

## English abstract

The main goals of the present structural, microstructural, and anisotropy of magnetic susceptibility (AMS) study are (1) a detailed description and characterization of deformations in the Neoproterozoic rocks of the central part of the Teplá–Barrandian Unit (TBU), (2) separation of structures formed during the Cadomian and Variscan orogeny, (3) interpretation of structural evolution of this segment of the TBU. The TBU makes up the central part of the Bohemian Massif which was a part of the Avalonian–Cadomian belt at the northern margin of Gondwana during the Neoproterozoic to Early Cambrian. During the late Devonian to Early Carboniferous, the TBU was accreted as a separate terrane to the Old Red Sandstone continent and incorporated into the Variscan orogenic belt.

Three contrasting structural domains were identified in the study area on the basis of lithology, structural pattern, cleavage development, microstructures, and magnetic fabric characteristics. Significant gradient in cleavage development and degree of regional metamorphism exists in the NW–SE direction: to the NW, only weak deformation and very low grade of regional metamorphism is recorded in alternating graywacke–shale multilayer sequences whereas to the SE, continuous cleavage in aleuropelites formed under the greenschist facies conditions. Juxtaposition of the three domains representing different crustal levels can be explained by crustal tilting during the Neoproterozoic, for example as a result of limb rotation in a megafold or by vertical displacement along large-scale faults. The Cadomian age of cleavage and metamorphism in the Neoproterozoic rocks is proved by unconformable relations to the overlying sediments and by ?Cambro–Ordovician dikes that discordantly crosscut the cleavage. The Cambro–Ordovician crustal extension is further documented by the extrusion of volcanic rocks and emplacement of felsic dike swarms. During the Variscan orogeny, Paleozoic rocks were gently folded, cleavage in the

Neoproterozoic rocks close to Barrandian area was reoriented and contractional kink-bands developed in strongly cleaved rocks in the Domain 2 and 3.