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Comparative morphology of ostracod Leptocytheridae – A prospect for better understanding the origin and evolution of selected *Amnicythere* taxa in long-lived Lake Pannon (Late Miocene)

Dan L. Danielopol, Martin Gross, Tadeusz Namiotko, Klaus Minati, Werner E. Piller & Mathias Harzhauser

Leptocytheridae have a long historical documentation in Central Europe. They were found in the marine environment of the Paratethys during the Badenian–Sarmatian (Middle Miocene), and during the Late Miocene (Pannonian) in long-lived Lake Pannon. The modern systematics of this group changed from a taxonomy based on a single genus, *Leptocythere* Sars to several genera, *Callistocythere* Ruggieri, *Euxinocythere* (Stancheva) and *Amnicythere* (Devoto). The assertion of taxa with certainty to these latter genera using classic methods of identification became difficult. The present communication compares several morphological characters of the carapace in order to find taxonomic criteria, which would allow a more secured identification of fossil leptocytherids for our research projects.

Four morphological characters are presented: (1) the general shape of valves, analysed with classic methods of transmitted light microscopy and geometric morphometric techniques; (2) the morphology of the anterior inner lamella of the valve, also studied with transmitted light microscopy; (3) the hinge structure, mainly aspects of the left valve; (4) the external ornamentation of the valve. The latter two morphological characters were best observed in scanning electron microscopy. The morphological characters we analysed are complex entities, which display causal coherence, respectively quasi-independence when integrated within the framework of a whole organism.

To gain more experience with fossil *Amnicythere* taxa we use information from a companion presentation (Namiotko et al. 2011), which deals with details of the living species, *A. karamani* (Klie) from Lake Ohrid. Additionally, we present morphological details of valves of several Recent *Leptocythere* and *Callistocythere* taxa from the Atlantic Ocean and the Mediterranean Sea. The fossil material used for this presentation comes from our own studies of the sites Hennersdorf (Middle Pannonian "E", cf. Harzhauser et al. 2008) and Hainburg (Late Badenian, cf. Gross 2006). Information for the Sarmatian *Amnicythere tenuis* (Reuss) is extracted from publications of Cernajsek (1974), Olteanu (2003) and Toth (2008).

The comparative study of two *Amnicythere* species, *A. nodigera* (Pokorny) and *A. tenuis* (Reuss) gives us an idea about the kind of evolutionary transformation, which apparently, occurred during the Miocene for the carapace shape and the surface ornamentation of the valves of the former species. The topic is related to our long-term interest for better comprehension of the way ostracods offer information for evolutionary scenarios related to the environmental changes of the Central Paratethys and the long-lived Lake Pannon.

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Authors addresses:
Dan L. Danielopol
Commission for the Stratigraphical and Palaeontological Research of Austria, Austrian Academy of Sciences, c/o Institute of Earth Sciences (Department of Geology & Palaeontology), Karl-Franzens-University of Graz, Heinrichstrasse 26, A-8010 Graz, Austria
ddanielo@oeaw.ac.at

Martin Gross
Universalmuseum Joanneum, Department for Geology & Palaeontology, Weinzöttlstrasse 16, A-8045 Graz, Austria

Tadeusz Namiotko
University of Gdansk, Department of Genetics, Laboratory of Limnozoology, Kladki 24, PI-80-822 Gdansk, Poland

Klaus Minati & Werner E. Piller
Institute of Earth Sciences, Department of Geology & Palaeontology, Karl-Franzens-University of Graz, Heinrichstrasse 26, A-8010 Graz, Austria

Mathias Harzhauser
Natural History Museum Vienna, Geological-Palaeontological Department, Burgring 7, A-1010 Vienna, Austria