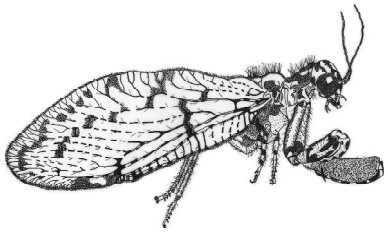
Lacewing News



NEWSLETTER OF THE INTERNATIONAL ASSOCIATION OF NEUROPTEROLOGY

No. 23 Autumn 2016

Presentation

Greetings once again to everyone. Thanks to all enthusiast neuropterologists who kindly sent contributions, notes, and bibliographic references. 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 John D. Oswald

Dear Colleagues,

Just a short note here to let you know that the Neuropterists Directory is now back up and running on the Lacewing Digital Library web portal. You can access the site at http://lacewing.tamu.edu/NeuroDirectory/Main The look of the site has been updated to match the Bibliography and Species Catalogue modules, but the functionality of the site is essentially the same as earlier versions. I invite everyone to take a look at the new version and to (please…!) send me additions, updates, and corrections for your Directory entries. Updates can very easily be e-mailed to me by following the short directions on the Add/Update page of the Directory. I would particularly like to receive more photographs of world neuropterists to post on the site. So, if you have a nice picture that you would like to go with your entry, please send it along to me!

Cheers,

John D. Oswald
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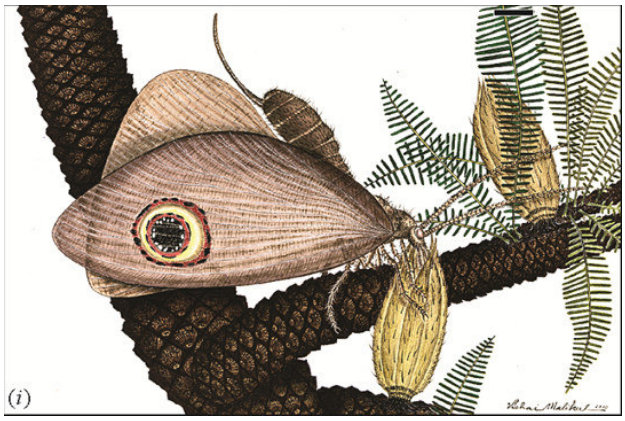
Lacewing Digital Library:

http://lacewing.tamu.edu/
Bibliography of the Neuropterida:
http://lacewing.tamu.edu/Biblio/Main
Neuropterida Species of the World:
http://lacewing.tamu.edu/SpeciesCatalog/Main

News from the Net

Butterflies in the Time of Dinosaurs, With Nary a Flower in Sight

by Jennifer Frazer



http://blogs.scientificamerican.com/artful-amoeba/butterflies-in-the-time-of-dinosaurs-with-nary-a-flower-in-sight/

Jewels are my best friends

from www.flickr.com

Readers' corner

From Michel Canard

[N.d.E. Prosit !]

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From Poorani Janakiraman

[N.d.E. a couple of dustywings for the LN readers!]

Janakiraman Poorani
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Field explorations and current researches

From Jean Maonge

Observations of ant lion diversity and ecology in the Adamawa plateau of the Sudano Guinean savannah of central Africa (Cameroon)
Some observations conducted together with Léonard S Ngamo, Antoine Bakoidi, Ismaela Djibo, Thomas Koda, and Roberto A. Pantaleoni.

Ngaoundéré is located in the Adamawa plateau in the agro-ecological area known as the Sudano Guinean savannah. The altitude is around 1400m above the sea level and the climate Is typically tropical with 2 main seasons: a humid and rainy season lasting for 5 months normally from May to September and the dry season from October to April. During the dry season, 3 main types of habitat of ant lion larvae were found: open and sunny areas (i); trees shadow (ii); and dry but moist places (iii). Here some physical conditions of the three habitats:

	Open and sunny	Shadow of trees	Dry but moist
Luminosity (lux)	865 000 (March)	82 500 (March)	12 500 (March)
Hygrometry (%)	9.3 (February)	13.5 (February)	15.06 (February)
Temperature (°C)	50.66 (March & April)	47.6 (April)	31.8 (February)

During this sampling campaign, adult antlions were obtained by rearing of larvae collected on field and by capture. Larvae collected in trees shadow area shown some case of parasites by parasitic flies. Several species were recognized, as *Centroclistis rufuscens*, *Creoleon diana*, *Cueta* sp., *Distoleon sanginolentus*, *D. harpalice*, *Hagenomyia tristis*, *Lachlathetes furfuraceus*, *Myrmeleon quiquemaculatus*, *M. obscurus*, *Neuroleon ruber*, *Nemoleon filiformis*, *Palpares obsoletus*, *P. papilinoides*, *Parapalpares latipennis*, and *Tomatares clavicornis*.

A parasitic fly, Bombilidae emerging from cocoon of *Myrmeleon* sp

When the dry season is over, during the ongoing rainy season, antlion larvae are surviving in shelter close to buildings. We are welcoming suggestions or any comments. We hope to have collaboration in order to carry out ecological experiments.

Contact: Léonard S Ngamo
leonard.ngamo@gmail.com

From Dušan Devetak

Field work in Serbia 2016
Sixth Slovenian neuropterological expedition to the Balkans

At the beginning of July 2016, a zoology group (Tina Klenovšek, Franc Janžekovič, Dušan Devetak) had a great opportunity to undertake an eight-days-long collecting expedition to Serbia, organized by the Department of Biology, University of Maribor. In Belgrade, Serbia our colleague and friend Predrag N. Jakšić joined us. As an experienced lepidopterologist, occasionally collecting Neuroptera, he suggested habitats with rich lacewing communities.

From left to right: Predrag Jakšić, Dušan Devetak, Tina Klenovšek, Franci Janžekovič. Suva planina mountain, 1311 m a.s.l., 4 July 2016. Photo D. Devetak.

The Danube – the second-longest river in Europe – provides habitats for Spongillaflies. Photo D. Devetak.

In previous years, five neuropterological collecting trips to the Balkans were carried out, more information can be found on the web site: http://zooexpeditions.fnm.um.si/

The Dojkinačka reka river where *Nevrorthus* adults were collected. Photo D. Devetak.

From left to right: Tina Klenovšek, Franci Janžekovič, Predrag Jakšić. Suva planina mountain, 1305 m a.s.l., 4 July 2016. Photo D. Devetak.

This was our second expedition to Serbia in the last two years. Landscape types in Serbia are extremely diverse. While our focus in the previous year was the Neuropterida fauna of the Tara National Park in the west, this year we surveyed diverse habitats in the eastern and northern parts of the country. In the mountains – Vidlič, Suva Planina and Balkan (=Stara Planina), higher altitudes influenced higher overall diversity of Neuroptera. In a primeval landscape – along an unpolluted rivulet (Dojkinačka reka), we collected *Nevrorthus apatelios* adults. Our second finding in Serbia! In the mountain Vidlič, we found the third mantidfly species for Serbia – *Sagittalata perla*. The specimens of this species occurred in a high number only in one *Ulmus* tree.

Entrance to the natural reserve Deliblato sands. Photo D. Devetak.

In river valleys at lower altitudes temperatures exceeded 30 °C, in contrast to moderate temperatures in mountains. The Danube – the second-longest river in Europe – offered a

spectacular view. At the Iron Gate (Đerdap), the Danube flows through a gorge that forms part of the boundary between Serbia and Romania. In that area we collected *Sisyra* adults.

Typical landscape in the Deliblato sands. 8 July 2016. Photo D. Devetak.

Myrmecaelurus trigrammus (Pallas) adults occurred in the Deliblato sands in huge numbers. 8 July 2016. Photo P. Jakšić.

The last couple of days were devoted to the Deliblato sands (Deliblatska peščara). They are one of the largest sands in the southeastern part of the Pannonian Plain. The area is known for wolves, jackals, European ground squirrels, lesser mole-rats, and rare birds. Dry climate and sandy habitats provided the highest number of adult antlions in the trip. Only five antlion species were noted, but individuals occurred in huge numbers! Original sandy patches are rare, because the area is known for the afforestation in the past.
In conclusion, Serbia has unique natural heritage. This trip resulted in some new findings for the country that was neuropterologically poorly investigated. During our last two expeditions in Serbia, the known number of lacewing species has tripled.

Social meetings

From David Bowles, USA

XXV International Congress of Entomology, Orlando Florida, USA, 25-30 September 2016

Neuropterists from around the world convened at the XXV International Congress of Entomology (ICE) for a symposium titled: Recent Advances in the Study of the Neuropterida. The symposium was organized and moderated by David E. Bowles (US National Park Service), Atilano Contreras-Ramos (National Autonomous University of México), and John D. Oswald (Texas A&M University). The broader goal of this symposium was to enlighten attendees on the role Neuropterists have in fulfilling the ICE meeting theme of "Entomology Without Borders." The concept of the symposium was to bring together a diverse assemblage of entomologists from throughout the World who are interested in Neuropterida in order to share recent research findings with each other and the broader entomological audience. Neuroptera workers present at the ICE represented Brazil, China, Egypt, Germany, Mexico, Turkey, and the United States.
Nine presentations were scheduled for the symposium, but Joshua Jones and Gilberto Albuquerque were unable to attend. There were approximately 50 people in attendance. The symposium began with the organizers recognizing the recent passing of our esteemed colleague, Dr. Norman D. Penny. A moment of silence was held in his honor.
Presentations given during this symposium included:
- An updated molecular phylogeny of the Neuropterida. Shaun Winterton (swinterton@cdfa.ca.gov), California

Dept. of Food and Agriculture, Sacramento, CA
- Taxonomic status of New World chrysopids (Neuroptera: Chrysopidae). Catherine A. Tauber (cat6@cornell.edu), Cornell Univ., Davis, CA
- Coniopterygidae associated to Mexican lime trees in Tecomán, Colima, Mexico. Mariza A. Sarmiento-Cordero (marizilla@hotmail.com)[1] and Atilano Contreras-Ramos[2], [1]National Reference Center for Biological Control, Tecomán, [2] National Autonomous Univ. of México, Mexico City, Mexico
- Taxonomic review of the subtribe Periclystina (Myrmeleontidae: Dendroleontini). Renato Machado (rjpmachado@neo.tamu.edu), Texas A&M Univ., College Station, TX
- Prospects for a revision of the genus Myrmeleon Linnaeus 1767 (Neuroptera: Myrmeleontidae) of North and Central America. Roberto Lopez-Garcia (exoddous@ hotmail.com), National Autonomous Univ. of México, Mexico City, Mexico
- Diversity of Chrysopidae, Hemerobiidae, and Mantispidae of tropical dry forests of the Mexican Pacific. Rodolfo Cancino-López (tk_57@hotmail.com) and Atilano Contreras-Ramos, National Autonomous Univ. of México, Mexico City, Mexico
- Progress on work towards a global monograph of the Neuropterida. John D. Oswald (joswald@ag.tamu.edu), Texas A&M Univ., College Station, TX

Other talks and posters were given at the ICE that addressed Neuroptera, but they were not part of the symposium. They were:
- Toxicity of commercial pesticides on the green lacewing, Chrysoperla carnea (Neuroptera: Chrysopidae). YoungSu Lee (allexton74@gmail.com)[1], HyunJu Lee[1], Chung[1], HeeA Lee[1], and Byeong-Ryeol Choi[2], [1]Gyeonggi Agricultural Research and Extension Services, Hwasung, South Korea, [2]National Institute of Agricultural Science and Technology, Suwon, South Korea
- Cytotoxic effects of neem oil in the midgut of the predator Ceraeochrysa claveri (Neuroptera: Chrysopidae). Daniela Santos (daniela@ibb.unesp.br), Elton Scudeler, Ana Silvia Garcia, Carlos Padovani, and Patricia Pinheiro, Sao Paulo State Univ., Botucatu, Brazil
- The phylogeny of green lacewings (Neuroptera: Chrysopidae): Phylogenetic signal versus rapid radiation. Ivonne Garzon (ivonne.garzon@gmail.com)[1], Laura Breitkreuz[2], Michael S. Engel[2], and Shaun Winterton[3], [1]Univ. of California, Sacramento, CA, [2]Univ. of Kansas, Lawrence, KS, [3]California Dept. of Food and Agriculture, Sacramento, CA
- Morphological phylogeny of green lacewings (Neuroptera: Chrysopidae) with emphasis on a revised wing venation homology. Laura Breitkreuz (l-breitkreuz@ku.edu)[1], Ivonne Garzon[2], Shaun Winterton[3], and Michael S. Engel[1], [1]Univ. of Kansas, Lawrence, KS, [2]Univ. of California, Sacramento, CA, [3]California Dept. of Food and Agriculture, Sacramento, CA
- Pharmacophagy in green lacewings (Neuroptera: Chrysopidae: Chrysopa spp.)? Jeffrey Aldrich (drjeffaldrich@gmail.com)[1], Kamlesh R. Chauhan[2], and Qing-He Zhang[3], [1]Univ. of California, Davis, CA, [2]USDA - ARS, Beltsville, MD, [3]Sterling International, Inc., Spokane, WA
- Demography and predation rate of Chrysoperla carnea (Neuroptera: Chrysopidae) fed on Hyalopterus pruni (Hemiptera: Aphididae). Remzi Atlihan (ratlihan@yyu.edu.tr) and Hazhar Abdulrahman, Univ. of Yuzuncu Yil, Van, Turkey
- Combining insect life table and predation rate for IPM and biological control: A study of Chrysoperla carnea (Stephen) (Neuroptera: Chrysopidae) fed on Myzus persicae (Sulzer) (Homoptera: Aphididae). Evin Polat Akkopru (polatevin@gmail.com) and Remzi Atlihan, Univ. of Yuzuncu Yil, Van, Turkey
- Impact of the predator Chrysoperla carnea (Stephens) (Neuroptera: Chrysopidae) on Zeuzera pyrina (Linnaeus) (Lepidoptera: Cossidae) populations attacking reclaimed apple orchards at Nobareia region in Egypt. Ahmed Merghem (ahmedmerghem@yahoo.com), Plant Protection Research Institute, Giza, Egypt

Neuropterists, some spouses, friends, and guests met for an informal dinner on the evening of the symposium. Great fun was had by all who attended.

Neuropterists and friends at the ICE informal dinner.

John Oswald, Kady Tauber, Renato Machado, Atilano Contreras-Ramos and David Bowles joined Lionel Stange and Bruce Miller at the Florida State Collection of Arthropods to examine the Neuroptera and Megaloptera collection. A great time was had by all and the adventure was productive.
Several Neuropterida workers attended the final dinner of the ICE and shared a table. The food was delicious and the company was fine. Everyone was in agreement that they look forward to the Neuroptera symposium hosted by Michael Ohl in Germany in 2018.
The next International Congress of Entomology was awarded to Finland and will be held in the summer of 2020.

From Horst Aspöck & Ulrike Aspöck

16 May 2016. China, Beijing. Participants of the "International Symposium on Insect Evolution" in the New Science Building, Capital Normal University. (Photo archive H. & U. Aspöck.)

International Meeting of Neuropterologists in China

On 16 May 2016 an "International Symposium on Insect Evolution" took place in the New Science Building of the Capital Normal University in Beijing, organised by Profs. Dong REN, Ding YANG, Xingyue LIU, Chungkun SHIH and Drs. Yunzhi YAO, Taiping GAO, and Yongjie WANG. The first initiative for this symposium had come from Ding Yang and Xingyue Liu, leading scientists of an NSFC (National Natural Science Foundation of China) major international research project on the phylogeny of Megaloptera, in which scientists from Europe and North and South America (Ulrike and Horst Aspöck, Benjamin W. Price, Shaun L. Winterton and others) have been involved.

16 May 2016. China, Beijing. Ulrike Aspöck and Yongjie Wang holding the two pieces of the holotype of Ulrikezza aspoeckae (Neuroptera: Saucrosmylidae), with the authors of this spectacular fossil dedicated to her: Hui Fang (right to U.A.), Dong Ren (right) and Yongjie Wang. (Photo archive H. & U. Aspöck.)

Lectures dealing with Neuropterida were given by Xingyue Liu, Conrad C. Labandeira, Shaun L. Winterton, Chungkun Shih, Benjamin W. Price, Chaofan Shi, Ulrike Aspöck, and Chen Wang. The symposium was a unique opportunity for international communication and exchange of ideas on current topics in neuropterology. Particularly impressive was the high number of young students intensively and eagerly interested in research on Neuropterida.

16 May 2016. China, Beijing. Ulrike Aspöck with young MSc and PhD girl students. (Photo archive H. & U. Aspöck.)

After the symposium Xingyue Liu and his PhD student Fei-Yang Liang flew together with Benjamin W. Price, Yvonne J. Garzón-Orduña, Shaun L. Winterton and Horst and Ulrike Aspöck to Nanning, the capital of the Guanxi Province in the south of China where we were collecting Neuropterida in the day-time as well as at light.

18 May 2016. China, Guangxi Prov., Tianlin Co., Cenwanglaoshan National Nature Reserve, Dalongping Wild Station. From left to right, front row: Horst Aspöck,
Ulrike Aspöck, Yvonne J. Garzón-Orduña, Ben Price, Guoquan Wang, Wei Wei; back: Shaun L. Winterton, Xingyue Liu, Fumio Hayashi, Fei-Yang Liang. (Photo archive H. & U. Aspöck.)

It was a great time in a region of the world exotic for most of us and we enjoyed the harmonic atmosphere. We are grateful to our Chinese friends and colleagues for their wonderful hospitality and for all the help and support. We are impressed by the extraordinarily high level of scientific work in China and the enormous input into the universities and into the education of the students.

Here are a few photographs of these remarkable days.

18 May 2016. China, Guangxi Prov., Tianlin Co. Fumio Hayashi. (Photo archive H. & U. Aspöck.)

19 May 2016. China, Guangxi Prov., Tianlin Co. From left to right: U.A., Ben Price, Shaun L. Winterton, Yvonne J. Garzón-Orduña. Light-trapping. (Photo archive H. & U. Aspöck.)

20 May 2016. China, Guangxi Prov., Tianlin Co. From left to right: Horst Aspöck, Shaun L. Winterton, Xingyue Liu and Guoquan Wang. (Photo archive H. & U. Aspöck.)

22 May 2016. China, Guangxi Prov., Jinxiu Co., Dayaoshan National Nature Reserve, Lianhuashan. From left to right: Guoquan Wang, Shaun L. Winterton, Horst Aspöck, Fumio Hayashi, Ulrike Aspöck, Benjamin W. Price, Yvonne J. Garzón-Orduña, Xingyue Liu, Fei-Yang Liang. (Photo archive H. & U. Aspöck.)

1 June 2016. China, Beijing. Horst and Ulrike Aspöck and Xingyue Liu with his students, from left to right: Fan Yang (MSc on molecular systematics of Megaloptera), Yun-Lan Jiang (MSc on taxonomy of Ankylopteryx and Italochrysa, morphology and molecular biology), Xiu-Mei Lu (PhD on taxonomy of Neuropterida from Baltic Amber), Ya-Nan Lue (PhD on systematics of fossil snakeflies from China), Fei-Yang Liang (PhD on systematics of Stenopsocidae (Psocoptera) from China). Taking leave after a farewell-dinner. (Photo archive H. & U. Aspöck.)

From Horst Aspöck & Ulrike Aspöck

2 July 2016. Germany, Bavaria, Castle of Schwanberg above Iphofen near Würzburg. Participants of the 16th Meeting of the German speaking Neuropterologists. From left to right: Leo Weltner, Florian Weihrauch, Lothar Brockmüller, Karl Meissner, Axel Gruppe, Veronika Hierlmeier, Melitta Fuchs, Steffen Potel, Johannes Gepp, Ulrike Aspöck, Werner Weißmair, Horst Aspöck, Lukas Kirschey, Wilfried Wichard, Michael Ohl, Rebekka Sontowski, Daniela Linde, Laura Breitkreuz, Mina Linde, Merle Linde. (Photo archive H. & U. Aspöck.)

Traditional Meeting of German speaking Neuropterologists in the castle of Schwanberg

From 1 to 3 July 2016 the 16th Meeting of German speaking neuropterologists took place in the castle of Schwanberg above Iphofen, near Würzburg in Bavaria/Germany. Altogether 16 neuropterologists and students working on Neuropterida attended the symposium, and most of them presented lectures. It was perfectly organised as always by Axel Gruppe.

1 July 2016. Germany, Schwanberg. From left to right: Florian Weihrauch, Axel Gruppe, Horst Aspöck. Discussions in the summer evening. (Photo archive H. & U. Aspöck.)

There was plenty of time for substantial discussions, not only during the sessions, but particularly also outside in the beautiful nature surrounding the old building as well as in the cosy vault of the castle in the evenings.

2 July 2016. Germany, Schwanberg. In the lecture hall. (Photo archive H. & U. Aspöck.)

2 July 2016. Germany, Schwanberg. Ulrike Aspöck presenting a lecture on the homology of genital sclerites of Neuropterida. (Photo archive H. & U. Aspöck.)

2 July 2016. Germany, Schwanberg. Laura Breitkreuz presenting a lecture on the evolution of Chrysopidae with emphasis on the wing venation. (Photo archive H. & U. Aspöck.)

All three organisers of the next (XIII)

International Symposium on Neuropterology to be held in Bavaria in 2018 – Axel Gruppe, Michael Ohl (presently President of IAN, the International Association for Neuropterology), and Florian Weihrauch – were present and presented their proposals for the program.
Here are a few photographs.

2 July 2016. Germany, Schwanberg. Wilfried Wichard presenting a lecture on fossil Sisyridae. (Photo archive H. & U. Aspöck.)

2 July 2016. Germany, Schwanberg. Horst Aspöck presenting a lecture on the Raphidioptera of the islands of the Mediterranean Sea. (Photo archive H. & U. Aspöck.)


2 July 2016. Germany, Schwanberg. Axel Gruppe presenting a lecture on the development of Raphidia mediterranea. (Photo archive H. & U. Aspöck.)


2 July 2016. Germany, Schwanberg. Karl Meissner presenting a lecture on the effectivity of predation in antlions. (Photo archive H. & U. Aspöck.)


2 July 2016. Germany, Schwanberg. Sitting, from left to right: Laura Breitkreuz, Ulrike Aspöck, Lukas Kirschey; standing: Wilfried Wichard. Discussion on wing venation and on Osmylidae. (Photo archive H. & U. Aspöck.)


3 July 2016. Germany, Schwanberg. Steffen Potel and Veronika Hierlmayer (an MSc student of Axel Gruppe), who presented her results on rearing Hemerobius micans in the laboratory. (Photo archive H. & U. Aspöck.)

Recent Literature on the Neuropterida (2016)

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

Badano, D.; Aspock, U.; Aspock, H.; Cerretti, P. 2016. Phylogeny of Myrmeleontiformia based on larval morphology (Neuropterida: Neuroptera). *Systematic Entomology* (2016): 1-24. doi: 10.1111/syen.12200 [r#15929].

Baldacchino, F.; Ibrahim, A.; Lamaj, F.; Tóth, M.; Tabilio, M.R.; Letardi, A. 2016. Valorizzare i predatori per salvaguardare la biodiversità vegetale: il caso *Chrysoperla carnea* s.l. *11° Convegno Nazionale sulla Biodiversità, Matera 9 e 10 giugno 2016, Libro dei riassunti*: 243. ISBN 9788894133226

Baldacchino, F.; Ibrahim, A.; Lamaj, F. 2016. Gestione sostenibile delle malerbe in vigneto ed influenza sui neurotteri crisopidi. *11° Convegno Nazionale sulla Biodiversità, Matera 9 e 10 giugno 2016, Libro dei riassunti*: 271. ISBN 9788894133226

Bowles, D. E.; Contreras-Ramos, A. 2016. First record of the family Sialidae (Megaloptera) from Thailand and description of the putative larva and female of *Indosialis bannaensis*. *Zootaxa* 4114: 485-491. [r#15927].

Bozdoğan, H.; Bahadiroğlu, C. 2016. Kahramanmaraş, Íli Myrmeleontidae (Neuroptera: Insecta) eko-fauna Çalişmasi. *Düzce Üniversitesi Bilim ve Teknoloji Dergisi* 4:336-353. [r#15941].

Canard, M.; Plant, C. W. (coll. Danflous, S.; Giacomino, M.; Petit, K. ; Thierry, D.; Villenave-Chasset, J. 2016. Cartographie des Chrysopes en France (4^{éme} complément) et dans les iles Anglo-Normandes (Neuroptera, Chrysopidae). *Revue de l'Association Roussillonnaise d'Entomologie* 25(3) : 157-164. [r#15957].

Dai, Y.; Winterton, S. L.; Garzón-Orduña, I. J.; Liang, F.; Liu, X.-y. 2016. Mitochondrial phylogenomic analysis resolves the subfamily placement of enigmatic green lacewing genus *Nothancyla* (Neuroptera: Chrysopidae). *Austral Entomology* : 1-10. doi: 10.1111/aen.12220 [r#15965].

Devetak, D.; Klokočovnik, V. 2016. The feeding behaviour of adult lacewings (Neuroptera): a review. *Trends in Entomology* 12: 29-42. [r#15934].

Devetak, D.; Slavevska-Stamenkovic, V.; Sivec, I. 2016. Alderflies (Insecta: Megaloptera: Sialidae) from Serbia and Macedonia, with notes on their occurrence in the neighbouring Balkan countries. *Acta Zoologica Bulgarica* 68(1): 39-42.

Dvořák, L. 2016. *Sialis fuliginosa* (Megaloptera), the first alderfly to be recorded from Albania. *Klapalekiana* 52: 3. [r#15966].

Garzón-Orduña, I. J.; Menchaca-Armenta, I.; Contreras-Ramos, A.; Liu, X.-y.; Winterton, S. L. 2016. The phylogeny of brown lacewings (Neuroptera: Hemerobiidae) reveals multiple reductions in wing venation. BMC Evolutionary Biology 16(192):1-19 [r#15951].

Giacomino, M. 2016. *Dilar parthenopaeus* Costa, 1855, new to the French fauna (Corsica) (Neuroptera, Dilaridae, Dilarinae). *Bulletin de la Société entomologique de France* 121 (1): 81-86. [r#15928].

Háva, J. 2016. *Neochauliodes tonkinensis* (van der Weele, 1907) new faunistic record from central Vietnam (Megaloptera: Corydalidae). *Arquivos Entomolòxicos* 16: 171-172. [r#15967].

Jones, V.P.; Mills, N. J.; Brunner, J. F.; Horton, D. R.; Beers, E. H.; Unruh T. R.; Shearer, P. W.; Goldberger, J. R.; Castagnoli, S.; Lehrer, N.; Milickzy, E.; Steffan, S. A.; Amarasekare, K. G.; Chambers, U.; Gadino, A. N.; Gallardo, R. K.; Jones, W. E. 2016. From planning to execution to the future: An overview of a concerted effort to enhance biological control in apple, pear, and walnut orchards in the western U.S. *Biological Control* : 1-6. doi: 10.1016/j.biocontrol.2016.03.013 [r#15968].

Klokočovnik, V.; Podlesnik, J.; Devetak, D. 2016. Occurrence of the antlion tribe Acanthaclisini in the Balkan Peninsula. *Spixiana* 39(1) : 99-104. [r#15952].

Krivokhatsky, V.A.; Anikin, V.V.; Astakhov, D.M.; Astakhova, A.S.; Khabiev, G.N.; Kurochkin, A.S.; Plotnikov, I.S. 2016. New records of the Low and Middle Volga antlions (Neuroptera, Myrmeleontidae) and analysis of particular fauna's distribution. In: *Entomological and parasitological investigations in Povolzh'e Region*. Saratov University Press 13: 7-31. [r#15932].

Letardi, A. (ed.) 2016. Atlante fotografico dei Neuropterida della fauna italiana. ENEA editor, Roma, 208 pp. ISBN 9788882863296 [r#15956].

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