Late Paleozoic Granitoid Magmatism of Northern Taimyr


mikhail.kurapov@gmail.com

The Taimyr–Severnaya Zemlya Fold and Thrust Belt is situated north of Siberian Platform and comprises the Taimyr Peninsula and Severnaya Zemlya Archipelago. It is subdivided into the Southern, Central, and Northern tectonic zones.

The studied granitoid intrusions are located within the Northern Taimyr Zone on the northern and northwestern coast of the Taimyr Peninsula. Various authors refer this region the southern part of the Kara Terrane. The studied intrusions are represented by muscovite–biotite granites, biotite granites and biotite–muscovite leucogranites. U-Pb zircon age of intrusions varies from 315 to 345 Ma. They are markedly older than previously published ages of granite intrusions and evidence that the onset of granitoid magmatism in the Northern Taimyr was related to Visean events. According to the geochemical data, the granitoids are magnesian, peraluminous, alkali–calcic and calc–alkalic rocks. The initial 87Sr/86Sr ratio of granitoids range from 0.70416 to 0.70527.

The petrographic, chemical and isotope composition of these intrusions is typical of I-type granites. An Andean-type continental margin is the most probable setting for them. The data indicate that the active margin at the southern edge of the Kara Terrane started to evolve in the Early Carboniferous.

The research was supported by the Russian Science Foundation (project no. 17-17-01171).