

ANDREI BRICEAG, MIHAELA C. MELINTE-DOBRINESCU & MARIUS STOICA

FLUCTUATIONS IN THE OSTRACOD ASSEMBLAGES FROM THE BLACK SEA SINCE THE LAST GLACIAL MAXIMUM

During the Late Pleistocene-Holocene, the Black Sea basin suffered a major shift from a freshwater environment to a brackish one, which is mirrored in the biotical turnover. The transition of the Black Sea from an inland lake to a marine basin during the last glacial/deglacial episode is still generating debates. In the Late Pleistocene – Holocene interval, the water level of the Black Sea was controlled by regional rather than global climatic modifications (LERICOLAIS *et al.*, 2010). During the Last Glacial Maximum (LGM, 25,000–18,000 years BP), the eustatic level of the Black Sea was approximately 200 m lower than today and the basin had a freshwater character (FEDOROV, 1972; YANKO, 1990; RYAN *et al.*, 1997). Throughout this period the ostracod community was represented by Ponto-Caspian fresh-brackish water species, with a continuous presence of *Graviacypis elongata* and the occurrence of cold-water ostracod species (BRICEAG *et al.*, 2019). Afterwards, during Heinrich Stadial 1 (HS-1, 18,000-14,700 years BP), the first Fennoscandian Meltwater Pulse in the Black Sea occurred, which recorded a high deglacial sediment load represented by the deposition of reddish-brown clays in the western part of the basin. Thereby, the sediment accumulation rate values indicate an almost four-fold increase and the ostracod diversity and abundance recorded higher values, suggesting an increase in nutrient delivery into the basin. In this study, high resolution microfaunal analyses were performed on one Kullenberg gravity core, 09 SG 13 (396 cm long) from 200 m water depth and one core, MN 103_04 collected with a multi-corer (29 cm long) from 78 m water depth, revealed changes that occur in the Black Sea from the Last Glacial Maximum through the transition to the present day semi-enclosed marine basin. The youngest sediments contain a brackish ostracod assemblage, with low diversity and abundance. This interval is characterized by the presence of

polyhaline ostracods with Mediterranean origin. The ostracods from this assemblage tolerate salinities comprised between 17-21 ‰ and characterize a sub-littoral environment. Regarding the shallower core, the shift in macro-fauna and the decrease in the ostracod abundance suggests a sea-level rise during the Holocene. Fluctuation in ostracod assemblages, based on qualitative and quantitative studies, are presented herein, together with a (paleo-) environmental characterisation.

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Authors' Addresses – A. BRICEAG, National Institute of Marine Geology and Geo-ecology, 23-25 Dimitrie Onciul Street, RO-024053, Bucharest, Romania, andrei.briceag@geoecomar.ro; M.C. MELINTE-DOBRINESCU, National Institute of Marine Geology and Geo-ecology, 23-25 Dimitrie Onciul Street, RO-024053, Bucharest, Romania, melinte@geoecomar.ro; M. STOICA, University of Bucharest, Faculty of Geology and Geophysics, Bucharest, Romania, marius.stoica@g.unibuc.ro