Dextral Shear Zone between Nove Mesto Unit and the Core of Orlica-Snieznik Massif (the Sudetes) – a Variscan Terrane Boundary?

Pawel ALEKSANDROWSKI and Stanislaw MAZUR

Institute of Geological Sciences, University of Wroclaw, Cybulskiego 30, 50-205 Wrocław, Poland

The Palaeozoic collage of the northeastermost extremity of the Variscan belt exposed in the Sudetes, includes a number of probable suture zones (e.g., in the southern and eastern Karkonosze-Izera massif, around the Góry Sowie massif and along the Stare Mesto shear zone), few of which, however, were so far explicitly interpreted as such. A Variscan suture separating the Saxothuringian zone (terrane) to the NW from the Tepla-Barrandian zone (terrane) to the SE, has been interpreted within the Rudawy Janowickie and south Karkonosze metamorphic complexes (Mazur et al. 1998; Mazur and Aleksandrowski 2001; following earlier concepts of Pin et al. 1988 and Matte et al. 1990). The counterpart of the latter suture seems to be a major shear zone developed in the Orlica Mts along the boundary between the Nove Mesto–Lewin Klodzki phyllite-greenstone complex in the SW (probably representing the Tepla-Barrandian terrane) and the gneissic Orlica-Snieznik and the mica schist Stronie complexes in the NE (probably representing the Moldanubian/Gföhl terrane). Both crustal domains show different structural patterns (Fajst 1976; Dumicz 1998) and their contact is occupied by 1.5 to 5 km wide amphibolite belt intruded by metagabbroic and acid igneous rocks. The amphibolite displays MORB-like geochemical features (Opletal et al. 1990; Floyd et al. 1996). The structural study performed by the present authors revealed that the continuous belt of the Stronie complex mica schists adjacent to the contact from the NE, defines a 1–2 km wide shear zone overprinting and obliterating all earlier fabric elements. This shear zone shows evidence of predominantly dextral shearing along moderately westerly dipping foliation and shallow NW-plunging stretching lineation. The strain intensity decreases both to the NE and SW of the contact. Locally, the rocks show record of younger top-to-SW semi-brittle shearing event associated with extensional collapse. These relationships partly correspond to recent results of Dumicz (1998), who interpreted the discussed contact as located along the ductile-to-brittle normal-displacement Olešnice-Uhrinov shear zone. Our results point to a later reactivation in semi-brittle regime of an earlier, predominantly strike-slip, ductile shear zone along the Olešnice-Uhrinov "fault". The hypothetical Orlica Mts suture zone deserves further structural, petrological and geochronological study which is planned in near future by the present authors.

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Controls on Development of Asymmetric Fining-Upward Megacycles in a Generally Fine-Grained Turbidite System of the Moravice Formation, Moravian-Silesian Culm Basin.

Ondřej BÁBEK[1], Jan ZAPLETAL[1], Radek MIKULÁŠ[2] and Tomáš LEHOTSKÝ[1]

[1] Department of Geology, Palacký University of Olomouc, tř. Svobody 26, 771 46 Olomouc, Czech Republic
[2] Institute of Geology, Academy of Sciences CR, Rozvojová 135, 165 02 Praha 6, Czech Republic

The Moravian-Silesian Culm basin filled with varied, mainly deep-marine siliciclastic sediments has undergone a large-scale syn- and postsedimenary tectonic evolution in a ocean subduction (remnant basin) to continental collision (foreland basin) related tectonic setting (Kumpera and Martinec 1995), leading to its complexity in the present-day tectonic structure and facies architecture. A detailed field facies- and ichnofacies analysis of an early Upper Viséan turbidite succession of the Moravice Fm.