**DISTRIBUTION OF THE TRANSSCANDINAVIAN IGNEOUS BELT IN THE BALTIC SEA REGION**

*by*

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The Transscandinavian Igneous Belt (TIB) is a major magmatic complex along the western margin of the Svecofennian Domian in the Fennoscandian Shield in which several granitoid generations (TIB 0, TIB 1, TIB 2 and TIB 3) have been recognized (Larson & Berglund 1992). Recent studies have also identified the presence of the 1.77-1.81 Ga TIB 1 generation at several drill sites below the Phanerozoic sedimentary cover in the Baltic Sea region: Kvarne on southernmost Gotland (Sundblad et al. 2003), Böda Hamn and Valsnäs on northern and central Öland respectively (Salin et al. 2018), as well as E-7, off shore the Latvian/ Lithuanian border (Salin et al. 2016).

In this study, we report U-Pb zircon ages from the Precambrian basement in the Baltic Sea region at two more sites: percussion drilling material from Frigsarve (southern Gotland) and drill core D1-1 from the Lithuanian off shore region. Zircons from Frigsarve yielded a LA-ICP-MS age of 1845±4 Ma, which is comparable with the age of the TIB 0 generation in southeastern Sweden. According to crystal morphology and SIMS ages, the zircons from the D1-1 drill core belong to two generations. The larger zircon grains have an age of 1792±8 Ma which is similar to the TIB 1 generation. The smaller zircon grains are 1744±7 Ma old and are interpreted to record a later 1.73–1.68 Ga high grade metamorphic event, which is widespread in Western Lithuania (Skridlaite et al. 2014).

In conclusion, all data from previous and current studies show that the Trans-scandinavian Igneous Belt extends over vast areas in the Baltic Sea region, from Öland and southern Gotland to the off shore regions of Latvia and Lithuania.

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