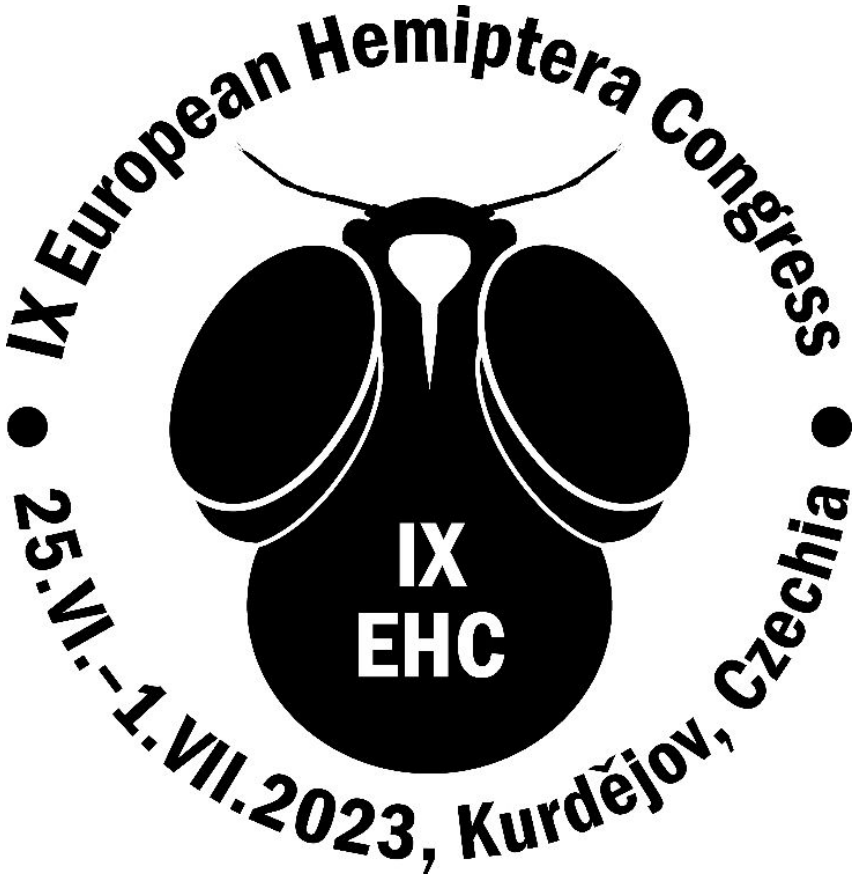
9TH EUROPEAN HEMIPTERA CONGRESS

Kurdějov, Czechia, 25.6.–1.7.2023

Book of abstracts



Editors:
Petr KMENT & Igor MALENOVSKÝ

Organising institutions

Department of Botany and Zoology, Faculty of Science, Masaryk University, Brno
Moravian Museum, Brno
National Museum of the Czech Republic, Prague

Congress venue: Hotel Kurdějov, Kurdějov, Czechia

Date: 25 June–1 July 2023

Organising Committee

Igor Malenovský (Masaryk University & Moravian Museum, Brno, Czechia)
Petr Baňař (Moravian Museum, Brno, Czechia)
Petr Kment (National Museum of the Czech Republic, Prague, Czechia)
Ilia Gjonov (Sofia University "St. Kliment Ohridski", Sofia, Bulgaria)
Monika Pramatarova (Sofia University "St. Kliment Ohridski", Sofia, Bulgaria)

Scientific Committee

Thierry Bourgoin (Museum national d'Histoire naturelle, Paris, France)
Jolanta Brożek (University of Silesia, Katowice, Poland)
Daniel Burckhardt (Naturhistorisches Museum, Basel, Switzerland)
Attilio Carapezza (University of Palermo, Italy)
Dmitry Dmitriev (Illinois Natural History Survey, Champaign, USA)
Alvin Jonathan Helden (Anglia Ruskin University, Cambridge, UK)
Werner Holzinger (Oekoteam, Graz, Austria)
Dalva Luiz de Queiroz (Embrapa Florestas, Colombo, PR, Brazil)
Jacek Szwedo (University of Gdańsk, Poland)
Attila Torma (University of Szeged, Hungary)

Recommended reference to an abstract

BIESZCZAD B. & SZWEDO J. 2023: Hemiptera of the European Jurassic World – unique and informative. P. 9. In: KMENT P. & MALENOVSKÝ I. (eds.): *9th European Hemiptera Congress, Kurdějov, Czechia, 25.6.–1.7.2023. Book of abstracts.* National Museum of the Czech Republic, Prague, 50 pp.

Publisher: National Museum of the Czech Republic, Prague

Issued as a non-periodical special purpose publication.
The abstract book is not issued for the purposes of the zoological nomenclature.
The authors are responsible for the language editing and content of the contributions.

e-ISBN xxx-xx-xxxx-xx-x

PARTNERS AND SPONSORS

We are grateful to our partners and sponsors for their support:

Department of Botany and Zoology, Faculty of Science, Masaryk University, Brno
Moravian Museum, Brno
National Museum of the Czech Republic, Prague
Institute of Vertebrate Biology, Czech Academy of Sciences, Brno
Archeopark Pavlov, Regional Museum, Mikulov
Administration of the Pálava Protected Landscape Area, Nature Conservation Agency of the Czech Republic, Mikulov
Department of Zoology and Anthropology, Faculty of Biology, Sofia University, Sofia, Bulgaria

history of the Hemiptera has been tumultuous, and its scenario is still full of ambiguities and gaps. This is due not only to the characteristics of the fossil record but also to its interpretation. The evolution of the hemipterans must be understood in the context of time and environmental changes, sometimes slow, sometimes rapid. Equally important in understanding of the evolutionary pathways of these insects are interactions with other organisms. Adaptations to new habitats and environments, new food sources and ways of their exploitation, resource sharing and avoidance of competition, and escape from predators, parasites and parasitoids – these phenomena have left a lasting mark on their evolutionary scenario. However, the bugs are also a playground for microorganisms, sometimes being neutral, sometimes harmful, often entering into close symbiotic relationships with hosts. Endosymbiosis could be an opportunity, but also an evolutionary rabbit hole. Interactions with other animals, e.g. in various forms of trophobiosis appeared. Specific reproductive strategies, sexual dimorphism and sexual conflicts, parthenogenesis, complex sexual and reproductive behaviors, including traumatic insemination and parental care – these could be beneficial at a particular time and place, risky at others. Major global changes of abiotic and biotic nature have shaped the evolutionary pathways of the Hemiptera during 300 million years. These insects survived many troubling events, adapted fast, in hardship and toil to new challenges, new environments, associated organisms and partners, particular lineages flourished, the others went extinct, interacted with changing environments and other organisms at various levels and scales.

The first damsel bug (Heteroptera, Nabidae) from Eocene Lublin amber [O]

SZWEDO J. & BOJARSKI B.

Laboratory of Evolutionary Entomology and Museum of Amber Inclusions, Department of Invertebrate Zoology and Parasitology, University of Gdańsk, Poland

The true bug family Nabidae – damsel bugs, contains about 30 genera and 400 species, divided into two subfamilies, Prostemmatinae and Nabinae, and up to eight tribes. The internal classification has been unclear and controversial, confusing researchers from different fields. Fossil Nabidae are uncommon in the fossil record. The oldest representative of the family – *Cretanazgul camillei* Garrouste et al., 2020 – comes from Cenomanian, Kachinian amber. Two species are known from Baltic amber – '*Nabis' lucidus* Germar & Berendt, 1856 and *Metatropiphorus succini* (Jordan, 1952). We present the first fossil Nabidae from a new source of fossil resins – Eocene amber from the Lublin area. Amber occurs in fine clastic sediments accumulated in the middle and late Eocene of the Górka Lubartowska area (north Lublin region, SE Poland). The amber-bearing sediments are formations of the littoral zone or shallow siliceous shelf. Accumulations of amber occur in marine sediments associated with regressive facies, deposited in fairly low energy environments. The amber piece from Górka Lubartowska contained a fossil of a true bug presenting features of the Nabidae, but also features not found in modern damsel bugs. The most conspicuous features of this fossil are a short head, with stalky eyes, rostrum base strongly shifted ventrad, short, two-segmented tarsi and the presence of fossula spongiosa on all legs. Some morphological details of this inclusion are shared with representatives of modern Prostemmatini (Prostemmatinae), others with Carthasini and Arachnocorini (Nabinae), placing it in an intermediate position. Analyses of the morphological features of the fossil and comparisons with modern representatives of the family have allowed hypotheses to be put forward regarding its palaeoecology, behavior and habitat. It can be assumed that this fossil was a riparian bug, hunting near banks or marginal growths near freshwater bodies, estuaries and sea coasts, similar to contemporary members of the families Leptopodidae, Saldidae or Gelastocoridae. Among the recent Cimiciformes, including the

Nabidae, fossula spongiosa is found on the pro- and mesotibiae or only on the protibiae. Its presence on all legs is usually associated with traumatic insemination behavior, as postulated in this fossil damsel bug.

Cylapinae (Heteroptera: Miridae) of Madagascar [P]

TASZAKOWSKI A. (1), MASŁOWSKI A. (2) & WOLSKI A. (2)

(1) Institute of Biology, Biotechnology and Environmental Protection, Faculty of Natural Sciences, University of Silesia, Katowice, Poland; (2) Institute of Biology, University of Opole, Opole, Poland

Madagascar, the fourth largest island in the world, is one of the top biodiversity hotspots on the Earth. The species richness of the Madagascan fauna is exceptional and is characterized by a very high degree of endemism. Only ninety-four species of Miridae, the most species-rich family of true bugs, have hitherto been recorded from this region. This obviously does not represent the actual diversity of this group and indicates a significant taxonomic impediment in this region. For example, of over 100 new species of Heteroptera described from Madagascar since 2010, only seven were Miridae. Cylapinae is currently recognized as one of the least diverse plant bugs (Miridae) subfamilies. They have primarily tropical and subtropical distributions, with only a few members inhabiting temperate regions. Gorczyca (2000) provided a comprehensive treatment of the Afrotropical Cylapinae. Since then, the Cylapinae of this region have received little attention, with most papers being descriptions of single taxa. Gorczyca (2006), in his catalogue, listed eight Cylapinae species represented by only a few individuals from Madagascar. In a rich collection of Madagascan true bugs in the Moravian Museum in Brno (MMBC), we recently found an unusually high (given the rarity of this group) number of Cylapinae specimens. So far, we described two new genera, each represented by a single new species, *Cassisotropis aciformis* and *Infernotropis madagascariensis*. In addition, *Fulvius anthocoroides* was recorded for the first time from Madagascar. Our poster presents the results of further research on Madagascan cylapines, which will result in the description of additional taxa within the tribes Fulviini and Vanniini.

Faunistic study of Auchenorrhyncha species in olive orchards in Greece [O]

THANOU Z. N., MAGKLARA A. P., THEODOROU D., RAIDOU E. V., KONIDIS G., STAMATAKOU G., TRIBONIA S., LYBEROPOULOS Ch. & TSAGKARAKIS A. E.

Department of Crop Science, Agricultural University of Athens, Greece

Studies of species composition, abundance and seasonal appearance of Auchenorrhyncha in Greek olive orchards are of paramount importance, since there is the plausible/imminent threat of the bacterium *Xylella fastidiosa* to invade and expand in Greece. Until recently, most studies on Auchenorrhyncha species in Greece were in mountainous regions, in forests, forest openings and near lakes and rivers by the late Professor Sakis Drosopoulos, while recently some studies were conducted for agricultural areas. From 2016 to 2023, extensive biodiversity studies were undertaken in twelve olive orchards in three main geographic regions of Greece: Peloponnese (4 orchards), Sterea Ellada (4 orchards) and Northeast Aegean (4 orchards). Malaise traps were installed in each orchard, and examined on a monthly basis for one year. Moreover, sweep net sampling was undertaken from the herb layer in some of the orchards to find species which are not so mobile but might be important as vectors of *X. fastidiosa*, and to associate