

CALCAREOUS ALGAE IN RIPHEAN SEDIMENTS OF EASTERN SIBERIA

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Calcareous algae are thought to appear on the Precambrian-Cambrian boundary, this is suggested to be linked with global changes in biosphere. We discovered *Girvanella* Nicholson et Etheridge, *Subtifloria* Maslov, *Renalcis* Vologdin calcareous algae, which are considered most researchers to be Cyanophyta, in Upper Riphean sediments of Eastern Siberia. *Renalcis* Vologdin were found in the Chenchka formation of the Patom upland, *Subtifloria* Maslov in the Burovaya formation of the Turukhansk mountains. *Girvanella* Nicholson et Etheridge was found in the Turukhansk and Rechka formations in the Turukhansk mountains and in the microstructure of carbonate oncolites *Osagia* udereica Yakschin in the Dashka formation of the Yenisey ridge. The obtained data give an opportunity to suggest that algae got a possibility to be calcified and to remain in Upper Riphean sediments. They support an idea about a dominating role of biogenic carbonate accumulation at that time. Thus, basing on those occurrences of *Girvanella*, *Subtifloria*, *Renalcis* algae, we cannot establish that their related sediments are not older than the Later Vendian-Earlyer Cambrian. The presence of *Girvanellas* in oncolites evidences that the Precambrian concentrically-laminated carbonate oncolites were formed under the participation of fibrous algae. A correlation can be made between the morphology and microstructure of oncolites on one hand, and their forming *Girvanellas* on the other hand. The data on calcareous algae in Upper Riphean carbonate rocks allow one to assert that the latter resulted from the physiological process of CaCO_3 release mainly by algae.