South-Albanian ophiolites and their relation to the Eastern Mediterranean ophiolites

Volker Höck[1], G. Furtmüller[1], F. Koller[2] & K. Onuzi[3]

[1]*Institute of Geology, University of Salzburg, A-5020 Salzburg, Austria*
[2]*Institute of Petrology, University of Vienna, A-1090 Vienna, Austria*
[3]*Geological Institute, Tirana, Albania*

The Albanian ophiolites form outstanding fully developed ophiolitic sections within the Eastern Mediterranean ophiolites. Generally, they are divided in eastern and the western belt, where the former shows a SSZ, the latter a MORB signature, a subdivision mainly developed in northern Albania.

Contrary to the north Albanian ophiolites, little has been published about the south Albanian ophiolites. We present here the first data from the south Albanian ophiolites, including the Shpati, Vallamare, Devolli and Voskopoja Massif as well as the Morava and Shebeniku Massif. The former are interpreted as a continuation of the western belt, the latter are compared to the ophiolites of the eastern belt.

The contrast between the western and the eastern ophiolites, well developed in northern Albania, is not so clearly recognizable in southern Albania. Most of the ophiolitic sections contain harzburgite together with lherzolite in the mantle segment and plag lherzolites in the ultramafic cumulate section. Troctolites are common in Devolli and Voskopoja. Pyroxenites are restricted to the Shebeniku Massif. Sheeted dikes are missing in all profiles. Only three ophiolites (Shpati, Vallamare and Voskopoja) contain a volcanic section directly overlying the ultramafic and/or mafic cumulate sequence. The first geochemical data of the Voskopoja lavas indicate an intermediate geochemistry between typical MORB and island arc tholeiites, erupted in a SSZ environment. This is documented by the enrichment of elements such as Sr, K, Rb, Ba and a small depletion of Ti. The Pindos ophiolite in Greece, a continuation of the south Albanian ophiolites, shows a SSZ genesis indicating that a geochemical variation from MORB to SSZ tholeiites exists not only between the eastern and the western belt, but also in a north-south direction, along the main axis of the ophiolites on a regional scale.