

BELOMORIAN DRUSITE COMPLEX (BALTIC SHIELD, RUSSIA) AS AN EXAMPLE OF SPECIFIC DISPERSED MAGMATISM OF THE EARLY PALEOPROTEROZOIC TRANSITIONAL ZONES BETWEEN LOW- AND HIGH-GRADE TERRANES

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During the early Paleoproterozoic (2.5- 2.1 Ga ago) three types of coeval structural provinces developed on the eastern Baltic Shield: (i) Karelian and Kola cratons, (ii) Lapland-Umba granulite belt of the moderate pressures (LUGB), and (iii) specific transitional mobile belts between these low- and high-grade terranes. The cratons evolved as vast extensional areas with mantle-derived magmatism of the siliceous high-Mg (boninite-like) series in form of volcano-sedimentary sequences in graben-like structures, gabbro-norite dyke swarms and large layered intrusions. The LUGB was a compensated compressional zone between the cratons and characterized by synkinematic crustal-derived enderbite-charnockite magmatism. The transitional mobile belts were zones of tectonic flowage, developed in extensional regime, and mainly consist of tectonic slices of granite-greenstone lithology of the adjacent cratons. Belomorian Mobile Belt (BMB) located between Karelian craton and the LUGB. It is characterized by wide distribution of small synkinematic intrusive bodies of mafic and ultramafic rocks locally named drusites. Composition of the drusite bodies rocks is akin to that of the coeval layered intrusions of cratons, however, drusite bodies usually were constituted by a single type of rocks (plagioclase peridotites and pyroxenites, norites and gabbro-norites, anorthosites, Mg-gabbro-norites, etc.) with attendant composition of chilled zones. Wide distribution of the drusite bodies suggests an occurrence of large magma generation area beneath the BMB, similar to existed beneath the Kola and Karelian cratons. Unlike the cratons, impregnation of new portions of melts occurred in the BMB in the mobile settings and it caused the appearance of specific dispersed type of intrusive magmatism.