II entstand aus Rockbridgeit I bei Temperaturen von < 200° C. Baurit kommt in zwei verschiedenen Farbvarietäten vor, er kann grün oder rot sein. Paulkerrit $K(Mg,Mn)_2 (Fe^{3+}_5,Al,Zi,Mg)_2 (OH)_3 (PO_4).15 H_2O$ tritt hier relativ häufig auf. Dolní Bory ist nach der Typlokalität die zweite Fundstelle dieses Minerals.

Die Phosphatmineral-Paragenese von Cyrilov ist nicht so reichhaltig, wie die von Dolní Bory. Als Primärphosphate sind Zwieselit und Graftonit vertreten. Mit Graftonit kommt in lamellaren Verwachsungen Heterosit vor, der zweifellos ein Umwandlungsprodukt von Triphylin ist. Durch hydrothermale und supergene Neubildung entstehen folgende Mineralphasen: Frondelit, Lipscombit, Mitridatit, Phosphosiderit, Strengit, Cyrilovit und Leukophosphit.

Der Pegmatit bei Vídeň weist mit Triplit und aus ihm entstandenen Apatit eine einfache Phosphatparagenese auf. Im Pegmatit bei Rousměrov wurde von allen Phosphatmineralen bisher nur Zwieselit festgestellt.

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THE KRUŠNÉ HORY (ERZGEBIRGE) GRANITE BATHOLITH

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The Krušné hory (Erzgebirge) granite batholith (330 - 290 m.y.) forms a partly hidden intrusive body of approximate 6000 km^2 size on the NW edge of the Bohemian massif. The batholith crops out in three plutons (Western, Middle and Eastern) (Fig. 1) differing in the depth of their emplacement and degree of erosion. The batholith was emplaced in metamorphosed Upper Proterozoic and Lower Paleozoic (Cambrian and Ordovician) sediments intruded by synkinematic acid magmatites ("red gneisses"). The largest Western pluton is divided into its northern (Nejdek - Eibenstock massif) and southern (Karlovy Vary massif) part by the major Krušné hory fault zone along which the southern part has sunken. The southernmost Lesná-Lysina massif shows a close affinity to the Smrčiny - Fichtelgebirge granite pluton.

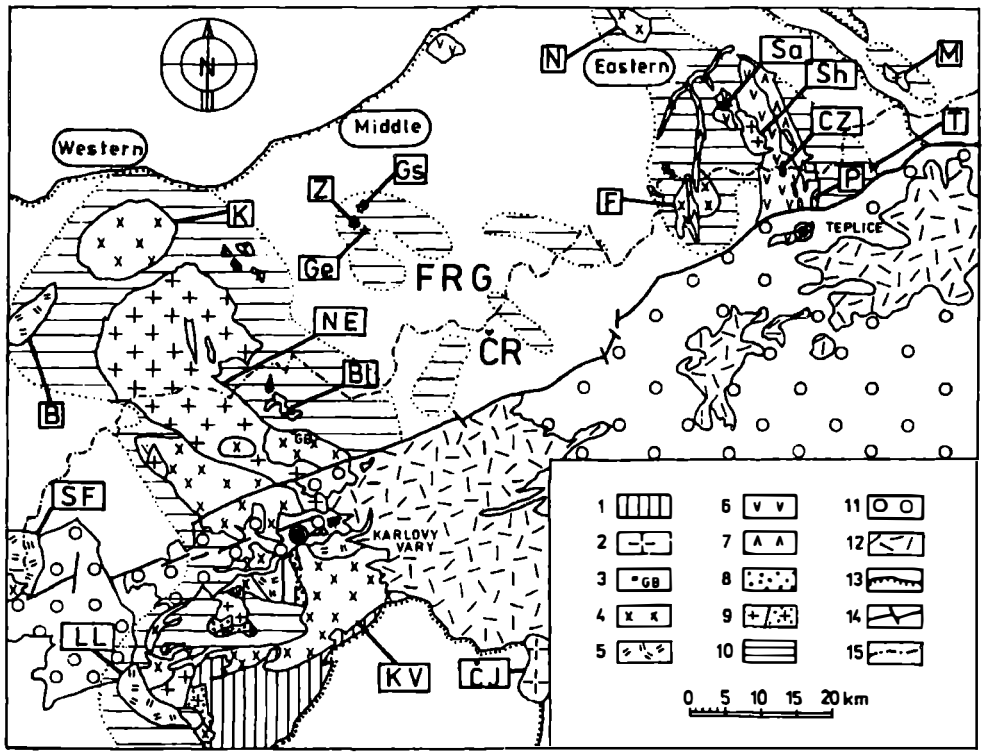

Fig. 1. The schematic map of the Krušné hory-Erzgebirge granite batholith.
1 - metabasites of the Mariánske Lázně complex, 2 - Čistá Jesenice granite, 3 - gabbrodiorite, 4 - granite of the Older Intrusive Complex (OIC), 5 - transitional (two-mica) granite, 6 - rhyolite, 7 - granite porphyry, 8 - intermediate granite (mostly two - phase granite), 9 - granite of the Younger Intrusive Complex, 10 - subsurface continuation of the plutons, 11 - Tertiary and Upper Cretaceous sediments, 12 - Tertiary volcanis and their tuffs, 13 - the boundary of the crystalline fundament, 14 - major fault line, 15 - state boundary. Names of the granite outcrops: B - Bergen, Bl - Blatná, CZ - Cínovec (Zinnwald), ČJ - Čistá, Jesenice, F - Fláje (Flöha), Ge - Geyer, Gs - Greifenstein, K - Kirchberg, KV - Karlovy Vaty, LL - Lesný, Lysina, M - Markersbach, N - Niederbobritsch, NE - Nejdek-Eibestock, P - Preisselberg, Sa - Sadisdorf, Sh - Schellerhau, SF - Smrčiny, Fichtelgebirge, T - Telnice, Z - Ziegelberg.

The Middle pluton is mostly hidden and crops out as small granite stocks near Ziegelberg, Greiffenstein and Geyer in Germany. The Eastern pluton is closely spatially associated with the multiple cover of the Teplice rhyolite and granite porphyry dykes. It is controlled by NW striking lineament along which small granite cupolas of Sadisdorf, Cínovec (Zinnwald), Preisselberg and the Schellerhau massif

are located. Petrologically the granitoids are restricted to monzo- or syenogranitic composition and occur as two distinct intrusive complexes: Older (OIC) and Younger (YIC). The OIC granites are essentially monzogranites with Mg-Fe biotite, plagioclase An_{10-30} and with average SiO_2 about 70 %, TiO_2 0.5 % and CaO 1.7 %, Rb 170 - 300 ppm and Sr 125 - 300 (ŠTEMPROK, 1986). The OIC granites enclose rare gabbrodiorite south of the Blatná massif (Fig. 1). The YIC granites are mostly syenogranites with orthoclase, albite, Fe-Mg biotite and common accessoric topaz and fluorite. Average SiO_2 is about 74.0 %, TiO_2 0.13 % and CaO 0.65 %, Rb 400 - 900 ppm, Sr mostly below 50 ppm.

Lithium albite granites form some marginal parts of the biotite or two-mica YIC granites (Eastern pluton, Cínovec, Krupka) or southern part of the Western pluton (Krásno). Granites compositionally mediate between OIC and YIC have been distinguished as transitional (two mica) granites by FIALA (1968) in the southern part of the Western pluton. The granites have average SiO_2 73 %, TiO_2 0.25 and about 1.0 % CaO. Fine-grained, porphyritic granites with the textures of two-phase granites (SELTMANN & ŠTEMPROK 1994) were found as precursors of the medium-grained YIC granites. The Krušné hory-Erzgebirge granite batholith represents a highly metallogenetically specialized multiple intrusive body derived by continuous magmatic process from predominantly sedimentary sources, possibly influenced by mantle fluids (ŠTEMPROK, 1993). The batholith is parental granite body to numerous ore mineralizations (Sn, W, Mo, U, possibly Pb, Zn, Ag, Bi, F and Ba).

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ENERGIEDISPERSIVE RÖNTGENFLUORESZENZANALYSE (EDXRFA): ANWENDUNG FÜR GEOCHEMISCH-PETROLOGISCHE FRAGESTELLUNGEN

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Die Röntgenfluoreszenzanalye ist seit mehreren Jahrzehnten eines der wichtigsten analytischen Instrumentarien in den Erdwissenschaften. Neben der hohen Präzision und Richtigkeit, sind es vor allem die relativ einfache Probenvorbereitung (Festkörperanalyse) und Analysenautomatisation, die an dieser Methode geschätzt werden. Diese Ansicht wird vorallem für wellenlängendispersive Fluoreszenzanalytik (WDXRFA) in Anspruch genommen. Die ernergiedispersive Röntgenfluoreszenz-