



[76]

Ostracods (Crustacea) through Permian–Triassic Events

Sylvie CRASQUIN^{1,*}, Marie-Béatrice FOREL¹

¹CR2P- Centre de Recherche en Paléontologie – Paris, CNRS – MNHN - Sorbonne Université, CP 38, 8 rue Buffon, 75005 Paris, France

*Corresponding author email: sylvie.crasquin@mnhn.fr

Through geological times, the main turnover of marine ostracod group occurred at the Permian–Triassic boundary (PTB) when the Palaeozoic world gave way to Meso-Cainozoic world. As quite all the groups, ostracods intensively suffered of the end Palaeozoic events but they have the particularity to pass the PTB and to be present in quite all marine environments. We have studied the ostracod assemblages from the best preserved marine Permian–Triassic sections through the world. These sections are, for most of them, located along the Palaeo-Tethys margins: South China Block and Tibet (P.R. China), Bükk Mountains (Hungary), Dolomites (Italy), Taurus Mountains (Turkey) and Elbourz Mountains (Iran). These areas present different environmental settings from very shallow water to deep shelf. The biostratigraphy is well constrained by the presence of conodont index.

In deep environment from external shelf to slope, all the Permian ostracods disappear slightly before the PTB and are absent from the Early Triassic. The last representatives of palaeopsychrospheric forms occur in the Early Anisian.

On the platforms, during the Late Permian, the ostracods are abundant and highly diversified everywhere along Peri-Tethyan margins. The typical Palaeozoic forms are mixed with the very first Meso-Cainozoic representatives. The specific extinction rates, in the latest Permian, vary from 74% to 100%. During the earliest Triassic, two different settings have to be considered: with or without microbialitic deposits. The development of microbialites gives favorable ecological conditions to ostracods. During the Griesbachian, the fauna is composed of both new comers and surviving Palaeozoic forms. The reduction of size is frequently observed. This interval is called "survival stage". During the Dienerian and the Smithian the fauna are very scarce and poor. These two substages represent the maximum of poverty for the ostracod fauna, may be due to the development of anoxia on the platforms. During the Spathian, occurs the beginning of the true recovery. The very last Palaeozoic representatives are found in the Earliest Anisian which is the radiation stage of ostracod fauna with typical new comers. The interval of Palaeozoic–Meso–Cainozoic ostracod turnover is quite long (about 15My).

KEYWORDS: Ostracods, Crustacea, Permian–Triassic boundary, extinctions, recovery.

ACKNOWLEDGMENTS

This research was supported CNRS, MNHN and SU. Field work in South China was realized with the support of Wuhan CUG.