

Emergence and succession of Carboniferous conodont and ammonoid communities in the Polish part of the Variscan sea

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Acta Palaeontologica Polonica 42 (1), 1997: 57-170

The end of the carbonate sedimentation of the Famennian *Wocklurneria* limestone in the Holy Cross Mts and Sudetes coincides with the disappearance of a high-diversity warm-water assemblage of ammonoids and conodonts with elaborated platform elements. In replacement, a low diversity ammonoid community of *Acutimitocerasprorsurn* and a thin-crown conodont *Protognathodus* fauna migrated to the area. When carbonate sedimentation was re-established in the Tournaisian, the new high-diversity ammonoid and conodont faunas represented again almost the whole range of morphologies known from the Famennian. Migrations into the area from unknown sources dominated, with little contribution from the local phyletic evolution. This characteristic ammonoid-conodont community disappeared with the sea-level rise in the *Siphonodella crenulata* Zone, to emerge at the same time in the North American Midcontinent. The reverse direction of migrations marks the latest Tournaisian *Scaliognathus anchoralis* event. In yet another cycle of the late VisCan, the new high-diversity faunas were not able to develop as elaborate conch or platform element morphologies as before. In a review of the literature it is shown how the Variscan orogenic activity, progressing towards the Northeast, and glaciations in Gondwana influenced the distribution of late Carboniferous ammonoids in Poland. Conodont taxa *Weyerognathus* gen. n., *Neopolygnathus sudeticus* sp. n., and *Siphonodella belkai* sp. n. are proposed.

Key words: conodonts, ammonoids, apparatuses, taxonomy, biostratigraphy, Famennian, Tournaisian, Devonian, Carboniferous, Hangenberg event.

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