

# Nappe tectonics and source areas of the Magura Flysch

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The Magura Flysch area is situated at the contact of the Bohemian Massif and the West Carpathians. The data from this area include results from a number of deep boreholes (up more 6 km deep) and an extensive complex of geophysical measurements. The analysis of frequency characteristics of seismic and gravity data will bring the data about composition of density balanced cross-sections of the upper layer of the crust along selected seismic profiles and tracing of tectonic elements. The impact of the thrusting of the Alpine nappes on the deformation of the crystalline complexes and their sedimentary cover will be studied. Geochemical investigation of rocks is focused on those compounds which give the best evidence of the sedimentary environments and postdepositional alterations under increased tem-

perature and pressure. Organic matter and clay minerals are the most sensitive indicators of these factors. The sedimentological research will include taxonomic detailed research of selected leading and index species and testing their stratigraphic range using planktonic foraminifers and nanofossils. Thanathocenosis of the foraminifers will especially be used for the dating of the paleoceanographic events and for the correlation of the sedimentary areas of the Flysch Belt units. Conglomerate layers of the Magura Flysch contain locally abundant granitoid pebbles. The ages of three granite pebbles were roughly constrained using chemical monazite dating. The ages fit to the Devonian–Carboniferous boundary. The age and geochemistry of the granite pebbles from the Magura Flysch are similar to the Variscan I/S transitional granites of the Western Carpathians. Several hundreds of microprobe analyses of detrital garnets were evaluated. Generally, great similarity among detrital garnet assemblages of the Upper Viséan graywackes (Moravo–Silesian Culm) and of the Paleogene sandstones was observed. A synthesis of new data in a geodynamic model of evolution of the Magura nappe will include the mechanism of basin opening and filling, orogenesis and formation of nappe structures.