separated by imbricated pre-Variscan units, show evident resemblance with the Variscan crust of Middle Europe. The dominant south-west vergengency in the Carpathians suggests that prior to the Mesozoic compression a south-vergent Variscan framework existed south of the actual northern Alpine front, partially with a sequence of the main units (Carpian + Sebes-Lotru, Rodna, Carpian, Poiana Rusca), quite similar as in the north (Moldanubian, Saxo- Thuringian, Middle German Rise, Rheno-Hercynian). It seems that the Moravo Silesian and Schwarzwald-Vogese zones belonged to this southern ensemble in that the Variscan regional metamorphism was more intensive as in the north.

CONTRASTING METAMORPHIC PATHS IN THE EASTERN PART OF THE KARKONOSZE-IZERA BLOCK, NE BOHEMIAN MASSIF

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The eastern margin of the Karkonosze-Izera Block is a longitudinally aligned metamorphic belt, between the Variscan Karkonosze pluton in the west and the Carboniferous-Permian Intrasudetic Basin in the east (Fig. 1). Four tectonolithostratigraphic units can be defined there (MAZUR, 1993; KRYZA & MAZUR, 1994); from west to east, and structurally upwards, these are: (a) Kowary gneiss group, composed of orthogneisses yielding a 500 Ma U-Pb age (OLIVER et al., 1993) and minor mica schists; (b) Czamiów schist formation, comprising variegated metasedimentary and metavolcanic rocks of assumed Late Precambrian Early Paleozoic age (CHALOUPSKY, 1989; TEISSEYRE, 1973); (c) Niedamirów schist formation of phyllites and basic metavolcanogenic rocks (?Late Precambrian - Early Paleozoic and/or ? Ordovician-Silurian; (CHALOUPSKY, 1989; TEISSEYRE, 1973), and (d) Leszczyniec meta-igneous complex formed of metabasites dated at ca. 490 Ma (OLIVER et al., 1993) and of orthogneisses. These major subdivisions are tectonically bounded, and most boundaries represent ductile shear zones related to E-W extension (MAZUR, 1993).

Evidence of HP metamorphism in the area was reported in several papers (e.g. WIESER, 1978; CHAB & VRANA, 1979; GUIRAUD & BURG, 1984) but new systematic studies of PT paths are still needed. 17 specimens have been analyzed using CAMEBAX microprobe. Particular tectonostratigraphic units are found to have experienced different PT paths. The Kowary and Czarnów units bear the evidence of medium pressure low grade metamorphism (apparently below the amphibolite facies) overprinted by a later high-temperature event. This metamorphic path is recorded by inverted zonation in plagioclase, Si content in white mica (Fig. 2a) decreasing from 3.3 in core to 3.1 in rim, and Alm-richer garnet rims. The higher units of Niedamirów and Leszczyniec, both represent higher-pressure metamorphic series.

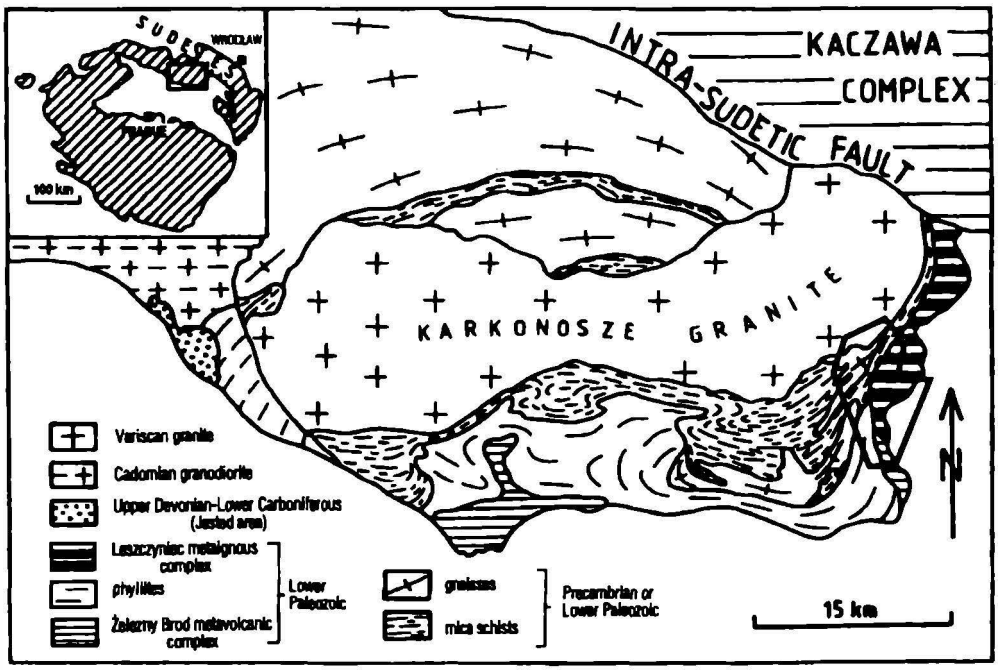

Fig. 1: Geological sketch of the Karkonosze-Izera Block and its location within the Bohemian Massif. The study area is outlined in the east of the block.

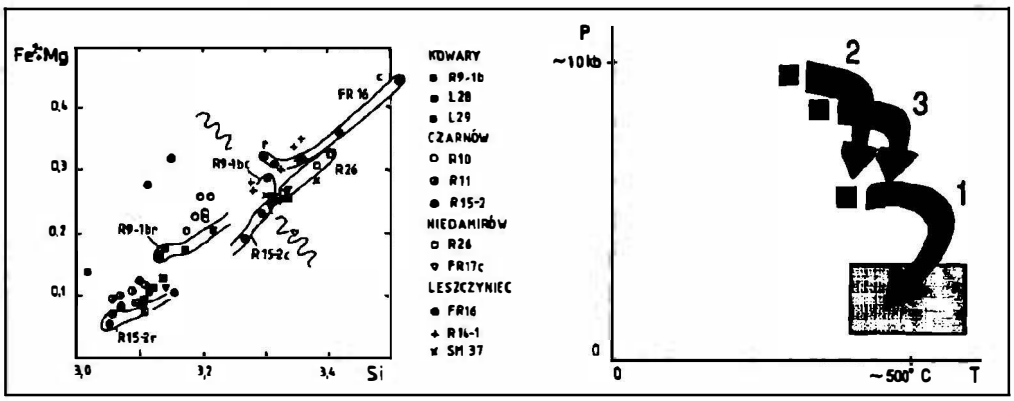

Fig. 2: a) Left side: White mica compositions: Samples having strongly zoned micas are enclosed by aligned loops with core (c)- and rim (r)-end indicated. The wavy line separates the micas of the Niedamirów and Leszczyniec unit rocks (Si above ca 3.3) from those of the Kowary and Czarnów unit rocks (Si below ca. 3.3). b) Right side: Tentative PT paths for Kowary and Czarnów units (1), Niedamirów unit (2), and Leszczyniec unit (3). Shaded box represents the approximate PT field of LP-HT metamorphism related to the granite intrusion.

The Niedamirów unit displays records of higher P and lower T (glaucophane, Sps-rich garnet, and albite) than the uppermost Leszczyniec complex. In both, the early P-dominated metamorphic events are followed by moderate-pressure metamorphism (Si content in white mica decreasing from 3.5 in core to 3.3 in rim). The Karkonosze-Izera block seems to represent a typical example of Variscan core complexes. The metamorphic core (Kowary and Czarnów units) is characterised by MP/MT metamorphism followed by a HT/LP event (Fig. 2b). The core is tectonically overlain by the Niedamirów and Leszczyniec units, which form the "upper plate". The units display inverted metamorphic zonation characteristic of a nappe pile. At a late stage, it underwent uplift and normal faulting related to the Karkonosze granite intrusion in the west, and the subsidence of the Intra-Sudetic basin in the east.

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GRANITOIDS FROM THE SOUTHERN PART OF THE BRNO MASSIF (BRUNOVISTULICUM)

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Based on detailed field work, petrology and geochemistry seven granitoid groups can be distinguished and mapped in the southern part of the Brno massif (Fig. 1), apart from more basic magmatic rocks such as diorites and basalts. There are

1. Leucogranites (G1)
2. Fine-grained garnet bearing granites (G2)
3. Biotite granite to granodiorites (G3)
4. Biotite granodiorites (G4)
5. Hornblende biotite granodiorites (G5)
6. Hybrid granitoids (G6)
7. Trondhjemites (G7)

The Leucogranits (G1) together with fine grained garnet bearing granites (G2), biotite granites to granodiorites (G3) and hornblende biotite granodiorites (G5) show clearly a **calc-alkaline trend**. In contrast the trondhjemites (G7) belong in the K-Ca-