MICROFOSSILS IN THE LATE PRECAMBRIAN BIOSTRATIGRAPHY OF SIBERIA

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The Riphean (Meso-, and Neoproterozoic) microfossils of the Siberian Platform are well-known nowadays. Eukaryotic microfossils are of significant importance among the variety of these findings. It apperead possible to construct the two parallel biostratigraphic Late Precambrian scales based on the evolution of prokaryotes (Cyanophyta) and eukaryotes. We find the direct analogues of Cyanophyta fossils among the recent algae, therefore the fossil forms are transitional. The principal Cyanophyta morphotypes appeared at the end of the Early Riphean (1350 Ma), the individual new taxa have appeared later. Eukaryotic algae are comparable, in terms of individual features, to the recent ones at the level of high taxa. Here the extinction process manifests itself that makes possible to identify the index forms for the Late Precambrian units. Rare small forms, such as Quaternatiphycus, Germinosphaera and branched thalluses have appeared in the Early Riphean (1400 Ma). No eukaryotes have yet been found within the interval 1350-1100 Ma. In the Late Riphean, Miroedichia, Valeria, Lophosphaeridium, Tasmanites, Tappania and others have appeared at the boundary of 1150 Ma; Majaphyton, Archaeoclada, Trachyhystrichosphaera and Cymatiosphaeroides at 1000 Ma, and Proterocladus, Valkyria, Cerebrosphaera, Tanarium, Verynachium and Ooidium at 850 Ma. The Vendian is characterized by the appearance of a variety of large complex eukaryotes. Thus, for the first time in the Siberian Platform we have a series of changing assemblages of eukaryotic microfossils throughout the entire Late Precambrian (Meso-, and Neoproterozoic).