

## **14: Reconstructing lost worlds – Quaternary continental Ostracoda as tools in geoarchaeology**

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**Involved disciplines/subjects:** micropalaeontology, palaeoecology, palaeoclimate

**Number of positions requested:** 1

**Abstract:**

Ostracods are one of the main palaeontological proxies in Quaternary continental systems because of their ecological sensitiveness, wide distribution, often high abundance and high diversity. Their palaeoecology and shell chemistry provide plenty of information on the palaeoenvironments they lived in, on palaeoclimate and provenance of sediments. This way they may provide essential geoarchaeological information. Although the value of ostracods is proven in palaeo-studies there is more potential in this proxy and some traditional assumptions still wait for testing. Palaeoecological, taphonomical and shell chemistry analyses have to be brought forward within the context of reconstructing environments of the past.

Despite large datasets on taxonomy and distribution are available for many regions of the world, there is, however, a need for new palaeoecological methods, a better taphonomic understanding and additional autecological data providing much better perspectives for palaeoenvironmental reconstructions. Such progress will allow to establish improved and new palaeoecological and taphonomical methods for applying Quaternary ostracods in geoarchaeological analysis, and better ecological datasets on tolerance ranges and preferences of taxa and associations.

We intend to develop new methods based on actualistic studies, to test those already used and to apply them to geoarchaeological case studies within other projects of the IMPRS-SHH contributing this way to a better knowledge on Quaternary environmental and climatic changes for selected IMPRS sites in Central Asia, Africa and Europe from the Pleistocene to the Holocene.

The successful candidate should hold a Master degree in geosciences, physical geography, geoecology or biosciences with micropalaeontological expertise in Quaternary continental or marginal marine systems, best with Ostracoda. He/she brings a high motivation to apply micropalaeontological methods in geoarchaeological studies. Knowledge of palaeoecological methods including statistics, of taxonomical basics and/or applications of shell chemistry analysis including stable isotope work are highly appreciated.