

The parautochthon basement: Basement Series are characterized by NNE-directed imbrication in more internal portions of the orogene forming basement duplexes in the Svatka and Thaya dome, followed by E-directed imbrication in a thin-skinned tectonic style in external parts.

Common features of the displacement histories are a clockwise displacement path with mainly viscous penetrative deformation in deep crustal levels and distinct localized deformation in upper crustal portions. This deformation path is related to dextral transpression along the southeastern margin of the Variscan orogen. Crustal thickening is achieved by thrusting of the Paleozoic Gföhl and granulite tectonostratigraphic unit onto the Moldanubian and Moravian Micaschist and Marble complexes of Proterozoic age (FRANK et al., 1990) and the orthogneisses. The Raabs Serie is interpreted to reflect the oceanic suture. Post-stacking coaxial rock-flow within the granulite unit is interpreted in postcollisional collapse of the overthickened crust. Folding occurred in the lower plate, within the Moldanubian Variegated Series, due to passive amplification as response of the crustal thickening. Stacking in the foreland in a thin-skinned tectonic style and formation of the pericollisional flysch basin was coeval to extension in the hinterland. Late stage of the Variscan orogeny was characterized by modification of the plate boundary by a set of strike-slip and extensional faults. The repetition of the stratigraphy in the Drosendorf area is interpreted as positive flower structure between two major strike-slip faults.

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THE RAABS SERIE, A DISMEMBERED OPHIOLITE IN THE SE-BOHEMIAN MASSIF: A KEY FOR THE TECTONIC INTERPRETATION

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Variscan orogeny in the SE-Bohemian Massif has been classically explained by collision of the Moldanubian continental block with the Moravo-Silesian foreland. Consequently, a possible suture including oceanic fragments should be located along this boundary. Based on new geochronological, petrological and structural

arguments however, a different model for the Variscan tectonostratigraphy has been recently proposed by FRITZ & NEUBAUER (1993).

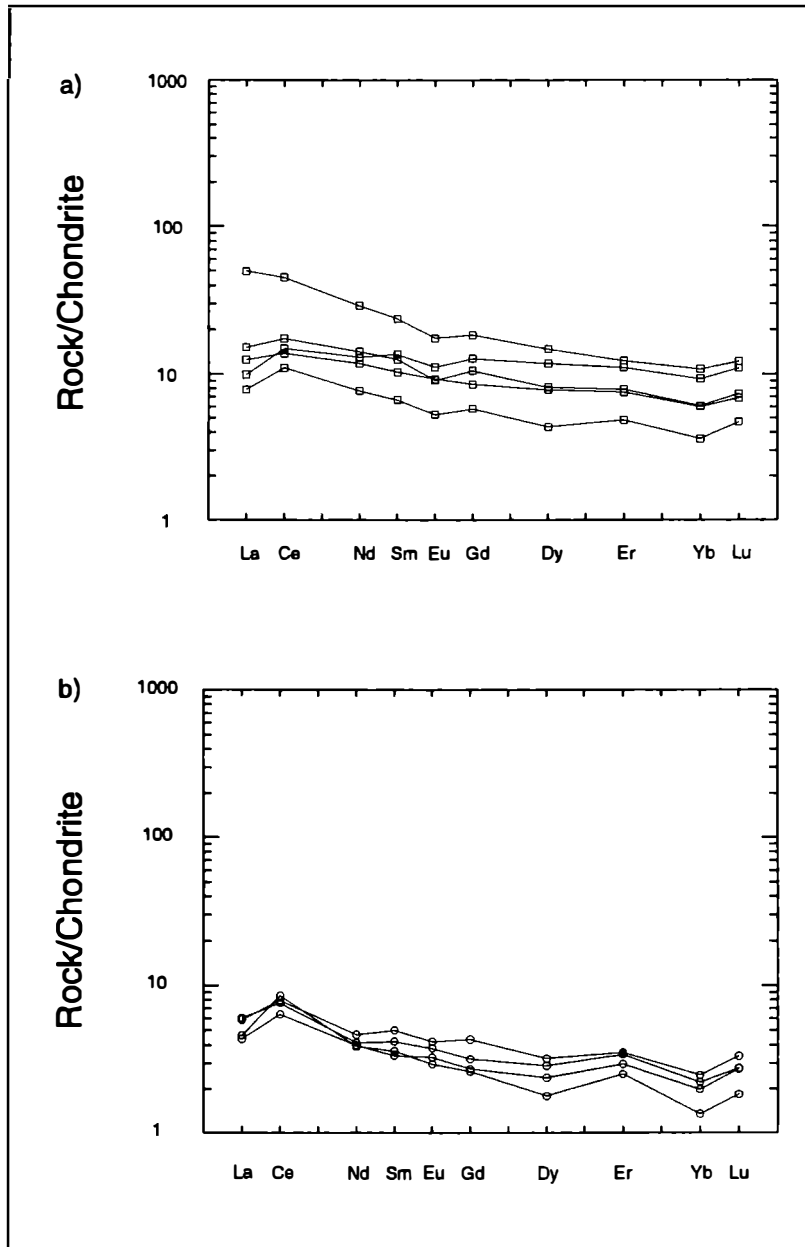


Fig. 1: Normalized REE pattern from amphibolites of the Raabs unit. a) Finegrained plagioclase garnet amphibolites; b) inferred meta-gabbros.

Two distinct crustal pieces are distinguished: (1) A Late Proterozoic terrane including the Moravian Nappe Complex and the Moldanubian Variegated and Monotonous Series and, (2) an Early Paleozoic terrane including Gföhl unit and granulite nappes (Gföhl terrane after FRANKE, 1989). The Raabs Serie is interpreted as an oceanic fragment separating these crustal blocks.

The Raabs Serie is defined by a highly metamorphosed meta-sedimentary sequence including metapsammities, metapelites and, to a lesser extent calcisilicates, marbles and quartzites which are closely connected with various types of amphibolites and serpentinites. The serpentinites derived from harzburgites and are extremely uniform in petrology and chemical composition. Al_2O_3 -CaO-MgO relations and petrology suggest metamorphic peridotites of oceanic or active margin origin.

Amphibolites differ in texture, mineral and chemical composition. Abundances of Rare Earth Elements (REE) normalized to average primitive mantle composition gave pattern subparallel to average E-type MOR-basalts for fine-grained plagioclase and garnet amphibolites (Fig. 1a). HFS element pattern normalized to N-type MORB are close to the unity line. Very coarse plagioclase amphibolites with gabbroic texture gave similar REE pattern but lower absolute abundances (Fig. 1b) and strong depletion of incompatible trace elements. Element patterns are explained by fractionation processes in gabbro respectively cumulate rocks.

A kinematic and geodynamic model which explains this situation includes: (1) The oceanic suture and hence the plate boundary is located within the Moldanubian Unit. Remnants of the suture are preserved in the Raabs and Letovice ophiolite bodies (MISAR et al., 1984). The Moldanubian/Moravian boundary is not a plate boundary but developed as a deep crustal decollement as an effect of continental underplating. (2) The Moldanubian Variegated Serie reflects an imbricated foreland unit and is comparable to the Moravo-Silesian Micaschist Complex.

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FLUID ACTIVITY DURING LATE STAGE OF VARISCAN DEFORMATION IN THE MORAVIAN NAPPE COMPLEX: PRELIMINARY RESULTS.

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The southeastern margin of the Bohemian Massif suffered polyphase deformation during late Variscan orogeny. Kinematic analyses indicate that NNE-directed thrusting is followed by extensional tectonics with partitioned displacement