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**PRELIMINARY DATA ON RECENTLY DISCOVERED
 BIOTITE-PYROXENE DIORITES FROM THE NIEMCZA ZONE
 (EASTERN PART OF THE FORE-SUDETIC BLOCK, SW POLAND)**

The Niemcza Zone is located immediately to the east of the Góry Sowie Gneissic Block, north of the Sudetic Marginal Fault. (Fig. 1). It was interpreted to be the sinistral shear zone developed in the Variscan time at the eastern margin of the Góry Sowie (Mazur, Puziewicz 1995).

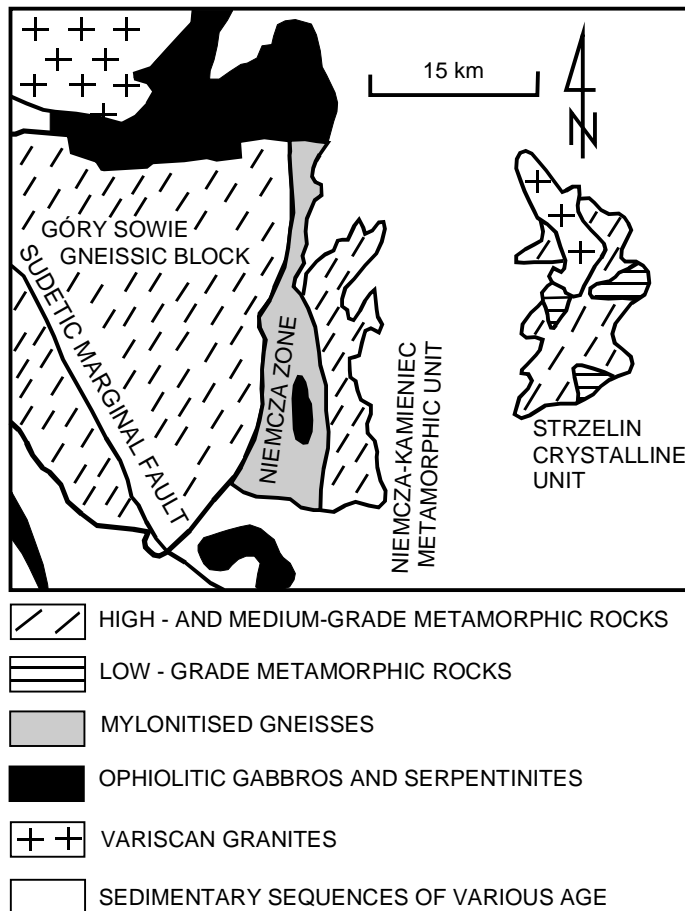


Fig. 1. Location of the Niemcza Zone relative to the main geological units of the eastern part of the Fore-Sudetic Block.

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The mylonites of the Niemcza Zone were intruded by late-tectonic granodiorites (Dziedzicowa 1963, Puziewicz 1992) dated at 340 My (Oliver et al. 1993) and by rocks whose composition ranges from quartz syenites to quartz diorites. The latter form small (up to first hundreds of meters) veins and lenses. These are: the Przedborowa quartz monzodiorite (Dziedzicowa 1963), the Koźmice monzodiorite (Puziewicz 1988, 1992) and the Piława Górna quartz syenite (Puziewicz 1987). Recently, Puziewicz and Oberc-Dziedzic (1995) have mentioned the undeformed diorite on the Kłośnik hill as well as the deformed dioritic rocks in Wilków Wielki, Sienice and Niemcza.

The diorites are usually fine-grained, rich in dark minerals (biotite + amphibole and/or pyroxene) which form 30-50 vol. % of the rock. The clinopyroxene + biotite assemblage is the primary one in most of the diorites, with amphibole replacing clinopyroxene to a various degree. In this abstract we present a general characteristics of dioritic rocks occurring on the Kłośnik hill near the village Brodziszów and to the east of Wilków Wielki. The chemical analyses of minerals were done by electron microprobe at various laboratories.

The Kłośnik diorite consists of plagioclase (plus small amounts of quartz) matrix embedding isometric aggregates of pyroxene and biotite. Locally pyroxene is partially replaced by amphibole. Plagioclase is normally zoned from 54 % of An in cores to 33 % in the rims. Pyroxene (Fe-rich diopside) contains fine (< 10 μm) numerous lamellae of silica-rich (Si > 7.10) magnesiohornblende or actinolite. Biotite has constant Fe/(Fe+Mg) ratio of 0.50 and relatively high titanium content (0.4-0.6 a pfu, $\text{O}^{2-} = 22$). The rock is undeformed, excepting marginal parts of the intrusive. The outcrop of the diorites has a diameter of first hundreds of meters.

The Wilków Wielki monzodiorite is deformed, contains significant potassium feldspar and is extremely rich in apatite (1.56 wt % of P_2O_5 in the whole-rock chemical analysis). Plagioclase is albite or slightly zoned oligoclase. Pyroxene and biotite are iron-rich: the Fe/(Fe+Mg) ratio of biotite is 0.26, and the pyroxene is hedenbergitic. Albite and silica-rich calcic amphibole are of secondary origin, the primary compositions of pyroxene and biotite were supposedly changed during the secondary alteration of the rock. The rock forms a lens of thickness not exceeding 100 m.

The data presented in this abstract and those published earlier show, that the dioritic rocks from Kłośnik and Wilków Wielki fit well the general characteristics of the diorites of the Niemcza Zone: the primary ferromagnesian phases are clinopyroxene and biotite and the content of dark minerals is high. They show, however, that part of the diorites preserved primary magmatic appearance, whereas some are foliated and affected by post-magmatic alteration. Thus, the variation in diorites is due to (1) magmatic enrichment of the primary melt by water and potassium (Puziewicz 1987) and (2) post magmatic alteration, related supposedly to final stages of deformation in the Niemcza Zone.

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