

## Paleozoic Evolution of the Moravosilesian Basin

Jiří KALVODA

Department of Geology and Paleontology, Faculty of Science, Kottlářská 2, 61137 Brno, Czech Republic

The Brunovistulian Terrane (BT) is a fragment of northern Gondwana margin regarded as a part of Avalonian group of terranes (Kalvoda 1995). Lithological record of the Cambrian marine sediments may indicate extension and rifting connected with the fragmentation of Gondwana. It is assumed that BT was amalgamated to Baltica along the TESZ in the Lower Paleozoic and was a southern promontory of Laurussia during the Variscan Orogeny.

The Devonian extension is assumed to be connected with intraplate stresses due to the collision of the Brunovistulian promontory with Moldanubian and Armorican Superterrane. The first evidence that the continental margin is being affected by collision may be extensional faulting on the downgoing rifted continental margin. Sengör (1995) suggested that a continent may break up upon the collision with another continent creating collision-related rifts (impactogens, aulacogens, strike-slip related rifts). Orogeny leads to rifting at high angle to the compression direction and rifts form first near the collision site and propagate later away from it. As a consequence, the amount of total extension and correlatively, the magnitude of the total subsidence, is commonly greatest near the suture and decreases away from it. The Moravosilesian Basin bears features of both impactogen and strike-slip related rifting. During the rifting old basement faults of approximately NW-SE direction paralleling the Teisseyre-Tornquist Zone and Kraków-Lubliniec Zone were reactivated. Remnants of the extensional zones can be distinguished in the Nesvačilka, Jablůnka, Jablůnkov and other half-grabens in the east, while more to the west detached sediments and their basement rocks were incorporated in the complicated mosaic of the Moravo-Silesian Shear Zone. Development of similar half-graben basins can be traced also in southern Poland and shows a distinct S-N polarity.

The compression in the Moravosilesian foreland basin started in the Tournaisian (Moravia) while in southern Poland extension still took place. During the compression, former extensional faults were often reactivated as overthrust zones. The Variscan flysch in Moravia can be subdivided into the inner belt (including the Protivanov and partly Rozstání Formation in the Drahaný Upland and the Andělská Hora and Horní Benešov Formation in the Nizký Jeseník Mountains) and outer belt (including the Myslejovice Formation in the Drahaný Up-

land and the Moravice and Hrádek-Kyjovice Formation in the Nizký Jeseník Mountains). The inner belt was characterized by prominent dextral translation on nappe units and Brunovistulian affinity of source rocks while the outer belt shows an eastward decreasing extent of overthrusting (even passing in paraautochthonous and autochthonous units), an important role of Moldanubian source rocks and prominent S-N grain-size distribution.

The evolution of the Moravosilesian foreland basin was governed by the interaction of the Brunovistulian Terrane with Moldanubian Superterrane in the Drahaný area, Armorican Superterrane in the Jeseníky area as well as with the Malopolska Terrane in the north. In this respect the evolution of the Moravosilesian foreland basin is more complex than in western Europe, where the Avalonian foreland collided with the Armorican Superterrane. The dextral translation was characteristic both for the contact with Malopolska Terrane (Kraków-Lubliniec Zone) and for the whole TESZ (Grygar and Vavro 1995). This idea is supported by the close affinity of the Devonian and Carboniferous foraminiferal fauna of the Brunovistulian Terrane with the Dnieper-Donets Basin. Consequently, the Brunovistulian Terrane may be regarded as a separate terrane within the Avalonian group of terranes showing similar tectonic position (Rhenohercynian Zone) but different paleogeographic evolution than the Eastern Avalonian Terrane in Germany. To conclude, we assume a more important role of terranes in the origin of the Middle European Variscides analogous to the evolution of the Appalachians.

### References

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## Variscan Structural Evolution of the Central Part of the Krušné Hory (Erzgebirge) Mts. in the Czech Republic

Jiří KONOPÁSEK, Karel SCHULMANN and Ondrej LEXA

Karlová Universita, Faculty of Science, Institute of Petrology and Structural Geology, Albertov 6, 128 43, Praha 2, Czech Republic

In the central part of the Krušné hory (Erzgebirge) Mountains, the para-autochthonous metasedimentary basement has been overthrust by a crustal nappe of fine- and coarse-grained or-

thogneisses. The thrust boundary is defined by the presence of mafic eclogites with preserved subduction-related D1 fabric. The D2 deformation is represented by thrust-related structures