

## THE SPECIFICS OF VENDIAN SYSTEM STRATIGRAPHY

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General Subdivisions of Vendian or Terminal Proterozoic System are recognized on the basis of Metazoa evolution. In the lower Varangerian Series the first medusas appear. In the upper Valdaian Series the Ediacarian Stage is connected with flourishing of the Ediacarian fauna, while in the Nemakit-Daldynian Stage it is followed by Small Shelly fauna. Exact locality of the Vendian Subdivisions lower boundaries are not paleontologically defined. They have to be discussed in methods usual for Proterozoic. Glacial deposits are typical for lower Vendian. But in some places they are completely missing and the number of tillites varies from 0 to 4. Numerous Cryogenian tillites come close to the Varangerian ones. This is why connecting the Glaciation with lower boundary of Vendian should be proven in each particular case. For this, one can often use eventual nature of the Vendian beginning. In Siberia it has to do with collision and accretion, proven in Baikal-Patom Upland. Considerable manifestation of such events might cause Varangerian glaciation. Analyses of U-Pb zircon datings indicates that the lower Vendian boundary is established as 650 Ma (a result similar to those attained by other methods). This facilitates the choice of event with which it is possible to connect the beginning of Vendian. The boundary of Vendian Series is also eventual. In Russia, aulacogen-like troughs finally transformed into sineclises around this time. Because of glacier melting the expansion of Upper Vendian basins followed by subsequent expansion of ediacarian fauna. This borderline is connected with substantial negative excursion of  $\delta^{13}\text{C}$ . Tectonic activation in the lower part of the Nemakit-Daldyn Stage is identified in the north of Siberia and in some other regions. Negative  $\delta^{13}\text{C}$  excursion is widely manifested near this border as well. The study was partly supported by grant 99-05-64442 of RFFI.