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Debate on the presence of transitional rock association in postcollisional setting - examples from Carpathian - Pannonian Region and Anatolia

Ioan Seghedi¹, Yalçın E. Ersoy²

¹Institute of Geodynamics Sabba S. Stefanescu, Romanian Academy, Jean-Louis Calderon 19-21, Bucharest 020032,

Romania ²Dokuz Eylül Üniversitesi, Mühendislik Fakültesi, Jeoloji Mühendisliği Bölümü, TR-35160 Buca, İzmir, Turkey

Volcanic rocks in orogenic, subduction-related setting may be subdivided in two major series, alkalic and subalkalic, separated by a line in the SiO2 vs. Na2O+K2O diagram, as proposed by many authors since late 19th century (e.g. Wilson, 1989 and references therein) up to early 2000th when several authors (LeBas et al, 1986; Le Maitre et al., 1989, 2002) applied IUGS recommendations that are used up to now by most the petrologists, known as TAS diagram. It was recognized that the boundary between alkalic and subalkalic, even marked by a solid line, is gradational, however, rocks that are plotting in this transition have not a specific name, each of the magma series ranging with different terminology from basic to acid. Only by using Na2O vs. K2O diagram was it possible to discriminate between primitive Na-series and Kand high-K-series a field named "transitional" (Middlemost, 1975; Le Maitre et al., 2002). Recently there was an attempt to distinguish the so-called "transitional basalts", by using different boundary lines in the total alkali-silica diagram (El-Hinnawi, 2016). Transitional rock association have been found in all the tectonic settings (e.g., Wilson, 1989 and references therein) and recently discussed also using trace elements and isotopes in rock association related to post-collisional setting in Carpathian-Pannonian region and western Anatolia (Seghedi et al., 2013); it was found that transitional rock association is timedependent and signifies a shift from the lithosphere orogenic (subalkaline magmas) to asthenosphere anorogenic (Na-alkalic magmas) reservoirs, though with periods of interruptions.

Here we wish to debate if transitional rock association occurs also in the central and eastern Anatolia in order to better understand the spatial evolution of the magma reservoirs and the geodynamic processes at the mantle and crustal levels.

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