

The Late Devonian Upper Kellwasser Event and entomozoacean ostracods in the Holy Cross Mountains, Poland

Ewa Olempska


Acta Palaeontologica Polonica 47 (2), 2002: 247-266

Late Frasnian-Early Famennian entomozoacean ostracod assemblages from the Płucki section in the Holy Cross Mountains were studied to establish the effect of the "Kellwasser bio-event" on the planktonic biodiversity and faunal content. The composition of ostracod assemblages changes from a moderately diverse (10 species) *Entomoprimitia-Richterina-Nehdentomis-Nandania* dominated "background" assemblage characterising a pre-event interval, to an *Entomoprimitia*-assemblage during the event interval, and finally to a *Franklinella*-dominated post-event assemblage in the Middle *Palmatolepis triangularis* conodont Zone. The Frasnian-Famennian extinction caused substantial losses among entomozoacean lineages. In the Płucki section it occurred in two closely spaced steps within the *Palmatolepis linguiformis* conodont Zone. The first step, at the base of the dark cephalopod limestone (Upper Kellwasser Horizon), reduced the abundance and the species diversity of entomozoaceans to only two *Entomoprimitia* species. The vacant niche was then filled by the new, immigrant species *Entomoprimitia (Entomoprimitia) kayseri* which is dominant in the Upper Kellwasser interval. All these species were lost at the second step within the Upper Kellwasser Horizon. The entomozoaceans remained virtually absent during a long time interval between the end-Frasnian crisis and the Middle *Pa. triangularis* Zone. They reappear as new species from refugia lineages (*Franklinella*, *Nehdentomis*) and became widespread, indicating favourable ecological conditions. Some 13 species have been identified and assigned to seven genera. *Rabienella? lagowiensis* sp. nov. is proposed.

Key words: Ostracoda, Entomozoacea, Frasnian, Famennian, Upper Kellwasser Event, extinction.

Ewa Olempska [olempska@twarda.pan.pl], Instytut Paleobiologii PAN, ul. Twarda 51/55, PL-00-818 Warszawa, Poland.

Attribution License (for details please see creativecommons.org), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

 [Full text \(1,525.8 kB\)](#)