

## On Leptocytheridae ostracods of long-lived Lake Ohrid (Albania/Macedonia)

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The remarkable ostracod diversity and endemism of the geologically long-lived Lake Ohrid on the Albanian-Macedonian border is well established. In total ca. 50 ostracod species have been documented from this lake, of which at least half represent endemic species groups comprised of candonids, limnocytherids and leptocytherids (GRIFFITHS & FROGLEY 2004). The latter group includes three species, originally described by KLIE (1939) as belonging to the genus *Leptocythere* SARS: *L. angulata*, *L. karamani* and *L. proboscidea*, which are endemic to Lake Ohrid as well as one more species *L. prespensis* PETKOVSKI which is endemic to the Prespa-Ohrid region (PETKOVSKI & KEYSER 1992). Together with three other extant *Leptocythere* species known from the Balkans (*L. fluviatilis* KLIE, *L. ostrovskensis* PETKOVSKI & KEYSER and *L. pseudoproboscidea* KARANOVIC & PETKOVSKI), these seven species represent the only freshwater species of the genus *Leptocythere* (KARANOVIC & PETKOVSKI 1999).

Detailed comparative morphological study of both limbs and valves of *L. karamani* recently collected from Lake Ohrid as well as those of *L. lacertosa* (HIRSCHMANN) from the Baltic Sea and several extant and extinct leptocytherid species from Lake Pannon (DANIELOPOL et al. 2011) and Black Sea and Caspian Sea Basins revealed that Ohrid species may belong to the genus *Amnicythere* DEVOTO rather than to *Leptocythere*.

*Amnicythere* was originally established as a subgenus of *Leptocythere* by DEVOTO (1965) to accommodate several species found in the Middle Pleistocene deposits of Central Italy. Later STANCHEVA (1968) raised *Amnicythere* to the genus rank, based principally on the characteristics of the valve hinge. Most of the c. 70 species assigned to this genus (KEMPF 1980, 1997) are known from fossils without information on the morphology of soft parts. To date, only about 10 living representatives of *Amnicythere* are known, all inhabiting fresh to oligo-(meso-)haline waters of the basins of Black-Azov, Caspian and Aral Seas (e.g., SCHORNIKOV 1972, GLIOZZI & GROSSI 2008). Although some authors have already attempted to improve the diagnosis of *Amnicythere* (GLIOZZI et al. 2005 – based on valve morphology criteria, SCHORNIKOV 1973 – first limb diagnostic characters), there is still lack of consensus in the literature on the generic assignment of several extant and extinct leptocytherid species and specific relationships

within the genus remain ambiguous. To disentangle this taxonomic problem detailed morphological studies and complete descriptions of several species are a prerequisite.

The results from our in depth analyses of both “hard” and “soft” part characters appeared congruent, allowing us to amend the diagnosis of the genus *Amnicythere* by consolidation of the previously established differential characters and adding newly discovered discriminant traits. The most reliable diagnostic characters at the generic level are the hinge structure, the morphology of the anterior inner lamella of the valves, the general shape and the external ornamentation of the valves, the chaetotaxy of the first antenna, and especially the hemipenis morphology (clasping organ reduced or absent, copulatory process elongated, tube-like and curved apically, and lateral lobe reduced, merged with the copulatory process or totally absent).

Based on our comparative morphological studies we conclude that *Leptocythere karamani*, as two other *Leptocythere* species endemic to Lake Ohrid (and possibly some other species assigned to *Leptocythere* which are known from the Balkans), should actually be allocated to the genus *Amnicythere*, however, the formal transfer of these species will be published in the prospective paper. Differences in the hemipenis morphology indicate also that *L. karamani* may represent a more derived clade, whereas *L. prespensis* and *L. ostrovsensis* seem to be more ancestral.

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