

## THE HISTORY OF LATE PROTEROZOIC - EARLY PALEOZOIC CALCAREOUS ALGAE ON THE SIBERIAN PLATFORM

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The mass appearance of calcareous algae is associated with the Paleozoic base, but the material from the Siberian platform suggests that their calcification began in the Late Riphean. One of the reasons of the appearance of calcareous cover was the basins shoaling, most intensive in the Early Paleozoic. Within the interval of Late Riphean - Early Paleozoic four types of algae preservation are known: siliceous, organic - walled, calcareous and phosphatic (or replaced by phosphate). The representatives of algae common to the Late Riphean began calcification, their phosphatization is related with oversaturation of water with calcium phosphate. Due to this material it is established that the cover of calcareous algae is like the the cover of the egg, and cellulars and filaments during fossilization were not preserved. The mode of calcification in ancient algae has no equivalents among modern representatives and is only characteristic of the group Calcibionta, the last representatives of which became extinct in the Late Cretaceous period. The representatives of some genera of the algae possessing of four types of preservation are described under the same name, for example, *Obruthevilla* Reitl., another under the different names: calcareous genus is called as *Proaulopora* Vologd., siliceous one - as *Circumvaginalis* Serg., *Siphonophycus* Shopf. The organic - walled genus *Ulophyton* Tim. et Herm. May be considered as the ancestor of the most enigmatic calcareous algae *Epiphyton* Born. Calcareous cover allowed the algae to produce numerous organogenous build - ups in lithoral zone beginning in the Vendian, while the number of stromatolites essentially decreased. A gradual replacement of the Riphean siliceous and organogenic algae by calcareous ones is recorded in the sequences of the Siberian platform. In the Late Vendian siliceous and calcareous algae were found in the same bed.