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Neoidic taphrogenic structures of the Bohemian Massif

Meso-Cenozoic taphrogenic structures of the epi-Hercynian platform of the Bohemian Massif are of two trends (Kopecký 1976) (Fig. 1):

- to the WSW: Ohře Rift;
- to the NW: Cheb-Domažlice Graben, Labe Tectono-Volcanic Zone, Odra Tectono-Volcanic Zone, South Bohemian Basins (non-volcanic).

Two main young volcanic complexes of the Bohemian Massif, i.e.: the CS Mts volcanic area and the DH Mts volcano, are located in the Ohře Rift (see Fig. 1) at places where the Central Rift Fault of the Ohře Rift intersects with transverse deep faults. The NW continuation of the Lusatian Deep Fault lineament is considered in genetic and geotectonic relationship of its ultramafic-ultra-alkaline volcanism to the Delitzsch intrusive complex (see Fig. 1) of similar age and chemistry (see below).

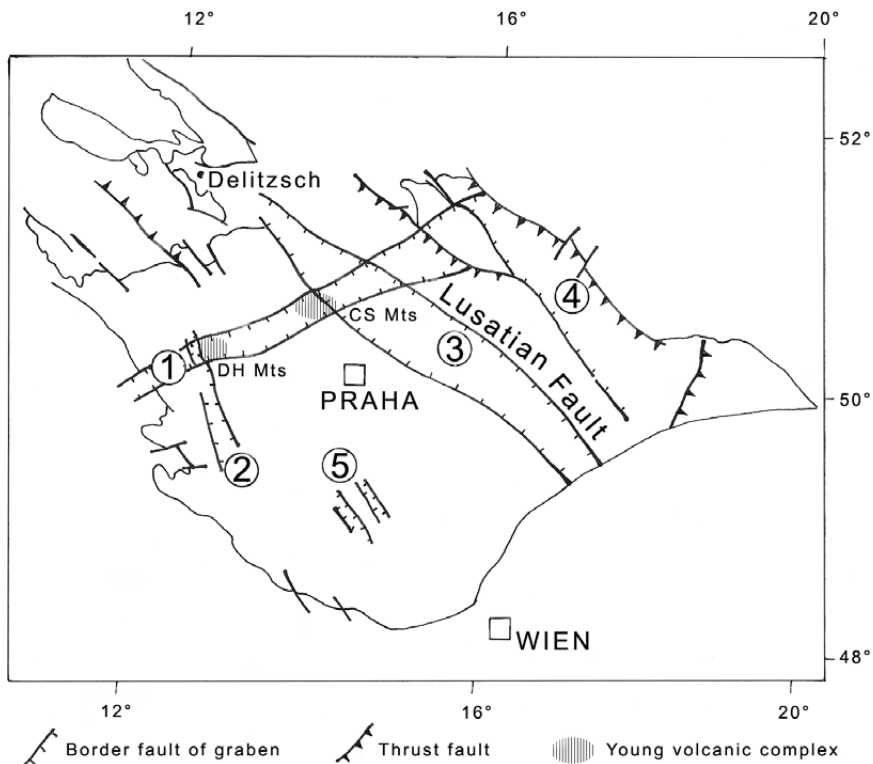


Figure 1. Neoidic taphrogenic structures of the Bohemian Massif (according to Kopecký 1978, fig. 1). Location of the alkaline ultramafic intrusion of Delitzsch in Germany is also shown. Explanations: 1 – Ohře Rift; 2 – Cheb-Domažlice Graben; 3 – Labe Tectono-Volcanic Zone; 4 – Odra Tectono-Volcanic Zone; 5 – South Bohemian Basins (nonvolcanic).

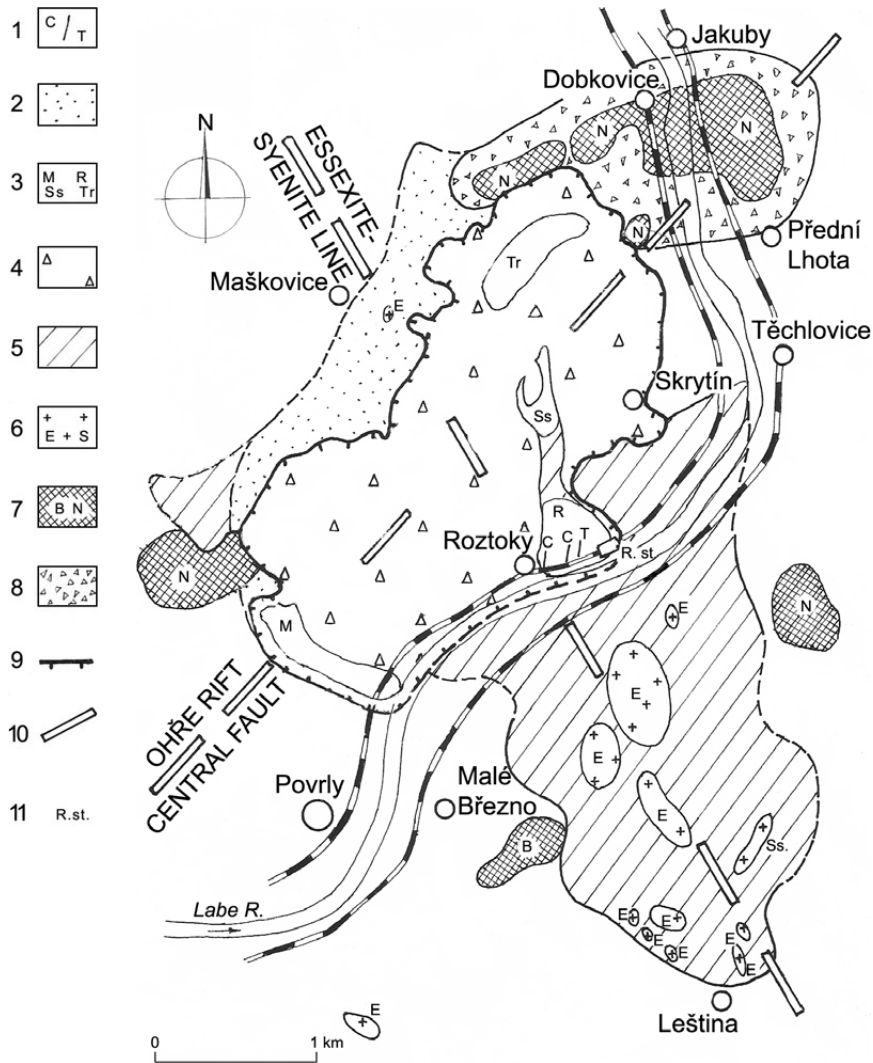


Figure 2. Main volcanic centre of the CS Mts at Rostoky (after Kopecký 1987). Explanations: 1 – late-stage carbonatite cone-sheet (C), tinguaita cone-sheet (T); 2 – feldspathized Santonian sandstone; 3 – rongstockite (R), mondhaldite (M), trachyte (Tr), and Santonian sandstone (Ss) remnant blocks; 4 – pseudotrachyte breccia; 5 – hornfels (thermally metamorphosed Upper Cretaceous marlstone in essexite exocontact); 6 – essexite (E), sodalite-syenite (S); 7 – olivine basalt (B), olivine nephelinite (N); 8 – basaltic vent breccia; 9 – Rostoky pseudotrachyte caldera outline; 10 – deep-seated fault; 11 – railway station.

A similar continuation of the deep fault lineament of the Ohře Rift is suggested by this author to lie in the Stopfenheim Dome, Nördlinger Ries Crater and Steinheim Basin astroblemes and the Urach and Kaiserstuhl volcanic areas, Germany – all of Tertiary age (see Fig. 35).