

## **Ostracods (Crustacea) as palaeoenvironmental indicators in a geoarchaeological study: Landscape development around the Celtic Princely Seat on the Ipf-mountain (Western margin of the Nördlinger Ries Meteorite Crater, Germany)**

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Early urbanising efforts in the areas of Southern German Celtic princely seats (Fürstensitze) and their territories have been investigated in the frame of a priority programme of the German Research Foundation (DFG). At the south-western margin of the Nördlinger Ries Miocene meteorite crater, archaeological excavations and sondages from between 1999 and 2008, on and around the butte Ipf (near Bopfingen) revealed traces of an Early Celtic fortress (c. 7<sup>th</sup> to 4<sup>th</sup> century BC) and settlements, as well as a number of grave-mounds. The area was considered being an adequate object to study the degree of early territory development and the correlation of periods of soil erosion and periods of settlement and anthropogenic influence.

A broad spectrum of disciplines has been gathered under the roof of this project providing an interdisciplinary approach: a total of 114 profiles have been investigated with sedimentological, pedological, archaeological, palynological and (micro-)palaeontological methods, about 150 radiocarbon- and two dendrochronological age determinations have been carried out. A multi-faceted image of the history of this area is now arising, giving new insights into more than three thousand years of regional human interaction with, and use of, land surface (MAILÄNDER et al. 2010).

We here report on the investigation of ostracod faunas recovered from six profiles taken in the small valley of the brook Goldbach (near the small village Osterholz, Kirchheim/Ries, Baden-Württemberg). Complex colluvial accumulation with fossil alluvial clay, peat and half bog were found in the shallow depressions of this brook. Together with other invertebrate microfossils, all ostracod specimens were picked from sediment samples of 3 L volume taken per petrologically differentiated horizon.

A total of 19 (extant) ostracod taxa have been identified and classified regarding their ecological preferences after the classification system suggested by FUHRMANN (2006). In varying proportions, the following faunal groups have been identified: spring fauna (rheocrenic and helo/limnocrenic), rhithron fauna, and stagnant water fauna (warmer and cooler waters).

The presented poster visualizes how ostracod valves can be used as supportive and elucidative palaeoenvironmental indicators, helping to unveil small scale changes (both, horizontally and vertically) in a developing Holocene landscape.

We furthermore present the valve of a *Cypria ophthalmica* from the Goldbach material with soft parts preserved, including mummified giant spermatozoa, and two valves of *Candonopsis scourfieldi* with preserved chitinous skeletons of the Zenker organ.

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