HT), in places representing the transport to several kilometers depths, the age of precursors is difficult to determine. Lithostratigraphically the rock series represents melange of upper crustal rocks with slices of upper mantle ultramafic assemblages. High grade terrains contain some skarn mineralization with Fe in oxidic, silicate and sulphide forms and some Zn, Cu and Sn. Large massive sulphides concentrations were encountered in Bavarian part of Moldanubicum with sulphides of Fe,Cu,Zn,Pb. Variscan mineralization reflects upper crustal evolved precursors (Sn,W, U–Th) in spite the upper mantle ultramafic rocks are present within the Moldanubian area. Isolated intrusions of mafic rocks carry some (Cu and Ni) mineralization (Ransko).

Brunovistulicum. The Proterozoic rocks derive from geochemically relatively primitive environments having gabbro – tonalite – trondjemite and their volcanic equivalents.In accompanying sedimentary strata the element abundances are far from evolved continental levels. Precambrian metallogeny may be represented by banded iron ores (B.I.Q) in "brunovistulian gneisses" in Moravosilesicum. Variscan processes had apparently minor compositional effect.

Moravosilesicum. Geochemicaly rather simple character is preserved in Lower Paleozoic where active continental margin could have been situated in pre–Devonian and Devonian times. Mixture of lithologically continental sedimentary rocks and synsedimentary "island arc" or back arc basin volcanic series are present. The accompanying mineralization bears the iron banded formation as well as originally "syngenetic" sulphide mineralization in both pre–Devonian and Devonian series.

The Variscan events e.g. collision, metamorphism, and extension related plutonic activity apparently reflect both: the composition of pre–Variscan precursor materials and enormous intensity of Variscan collision, deep transport of some of the units (Moldanubicum and Saxothuringicum) uplift and thermal effects and consequent stitching of all units.

Variscan epigenetic mineralization. Similarly to "Variscan plutonic stitching" the Variscan metallogeny that is represented by epigenic mineralizations "unites" these units apparently with the inheritance of precursor materials.

GEOLOGICAL SETTING AND POSITION OF ULTRAMAFIC ROCKS FROM BYSTRZYCA GÓRNA INSIDE THE ALLOCHTONOUS GÓRY SOWIE BLOCK (LUGOSUDETICUM, POLAND)

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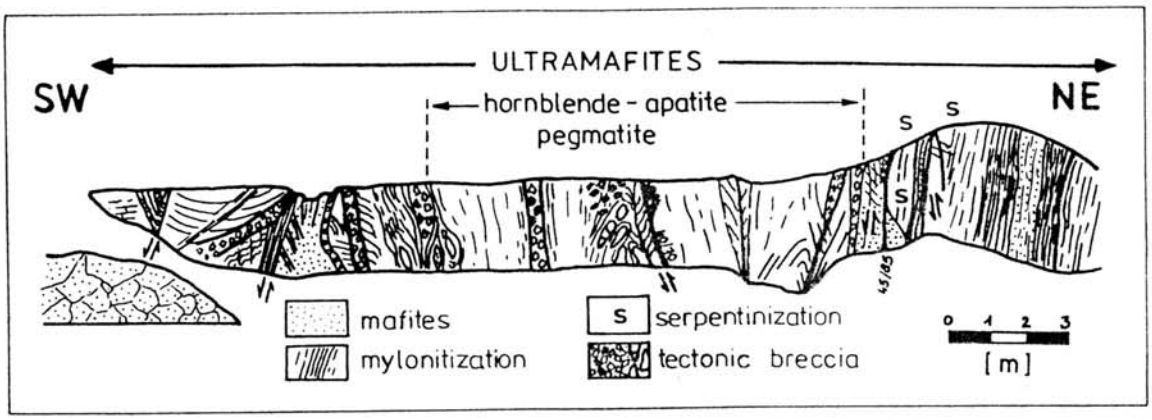
The Góry Sowie Block (BGS) is the oldest tectonostratigraphic unit of the Western Sudety Mountains. It is triangular in shape, surrounded by dislocation zones. Moreover, that unit is divided into two parts: Sudetic and Foresudetic ones, by the Sudetic Marginal Fault (SMF). The Góry Sowie Block is built of metamorphic rocks, predominantly different types of gneisses, metamorphosed in the upper amphibolite facies (Polański 1955, Grocholski 1967, Morawski 1973, Kryza 1981, Żelaźniewicz 1987). A gneissic complex of Góry Sowie developed from Upper Proterozoic pelitic and graywacke sediments. Before late Devonian it was affected by five tectonic deformational episodes (Żelaźniewicz 1987).

The Góry Sowie Block is surrounded from NE, E and S with mafic and ultramafic rocks (Maciejewski 1968, Narębski et al. 1982, Majerowicz & Pin 1987, Pin et al. 1988, Narębski 1990) which belong to the Upper Devonian – Lower Carboniferous ophiolite complex (Pin et al. 1988). The unit under consideration is now interpreted as a remnant of the crystalline nappes overthrusted on the outer zones of the Variscan Belt. Rocks similar to the ophiolite complex underlie in a different extent the mentioned block (Znosko 1981, 1984, Jamrozik 1981, 1989a,b, Cymerman 1987, 1989, Oberc 1991). According to Cwojdziński (1980) and Grocholski (1987) gneissic complex of Góry Sowie Block is a microcontinent. Quernadel & Brochwicz–Lewiński (1985) and Aleksandrowski (1990) suggested it is a terrane; Matte et al. (1990) and Cymerman (1991) proposed that it could be only a fragment of the mentioned terrane.

Within the gneissic complex of Góry Sowie Block small serpentinized intrusions of mafic and ultramafic rocks occur together with associated granulites. The biggest outcrops of those rocks are situated in Bystrzyca Górna. Occuring here granulites correspond with "granulites type I" (Kryza et al. 1988, Kryza 1991). Their emplacement took place in the early periods of the evolution of inner zones of the Variscan orogene (Pin & Vielzeuf 1983) and might have been connected with the subduction process. Ultramafic rocks (Smulikowski 1973, Smulikowski & Bakun–Czubarow 1969, 1973, Bakun–Czubarow 1980, 1981), have intrusive, sharp contacts with granulites (Żelaźniewicz 1985).

They probably had their origin in the upper mantle (Bakun–Czubarow 1980). It is generally believed that these rocks intruded into granulites in great depth, outside the present complex of Góry Sowie gneisses. During a tectonic event preceding the D2–phase some portions of ultramafic rocks and granulites were uplifted, overlapped and emplaced in the midst of gneisses (Żelaźniewicz 1987).

Ultramafic rocks from Bystrzyca Górna are in fact serpentinized peridotites, pyroxenites, pyroxen–amphibolitic rocks, amphibolitic rocks, lherzolites and websterites. They showed a remarcably alternation of rock–types and striking polyphase tectonic deformations. Within the ultramafic rock were stated ductile overthrusting deformations (towards W and WNW) as well as subvertical, dense fault zones with the predominancy of the normal faults, running NW–SE. Brittle deformations occurred in at least two stages. They manifested themselves by cataclasis and creation of many tectonic breccias. In granulites the shear zones were stated (ductile, ductile/brittle and brittle), characterized by the inversion of the sense of relative motions. They are cut by the subvertical zones of cataclases and breccias. Tectonical contacts between individual rock–types were used as ways of migration for only slightly deformed feldspatic–amphibole rocks (see Fig.).



A fragment of ultramafic body, outcropped within the weathered rocks in the environs of railway station of Bystrzyca Górna.

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