

Ordovician strata with acritarchs and conodonts in the Upper Silesian Massif

Gładysz, J., Jachowicz, M., & Piekarski, K. 1990. Akritarchy paleozoiczne z okolic Siewierza (północne obrzeżenie GZW). *Kwartalnik Geologiczny* 34, 4, 623-646, 3 text-figs, 7 plates.

The central European Variscan belt separates two great paleogeographic units of the Middle Ordovician, i.e. the sub-polar Mediterranean Province of Gondwanan affinities and the temperate North Atlantic Province. Profound faunistic differences between the units allow to recognize and demarcate particular Early Paleozoic terranes within the belt. In Poland, the Variscides are covered with a thick sequence of late Paleozoic and Mesozoic deposits, which makes any studies on them especially difficult. Therefore, a lot of controversial problems still require solutions, among them the relationships of the Upper Silesian Massif to the neighbouring tectonic units and the possible presence of a Variscan orogen in between Upper Silesian and Małopolska Massives. Hence, the Ordovician strata reached by several boreholes at the northeastern margin of the Upper Silesian Massif are of special interest. The paper gives some insight into the evidence gathered during the last decades, even if only a very general presentation of data is provided in it.

In the borehole BM-152, which is the subject of the paper, drilled about 20 km northwest of Siewierz, more than two hundred meters of the core probably represents the Ordovician. The strata dip at a relatively low angle. Immediately below the Triassic (165.7-193.2 m depth) twenty meters of coarse sandstones with intercalations of conglomerates occur. The sandstones gradually change into dolomites about fifty meters thick (193.2-255.3).

Below, there is a more than a hundred meter thick sequence of shales with thin intercalations of fine-grained sandstones and limestones. In a limestone bed in the upper part of the shaly unit (depth 300.7-306.7 m) poorly preserved conodonts are reported, among them '*Prionodus cf. alatus*'. If correctly identified, they would indicate the Middle Ordovician age and North Atlantic affinities. The limestone and sandstone units have no paleontological dating, but their Ordovician age is suggested by a similarity to the sequence in other boreholes on the margin of the Upper Silesian Massif. One may also expect the presence of Early Ordovician limestones below the shales, similarly to the Myszków area nearby.

The reviewed paper presents the additional evidence for the Ordovician age of the shaly unit in the BM 152 borehole. Two acritarch-rich horizons have been recognized above (267.5 m) and below (338.0 m) the conodont-bearing limestone bed. There is given a list of acritarch 'species' and their transmitted light micrographs. The assemblages are dominated by *Baltisphaeridium* and *Veryhachium* (the upper sample) or *Baltisphaeridium* and *Michys-tridium* (the lower one). Unfortunately, neither their paleobiological significance is commented upon, nor the biogeographic aspects are discussed. Still, the paper is a valuable source of information on the Early Paleozoic in the area, which is crucial to understanding of the geotectonic evolution of central Europe.