



Ca. 1.45 Ga Danopolonian magmatism and deformation in southwestern Fennoscandia

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The increasing geological and structural data on the ca. 1.45 Ga old rocks within SW Fennoscandia shed light on the Danopolonian geodynamics in the East European Craton. In the southern part, in the Blekinge-Bornholm Block (BBB) and Lithuania, the Danopolonian magmatism is manifested by alkali calcic, ultrahigh potassic, ferroan granitic intrusions. Commonly, these magmatic bodies comprise two or more magmatic suites differing in geochemistry and were formed by multiple emplacements.

Structurally, the Karshamn, Stenshuvud and Bornholm plutons in the BBB exhibit folded magmatic foliations that are usually continuous with the gneissosity in surrounding rocks, synmagmatic extensional gashes and pygmatitic folding of veins, and magmatic- to high-temperature shear zones. All these create a uniform structural pattern suggesting that the BBB intrusions experienced syn- and high-T post-magmatic shortening. The preliminary data suggest the magmatism occurred during regional NE-SW shortening.

Further north, in Smaland (Sweden), the coeval granitoid magmatism is more alkaline and seemingly occurred in extensional setting. This may be a result of a more distal expression of the Danopolonian igneous activity in respect to the major zone of convergence in the south.