

Main Features of Morphotectonic Development of a Platform in the Period Between Tectogeneses Exemplified by the Southeastern Margin of the Bohemian Massif

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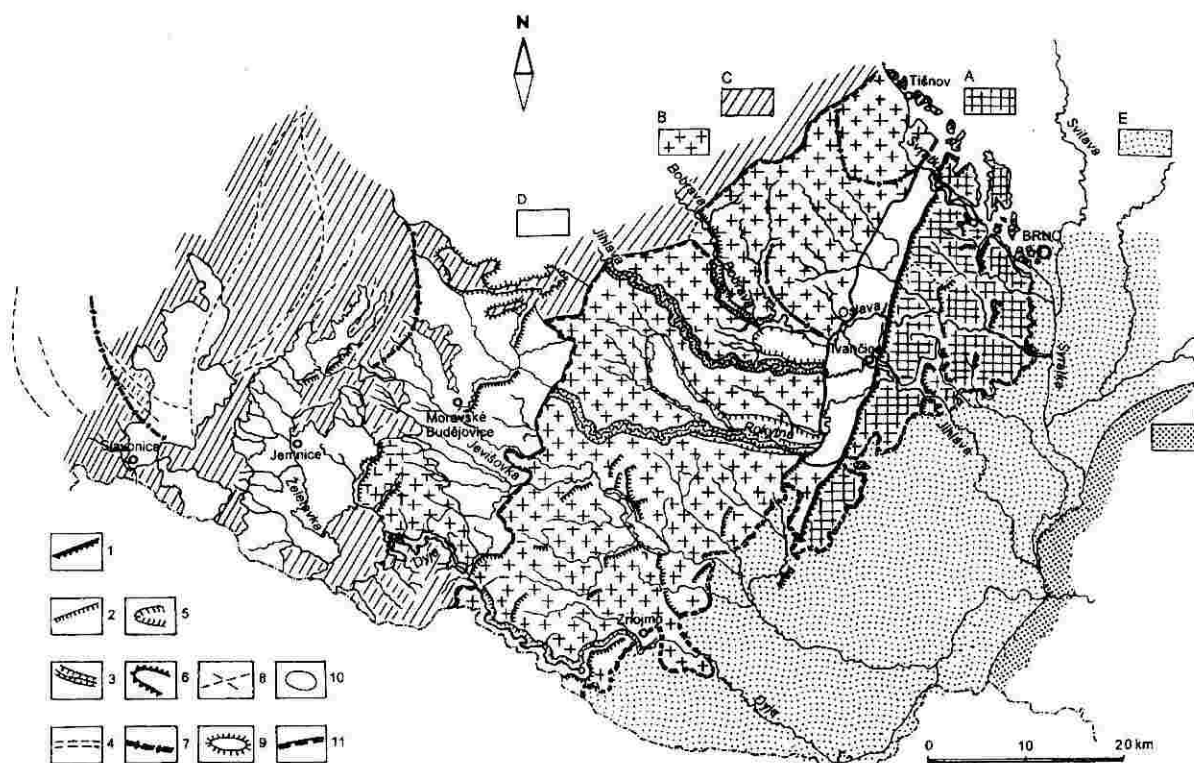


Fig. 1. Map of the south-eastern flank of the Bohemian Massif. Explanations: A The forebulge build up from the rocks of Brno Massif as the part of the Bohemian Massif most influenced by collision with Carpathian-Pannonian blocks. B More flat part of the forebulge with the Znojmo type of levelled surface constituted from eastern part of the Moldanubicum and the Svratka Dome. C The area with features of the stable platform relief development. D The area of basins and depression separating forebulge from less deformed parts of the Bohemian Massif. 1. The most distinct fronts of tilted blocks. 2. Other less distinct fronts. 3. Deep incised valleys. 4. Erosional contact of tilted blocks with Carpathian Foredeep. 5. Synclinal depressions exhumed from cover of Miocene sediments. 6. Tectonic cuestas. 7. Groundplans of the cratonic ring structures. 8. Lineaments. 9. Anticlinal and horst-diapiric structures. 10. Small blocs following in NE part the course of lineament. 11. Rejuvenated structural line of the Bíteš fault.

According to Franke et al. (1995) the Variscan orogen of Europe was a collage of terranes, Gondwana-based microcontinents making up a complex situated between Laurentia and Baltica in the north and Gondwana in the south. A convergence of the Moldanubian continental block with the Moravian-Silesian foreland came about in the southern flank of Variscan folded zone (Fritz and Neubauer 1995). The suture formed between blocks of the collage was overprinted by right lateral strike-slips and in the inner part the blocks were "welded" together by a low-pressure and high-temperature metamorphism followed by a mild postorogenic extension and magmatism in the Permian-Carboniferous (Franke et al. 1995). Approximately by this kind of development the Bohemian Massif was consolidated into an epi-platform massif, a constituent of the European Platform.

In the postorogenic development since the end of the Carboniferous occurred a vast denudation of the mountains of

Variscan orogen. It resulted in the sub-Hercynian planation surface (Ivan 1982), the existence of which is securely confirmed as early as before the Jurassic. In the course of the Mesozoic the surface formed in this way continued to be constituted by processes of deep weathering, in dependence on the prevailing climate, by the Jurassic and the Upper Cretaceous (or also Lower Cretaceous in some cases) marine transgression and subsequently, towards the end of the period, by an exhumation from the platform cover. In this phase the platform surface could be deformed by a responses of late magmatism and, in the following, by granite diapirism, e.g. in the area of the Moldanubian Pluton (Hrádek 1997). The period of levelling and deep weathering is characterised by tectonic stability (Ollier 1981). Since the end of the Mesozoic effects of the Alpine tectogenesis coming from the area of Eastern Alps folding were important. The sub-Hercynian surface modified by the platform-kind development was locally deformed.

