

HeFo — Hemiptera Fossils Database – beginnings and state of the art

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The Hemiptera contains 302 extant and extinct families known – the biggest number of families among any insects, with approximately 104,000 described extinct and recent species (Mitchell 2013; Beutel *et al.* 2014; PaleoBioDB 2017). Being one of the Big Five insect orders, after Coleoptera, Diptera, Hymenoptera, and Lepidoptera (Gullan & Cranston 2014), it is the most diversified group of non-endopterygote insects, with diversity maybe surpassed only by the Diptera.

A few databases covering the fossil insects available (Mitchell 2013; PaleoBioDB 2017) are listing just species ascribed to the Hemiptera, localities and original descriptive papers, without any subsequent revisionary studies and opinions included and introduction of recent, rapid changes in classification of the Hemiptera, as well many other issues related to these insects. These are provided and sustained by geologists not entomologists, so taxonomic changes affecting the classification and fossil taxa are not introduced.

HeFo (Hemiptera Fossils Database) is designed to be a tool for a better knowledge and understanding of the history and ways of evolution of fossil Hemiptera. This online database is aimed to gather the information concerning the taxonomy, stratigraphy and geographical distribution of species, genera, families and higher taxa, along with the authors of taxonomic names and the associated publications. The classification presented is based on the most recent list of families and higher taxa (Szwedo 2017, in print), updated with the relevant data from published and disclosing up to date papers. HeFo database is complementary on one hand and backbone on the other, to HemBases (Hemiptera Databases in MNHN-Paris), covering recently set of databases on various hemipteran groups: whiteflies, psyllids, planthoppers, froghoppers, moss bugs (Coleorrhyncha), lace bugs (tingids), and flatbugs (aradids).

At first stage of the project it offers an overview of fossils at the level of families – both extinct and extant, genera and species, with their synonyms. Each taxonomic level, taxon, decision is provided with relevant reference. Further enlargement of HeFo database will involve the addition of information about chronostratigraphy, lithostratigraphy, geological levels, distribution and even photos of specimens.

References

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