creosote bush scrub vegetation, such as *Larrea tridentata* and *Encelia farinosa* (desert brittle bush, Asteraceae). The canyon bottom hosts riparian (riverine) vegetation that includes *Populus fremontii* (Fremont's cottonwood) and *Salix* spp. (willows, both Salicaceae). *Encelia farinosa* is widespread in the canyon and appears with increasing frequency in the canyon bottom as it travels southward and lowers in elevation, becoming typical desert vegetation when the canyon mouth joins the open desert. The type specimen of *P. intermedia* taken earlier from



Third instar larva of *Chrysoperla comanche* (Banks), taken on *Encelia farinosa*. Whitewater Canyon, California. Photo by Bob Allen.

Whitewater Canyon had *Salix* sp. pollen in its crop, suggesting that it foraged along a riparian system.

Interestingly, these two localities are not far from one another. Lower Covington Flat is about 33 km (21 miles) east-northeast of Whitewater, at a latitude of about 8 km (5 miles) north.

Specimens of this genus are generally uncommon and nothing is known about their larvae or life history. Oh, so much work remains to be done on this group. But what lacewing-phile doesn't relish a challenge?

On the morning of Thursday, 26 March 2015, a plucky band of entomologists departed for the desert, in hopes of securing living specimens of *Pimachrysa* spp. Those people were Catherine "Kady" Tauber, Dave Faulkner, and Jeanne Bellemin. Kady spent most of her career at Cornell University where she and her husband Maurice worked on the phenology, comparative biology, and systematics of chrysopids. They retired from Cornell University and moved to Davis, California, where Kady now continues her work on chrysopid systematics. Dave is known for his studies of *Lomamyia* spp. (Berothidae) and discovery of the life stages of *Oliarces clara* (Ithonidae). Jeanne teaches Field Entomology at El Camino College near Los Angeles; she studies beetles but was allowed to participate anyway. The three spent the day at Lower and Upper Covington Flat and thought that they had not been successful – although they did capture several dark green colored *Chrysoperla* adults, and a larva that looked like a second instar *Chrysoperla*. This larva died shortly after it was collected and Kady preserved it as a specimen.

On Friday morning, the troop was joined in Whitewater Canyon by Bob Allen and Michelle Rivers. Bob was the last graduate student of Phil Adams and worked on *Eremochrysa* (Chrysopidae); he currently works primarily on pollination biology. Michelle previously worked for Bumblebee Conservation Trust (bumblebeeconservation.org) in Scotland and is interested in many types of insects and plants.

Thanks to a contact made by Dave, the five were able to meet up with Marcus Hughes, a transplant from the UK who owns and operates rental cabins in the Bonnie Bell community

within Whitewater Canyon (elevation 513 m, 1,683 ft), and is a self-taught naturalist (whitewatercanyon.org). He led the group through the riparian and adjacent desert sections, in search of habitats and specimens of chrysopids.



Second instar larva of *Pimachrysa* sp., taken on *Quercus* sp. Lower Covington Flat, California. Photo by Kady Tauber.

A few adults were sweep-netted from *Salix* spp. and *Encelia farinosa*; these turned out to be *Chrysoperla* species, including *C. comanche*

(Banks) and a species in the *C. carnea* species complex. It was very windy, so adults hung tightly onto vegetation and were not easily dislodged, perhaps the reason why so few were found. The group pondered out loud the food sources of these chrysopids.

During the foray, Bob noticed a few plants of *Mirabilis laevis* var. *villosa* (hairy desert wishbone bush, Nyctaginaceae), amongst other desert plants. Its flowers have 5 corolla lobes, fused into a funnel-shape, white or with a touch of pink, and 3-5 long stamens that protrude. This sparked a memory and he shared an observation made several years ago while on a camping trip to the eastern Mojave Desert. One early morning, he walked about the camp while enjoying coffee, and noticed perhaps 10 adult chrysopids in flight around and at rest on a single plant of *Mirabilis laevis*. The adults were crawling on the flowers and appeared to be taking pollen that was shed from the anthers. With Bob's observation in mind, the group began to search these plants for chrysopids.

Stalked eggs, some hatched, some not yet hatched, were found on the plants, but neither larvae, pupae, nor adults were seen. Some of the eggs were taken in order to examine their life stages and determine their identity. Might they be members of the Holy Grail genus?

Lunch was spent at the Whitewater Preserve, inside the nature center, out of the wind (collecting, by the way, is not allowed on the preserve). Two of the collected eggs were photographed while in the nature center. Dave and Jeanne departed right after lunch. Bob and Michelle departed a short while later, but stopped about halfway down the canyon in order to photograph some desert habitats and scenery. Soon, Kady pulled up and asked why they had stopped. While Bob photographed and chatted with Kady, Michelle happened to look on *Encelia farinosa* plants and found stalked eggs! Kady joined her and they were able to find several eggs for later study. Michelle even found a third instar *C. comanche* larva, which Bob photographed. Two adults, captured earlier in the day were loaned by Kady to Bob, who photographed them later at home.

The three again parted ways and headed for home, satisfied at the day's foray and longing for

more.

But the best part lie ahead. When she returned home, Kady examined the preserved larva that was collected at Lower Covington Flat and discovered to her great surprise, that it indeed was a member of the Nothochrysininae – presumably a *Pimachrysa* sp. Its superficial resemblance to *Chrysoperla* had fooled her in the field. The specimen is in good enough condition to be used in characterizing the generic features of *Pimachrysa*. The group will continue to seek additional *Pimachrysa* specimens and will describe the one they collected in a future publication.

Bob Allen bugbob@mac.com

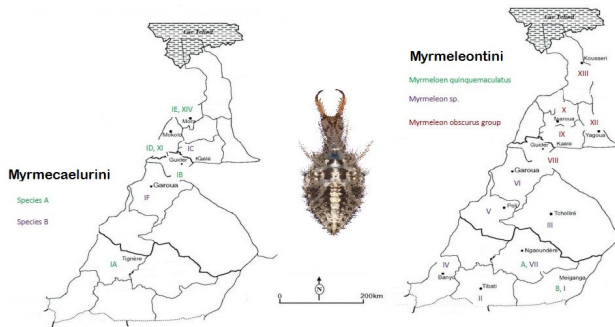
*Research Associate in Entomology, Natural History Museum of Los Angeles County
Research Associate, Rancho Santa Ana Botanic Garden
Author, Wildflowers of Orange County and the Santa Ana Mountains*

From Ngamo Tinkeu & Maoge

Advances in Neuropterology in Cameroon, Sub Saharan and Central Africa

In Sub Saharan Africa, Cameroon extends from the Guinea gulf to lake Chad. Since 2011, at the University of Ngaoundéré, a research was set on the diversity and the biogeography of the larvae of pit building antlions of the Sudano-Guinean and Sudano-Sahelian zones of Cameroon. These larvae were collected in all administrative Divisions of the study area during 3 successive dry seasons (February, March and April in 2012, 2013 and 2014). After collection, these larvae were reared the laboratory till emergence of adults. Some highly experienced neuropterologists, (Alain PROST, Michel BRUNO and Roberto A. PANTALEONI) are giving us very important help and follow up. We come to the observation that the tribes Myrmeleontini and Myrmecaelurini occur in the area. The Myrmeleontini species are *Myrmeleon quinque maculatus* (Hagen, 1853), *Myrmeleon obscurus* (RAMBUR 1842), and another group which may include *Hagenomyia tristis* (WALKER, 1853) and *Myrmeleon* sp. are the most frequent observed. To species of

Myrmecaelurini collected are to be identified.



Field observations release that distribution of pitfall traps of antlions larvae is irregular but locally, it is aggregative around trees showing a gradient of high density of funnels from the trunk and decreases outwards. Moreover, occurrence of pitfall trap is influenced by the chemical composition of the soil. As consequence an irregular distribution of antlions is observed in the study area; *M. quinquemaculatus* seems to be endemic to moist Guinean savannas, *M. obscurus* is closely associated to dry savanna of the Far North Region. *H. tristis* has is restricted to the Sudano Sahelian zone and *Myrmeleon* sp. is confined to North and Adamaoua Regions.

As the collection and identification of pit building antlion larvae in the area is ongoing, further investigations will extend morphological approach of identification and description to phylogeny.

see also: Maoge J, Ngamo Tinkeu LS, Michel B, Prost A (2014). Spatial distribution of the pit builders antlion's larvae (Neuroptera: Myrmeleontidae) in the septentrional regions of Cameroon (Central Africa). *International Journal of Scientific and Research Publications*. 4 (9), 1-10.

Ngamo Tinkeu & Maoge

University of Ngaoundéré,
Cameroon

Social meetings

From Dušan Devetak

Entomologentagung 2015, Frankfurt am Main,
Germany



The German Society of General and Applied Entomology (DGaaE) together with the Senckenberg Society for Natural History Research (Senckenberg Gesellschaft für Naturforschung) and the Goethe University organized the Entomology Congress – »Entomologentagung 2015«, Frankfurt am Main, Germany, 2-5 March 2015. The meeting took place in the lecture hall of the Goethe University at campus Bockenheim. The ice-breaker party and social evening took place in a nice atmosphere in the Senckenberg Natural History Museum, in a hall with the skeletons of dinosaurs.

Talks were held in German or English and dealt with different aspects of entomology. The program included 17 sections, among them three workshops and one symposium – the 3rd International Symposium on Vibrational Communication in Arthropods.



Frontage of the Senckenberg Natural History Museum. Entomologentagung 2015, 3 March 2015. Photo V. Klokočovnik.

Despite of the fact that more than 270 participants attended the congress, mostly from Germany, only three presentations were devoted to Neuroptera. In the section on morphology, systematics and evolution Sonja Wedman (Messel, Germany) presented fossil insects – true bugs (Heteroptera) and lacewings (Neuroptera: Berothidae) from Eocene. In the »Amber Workshop« Wilfried Wichard (Köln, Germany) talk about fossil Neuroptera in Baltic amber. In the Symposium on vibrational

communication in arthropods Vesna Klokočovnik, Jan Podlesnik and Dušan Devetak (Maribor, Slovenia) presented behavioural responses of antlion larvae to artificial and natural vibrational stimuli.



Three Slovenian participants in front of the statue of *T. rex* near frontage of the Senckenberg Natural History Museum. From right to left: Jan Podlesnik, Vesna Klokočovnik and Dušan Devetak. Entomologentagung 2015, 3 March 2015. Photo V. Klokočovnik.

The presentations were informative and well received. More information on the program one can find on the web site of the symposium (<http://www.dgae.de/index.php/program.html>).

Dušan Devetak

From Horst & Ulrike Aspöck

Neuropterologists at the 81st Entomological Meeting in Linz (Upper Austria)



81st Annual Entomological Meeting in Linz (Upper Austria), 9 November 2014. Hans Malicky (right) and his son Michael Malicky. Hans Malicky discovered the pupa of *Nevrorthus* more than 30 years ago. Michael Malicky is a key person for ZOBODAT, the large database on biology and geosciences and particularly also of biographies of the Biologiezentrum Linz. (Photo archive H. & U. Aspöck.)



81st Annual Entomological Meeting in Linz (Upper Austria), 9 November 2014. Fritz Gusenleitner (left) and Horst Aspöck. Fritz Gusenleitner is the head of the Biologiezentrum Linz and responsible for the publications of this institution, among them the journals "Denisia" and "Linzer biologische Beiträge", where many publications dealing with Neuropterida have appeared. (Photo archive H. & U. Aspöck.)

The 81st Annual Entomological Meeting Linz took place on 8 and 9 November 2014. It was attended by several neuropterologists: Johannes Gepp, Hans Malicky, Hubert and Renate Rausch, and Horst and Ulrike Aspöck. J. Gepp presented a lecture on "Ascalaphidae and the cryptic life of their bizarre larvae". Here are two photographs taken at this event.

From Horst & Ulrike Aspöck

Neuropterologists at the 8th Annual Meeting of NOBIS Austria

NOBIS Austria (= Network of Biological Systematics Austria) is a scientific society devoted to evolution, phylogeny and systematics of all living and fossil organisms, eukaryotes as well as prokaryotes. It was founded in Vienna in 2007. The 8th Annual Meeting took place upon an invitation of Gerhard Haszprunar, head of the Zoological Collections of Bavaria, in Munich on 28 and 29 November 2014. Several neuropterologists attended the meeting: Axel Gruppe (Munich), Susanne Randolph (Vienna), Dominique Zimmermann (Vienna), and the two Aspöcks. S. Randolph and D. Zimmermann presented a beautiful poster on "Head anatomy of *Coniopteryx pygmaea* (Insecta: Neuroptera: Coniopterygidae) and convergent miniaturization

effects in insects”.



8th Annual Meeting of NOBIS Austria in Munich (Bavaria, Germany), 28 November 2014. From left to right: Susanne Randolph, Gerhard Haszprunar, Dominique Zimmermann, Ulrike Aspöck. G. Haszprunar is the head of the “Zoologische Sammlungen des Bayerischen Staates”. He is co-author of a recent paper on barcodes of Central European Neuropterida. (Photo archive H. & U. Aspöck.)

They have been studying the comparative anatomy and morphology of heads of small insects. The project is still in work and will certainly result in a most interesting publication.



8th Annual Meeting of NOBIS Austria in Munich (Bavaria, Germany), 29 November 2014. Susanne Randolph (left) and Dominique Zimmermann presenting their poster on the head anatomy of *Coniopteryx*. (Photo archive H. & U. Aspöck.)



8th Annual Meeting of NOBIS Austria in Munich (Bavaria, Germany), 29 November 2014. Axel Gruppe (right) and Horst Aspöck. (Photo archive H. & U. Aspöck.)

From Horst & Ulrike Aspöck

Munich meets Vienna



Vienna, 9 December 2014. Axel Gruppe studying Chrysopidae in the collection of H. & U. Aspöck in their private institute. (Photo archive H. & U. Aspöck.)

It is well-known that snakeflies cannot develop to adults, if a decrease of temperature during winter is withheld from the hibernating larvae (for details see H. Aspöck 2002). If the larvae are kept at room temperatures throughout the winter, they will usually (unless they die before) develop prothetely, i.e. they will develop spectacular eyes similar to those of adults, wing pads and even peculiar and sometimes monstrous genital sclerites (see photographs in H. Aspöck et al. 1991).



Vienna, 10 December 2014. Axel Gruppe (right) and Horst Aspöck in front of the library of reprints (and print-outs) of publications on Neuropterida in the private institute of H. & U. Aspöck. (Photo archive H. & U. Aspöck.)

However, so far nobody really knows how deep the decrease of temperature must be, how long this period of reduced temperature must last and which date is crucial for the beginning of the decrease of temperature. Probably it is different in different species, but concrete data are not existing.



Vienna, Natural History Museum, 10 December 2014. From left to right: Horst Aspöck, Ulrike Aspöck and Axel Gruppe in the study of U.A. On the wall left there are portraits of Anton Handlirsch and of Friedrich Brauer. (Photo archive H. & U. Aspöck.)

Axel Gruppe has been studying the biology of Raphidioptera under various aspects for several years, and we have been intensively working with Raphidioptera for more than 50 years. These common interests led to a cooperation, and we will particularly try to elucidate the somewhat enigmatic phenomenon of prothetely. In December 2014 Axel Gruppe came to Vienna and we spent neuropterologically stimulating

hours in our home, in our private institute, and in the Natural History Museum of Vienna. We enjoyed the discussions on current and future cooperation very much.

More details in:

Aspöck, H. (2002): The biology of Raphidioptera: A review of present knowledge. – In: G. Sziráki: Neuropterology 2000. Proceedings of the Seventh International Symposium on Neuropterology, 6–9 August 2000, Budapest, Hungary. Acta Zoologica Academiae Scientiarum Hungaricae 48 (Suppl. 2), pp. 35–50.

Aspöck, H., U. Aspöck & H. Rausch (1991): Die Raphidiopteren der Erde. Eine monographische Darstellung der Systematik, Taxonomie, Biologie, Ökologie und Chorologie der rezenten Raphidiopteren der Erde, mit einer zusammenfassenden Übersicht der fossilen Raphidiopteren (Insecta: Neuropteroidea). – 2 vol: 730pp; 550pp. Goecke & Evers, Krefeld.

Recently published

From Charles S. Henry & collaborators

Price, B.W.; Henry, C.S.; Hall, A.; Mochizuki, A.; Duelli, P.; Brooks, S.J. 2015. *Singing from the grave: DNA from a 180 year old type specimen confirms the identity of *Chrysoperla carnea* (Stephens).* PLoS ONE 10(4): e0121127. doi:10.1371/journal.pone.0121127

Abstract:

Chrysoperla carnea (Stephens) belongs to a complex of about 20 cryptic species, most of which can only be reliably distinguished by their pre-mating courtship songs or by DNA analysis. The subtle morphological variation in the group has led to disagreement over the previous designation of the lectotype for *C. carnea*, an issue that has been further compounded because *Chrysoperla carnea* is a highly valued biological control agent in arable crops. Archival DNA extraction from the 180 year old lectotype specimen and Bayesian and Likelihood based phylogenetic analyses were used to establish unambiguously the true identity of *Chrysoperla carnea*, and to thereby resolve an ongoing controversy of both taxonomic and economic importance.

General Summary of content and Significance:

The manuscript describes a study in which special DNA extraction methods and basic

Sanger sequencing have resolved the species identity of an old, delicate, and taxonomically controversial museum specimen. This specimen is the designated Type (actually, lectotype) of a species described by Stephens in 1835. As a member of a species-group comprising over 20 morphologically identical species that are separable only by their duetting songs, the true identity of this museum specimen cannot be determined, either from morphology or song. However, we have shown here that mitochondrial sequences can be used to unambiguously assign this ancient specimen to *Chrysoperla carnea*.

The paper is important for several reasons:

First, a positive identification of this old specimen has ramifications far beyond its scientific value. *Chrysoperla carnea* is an important biocontrol agent of insect pests on agricultural crops, and is raised in large numbers by commercial insectaries for sale to growers and inundative release on their croplands. Because rearing programs and agricultural study systems of the Western Palearctic universally focus on this species, reference to a correctly identified type specimen is vitally important to avoid confusion with other cryptic species in the complex.

Second, it is important to recognize that a significant portion of existing biodiversity is cryptic biodiversity. New methods (such as shown here) of reliably identifying cryptic species, when species-specific characters such as songs or pheromones are unavailable, have great intrinsic value.

Third, professional museum collections such as in the Natural History Museum, London, document, archive, and even dictate our understanding of biodiversity. As such, inaccurate or incomplete curation of collections diminishes and distorts that understanding.

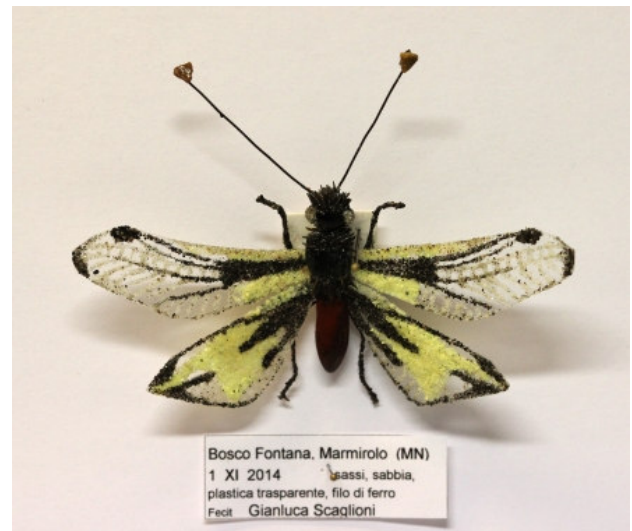
Finally, a pressing reason for this study was an important controversy that arose when we assigned the museum lectotype of *Chrysoperla carnea* to a specific song variant back in 2002. Several respected European entomologists disagreed, choosing instead to assign a different song variant (our *C. pallida* type) to the

lectotype. These scientists promised to take up the issue with the International Commission on Zoological Nomenclature, while meanwhile populating the literature with papers using alternative and highly confusing nomenclature. Our new study settles this controversy once and for all, without the need for intervention by the ICZN.

Fantastic bestiary and funny things

From Davide Badano

NotE: after the picture of a fantastic *Libelloides* by R.Lisa (see LN15), another fantastic new species of this genus, this time a kind of handmade jewel!



Libelloides lapidarius sp.nov.

Hand made owlfly by Gianluca Scaglioni, Porto Mantovano (Italy). It is entirely composed of small pebbles, sand, transparent plastic and iron wires. Note bristles and wing pattern made of rock fragments and sand particles!

From Edmund Jarzembowski

NotE: ...an abstract of e-mails exchange between Ed and the British Entomological & Natural History Society's secretary...

From: jarzembowski2@live.co.uk
To: secretary@benhs.org.uk
Subject: Lacewing logo
Date: Tue, 28 Oct 2014

Sunny morning!

Like a number of people, I have wondered why the /British /ENHS sports an exotic insect (nemopterid) as it's logo...



No worries now as a late Eocene fossil (pic. Fred Clouter enc.) from the loW (newish amateur find) now puts the family on the British list (and indeed a subfamily and tribe with the help of the French).



It'll be formally described in the Transactions of the Royal Society of Edinburgh hopefull before the year is out.

Yours
Ed Jarzembowski

From: b.garner@nhm.ac.uk
To: jarzembowski2@live.co.uk
Subject: RE: Lacewing logo
Date: Wed, 29 Oct 2014

Dear Ed,
Thanks for this. I have passed this on to council who have responded in a variety of ways. So finally our logo makes some sense in today's context! Attached for your interest!
Best wishes,

Beulah
Secretary BENHS

NotE: attached some pages from British Journal of Entomology and Natural History 9 (1996): pages 1-2 and 128.... about the Society's "new" logo! I can send them to anyone of you, if you want!

From: jarzembowski2@live.co.uk
To: b.garner@nhm.ac.uk
Subject: lacewing logo
Date: Thu, 30 Oct 2014 10:02:19 +0000

Thanks for yours!

Clearly Arthur Smith was ahead of his time!! I enclose an internet pic. of what our fossil may have looked like - not got enough material at present to be sure of the exact genus - but hopefully will inspire people to look harder...

Ed



From the Net... just to stay on topic ;-)



Recent Literature on the Neuropterida (2014-2015)

Organized by Agostino Letardi with the support of John D. Oswald and BotN project
(<http://lacewing.tamu.edu/bibliography/>)

- Alonso-Eguialis, P.; Mora, J.M.; Campbell, B.; Springer, M. (eds) 2014. Diversidad, conservacion y uso de los macroinvertebrados dulceacuicolas de Mexico, Centroamerica, Colombia, Cuba y Puerto Rico. *Instituto Mexicano de Tecnología del Agua, Jiutepec, México*, 444 pp. [r#15711]
- Ardila-Camacho, A.; Garcia, G. A. 2015. Mantidflies of Colombia (Neuroptera, Mantispidae). *Zootaxa* 3937(3): 401-455. doi: 10.11646/zootaxa.3937.3.1 [r#15712]
- Aspöck, H.; Aspöck, U. 2014. Die deutschsprachigen Autoren der Raphidiopteren-Taxa im 19. Jahrhundert. – Zum 200. Geburtstag von Wilhelm Gottlieb Schneider (1814–1889) und Johann Philip Emil Friedrich Stein (1814–1882). *Nachrichten der Deutsche Gesellschaft für allgemeine und angewandte Entomologie e.V.* 28(2): 96-97. [r#15713]
- Aspöck, U.; Aspöck, H. 2014. “Political Correctness“ der Algorithmen versus Plausibilität im Stammbaum der Neuropterida. *Nachrichten der Deutsche Gesellschaft für allgemeine und angewandte Entomologie e.V.* 28(2): 97-99. [r#15714]
- Aspöck, U.; Aspöck, H.; Letardi, A.; de Jong, Y. 2015. Fauna Europaea: Neuropterida (Raphidioptera, Megaloptera, Neuroptera). *Biodiversity Data Journal* 3: e4830. doi: 10.3897/BDJ.3.e4830
- Aspöck, U.; Randolph, S. 2014. Beaded lacewings - a pictorial identification key to the genera, their biogeographics and a phylogentic analysis (Insecta: Neuroptera: Berothidae). *Deutsche Entomologische Zeitschrift*, Berlin 61(2): 155-172. [r#15696]
- Bowles, D. E. 2015. New distributional records for Neotropical spongillaflies (Neuroptera: Sisyridae). *Insecta Mundi* 0400:1-7. [r#15715]
- Bowles, D. E.; Contreras-Ramos, A.; Sarmiento-Cordero, M. A. 2015. New distributional records for pleasing lacewings (Neuroptera: Dilaridae, *Nallachus* spp.) in the Americas. *Insecta Mundi* 0406:1-10. [r#15716]
- Califre Martins, C.; de Souza Amorim, D. 2015. First record of pleasing lacewings (Neuroptera: Dilaridae) in São Paulo state, Brazil. *Check List* 11(1):[1]-[3] [article 1538]. [r#15699]
- Canard, M. ; Thierry, D. 2015. *Sisyra iridipennis* Costa, 1884, espèce nouvelle pour la France continentale (Neuropterida: Sisyridae). *Revue de l'Association Roussillonnaise d'Entomologie* 24 (2): 45-49. [r#15717]
- Canard, M.; Thierry, D.; Cloupeau, R.; Rausch, H.; Weißmair, W. 2015. A spongillafly new to the French fauna: *Sisyra bureschi* Rausch & Weißmair, 2007 (Neuropterida: Sisyridae). *Bulletin de la Société Entomologique de France* 120(1): 19-24. [r#15718]
- Canbulat, S. 2014. Checklist of Turkish Raphidioptera on the basis of distribution pattern and biogeographical analysis. *Turkish Journal of Zoology* 38: online 1-10. doi:10.3906/zoo-1311-2 [r#15719]
- Devetak, D. 2014. Host diversity and seasonality of *Hyalospora hemerobii* (Apicomplexa: Eugregarinorida: Hirmocystidae) infections in lacewings. *Biologia* 69(11): 1585-1592. doi: 10.2478/s11756-014-0456-7 [r#15697]
- Devetak, D.; Klokocovnik, V.; Rausch, H.; Janžekovič, F. 2015. Fauna of the Neuropterida (Raphidioptera, Neuroptera) of the Protected Area Jasen, Macedonia: a summer flash. *Turkish Journal of Zoology* 39: 15-27. doi:10.3906/zoo-1305-43 [r#15698]

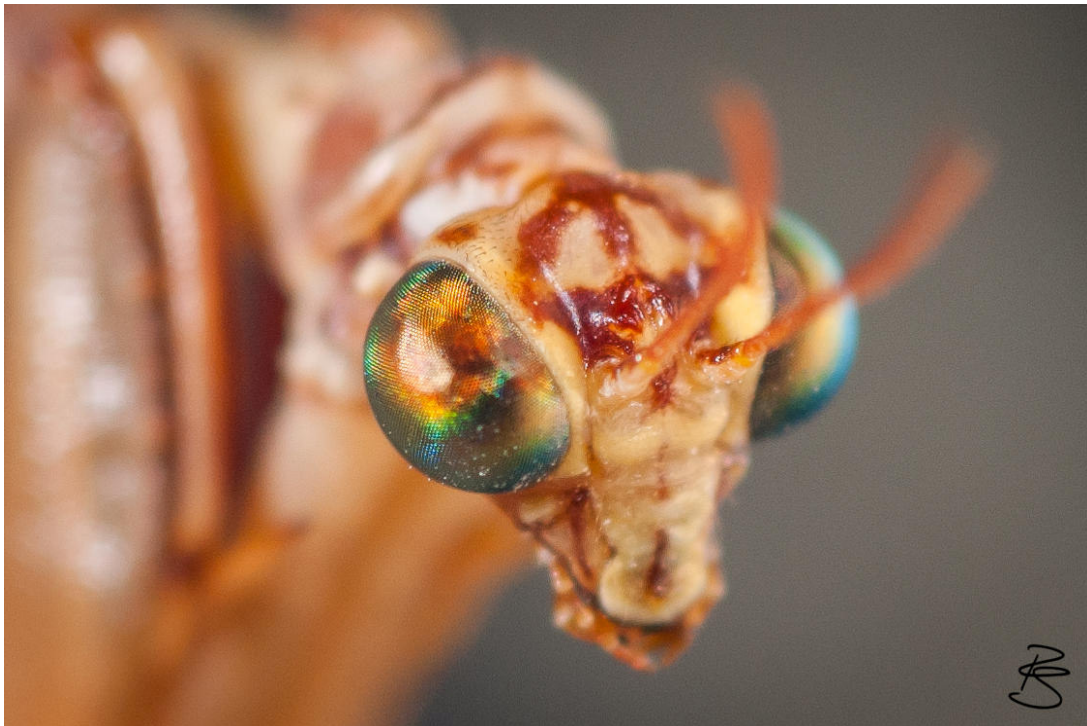
- Duelli, P.; Bolt, D.; Henry, C. S. 2015. Neuroptera of the Caucasian Republic of Georgia *Entomological News* 124 (4): 229-244. [r#15720]
- Duelli, P.; Henry, C. S.; Mochizuki, A. 2014. The endemic *Atlantochrysa atlantica* (McLachlan) (Neuroptera: Chrysopidae) on Atlantic Islands: African or American origin? *Journal of Natural History* 48 (41-42): 2595-2608. doi: 10.1080/00222933.2014.917211 [r#15721]
- Fogh Nielsen, O. 2014. Florvingen *Symphorobius (Niremberge) klapaleki* Zeleny 1963 - ny for den danske fauna (Neuroptera, Hemerobiidae). *Entomologiske Meddelelser* 82(2): 93-95. [r#15722]
- Fogh Nielsen, O.; Karsholt, O. 2014. Fangst af netvinger (Neuroptera) med lysfaelde på Zoologisk Museums tag. *Entomologiske Meddelelser* 82(2): 103-112. [r#15723]
- Gepp, J. 2014. Der Steirische Fanghaft *Mantispa styriaca* poda, 1761 als Modell im Naturkundemuseum Graz. *Nachrichten der Deutsche Gesellschaft für allgemeine und angewandte Entomologie e.V.* 28(2): 102-103. [r#15724]
- Gruppe, A. 2014. Ökologie von *Mongoloraphidia sororcula* (H. Aspöck & U. Aspöck, 1966). *Nachrichten der Deutsche Gesellschaft für allgemeine und angewandte Entomologie e.V.* 28(2): 100-101. [r#15725]
- Gruppe, A.; Zehetmair, T. 2014. Neuropteren in europäischen Buchenwäldern. *Nachrichten der Deutsche Gesellschaft für allgemeine und angewandte Entomologie e.V.* 28(2): 99-100. [r#15726]
- Henry, C.S.; Wells, M.M. 2015. Courtship songs of green lacewings filmed in slow motion: how a simple vibrating structure can generate complex signals (Neuroptera: Chrysopidae: *Chrysoperla*). *Journal of Insect Behaviour* . doi:10.1007/s10905-015-9484-6 [r#15727]
- Joachim, C.; Vorsteen, I.; Weisser, W, W 2014. The aphid alarm pheromone (E)-b-farnesene does not act as a cue for predators searching on a plant. *Chemoecology* . doi: 10.1007/s00049-014-0176-z [r#15728]
- Kemal, M.; Koçak, A. Ö. 2014. Illustrated and annotated list on the entomofauna of Gören Mount (Van province, east Turkey), with ecological remarks I - Period of April-June 2014. *Priamus* 33(Supp.):5-206. [r#15684]
- Kirschey, L.; Ohl, M. 2014. Von Fäden, Bändern und Löffeln – Die Evolution der Hinterlängel der Nemopteridae. *Nachrichten der Deutsche Gesellschaft für allgemeine und angewandte Entomologie e.V.* 28(2): 101-102. [r#15729]
- Klokocovnik, V.; Devetak, D.; Klenovšek, T.; Podlesnik, J. 2014. Contribution to the knowledge of brown lacewings from Albania (Neuroptera: Hemerobiidae). *Spixiana* 37(2): 233-237. [r#15701]
- Kovanci, O. B.; Kovanci, B. 2014. Contribution to the knowledge of Mantispoidea, Osmyloidea, and Myrmeleontoidea with new records for the Neuroptera fauna of northwestern Turkey. *Turkish Journal of Zoology* 38: online 1-9. doi:10.3906/zoo-1401-45 [r#15731]
- Letardi, A.; Coccia Collepardo F. 2015. Nuove segnalazioni di *Nineta principiae* Monserrat, 1980 (Neuroptera: Chrysopidae). *Onychium* 11: 152-155.
- Letardi, A.; Tabilio, M.R.; Nobili, P.; Toth, M.; Vona, S.; Ceccaroli C. 2014. Strategie di gestione di un "predatore chiave" in frutteti a conduzione biologica. Pp. 212-218. In: Rossi G, Alba E, Benedetti A, Bucci G, Ciaccia C, Pacucci C, Pinzari F, Scarascia Mugnozza G eds. 2014. Atti del X Congresso Nazionale sulla Biodiversità. CNR (Roma, Italy) 3-5 Set 2014. 624 pp. doi: 10.13140/2.1.4816.4644 [r#15732]

- Liu, X.-y.; Hayashi, F.; Yang, D. 2015. Phylogeny of the family Sialidae (Insecta: Megaloptera) inferred from morphological data, with implications for generic classification and historical biogeography. *Cladistics* 31: 18-49. doi: 10.1111/cla.12071 [r#15506]
- Liu, X.-y.; Hayashi, F.; Yang, D. 2015. Taxonomic notes of the Neotropical alderfly genus *Ilyobius* Enderlein, 1910 (Megaloptera, Sialidae), with description of a new species. *Deutsche Entomologische Zeitschrift* 62 (1): 55-63. doi: 10.3897/dez.62.4481 [r#15733]
- Lu, Y.; Liu, X.-y.; Yang, D. 2014. Ultramorphology of sensilla on the antennae of four fishflies. *Plant Protection* 40(5): 62-69. [r#15734]
- Makarkin, V. N.; Khramov, A. V. 2015. A new fossil species of snakeflies (Raphidioptera: Mesoraphidiidae) from the Late Cretaceous of Kazakhstan, with notes on Turonian Neuropterida. *Cretaceous Research* 52:407-415. [r#15685]
- Makarkin, V. N.; Ohl, M. 2015. An important new fossil genus of Berothinae (Neuroptera: Berothidae) from Baltic amber. *Zootaxa* 3946(3): 401-415. doi: 10.11646/zootaxa.3946.3.7 [r#15758]
- Michel, B. 2014. A revision of the genus *Solter* Navás, 1912 for Maghreb and West Africa with descriptions of five new species (Neuroptera, Myrmeleontidae). *Zootaxa* 3887(5): 529-554. [r#15735]
- Misof, B. et al. 2014. Phylogenomics resolves the timing and pattern of insect evolution. *Science* 346(6210): 763-767. [r#15700]
- Monserrat, V. J. 2014. Los megalópteros de la península Ibérica (Insecta, Neuropterida, Megaloptera, Sialidae). *Graellsia* 70(2):1-24. e009 <http://dx.doi.org/10.3989/graellsia.2014.v70.111> [r#15736]
- Monserrat, V. J. 2014. Los dilaridos de la península Ibérica (Insecta, Neuropterida, Neuroptera, Dilaridae). *Heteropterus Revista de Entomología* 14(2): 187-214. [r#15737]
- Monserrat, V. J. 2014. Los sisiridos de la península Ibérica (Insecta, Neuropterida, Neuroptera, Sisyridae). *Heteropterus Revista de Entomología* 14(2): 215-239. [r#15738]
- Monserrat, V. J. 2014. Los mantíspidos de la Península Ibérica y Baleares (Insecta, Neuropterida, Neuroptera, Mantispidae). *Graellsia* 70:1-52 [e012]. [r#15693]
- Monserrat, V. J.; Badano, D.; Acevedo, F. 2014. Nuevos datos de ascalafidos para la península Ibérica, con una nueva especie para la fauna europea (Insecta, Neuropterida, Neuroptera, Ascalaphidae). *Heteropterus Revista de Entomología* 14(2): 147-167. [r#15739]
- Monserrat, V. J.; Duelli, P. 2014. A new species of Spongilla-fly from Western Africa (Neuroptera: Sisyridae). *Zootaxa* 3900(3): 446-449. doi:10.11646/zootaxa.3900.3.8 [r#15739]
- Müller, M.; Schlegel, J.; Krüsi, B.O. 2014. Selection of oviposition sites by *Libelloides coccajus* (Denis & Schiffermüller, 1775) (Neuroptera: Ascalaphidae), north of the Alps: implications for nature conservation. *Journal of Insects* 2014: 1-10. doi: 10.1155/2014/542489 [r#15741]
- Nicoli Aldini, R.; Pizzetti, L. 2014. *Coniopteryx (Holoconiopteryx) renate* Rausch et Aspöck, 1977 (Insecta Neuroptera Coniopterygidae) nel nord Italia. *Parva Naturalia* 10:29-36. [r#15742]
- Niehuis, M.; Blanke, A.; Peters, R. S. 2014. Der Verwechselte Fanghaft (*Mantispa aphavexelte* U. Aspöck et H. Aspöck, 1994) in Rheinland-Pfalz nachgewiesen (Neuroptera: Mantispidae). *Fauna Flora Rheinland-Pfalz* 12(4): 1393-1402. [r#15743]

- Pantaleoni, R. A.; Sechi, P. 2014. ¿Existe realmente *Chrysoperla carnea*? Historia de la investigación sobre el complejo *carnea*. In: Memorias XXV Curso Nacional de Control Biológico, Mérida, Mexico: 223-236. [r#15744]
- Perrichot, V. ; Garrouste, R.; Azar, D.; Néraudeau, D.; Nel, A. 2014. A new genus of dustywings (Neuroptera: Coniopterygidae) in late cretaceous Vendean amber. *Paleontological Contributions* 10F: 25-29. [r#15745]
- Price, B.W.; Henry, C.S.; Hall, A.; Mochizuki, A.; Duelli, P.; Brooks, S.J. 2015. Singing from the grave: DNA from a 180 year old type specimen confirms the identity of *Chrysoperla carnea* (Stephens). *PLoS ONE* 10(4): e0121127. doi:10.1371/journal.pone.0121127
- Prokop, J.; Rodrigues Fernandez, F.; Lapeyrie, J.; Nel, A. 2015. Discovery of the first lacewings (Neuroptera: Permithonidae) from the Guadalupian of the Lodève Basin (Southern France). *Geobios* : 1-8. doi: 10.1016/j.geobios.2015.03.001
- Rintala, T.; Kumpaulainen, T.; Ahlroth, P. 2014. Suomen verkkosiipiset. Hyönteistarvike Tibiale Oy, *Helsinki*. 184 pp. [r#15679]
- Rueda, J.; Molina, C.; Hernandez, R.; Benavent, J.M. 2014. Nuevas aportaciones sobre el neuroptero *Sisyra iridipennis* Costa 1884 (Neuroptera: Sisyridae) para las provincias de Albacete, Alicante y Valencia (España). *Boletín de la Sociedad Entomológica Aragonesa* 54: 407-409. [r#15746]
- Salamanca, J.; Pareja, M.; Rodríguez-Saona, C.; Resende, A. L. S.; Souza, B. 2015. Behavioral responses of adult lacewings, *Chrysoperla externa*, to a rose–aphid–coriander complex. *Biological Control* 80: 103-112. doi: dx.doi.org/10.1016/j.biocontrol.2014.10.003 [r#15747]
- Shi, C.-f.; Winterton, S. L.; Ren, D. 2014. Phylogeny of split-footed lacewings (Neuroptera, Nymphidae), with descriptions of new Cretaceous fossil species from China. *Cladistics* 1-36 10.1111/cla.12104 [r#15704]
- Sziráki, G. 2014. Data to the Raphidioptera fauna of the Balkan Peninsula and Crete. *Folia Historico Naturalia Musei Matraensis* 38: 87-90. [r#15748]
- Tarter, D. C.; Bailey, J. E.; Whitman, M. J. 2014. New distribution records of fishflies (Megaloptera: Corydalidae) for West Virginia, U.S.A. *Entomological News* 123(4): 278-284. [r#15749]
- Tauber M.J., Tauber C.A. 2015. Phenological responses of *Pseudomallada* (Neuroptera: Chrysopidae): comparative data from three Nearctic species and interspecific hybrids. *European Journal of Entomology* 112(1): 49-62. doi: 10.14411/eje.2015.015 [r#15750]
- Tiago H., A.; Bhrenno M., T.; Silvestre, R. 2014. Five new associations of parasitoids in potter wasps (Vespidae, Eumeninae). *Revista Brasileira de Entomologia* : 1-3. [r#15695]
- Tillier, P.; Thierry, D.; Dobosz, R.; Canard, M. 2014. *Chrysopa gibeauxi* (Leraut, 1989): reinstatement as valid species and remarks on its distribution (Neuroptera, Chrysopidae). *Bulletin de la Société entomologique de France* 119(4): 521-528. [r#15692]
- Vidlicka, L. 2014. Description of *Helicoconis tatricus* sp. n. (Neuroptera, Coniopterygidae) from Slovakia (Central Europe) and key for determination of all Palaearctic species of subgenus *Helicoconis*. *Zootaxa* 3893(3):438-444. dx.doi.org/10.11646/zootaxa.3893.3.8 [r#15751]
- Yang, Q.; Makarkin, V. N.; Shih, C.-k.; Ren, D. 2015. New Aetheogrammatidae (Insecta, Neuroptera) from the Lower Cretaceous Yixian formation, China. *Cretaceous Research* 55: 25-31. dx.doi.org/10.1016/j.cretres.2015.01.005 [r#15752]

- Yue, L.; Liu, X.-y.; Hayashi, F.; Wang, M.-q.; Yang, D. 2015. Molecular systematics of the fishfly genus *Anachauliodes* Kimmins, 1954 (Megaloptera: Corydalidae: Chauliodinae). *Zootaxa* 3941(1): 91-103. doi: 10.11646/zootaxa.3941.1.4 [r#15753]
- Zhang, J.; Wang, A.; Wang, Z.-l.; Wang, X.-l. 2014. A newly recorded genus and one newly recorded species of Myrmecaelurini (Neuroptera: Myrmeleontidae) from China. *Entomotaxonomia* 36(3): 211-215. [r#15754]
- Zhang, Q.-H.; Zhou, G.; Hoover, D. R.; Michaelson, N. J.; Bryant, P.; Margaryan, A.; Chauhan, K. R.; Aldrich, J. R.; Schneidmiller, R. G. 2015. Serendipitous, cross familial discovery of the first long-range chemical attractants for antlions (Neuroptera: Myrmeleontidae): (1R,2S,5R,8R)-iridodial and Z,E-nepetalactol. *Frontiers in Ecology and Evolution* 2 (80): 1-7. doi: 10.3389/fevo.2014.00080 [r#15755]
- Zhang, W.; Liu, X.-y.; Aspöck, H.; Aspöck, U. 2014. Revision of Chinese Dilaridae (Insecta: Neuroptera)(Part II): Species of the genus *Dilar* Rambur from Tibet. *Zootaxa* 3878(6):551-562. [r#15509]
- Zhang, W.; Liu, X.-y.; Aspöck, H.; Winterton, S.; Aspöck, U. 2014. Species of the pleasing lacewing genus *Dilar* Rambur (Neuroptera, Dilaridae) from islands of East Asia. *Deutsche Entomologische Zeitschrift*, Berlin 61(2): 141-153. [r#15694]
- Zhao, C.-j.; Liu, X.-y.; Yang, D. 2014. Wing base structural data support the sister relationship of Megaloptera and Neuroptera (Insecta: Neuropterida). *PLoS ONE* 9(12): e114695. doi:10.1371/journal.pone.0114695 [r#15757]

Picture of the semester



Head of *Mantispa styriaca* from www.flickr.com/photos/roman_sandoz/8118898840

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Lacewing News - Newsletter of the International Association of Neuropterology](#)

Jahr/Year: 2014

Band/Volume: [20](#)

Autor(en)/Author(s): diverse

Artikel/Article: [Lacewing News 20 1](#)