

## Morphological Disparity within Sarmatian and Pannonian Populations of *Cyprideis* from the Vienna Basin

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*Cyprideis pannonica* is a pillar of ostracod biostratigraphic zones in the northern Lake Pannon, which characterizes the Late Sarmatian and Early Pannonian Zones "A–C" in the Central Paratethys. It differs from the second stratigraphically most important *Cyprideis tuberculata* in height and length, and in ornamentation (KOLLMANN 1960).

Morphometric outline analysis was realized on the adult female valves of two Sarmatian and two Pannonian *Cyprideis* populations from the Vienna Basin. All valves were photographed in external lateral view using a microscope and a digital camera. Optical images were processed with the Tps-dig software and for the reconstruction of valve outlines the B-splines approach adapted to ostracods was used (BRAUNEIS et al. 2006).

Only *Cyprideis* from Pellendorf were attributed to *C. pannonica* based on KOLLMANN's revision of *Cyprideis* and they were successively compared with three other ecologically different populations.

Ostracod taphocenosis of the sandy deposits of *Porosonion granosum* Biozone from Skalica is composed of brackish *Cyprideis* and marine (*Pontocythere*, *Neocyprideis*) taxa indicating sublittoral, outer estuarine conditions (FORDINÁL & ZLINSKÁ 1998).

The latest Sarmatian association of caliche-like sediments from Sankt Margarethen is composed mainly of *Cyprideis* (53% of all individuals in wash residuum) and *Heterocypris* (37%). Other genera – *Cyclocypris*, *Potamocypris*, *Virgatocypris*, *Loxiconcha*, *Cypridopsis*, *Candonopsis*, *Notodromas*, *Stenocypris* – reflect an input of freshwaters to saline coastal ponds or lake.

Pannonian *Cyprideis* associations from Pellendorf and Stavešice are ecologically more unified being composed of *Hungarocypris*, *Amplocypris*, *Hemicytheria* and *Loxiconcha*.

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## References

- BRAUNEIS, W., LINHART, J., STRACKE, A., DANIELOPOL, D.L., NEUBAUER, W., & BALTANÁS, A. (2006): *Morphomatica*. – Version 1.6, User Manual/Tutorial, Mondsee.
- FORDINÁL, K. & ZLINSKÁ, A. (1998): Fauna of the upper part of Holíč Formation (Sarmatian) in Skalica (Vienna Basin). – *Mineralia Slovaca*, 30: 137-146, Bratislava.
- KOLLMANN, K. (1960): Cytherideinae und Schulerideinae n. subfam. (Ostracoda) aus dem Neogen des östl. Oesterreich. – *Mitteilungen der Geologischen Gessellschaft in Wien*, 51: 89-195, Wien.

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