

Using Microsoft Access, it is possible to sort and search each field and output any field combination. Thus synonyms can be extracted plus authors of taxonomic changes. Counts and graphs can also be generated. A future challenge is extending the database to taxonomic ranges.

Completeness and bias versus adequacy of the spider fossil record

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The current state of knowledge of the spider fossil record is presented in the form of an evolutionary tree, by superimposing the accepted cladogram of spider phylogeny over geological time and calibrating it with fossil data. The importance of this technique is that it allows predictions to be made for taxa with an incomplete, or non-existent fossil record. It also graphically highlights biases associated with the spider fossil record in terms of rich and poor sources of fossil spiders and different modes of preservation. Combining neontological and palaeontological data in this manner provides an immense amount of information and thus the ability to investigate palaeobiological problems that could not be addressed adequately using solely palaeontological data. In this presentation recent and ongoing advances (since the previous amber congress) in fossil-spider taxonomy and palaeobiology are illustrated. The fossil record of spiders is very useful for addressing palaeobiological problems but it is still far from complete.

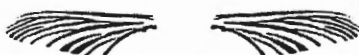
A comparative analysis of the Baltic and Rovno amber arthropod faunas: representative samples

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A comprehensive comparison is provided for the first time for the arthropod composition in Rovno and Baltic ambers, based on representative samples from the Klesov and Dubrovitsy quarries (1246 fossils) and the Yantarnyi Quarry (700 fossils), respectively. The composition of arthropod fossils in different-sized fractions of Baltic amber is also compared for the first time. Results indicate the composition as different enough to consider the origin of Rovno and Baltic ambers as geographically different. The Rovno sample shows a distinctly lower share of Acari (16% vs. 24%), Homoptera (4.7% vs. 8.8%, due to the rarity of *Germaraphis* aphids and scale insects: 1.2% vs. 5.2%, and 0.7% vs. 1.3%, respectively), Chironomidae (22% vs. 40% of Diptera), Empididae (1.1% vs. 3.6% of Diptera), and a higher share of beetles (5.2% vs. 2%), Sciaridae (30% vs. 15% of Diptera) and Phoridae (2.9% vs. 0.9% of Diptera). For ants, Dolichoderinae are less abundant in the Rovno sample (43% vs. 64% of ants), with a particularly low share of *Ctenobethylus goepperti* (Mayr) (30% vs. 59%). The differences are most convincing in the species composition: 9 of 37 ant species found in Rovno amber are unknown in Baltic amber. The deficiency of aquatic and subaquatic arthropods and an excess of dwellers of the *Sciara* zone, indicate the partially ecological nature of the above differences.



Fossils X 3

Programme and Abstracts

3RD INTERNATIONAL CONGRESS OF PALAEOENTOMOLOGY
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2ND INTERNATIONAL MEETING ON PALAEOARTHROPODOLOGY
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