

## **HISTORY OF THE PALAEOZOIC REEFS IN THE NORTH OF THE URALS**

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Palaeozoic organic structures are widespread and can be observed throughout Middle Ordovician-Lower Permian. Upper Cambrian-Sakmarian organic buildups (bioherms, biostromes, microbial and skeletal mounds) and reefs (knoll, patch, isolated and barrier types) formed up to 1000km long belt in the Northern and Polar Western Urals (= the north-eastern edge of the palaeocontinent Baltica). The organic structures, representing eight main environmental patterns, formed during three stages of growth of the Palaeozoic reefs. In the late Ashgill-early Emsian, the ecologically mature reefs originated only in the outer marginal zone of the carbonate shelf. They grew on an uniformly, gradually subsiding continental margin, prior to the late Palaeozoic plate convergence. The reefs were largest (up to 1000m in thickness), and the barrier reefs became dominantly, in the Pragian time. The facies zonation of reefs was particularly distinct and complicated. They represent the acme phase in the development of the Uralian Palaeozoic reefs. In the Givetian-Eifelian time, biostromes and bioherms were small and buildups rare due to the formation of mixed carbonate-clastic sequences in the transitional zone on the shelf. In the Middle Frasnian-Tournaisian time, the organic structures were represented by carbonate banks (microbial mounds) more than 600m in thickness. Reefal ecosystem stopped existence during this long period on the pioneer phase. The frame-forming skeletal metazoans were reduced because expansion of the reef-building microbial associations. Reef evolution in the late Viséan-early Permian time reflexes a transition from isolated microbial-algal reefs, 200m thick, to skeletal mounds or carbonate banks about 300m thick. In time, sedimentation of orogenic flysch just outside the carbonate platform caused a migration of its margin to the west. Evolution of the Palaeozoic reefs became to the end in the early Artinskian.