Rhaetian (Late Triassic) ostracods (Crustacea, Ostracoda) from the offshore prolongation of North Dobrogean Orogen into the Romanian Black Sea shelf

Marie-Béatrice Forel *[1], Eugen Grădinaru [2], Lidija Korat [3]

[1] CR2P - Centre de Recherche en Paléontologie - Paris, MNHN- Sorbonne Université-CNRS – France
[2] Department of Geology, Faculty of Geology and Geophysics, University of Bucharest – Romania
[3] Slovenian National Building and Civil Engineering Institute, Ljubljana – Slovenia

The Triassic has been a turning point in the evolutionary history of marine organisms with the replacement of the Palaeozoic evolutionary fauna by the Meso-Cenozoic one. However, this period remains challenging for ostracods (Crustacea) with the temporary dominance of Platycopida, the explosive radiation of ornate Bairdiidae or the residual occurrence of Paleozoic taxa in deep waters up to the Late Triassic. In that sense, the Triassic ostracod fauna is transitional: neither Paleozoic, nor truly Mesozoic. At the very end of the Triassic, the Rhaetian witnessed the acme of several ostracod families, including Bairdiidae, Cytheruridae and Healdiidae as well as the earliest known occurrences of Progonocytheridae or Cytheridae. This stage preceded the end-Triassic extinction event so that the characterization of assemblages during the Rhaetian is pivotal to provide a baseline to study this key interval.

Rhaetian ostracods are known from several areas worldwide but only rare complete assemblages have been documented to date. Here we describe the first known assemblage of marine ostracods of Rhaetian age from a drill core performed on the Romanian Black Sea shelf. The assemblages developed on an outer shelf with relatively normal marine oxygenation and provide the oldest occurrence of *Pokornyopsis* which demonstrates that this forerunner of modern troglobitic ostracods may not have been troglobitic in the Triassic. The internal structure of Bairdiidae carapaces has been observed by X-ray micro-computed tomography scanning (CT-scan) and characters previously inaccessible allow for the clarification of the taxonomy of this family. Two traces of drill holes of predatory origin add to the oldest known of such records in the Carnian. These traces illustrate the improvement of the abilities of drilling predators on meiofauna from the Carnian to the Rhaetian and further demonstrate that the deep roots of the Mesozoic Marine revolution are to be found in the Triassic.

Mots-Clés : Ostracods, Late Triassic, Romanian Black Sea shelf, predation, CT-scan

Merci de ne rien inscrire dans cette zone et ne pas modifier les marges des pieds de page et entêtes.