



Environment of Phytoliths in Meso-Neoproterozoic deposits on the Baikal-Patom mountain area

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In accordance with a tectonic zoning the Patom upland belongs to the folded adjacent area of the Siberian platform and is subdivided into Chuisk-Nechersk anticlinorium, Mama-Bodaibo and Patom synclinoria. Within the bounds of the platform near the upland Prilensk fold zone is distinguished. Stromatolitic constructions were studied only within Prilensk fold zone and Patom synclinorium. According to the recent data, the layerwise studying of a lot of cross-sections from Upper Precambrian of Baikal-Patom rocks accompanied by observations of the stromatolites and microphytolites (phytoliths) position, structural and textural peculiarities of organogenic and alternate rocks as well as analysis of petrographic and chemical characteristics of organic rests and those of enclosing them rocks has allowed us to estimate some regularities of facial relationship of stromatolites to the Baikal-Patom mountain area.

Phytoliths of the region are timed to the Mariinka, Bulbukhta, Barakun, Valukhta, Chenchа, Zherba and Minya suites of Riphean, Vendian and they are in relationship with two facies groups.

1. A facies group of a shallow marine basin with a normal salinity (zone of limestone and terrigenous sediments deposits).
2. A facies group of a shallow marine basin with an abnormal salinity (zone of the dolomite formation).

The first facies group is typical for the Chenchа time. Five types of facies can be estimated within the Riphean paleo-basin in dependence of the coastline.

All stromatolites in the deposits of the Mariinka, Bulbukhta, Barakun, Valukhta, Chenchа suites are submitted the typical forms of Riphean. Facies with an active hydrodynamical condition inhere for the deposits of Zherba suite of Vendian in the basins of the following rivers: Bolshoi Patom, Lena. The prevalent rocks are here aleurolite dolomites and dolomites with glauconite and some terrigenous admixture. Wide spread are indirect-layered textures. The stromatolites of these facies are presented here by two columnar groups.

Due to this fact initial stromatolitic builds remained here well in the deposits and that is why we can use information by analysis of the builds on life conditions, ways of burial and petrified rest changing for determination of the geological region history during Late Proterozoic and Paleozoic.

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