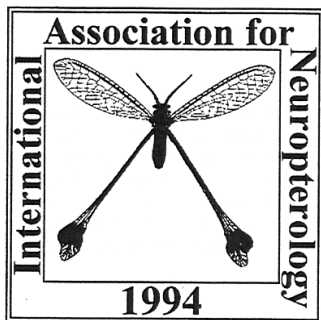
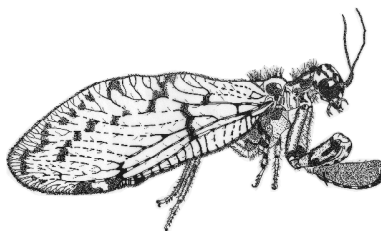




Lacewing News



NEWSLETTER OF THE INTERNATIONAL ASSOCIATION OF NEUROPTEROLOGY

No. 26

Spring 2018

Save the date now!

What?
XIII International Symposium on Neuropterology
When?
17-21 June 2018
Where?
Academy for Nature Conservation and
Landscape Management (ANL) in Laufen (DE)
Why?
Because we are neuropterologists! ☺

Please send all communications concerning
Lacewing News to agostino.letardi@enea.it
(Agostino Letardi). Questions about the
International Association of Neuropterology may
be addressed to our current president, Dr.
Michael Ohl (Michael.Ohl@mfn-berlin.de).
Concerns about the XIII International
Symposium on Neuropterology (Laufen on River
Salzach 2018) should be directed to Dr. Axel
Gruppe (gruppe@wzw.tum.de).



From Rinaldo Nicoli Aldini

**Maria Matilde Principi (1915-2017).
In memoriam.**



Maria Matilde Principi, the Grande Dame of Neuropterology (a very fine definition by Horst and Ulrike Aspöck), who passed away on Sunday 10 September 2017 at the age of 102, was commemorated shortly after her death in the latest issue of *Lacewing News* (No. 25, Autumn 2017) with a photograph portraying her as a young woman outdoors collecting neuropterans. In some previous issues of *Lacewing News* (Nos. 22, 20, 19) several brief but significant articles were dedicated to Prof. Principi on the occasion of her 100th birthday (May 4, 2015).

Now she is no longer among us, I feel it is right and proper to add a few words in her memory here too: she was the doyen of the Italian entomologists and of the world neuropterologists, Professor Emeritus of the University of Bologna, holder of the Italian Gold

Medal to the Meritorious in Education, Culture and Art, member of the Italian National Academy of Entomology and of other academies, and member of the Italian Entomological Society (for eighty years) and of other important scientific associations.

M. M. Principi was born in San Mariano di Corciano (Perugia, Umbria) on May 4, 1915. She studied the classics at school and in 1937 graduated cum laude in Agricultural Sciences from the University of Perugia, with a thesis on the Chrysopidae of Umbria. After winning a grant from the Ministry of Agriculture and Forestry, she was nominated by Prof. Guido Grandi to the Institute of Entomology, which he had founded and was directing, at the University of Bologna. She became Assistant Professor in 1948 and in 1951 she became Professor of Agricultural Entomology. In 1958 she succeeded Prof. Grandi as Head of the Institute, which she directed for thirty years. In Bologna she founded the Research Doctorate in Agricultural Entomology and served as Coordinator; she directed the School of Specialization in Phytopathology and was the Director in Charge of the prestigious *Bollettino dell'Istituto di Entomologia "Guido Grandi" dell'Università di Bologna*. As a teacher, she contributed to the training of generations of graduates in agricultural sciences.

Her scientific activity ranged over various areas of basic and applied research and gave her international fame. She contributed to knowledge of the Neuropterida, above all Chrysopidae, through research into morphologic, taxonomic, systematic, faunistic and bio-ecological aspects. She also studied the morphology and biology of some phytophagous insects (flea beetles, leaf blotch miners, gall midges) and of parasitic wasps. The problem of protecting plants from arthropod pests through enhancing beneficial insects led her to organize and coordinate a working group for the application of integrated protection in orchards. M. M. Principi produced 110 publications which are remarkable for their breadth, depth, rigor and clarity as well as for the incomparable quality of the illustrations.

A strong believer, impeccable in her style and manner, she is much missed by her few surviving colleagues and the numerous pupils,

collaborators and admirers who enjoyed her consideration and benefited from her competence and generous help.

The photograph in remembrance chosen by her relatives portrays her in the academic dress of a young full professor, and it is pleasing to remember her thus, always 'young' within and lucid until her final days, despite her age, as is possible for one who dedicated her life to the study of living organisms, to the wonders of the biosphere and to our fascinating neuropterans.

Current researches

From Rolf Becker

Neuropterology at the Namibia University of Science and Technology (NUST)

A small group of lacewing enthusiasts had been formed at the Namibia University of Science and Technology in Windhoek, Namibia. The group consists of Gail Morland, Alma Moller and Rolf Becker, who, together with their students, have started to revive Neuroptera studies in Namibia. The group has obtained funding through the **Nedbank Namibia GoGreen Fund** to do a census of Neuroptera in the different Namibian vegetation types. They also form part of a substantial **European Union** funded project to advise on the management of biodiversity of the Iona - Skeleton Coast Transfrontier Area, straddling the Kunene River that separates Angola and Namibia, together with the adjoining Kaokoland Conservancies. This is one of the most remote, inaccessible and vast desert regions in the world and is still greatly understudied. Working there is bound to lead to exciting new findings and range extensions of all kinds of Neuroptera.

Any Neuropterophiles wishing to join the group as collaborators to study the biota of this fascinating 44 000 km² area are welcome to contact Rolf Becker at rbecker@nust.na. Below are some pictures of the innovative **"NUST" Light Trap** that has been assembled by the group. It consists of a shop-bought drying rack covered with mosquito netting expertly sown by Alma. It is relatively cheap, easily transported and ideal for Namibian conditions.



Innovative “NUST” Light Trap ideal for Namibian conditions
(Photo by Rolf Becker)



“NUST” Light Trap in use with students collecting specimens (Photo by Morgan Hauptfleisch)

Social meetings

From Atilano Contreras-Ramos, Roberto Lopez Garcia, and David E. Bowles. Photos by Valeria Cuellar and David Bowles

Neuropterists convened at the annual meeting of the Entomological Society of America from 5 to 8 November 2017, Denver, Colorado, USA. At this meeting, there was a symposium titled Americas Neuropterists Meeting that was organized and convened by Roberto Lopez Garcia, Atilano Contreras-Ramos, and David E. Bowles.



The poster announcing our session.

Authors (**speakers in bold**) and titles presented at the symposium included:

Catherine A. Tauber, Francisco Sosa, Gilberto Albuquerque, Atilano Contreras-Ramos, Shelby Kilpatrick and John Oswald—Recent collaborative studies in the systematics of New World Chrysopidae.

Yesenia Marquez-López and **Atilano Contreras-Ramos**—Coniopterygidae and Hemerobiidae (Neuroptera) of Nanacamilpa, Tlaxcala, Mexico.

Roberto López-García—Advancement in the taxonomy of the genus *Myrmeleon* of the Neotropics

Fernando Acevedo—Current knowledge of antlion larvae in Mexico

Renato Machado and **John Oswald**—A new phylogeny and classification of the Myrmeleontidae (Insecta: Neuroptera) based on anchored hybrid enrichment data.

Rodolfo Cancino-López—Towards studying the diversity of Neuroptera in an altitudinal gradient, Volcan Tacana, Chiapas, Mexico.

David E. Bowles, Michael Ferro, and Robert W. Sites—The Neuroptera of Missouri: 70 years after Froeschner.



Some of the speakers at the meeting (left to right: Samuel Howard, Rodolfo Cancino-López, Fernando Acevedo, David Bowles-seated, John Oswald, Atilano Contreras-Ramos, and Roberto López-García).

Other papers on Neuropterida given at the conference, but were not included in the symposium included (**presenters in bold**):

Makani Fisher—Spongilla biology in Utah (Neuroptera: Sisyridae: *Climacia californica*)

Harlee Pauley, Jackie Fletcher, Daniel Payne, Hannah Payne, and Barbara Liedl—Exposure

and behavioral assays of four OMRI approved insecticides on the biocontrol generalist predator, green lacewing, *Chrysoperla rufilabris*

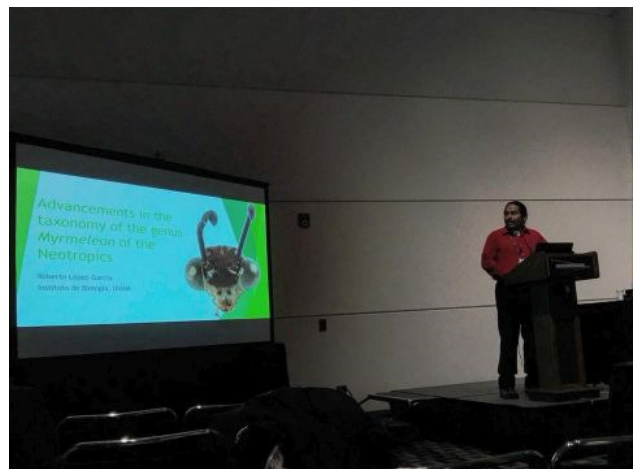


Good food was had by all (left to right: Rodolfo Cancino-López, Fernando Acevedo, Pilar Abad-Ballesteros, Andrea Abela-Posada, Magali Luna-Luna, Valeria Cuellar, Roberto López-García, Atilano Contreras-Ramos).

Brett Nash—Controlling aphid populations in daylily crops using green lacewings (*Chrysoperla rufilabris*)

Jordano Salamanca, Brígida Souza, Jonathon Lundgren, and Cesar Rodriguez-Saona—Electrophysical and behavioral response of *Chrysoperla rufilabris* (Neuroptera: Chrysopidae) to methyl salicylate.

Rene Luna, Luziani Bestete, **Jorge Torres**, and Christian Silva-Torres—Susceptibility of the lacewing *Chrysoperla externa* (Hagen) to lambda-cyhalothrin and behavior and predatory response.



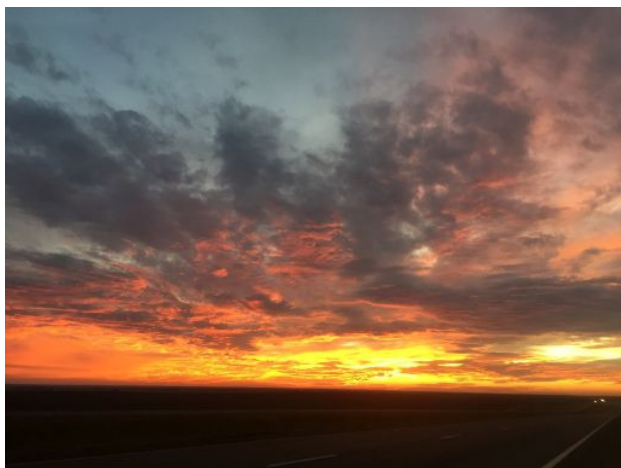
Roberto López-García giving his presentation.

James Nechols, John Ruberson, Dustyn King, Aavudai Anandhi, and Catherine A. Tauber—
Has climate change caused a shift in the photoperiodic response for diapause in a green lacewing?



Enjoying cold Colorado (left to right: Roberto Lopez-García, Magali Luna, Rodolfo Cancino-López, Valeria Cuellar)

Approximately 25 people attended the session. Neuropterists David Faulkner, Jeffrey Heilveil, and Makani Fisher also were in attendance. A group dinner followed at a local restaurant, and all had a great time.



A lovely Colorado Sunset.

From Horst Aspöck & Ulrike Aspöck

In the course of the past months several biological (and particularly entomological) meetings and events took place in Austria, which were also attended by neuropterologists. Here are a few photographs



10 October 2017. Vienna, Austria. In front: Alessandro Minelli (Padova) (middle) presented a lecture "Phylo Evo Devo" at the Natural History Museum Vienna. Left of him Ulrike Aspöck, right Hannes Paulus. (Photo archive H. & U. Aspöck)



10 October 2017. Vienna, Austria. From left to right: Alessandro Minelli (Padova), Horst Aspöck and Elisabeth Haring. (Photo archive H. & U. Aspöck)



21 October 2017. Vienna, Austria. Symposium of the Austrian Entomological Society on biodiversity in agriculture and forestry. Johannes Gepp (right) and Herbert Christian Wagner (myrmecologist). (Photo archive H. & U. Aspöck)



4 November 2017. Linz, Austria. 84th Meeting of the Upper Austrian Entomological Society. From left to right: Eyjolf Aistleitner, Horst Aspöck and Hans Malicky. (Photo archive H. & U. Aspöck)



11 February 2018. Vienna, Austria. 19th Meeting of the Society for Biological Systematics. Left: Michael Ohl and Susanne Randolph, right: Ulrike Aspöck. (Photo archive H. & U. Aspöck)

Parerga und Paralipomena

From John D. Oswald

Neuropterida Species of the World (Ver. 6)

We are pleased to announce that version 6.0 of the Neuropterida Species of the World (NSW) catalogue/monograph was released on 23 March 2018. The new version contains several important upgrades. Most importantly, version six contains a new output page format – the “Monograph Record” page. The original NSW output page format – the “Catalogue Record” page – presents data in blocks that are organized around individual, unique, species-group names. The new Monograph Record pages aggregate NSW data by valid species and subspecies (ca. 7600+), which allows data that

were published for the same species or subspecies under synonymous taxon names to be programmatically integrated into a single page. Some of the classes of integrated data that may be of interest to most users include: (1) complete species/subspecies-level synonymical listings for all valid species-group taxa, (2) tabular listings of country-level geographic distributions for each species, and (3) links to lists of keys that contain each valid species as a terminal taxon. Version six also provides access to a new dataset that contains information about (and often PDF links to) >80,000 different Neuropterida figures that have been published in >3500 journal articles and books. The metadata captured for these figures provide, essentially, a new set of standardized captions for a large proportion of the technical illustrations that have been published to date in the global Neuropterida literature.

Version six also incorporates several new interface improvements. These include a more liberal use of icons to provide direct links to PDFs of relevant literature (be sure to log in to the site to maximize literature access), and links to corresponding records in the Bibliography of the Neuropterida (for access to full bibliographic details of each work). Much of the data displayed on the Monograph Record pages is contained in a new kind of scrollable and collapsible table, which allows the Monograph Record pages to display large amounts of information in a relatively compact space, and gives users some flexibility to customize the kinds of information that they want to see on each Monograph Record page.

We hope that you find the new data and functionality available in version six useful for your studies, and we are always happy to receive comments that we can consider for making additional improvements in the future.



Recent Literature on the Neuropterida (2017-2018)

Organized by Agostino Letardi with the support of John D. Oswald and BotN project (<http://lacewing.tamu.edu/Biblio/Main>) and a comment from John: << Let me asks authors to e-mail me PDFs of any/all of their new Neuropterida papers, so that I can archive them in the Bibliography. That will (hopefully) save me some work in trying to trace those PDFs, and make it easier for me share literature out to the full community via the Bibliography. Thanks >>

- Aspöck, H. 2018. Aspöck, Ulrike, geb. Pirklbauer, *12.7.1941, Linz, OÖ, Biologin und Entomologin. pp. 32-53. - In: Korotin, I.; Stupnicki, N. (Hrsg.). *Biographien bedeutender österreichischer Wissenschaftlerinnen. „Die Neugier treibt mich, Fragen zu stellen.“* Böhlau Verlag Wien Köln Weimar. 992 pp. ISBN 978-3-205-20238-7.
- Badano, D.; Aspöck, H.; Aspöck, U.; Haring, E. 2017. Eyes in the dark ... Shedding light on the antlion phylogeny and the enigmatic genus *Pseudimares* Kimmins (Neuropterida: Neuroptera: Myrmeleontidae). *Arthropod Systematics & Phylogeny* 75(3): 535-554. [r#16321].
- Badano, D.; Winterton, S. L. 2017. New Philippine species of *Spilosmylus* Kolbe (Neuroptera: Osmyliidae). *Zookeys* 712: 29-42. doi: 10.3897/zookeys.712.19883 [r#18009].
- Bakkes, D. K.; Sole, C. L.; Mansell, M. W. 2017. Revision of Afrotropical Silky Lacewings (Neuroptera: Psychopsidae). *Zootaxa* 4362(2): 151-212. doi: 10.11646/zootaxa.4362.2.1 [r#16332].
- Baldacchino, F.; Lamaj, F.; Naser el Deen, S.; Verrastro, V. 2017. Preliminary analysis of arthropod aggregation overwintering in vineyards with different management. *Future IPM 3.0 15-20 October 2017, Book of Abstract*: 2 pp.
- Barbosa, P.; Michaud, J.; Bain, C.; Torres, J. 2017. Toxicity of three aphicides to the generalist predators *Chrysoperla carnea* (Neuroptera: Chrysopidae) and *Orius insidiosus* (Hemiptera: Anthracoridae). *Ecotoxicology* 26:589-599. [r#17936].
- Benítez, E.; Paredes, D.; Rodríguez, E.; Aldana, D.; González, M.; Nogales, R.; Campos M.; Moreno, B. 2017. Bottom-up effects on herbivore induced plant defences: a case study based on compositional patterns of rhizosphere microbial communities. *Scientific Reports* 7: 1-14. doi: 10.1038/s41598-017-06714-x [r#18010].
- Bezerra, C. E. S.; Amaral, B. B.; Souza, B. 2017. Rearing *Chrysoperla externa* larvae on artificial diets. *Neotropical Entomology* 46:93-99. [r#17707].
- Boualem, M.; Tillier, P. 2018. *Coniopteryx (Coniopteryx) borealis*, espèce nouvelle pour la faune de l'Algérie, et liste actualisée des Coniopterygidae d'Algérie (Neuroptera). *Bulletin de la Société entomologique de France* 123(1): 19-20. [r#18007].
- Bozdoğan, H.; Satar, A. 2017. Seasonal abundance and diversity of some pit building antlion larvae (Neuroptera: Myrmeleontidae). *Journal of Natural and Applied Sciences* 33(3): 121-126. [r#18012].
- Breitkreuz, L. C. W.; Winterton, S. L.; Engel, M. E. 2017. Wing tracheation in Chrysopidae and other Neuropterida (Insecta): a resolution of the confusion about vein fusion. *American Museum Novitates* 3890: 1-44. [r#18013].
- Canedo-Júnior, E. O.; Santiago, G. S.; Ribas, C. R.; Zurlo, L. F.; Cuissi, R. G.; Souza, B.; Faria, L. D. B.; Rabello, A. M.; Braga, D. de L.; Silva, E. 2017. The effect size of aphid-tending ants in an agricultural tri-trophic system. *Journal of Applied Entomology* X: 1-10. doi: 10.1111/jen.12475 [r#18014].

- Castilhos, R. V.; Grutzmacher, A. D.; Neves, M. B. D.; De Moraes, I. L.; Gauer, C. J. 2017. Selectivity of insecticides used in peach farming to larvae of *Chrysoperla externa* (Neuroptera: Chrysopidae) in semi-field conditions. *Caatinga [=Revista Caatinga]* 30:109-115. [r#17801].
- Chang, Y.; Fang, H.; Shih, C.-k.; Ren, D.; Wang, Y.-j. 2018. Reevaluation of the subfamily Cretanallachiinae Makarkin, 2017 (Insecta: Neuroptera) from Upper Cretaceous Myanmar amber. *Cretaceous Research* 84:533-539. [r#18015].
- Chen, Z.-z.; Liu, L.-y.; Liu, S.-y.; Cheng, L.-y.; Wang, X.-x.; Xu, Y.-y. 2017. Response of *Chrysoperla nipponensis* (Okamoto) (Neuroptera: Chrysopidae) under long and short photoperiods. *Journal of Insect Science, Tuscon* 17(35):1-9. [r#17743].
- Civantos Ruiz, M.; Gómez Guzmán, J.A.; Sáinz Pérez, M.; González Ruiz, R. 2017. Importancia de la cubierta vegetal herbácea en el control natural ejercido por *Chrysoperla agilis* (Neu., Chrysopidae) sobre la generación carpófaga de *Prays oleae* (Lep., Praydidae). *Phytoma* 293: 1-4. [r#18016].
- Dobosz, R.; Japoshvili, G.; Krivokhatsky, V. A.; Wasala, R. 2018. Contributions to the knowledge of neuropteroid insects (Neuropterida: Raphidioptera, Neuroptera) of Georgia (Sakartvelo). Part II. *Annals of the Upper Silesian Museum in Bytom Entomology* 26(online 006): 1-21. doi: 10.5281/zenodo.1147632 [r#18017].
- Dobosz, R. A.; Palaczyk, A. 2017. *Symphorobius klapaleki* Zelený, 1963 and new data on lacewings (Neuroptera) in the Ojców National Park. *Annals of the Upper Silesian Museum in Bytom, Natural History* 23(7):1-8. [r#16347].
- Dorey, J. B.; Merritt, D. J. 2017. First observations on the life cycle and mass eclosion events in a mantis fly (Family Mantispidae) in the subfamily Drepanicinae. *Biodiversity Data Journal* 5: e21206. doi: 10.3897/BDJ.5.e21206 [r#16330].
- Dvořák, L.; Georgiev, D. 2018. New and interesting records of Neuroptera from Samothraki islands, North Aegean islands, Greece. *Parnassiana Archives* 6: 3-6. [r#18018].
- El-Sayed, A.M.; Knight, A.L.; Basoalto, E.; Suckling, D.M. 2018. Caterpillar-induced plant volatiles attract conspecific herbivores and a generalist predator. *Journal of Applied Entomology* 2018:1-9. doi:10.1111/jen.12495 [r#18019].
- Engel, M. S.; Winterton, S. L.; Breitkreuz, C. V. 2018. Phylogeny and evolution of Neuropterida: where have wings of lace taken us? *Annual Review of Entomology* 63: 531-551. doi:10.1146/annualrev-ento-020117-043127 [r#16333].
- Evenhuis, N. L. 2017. A new species of *Chrysanthrax* Osten Sacken (Diptera: Bombyliidae) from Costa Rica parasitic on an ant lion (Neuroptera: Myrmeleontidae). *Zootaxa* 4363:583-588. [r#17509].
- Farrokhi, M.; Gharekhani, G.; Iranipour, S.; Hassanpour, M. 2017. Host plant–herbivore–predator interactions in *Chrysoperla carnea* (Neuroptera: Chrysopidae) and *Myzus persicae* (Homoptera: Aphididae) on four plant species under laboratory conditions. *Journal of Economic Entomology* 110:2342-2350. [r#17184].
- Gruppe, A.; Doczkal, D. 2017. Neue Nachweise von Coniopterygidae in Bayern (Neuropterida: Neuroptera). *Beiträge zur bayerischen Entomofaunistik* 17: 51-56. [r#18020]

- Han, B.-f.; Zhang, S.; Zeng, F.-r.; Mao, J.-j. 2017. Nutritional and reproductive signaling revealed by comparative gene expression analysis in *Chrysopa pallens* (Rambur) at different nutritional statuses. *PLoS ONE* 12(7):1-18 [e0180373]. [r#16474].
- Heckman, C. W. 2017. Neuroptera (including Megaloptera). *Encyclopedia of South American aquatic insects. Illustrated keys to the known families, genera, and species in South America*. Springer. xvi + 621 pp. [r#16314].
- Hiermann, U.; Kopf, T.; Gruppe, A. 2018. Nachweise von Kamelhalsfliegen (Insecta: Neuropterida: Raphidioptera) aus Vorarlberg und Nordtirol (Austria occ.), sowie Streudaten aus Europa. *iNatura – Forschung online* 55: 1-5. [r#18021].
- Hu, J.-h.; Lu, X.-m.; Wang, B.; Liu, X.-y. 2018. Taxonomic notes on Babinskaiidae from the Cretaceous Burmese amber, with the description of a new species (Insecta, Neuroptera). *ZooKeys* 748: 31-46. doi:10.3897/zookeys.748.24198 [r#18022].
- Jepson, J.E.; Khramov, A.V.; Ohl M. 2018. New Mesomantispinae (Insecta: Neuroptera: Mantispidae) from the Jurassic of Karatau, Kazakhstan. *Zootaxa* 4402(3): 563-574. doi: 10.11646/zootaxa.4402.3.9 [r#16348].
- Jose-Pablo, R.; Villanueva-Jimenez, J. A.; Vargas-Mendoza, M. D.; Huerta-de-la-Pena, A. 2017. Life cycle and larval predation by *Ceraeochrysa valida* (Banks) on nymphs of *Diaphorina citri* Kuwayama. *Southwestern Entomologist* 42:61-72. [r#17384].
- Karami-jamour, T.; Mirmoayedi A.; Zamani, A.; Khajehzadeh, Y. 2018. The impact of ant attendance on protecting *Aphis gossypii* against two aphidophagous predators and it's role on the Intraguild Predation between them. *Journal of Insect Behaviour* X: 1-18. doi: 10.1007/s10905-018-9670-4 [r#18023].
- Khan, J.; Ul Haq, E.; Mahmood, T.; Rasool, A.; Aslam, N.; Shah, H.; Blouch, A.; Mahmood, M. M.; Ahmad, I. 2017. Life table attributes of *Chrysoperla carnea* (Neuroptera: Chrysopidae) reared on *Corcyra cephalonica* (Lepidoptera: Pyralidae) eggs under laboratory condition. *International Journal of Biosciences* 10:52-59. [r#17393].
- Khramov, A. V. 2017. Jurassic lacewings (Insecta: Neuroptera) of Western Siberia. *Paleontological Journal* 51(1): 59-68. [r#17339].
- Khramov, A. V.; Liu Q.; Zhang, H. 2017. Mesozoic diversity of relict subfamily Kempyninae (Neuroptera: Osmylidae). *Historical Biology* : 1-9. doi: 10.1080/08912963.2017.1411351 [r#18024].
- Koczor, S.; Szentkirályi, F.; Vuts, J.; Caulfield, J. C.; Withall, D. M.; Pickett, J. A.; Birkett, M. A.; Tóth, M. 2018. Conspecific and heterogeneric lacewings respond to (Z)-4-Tridecene identified from *Chrysopa formosa* (Neuroptera: Chrysopidae). *Journal of Chemical Ecology* : 1-10. doi: 10.1007/s10886-017-0920-2 [r#18025].
- Krivokhatsky, V.; Hajjesmailian, A.; Mirmoayedi, A.; Khabiev, G.; Dobosz, R.; Ostroverkhova, M. 2017. *Palpares turcicus* Koçak, 1976 – new name for iranian fauna and its place in the *P. libelluloides* species group (Neuroptera: Myrmeleontidae). *Proceedings of the Zoological Institute RAS* 321(4): 377-402. [r#18026].
- Kryuchkov, M.; Lehmann, J.; Schaab, J.; Fiebig, M.; Katanaev, V. L. 2017. Antireflective nanocoatings for UV-sensation: the case of predatory owlfly insects. *Journal of Nanobiotechnology* 15(52):1-3. [r#16406].

- Lara, R. I. R.; Perioto, N. W. 2017. New records of pleasing lacewings (Neuroptera, Dilaridae) from São Paulo state, Brazil. *Check List* 13(6): 857-862. <https://doi.org/10.15560/13.6.857> [r#18027].
- Letardi, A. 2017. Echoes from the past: rediscovering *Isoscelipteron fulvum* Costa, 1863 (Neuroptera: Berothidae) in Italy. *Arquivos Entomol6xicos* 18: 279-282. [r#18028].
- Li, Q.-h.; Ren, D.; Wang Y.-J. 2018. Revision of the gumilline genus *Nilionympha* with a new species from the Middle Jurassic of China (Neuroptera: Osmylidae). *Zootaxa* 4399(1): 146-150. doi: 10.11646/zootaxa.4399.1.13 [r#18029].
- Liu, X.-y. 2018. A review of the montane lacewing genus *Rapisma* McLachlan (Neuroptera, Ithonidae) from China, with description of two new species. *Zoosystematics and Evolution* 94(1): 57-71. doi: 10.3897/zse.94.21651 [r#18030].
- Liu, X.-y.; Lu, X.-m.; Zhang, W.-w. 2017. Phylogenetic position of Corydasialidae (Insecta: Neuropterida) revisited based on a significant new fossil in Cretaceous amber of Myanmar. *Journal of Systematic Palaeontology* 15:571-581. [r#16323].
- Lu, X.-m.; Wang, B.; Ohl, M.; Liu, X.-y. 2018. The first green lacewing (Insecta: Neuroptera: Chrysopidae) from the mid-Cretaceous amber of Myanmar. *Zootaxa* 4399(4): 563-570. doi: 10.11646/zootaxa.4399.4.6 [r#18031].
- Lu, X.-m.; Xia, F.-y.; Wang, B.; Aspöck, U.; Liu, X.-y. 2018. Taxonomic notes on *Cretarophalis patrickmuelleri* Wichard, 2017 (Insecta: Neuroptera: Nevrorthidae) from the mid-Cretaceous of Myanmar, and its phylogenetic significance. *Zootaxa* 4370(5): 591-600. doi: 10.11646/zootaxa.4370.5.10 [r#18032].
- Lucchi, A.; Loni, A.; Gandini, L. M.; Scaramozzino, P.; Ioratti, C.; Ricciardi, R.; Shearer, P.W. 2017. Using herbivore-induced plant volatiles to attract lacewings, hoverflies and parasitoid wasps in vineyards: achievements and constraints. *Bulletin of Insectology* 70(2): 273-282. [r#17971].
- Lyu, Y.-n.; Ren, D.; Liu, X.-y. 2017. Review of the fossil snakefly family Mesoraphidiidae (Insecta: Raphidioptera) in the Middle Jurassic of China, with description of a new species. *Alcheringa* 41:403-412. [r#16327].
- Lyu, Y.-n.; Ren, D.; Liu, X.-y. 2017. Systematic revision of the fossil snakefly family Baissopteridae (Insecta: Raphidioptera) from the Lower Cretaceous of China, with description of a new genus and three new species. *Cretaceous Research* 80:13-26. [r#16295].
- Lyu, Y.-n.; Ren, D.; Liu, X.-y. 2018. A remarkable new genus of the snakefly family Mesoraphidiidae (Insecta: Raphidioptera) from the Lower Cretaceous of China, with description of a new species. *Cretaceous Research* 89: 119-125. doi: 10.1016/j.cretres.2018.02.018 [r#18033].
- Machado, R. J. P. 2017. Myrmeleontidae (Neuroptera): molecular phylogeny and taxonomic review of the subtribe Periclystina (Dendroleontini). Ph.D. dissertation. Texas A&M University, College Station, Texas, USA. 786 pp. [r#16174].
- Makarkin, V. N. 2017. Oldest new genus of Myrmeleontidae (Neuroptera) from the Eocene Green River Formation. *Zootaxa* 4337(4): 540-552. doi.org/10.11646/zootaxa.4337.4.5 [r#16316].

- Makarkin, V.N.; Wedmann, S.; Heads, S. W. 2018. A systematic reappraisal of Araripeneuridae (Neuroptera: Myrmeleontoidea), with description of new species from the Lower Cretaceous Crato Formation of Brazil. *Cretaceous Research* 84: 600-621. [r#18034].
- Mansell, M.W. 2018. Antlions of southern Africa: genus *Crambomorphus* McLachlan, 1867, including extra-limital species (Neuroptera: Myrmeleontidae: Palparinae: Palparini). *Zootaxa* 4382(3): 465-500. doi: 10.11646/zootaxa.4382.3.3 [r#16335].
- Mansoor, M. M.; Raza, A. M.; Abbas, N.; Aqueel, M. A.; Afzal, M. 2017. Resistance of green lacewing, *Chrysoperla carnea* Stephens to nitenpyram: cross-resistance patterns, mechanism, stability, and realized heritability. *Pesticide Biochemistry and Physiology* 135:59-63. [r#17740].
- Michel, B.; Mansell, M.W. 2018. A new genus and species of owlfly from eastern and southern Africa (Neuroptera: Ascalaphidae). *European Journal of Taxonomy* 413: 1-12. doi: 10.5852/ejt.2018.413 [r#16345].
- Morales-Corrêa e Castro, A. C.; Barbosa, N. C. C. P. 2017. Recent evolutionary history of *Chrysoperla externa* (Hagen 1861) (Neuroptera: Chrysopidae) in Brazil. *PLoS ONE* 12(5):1-12 [e0177414]. [r#17710].
- Nel, P.; Bertrand, S.; Nel, A. 2018. Diversification of insects since the Devonian: a new approach based on morphological disparity of mouthparts. *Scientific Reports* 8:3516. doi:10.1038/s41598-018-21938-1 [r#18035].
- Nicoli Aldini, R. 2017. Osservazioni su *Sisyra terminalis* Curtis, 1854, in Italia (Neuroptera, Sisyridae). *Bollettino dell'Associazione Romana di Entomologia* 71(1-4): 27-35.
- Nicoli Aldini, R. 2017. Atti Sociali. Prof.ssa Maria Matilde Principi. *Bollettino della Società Entomologica Italiana* 149(3) 137. [r#18036].
- Nunes, G. d. S.; Fidelis Alves da Silva, I. T.; Barbosa, V. d. O.; Vitoriano Dantas, T. A.; de Oliveira, R.; Batista, J. d. L. 2017. Influence of feeding of *Ephestia kuehniella* Zeller (Lepidoptera: Pyralidae) on development of *Ceraeochrysa cubana* Hagen (Neuroptera: Chrysopidae). *EntomoBrasilis* 10:14-18. [r#17263].
- Ono, E. K.; Zanardi, O. Z.; Santos, K. F. A.; Yamamoto, P. T. 2017. Susceptibility of *Ceraeochrysa cubana* larvae and adults to six insect growth-regulator insecticides. *Chemosphere* 168:49-57. [r#17894].
- Pantaleoni, R. A.; Loru, L. 2018. The spurious dragonfly: the intricate nomenclatural problems regarding the names *Libelloides* and *libelluloides* (Neuroptera Ascalaphidae et Myrmeleontidae). *Zootaxa* 4387(3): 524-540. doi: 10.11646/zootaxa.4387.3.7 [r#16338].
- Pantaleoni, R. A.; Loru, L.; Misfud, D. 2017. Neuroptera (Insecta) of Pantelleria, the Pelagic Islands and the Maltese archipelago: towards an annotated checklist with new records. *Bulletin of the entomological Society of Malta* 9: 75. [r#18037].
- Portilla, M.; Snodgrass, G.; Luttrell, R. 2017. Lethal and sub-lethal effects of *Beauveria bassiana* (Cordycipitaceae) strain NI8 on *Chrysoperla rufilabris* (Neuroptera: Chrysopidae). *Florida Entomologist* 100:627-633. [r#17375].

- Promrak, J.; Rattanakul, C. 2017. Effect of increased global temperatures on biological control of green lacewings on the spread of mealybugs in a cassava field: a simulation study. *Advances in Difference Equations* 2017(161):1-17. [r#16908].
- Prost, A. 2018. Révision du taxon *Parapalpares latipennis* (Rambur, 1842) et description d'une espèce nouvelle d'Angola (Neuroptera, Myrmeleontidae, Palparinae). *Bulletin de la Société entomologique de France* 123(1): 65-71. [r#16346].
- Rahman, A.; Handique, G.; Roy, S. 2017. Comparative biology, predation capacity and effect of an artificial diet on reproductive parameters of green lacewing *Mallada boninensis* (Neuroptera: Chrysopidae). *Agricultural and Forest Entomology* 19:418-423. [r#16711].
- Rimoldi, F.; Fogel, M. N.; Ronco, A. E.; Schneider, M. I. 2017. Comparative susceptibility of two Neotropical predators, *Eriopis connexa* and *Chrysoperla externa*, to acetamiprid and pyriproxyfen: Short and long-term effects after egg exposure. *Environmental Pollution* 231:1042-1050. [r#16652].
- Ríos-Moreno, A.; Quesada-Moraga, E.; Garrido-Jurado, I. 2018. Treatments with *Metarhizium brunneum* BIPESCO5 and EAMa 01/58-Su strains (Ascomycota: Hypocreales) are low risk for the generalist predator *Chrysoperla carnea*. *Journal of Pest Science* 91:385-394. [r#17947].
- Rios-Velasco, C.; Najera-Miramontes, D.; Jacobo-Cuellar, J. L.; Berlanga-Reyes, D. I.; Ruiz-Cisneros, M. F.; Zamudio-Flores, P. B.; Ornelas-Paz, J. J.; Acosta-Muniz, C. H.; Romo-Chacon, A.; Salas Marina, M. A.; Ordaz-Silva, S. 2017. Predation capability and functional response of *Chrysoperla carnea* to *Choristoneura rosaceana* under laboratory conditions. *Southwestern Entomologist* 42:677-689. [r#17635].
- Rocca, M.; Messelink, G. J. 2017. Combining lacewings and parasitoids for biological control of foxglove aphids in sweet pepper. *Zeitschrift für Angewandte Entomologie [=Journal of Applied Entomology]* 141:402-410. [r#16644].
- Rosso, A.; Aragon, P.; Acevedo, F.; Doadrio, I.; Garcia-Barros, E.; Lobo, J. M.; Munguira, M. L.; Monserrat, V. J.; Palomo, J.; Pleguezuelos, J. M.; Romo, H.; Trivino V.; Sanchez-Fernandez, D. 2017. Effectiveness of the Natura 2000 network in protecting Iberian endemic fauna. *Animal Conservation* X: 1-10. doi: 10.1111/acv.12387 [r#18038].
- Sattar, M. 2017. Impact of proteins in adult artificial diet of *Chrysoperla carnea* (Stephens) (Neuroptera: Chrysopidae) on biological parameters. *Pakistan Journal of Zoology* 49:1491-1497. [r#17231].
- Scapini, F.; Gambineri, S.; Fanini, L. 2018. Deconstructing responses of sandy beach arthropodofauna to shoreline erosion: looking for the proper spatial scale to monitor biodiversity. *Journal of Coastal Conservation* 22:369-383. [r#16706].
- Song, N.; Lin, A.-I.; Zhao, X.-c. 2018. Insight into higher-level phylogeny of Neuropterida: evidence from secondary structures of mitochondrial rRNA genes and mitogenomic data. *PLoS ONE* 13(1):1-21 [e0191826]. [r#17296].
- Sultans, A.; Khan, M. F.; Siddique, S.; Akbar, M. F.; Manzoor, A. 2017. Biology and life table parameters of the predator, *Chrysoperla carnea* (Stephens, 1836) (Neuroptera: Chrysopidae) on sugarcane whitefly, sugarcane stem borer and angoumois grain moth. *Egyptian Journal of Biological Pest Control* 27:____. [r#16557].

- Szawaryn, K.; Dobosz, R. 2017. New distribution records of *Myrmeleon bore* (Tjeder, 1941) (Neuroptera: Myrmeleontidae) in Poland. *Acta entomologica silesiana* 25: 1-3. [r#18039].
- Tauber, C. A.; Sosa, F.; Contreras-Ramos, A. 2018. *Cryptochrysa* Freitas & Penny, a generic homonym, replaced by *Titanochrysa* Sosa & Freitas (Neuroptera: Chrysopidae). *Zootaxa* 4375(2): 287-295. doi: 10.11646/zootaxa.4375.2.9 [r#18040].
- Tăușan, I.; Popescu, M.; Pintilioaie, A. 2018. *Mantispa styriaca* (Poda, 1761) (Neuroptera: Mantispidae) in Romania – a New Record After a Half of Century. *Travaux du Muséum National d'Histoire Naturelle «Grigore Antipa»* 61(1): 1-2. doi: 10.2478/travmu-2018-0001 [r#18008].
- Thierry, D.; Canard, M. 2017. Désignation d'un néotype pour *Pseudomallada benedictae* (Séméria, 1976) (Neuroptera: Chrysopidae). *Revue de l'Association Roussillonnaise d'Entomologie* 26(4): 198. [r#18041].
- Thierry, D.; Canard, M. 2018. Three green lacewings new to the Bulgarian fauna (Neuropterida: Chrysopidae). *Entomofauna* 39/1(5): 83-86. [r#16238].
- Vacacela, H. E.; Alvarez-Zapata, A.; Gonzales, A. C.; Martins, E. F.; Martinez, L. C.; Serrao, J. E. 2017. Anatomy and histology of the alimentary canal and ovarioles of *Ceraeochrysa cubana* adults. *Bulletin of Insectology* 70:181-188. [r#16401].
- Van Den Berg, J.; Warren, J. F.; Du Plessis, H. 2017. The potential effect of bt maize on *Chrysoperla pudica* (Neuroptera: Chrysopidae). *Environmental Entomology* 46:413-417. [r#17622].
- Villagomez, F.; Contreras-Ramos, A. 2017. First records of adult feeding in Megaloptera (Corydalidae, Corydalinae) from Mexico and their possible relationship with the increase in life span. *Zootaxa* 4341(2): 287-290. doi: 10.11646/zootaxa.4341.2.11 [r#18042].
- Wells, P. M.; Baverstock, J.; Clark, S. J.; Jiggins, F. M.; Roy, H. E.; Pell, J. K. 2017. Determining the effects of life stage, shared prey density and host plant on intraguild predation of a native lacewing (*Chrysoperla carnea*) by an invasive coccinellid (*Harmonia axyridis*). *BioControl* 62:373-384. [r#16804].
- Winterton, S. L.; Lemmon, A. R.; Gillung, J. P.; Garzon, I. J.; Badano, D.; Bakkes, D. K.; Breitzkreuz, L. C. V.; Engel, M. S.; Moriarty Lemmon, E.; Liu, X.-y.; Machado, R. J. P.; Skevington, J. H.; Oswald, J. D. 2017. Evolution of lacewings and allied orders using anchored phylogenomics (Neuroptera, Megaloptera, Raphidioptera). *Systematic Entomology* XX, 1-25. doi: 10.1111/syen.12278 [r#16329].
- Winterton, S. L.; Zhao, J.; Garzon-Orduna, I. J.; Wang, Y.-J.; Liu, Z.-q. 2017. The phylogeny of lance lacewings (Neuroptera: Osmylidae). *Systematic Entomology* XX, 1-20. doi: 10.1111/syen.12231 [r#18043].
- Xu, H.; Winterton, S. L.; Wang, Y.-j.; Liu, Z.-q. 2017. Two new species of *Thyridosmylus* Krüger, 1913 from Madagascar (Neuroptera, Osmylidae). *ZooKeys* 724: 43-52. doi: 10.3897/zookeys.724.21057 [r#18044].
- Yang, F.; Jiang, Y.; Yang, D.; Liu, X.-y. 2017. Mitochondrial genomes of two Australian fishflies with an evolutionary timescale of Chauliiodinae. *Scientific Reports* 7: 4481. doi:10.1038/s41598-017-04799-y [r#16325].

- Yang, Q.; Shi, C.; Li, X.; Pang, H.; Ren, D. 2018. The first fossil brown lacewing from the Miocene of the Tibetan Plateau (Neuroptera, Hemerobiidae). *ZooKeys* 726: 145-154. doi: 10.3897/zookeys.726.21086 [r#18046].
- Yang, Q.; Shi, C.-f.; Ren, D.; Wang, Y.-j.; Pang, H. 2018. New genus and species of sisyrids (Insecta, Neuroptera) from the Late Cretaceous Myanmar amber. *ZooKeys* 739:151-158. doi: 10.3897/zookeys.739.22310 [r#18045].
- Ye, J.-w.; Li, J.; Li, Z.-g.; Han, S.-c. 2017. Rearing of *Mallada basalis* (Neuroptera: Chrysopidae) on modified artificial diets. *PLoS ONE* 12(9):1-9 [e0185223]. [r#17708].
- Yu, H.-l.; Khashaveh, A.; Li, Y.-h.; Li, X.-j.; Zhang, Y.-j. 2017. Field trapping of predaceous insects with synthetic herbivore-induced plant volatiles in cotton fields. *Environmental Entomology* XX(X): 1-7. doi: 10.1093/ee/nvx201 [r#18047].
- Zhang, S.-q.; Che, L.-h.; Li, Y.; Liang, D.; Pang, H.; Ślipiński, A.; Zhang, P. 2018. Evolutionary history of Coleoptera revealed by extensive sampling of genes and species. *Nature Communications* 9: 1-11. doi: 10.1038/s41467-017-02644-4 [r#17065].
- Zhang, T.-t.; Zhang, G.-c.; Zeng, F.-f.; Liu, C.-y.; Mao, J.-j. 2017. Insulin-like peptides regulate vitellogenesis and oviposition in the green lacewing, *Chrysopa septempunctata*. *Bulletin of Entomological Research* 107:148-154. [r#17297].

Picture of the semester



A young yankee owlfly (Southwest Alabama USA - April 17, 2018) from the Net

https://scontent-mxp1-1.xx.fbcdn.net/v/t1.0-9/30706996_10101928595830803_2875795498789240832_o.jpg?_nc_cat=0&oh=92f3a3a6b5cb4b22275888ec9e284b03&oe=5B5E0EDB

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