

## **Late Miocene – Pannonian ostracods from the southwestern Transylvanian Basin (Romania)**

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Study of the Paratethys Neogene ostracods has substantially contributed to the stratigraphic, ecological, and paleogeographic understanding of this huge and complex marine to lacustrine depositional system (Danielopol et al., 2008). Of the large brackish lakes that repeatedly formed during the history of the Paratethys, the Late Miocene-Early Pliocene Lake Pannon was probably the longest-lived (Magyar et al., 1999). As a consequence this lake incubated a perplexingly diverse lacustrine biota (Magyar et al., 1999). In particular, the Transylvanian Basin (TB), representing the easternmost part of the early Lake Pannon, lacks modern and well-illustrated documentation of the endemic ostracod taxa. The objective of this contribution is to present the Late Miocene (Pannonian) ostracod faunae from 7 outcrops (Lopadea Veche/Oláhlapád, Gârbovița/Középorbó, Gârbova de Jos/Alsóorbó, Mihálț/Mihálc, Oarba de Mureș/Marosorbó, Tău/Székástóhát, Cunța/Kunca) of the southwestern TB, and to explore their paleoecological, paleobiogeographical and biostratigraphic context. The fauna, consisting of 30 taxa, is dominated by species endemic to the brackish Lake Pannon. The overall paleoecological interpretation of the investigated ostracod faunae is difficult; probably much more samples would be required to understand the ecological significance of these endemic species. In general, the assemblages indicate a mixture of deep-water and shallow-water species. Thin-shelled, smooth Paratethyan Candoninae occupied the sublittoral to profundal zones of Lake Pannon, from the wave base down to the foot of the slope. The littoral zone was inhabited by forms with thicker and ornamented shells, such as, for instance, *Cyprideis*, *Loxoconcha*, *Amnicythere*, and *Hemicytheria*. In our samples, the deep-water and littoral taxa occur in various ratio.

Three ostracod biozones: *Hemicytheria hungarica* Zone (Lopadea Veche and Gârbovița); *Hemicytheria tenuistriata* Zone (Gârbova de Jos, Oarba de Mureș, and Mihálț) and *Propontoniella candeo* Zone (Tău and Cunța) are represented from the southwestern part of the TB. All these zones belong to the lower Pannonian Slavonian Substage, but the oldest Pannonian ostracod biozone, the *Hemicytheria loerentheyi* Zone was not identified in any of the samples. This interpretation is roughly supported by the mollusc fauna. The age of the outcrops is thus approximately between 10 and 11.3 Ma (cf. Vasiliev et al., 2010).

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