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Ostracods and fore-reef sedimentology of the Frasnian-Famennian boundary beds in Kielce (Holy Cross Mountains, Poland)

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Four major microfacies have been recognized in the Psie Górki section and the bioclastic content indicates an open marine environment in the photic zone close to an algal shole. Sedimentological studies point to a regressive episode starting close to the Frasnian-Famennian boundary. The regressive microfacies pattern is revealed by the presence of semi-restricted algal microbreccias that compose all of the lower part of the Famennian. The regression was accompanied by meteoric water invasion as the sea level fell. Seventy-six ostracod species are recorded. The ostracod assemblage, dominated by podocopids, belongs to the Eifelian ecotype and is indicative of a well-oxygenated marine environment below fair-weather wave base in the Frasnian part of the section, and of shallower environments in the base of the Famennian. No ostracod assemblage characteristic of hypoxic or semi-restricted water conditions has been recorded. The rate of extinction of ostracod species (>70%) close to the Frasnian-Famennian boundary is comparable with that known on the same level in several other sections investigated in the world. Five new ostracod species are proposed by J.-G. Casier and F. Lethiers: *Selebratina vellicata, Samarella*? *minuta, Bairdiocypris ventrorecta, Acratia pentagona*, and "*Bairdia" psiegorkiensis*.

Key words: Ostracoda, sedimentology, mass extinction, Frasnian, Famennian, Holy Cross Mountains, Poland.

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