

RUGOSE CORALS FROM THE BOUNDARY INTERVALS WITHIN THE UPPER CARBONIFEROUS OF THE EUROPEAN PART OF RUSSIA: THE APPROACH TO THE STAGE BOUNDARY DEFINITION.

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The historically used stages of the Upper Carboniferous (the Middle and Upper Carboniferous series of Russian Stratigraphical Scale) had been proved mainly by brachiopods, fusulinids, and corals. The usage of conodont zonation as a basis for GSSP definition and the revision of the stage boundaries in a type area have resulted in approval of new stage boundaries that are more or less closely related to the former ones. The comprehensive data on the other traditionally used faunal groups are also of importance.

The Askyn (the South Urals) and Sula River sections studied contain coral faunas near the Serpukhovian/Bashkirian boundary. At the boundary the gap has been confidently recorded in Askyn section (the Southern Urals), but less well proved in northern sections (northern Timan and Novaya Zemlya). The shallow-water coral assemblage occurred at the *Pseudostaffella antiqua* level is represented by fasciculate colonies both in the ramp and platform carbonate facies. This fauna includes a few genera, which need a taxonomic revision. The first species which appeared near the boundary is *Protokionophyllum vassilukae*. „*Lytvophyllum*” *antiqua* Gorsky should be separated as a type species of the Gen. nov. 1, because of its strong difference from the type species *Lytvophyllum tchernovi* Dobrolyubova known from the Lower Permian deposits of Lytva River. The *Protodurhamina* Kozyreva, 1978 is represented by *P. toulia*, and *P. karanelgense* with a complicated axial structure. There is a strong similarity of the axial structure between *Protodurhamina* and *Corwenia*. Also, the Lower Carboniferous *Heintzella rossica* (Stuckenberga, 1904) closely resembles the Lower Permian species of *Heintzella*, which are widespread in the Russian Arctic.

In the type area of the Lower Moscovian „caninomorph” corals appeared at the *ouachiensis* conodont Zone slightly above the Bashkirian/Moscovian boundary (Makhlina et al., 2001). They are represented by *Alekseeviella irinae* (Gorsky) discovered in the Moscow basin (Oka-Zna uplift), in Malaya Pokayama section (Northern Timan) and in the northern island of the Novaya Zemlya Archipelago. In the type area the uppermost Moscovian (Peski Fm.) is characterized by the disappearance of massive colonial Petalaxidae. Contemporaneous deposits of the Dalnyi Tyulkas section of the Pre-Uralian foredeep contain the deep-water „*Cyathaxonia*” fauna. Relatively abundant *Bothrophyllum* characterize the *saggitalis* conodont Zone boundary, which has been recently discussed as a possible level of GSSP at the Moscovian/Kasimovian transition. *Gshelia rouillieri* (Stuckenberga) is one of the most widespread taxa found 1.5 m above the boundary in the memorial stratotype of the Gshelian Stage, near Gshel' Village in Moscow basin. Several high correlation potential levels have been discovered within these stages. It is shown that restricted coral assemblages occur at the „traditional” stage boundaries. This could be explained by the sedimentological events which have been used for establishing the classical Russian stages as far back as the end of 19th century.

(This investigation is supported by RFBR grant 03-05-64415.)