

Svecofennian Orogenic Belts in the Western Part of the East European Craton (EEC) as Accreted Parts of the Paleoproterozoic Ocean

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The Precambrian crust in the western part of the EEC between the Baltic and the Ukrainian Shields consists of the Archaean (2.5-2.7 Ga) nuclei and the Archaean nuclei partly reworked at the Early Paleoproterozoic (2.3-2.19 Ga) time in Fennoscandia and Sarmatia, and the Paleoproterozoic (Svecofennian, 2.0-1.8 Ga) orogenic belts. The latter ones we subdivided into accretion/collision belts (the Archaean granulite nappes exhumated and reworked partly or completely at Paleoproterozoic time, domains of an active Svecofennian continental margins and Andean-type Osnitsk-Mikashevichi continental arc) and paleoceanic-type Inchukalns-Podliase and Central Belarussian fold belts with remnants of the Paleoproterozoic ophiolites.

The boundary between Paleoproterozoic Fennoscandia and Archaean Sarmatia represents the suture zone that is marked by the Andean-type wide Osnitsk-Mikashevichi Igneous Belt of 2.0-1.95 Ga age. Among the Fennoscandia the limit between the Baltic-Belarussian Granulite and Central Belarussian Belts separates terranes of 2.0-1.9 Ga age in the east, while more younger, 1.9-1.8 Ga old terranes in the west separate West Lithuanian Granulite Domain and Inchukalns-Podliase Belt. The accretional amalgamation of the Sarmatian and Fennoscandian crustal segments may have lasted 400 Ma.

The boundary between Archaean nuclei, Karelian domains and Paleoproterozoic orogenic belts of the Svecofennian Province in the northern part of the Baltic Shield obviously represent the accretion/collision zone with NE-deeping subduction.