Thrust Tectonics in the Southern Part of the Moravian Karst

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The Moravian Karst is a terrain made up from a carbonate complex of Devonian to Carboniferous age (Eifelian to Viséan) and represents carbonate ramp sedimentation to sedimentation from calciturbidites. Thrust tectonics was recognized by Kettner (1949), but a long time prevailed fixistic interpretations of structures observed (e.g. Dvořák, Ptáček, 1963). Recently thrust concept was revived by Hladil (1991), but many problems have remained. This contribution tries to explain the deformation history of the southern part of Moravian Karst using the best exposed and well investigated region of Mokr quarries as a model.

The rocks found in the vicinity of Mokr quarries are represented by the Viliovice Limestones (Givetian-Frasnian, light grey, massive) and the K?iny limestones (Famenian-Visean, dark grey, well bedded). These limestones are folded in the east over the Gfohl and Varied units again and it ends on the border of Brunovistulian. The dominant foliation in the western part of the cross section is dipping to the E or SE under intermediate angles and lineations dipping in the SE to S-direction. This fabric contains relics of a subvertical foliation of N-S direction. The eastern part contains structures of opposite direction. The foliations in the body of felsic granulite, which is in the centre of this fan-like structure, are relatively flat and are dipping to the south in the northern part of the body and to the north in the southern part. The lineations in the granulite are subhorizontal and have W-E direction. The aim of this investigation is to understand the structural evolution of this area, to correlate it with the metamorphic history and to resolve the emplacement of the granulitic body with evidently discordant structural characteristics correspondingly to the surrounding units.

References


Fig. 1. Schematical cross-section through Mokr quarries suggesting localisation and refolding of the main thrust zones and their obliquity to footwall and basic structural plots.