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Terreneuvian stratigraphy and faunas from the Anabar Uplift, Siberia

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Assemblages of mineralized skeletal fossils are described from limestone rocks of the lower Cambrian Nemakit-Daldyn, Medvezhya, Kugda-Yuryakh, Manykay, and lower Emyaksin formations exposed on the western and eastern flanks of the Anabar Uplift of the northern Siberian Platform. The skeletal fossil assemblages consist mainly of anabaritids, molluscs, and hyoliths, and also contain other taxa such as *Blastulospongia*, *Chancelloria* , *Fomitchella*, *Hyolithellus*, *Platysolenites*, *Protohertzina*, and *Tianzhushanella*. The first tianzhushanellids from Siberia, including *Tianzhushanella tolli* sp. nov., are described. The morphological variation of *Protohertzina anabarica* and *Anabarites trisulcatus* from their type locality is documented. Prominent longitudinal keels in the anabaritid *Selindeochrea tripartita* are demonstrated. Among the earliest molluscs from the Nemakit-Daldyn Formation, *Purella* and *Yunnanopleura* are interpreted as shelly parts of the same species. Fibrous microstructure of the outer layer and a wrinkled inner layer of mineralised cuticle in the organophosphatic sclerites of *Fomitchella* are reported. A siliceous composition of the globular fossil *Blastulospongia* is reported herein and a possible protistan affinity similar to *Platysolenites* is discussed. New carbon isotope data facilitate correlation both across the Anabar Uplift and with the Terreneuvian Series of the IUGS chronostratigraphical scheme for the Cambrian System. The base of Cambrian Stage 2 is provisionally placed herein within the Fortunian–Cambrian Stage 2 transitional interval bracketed by the lowest appearance of *Watsonella crosbyi* and by a slightly higher horizon at the peak of carbon isotope excursion I′ from western flank of the Anabar Uplift. Correlation across the Siberian Platform of the fossiliferous Medvezhya and lower Emyaksin formations showing δ13Ccarb excursion I′ with the upper Sukharikha Formation containing excursion 5p and upper Ust'-Yudoma Formation containing excursion I is supported herein.

Key words: Mollusca, stratigraphy, carbon isotopes, Cambrian, Terreneuvian, Russia, Siberia, Anabar.

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