reference data of Veizer et al. (1999), ratios 0.70840 to 0.70842 indicate Middle Pragian ages corresponding to the *kindlei Z.* (Janoušek et al. 2000). On this basis it seems that the Pragian sedimentation on the Koněprusy ridge was relatively short-lived, reflecting mostly a secondary mid-Pragian sea level rise, with the Upper Pragian carbonate beds being either primarily absent and/or later largely truncated.

Taken together, the easiest explanation of the available stratigraphic and geochemical data is that reef structure at Koněprusy, preserved fragmentarily, originally continued in large oceanic reef chains of atoll shape that separated the inner part of the Prague Basin from the main ocean reservoir. Considering a slight and even diminishing content of silt and clay in carbonate deposits of these Pragian–Eifelian times, the anomalously radiogenic compositions some of the brachiopods may be due to: (1) retarded development of Sr isotopic ratios as a consequence of incomplete homogenization of the detached basin with the main ocean reservoir, (2) deposition of aeolian dust from the Old Red Continent in the NW (cf. rich Old Red spore assemblages in zoogeographically peri-Gondwanan Barrandian, Hladil & Bek 1999), (3) limited dispersal of lateritic weathering products around eustatically emerged carbonate plateaux.

Petrogenesis and geodynamic significance of peraluminous post-orogenic granites: Ševětín Massif, Moldanubian Batholith

V. Janoušek, S. Vrána, V. Erban

Czech Geological Survey, Prague, Czech Republic

Strongly peraluminous post-orogenic granites form a conspicuous rock suite in the waning stages of an orogenic cycle. Two alternative heat sources for the intracrustal melting are commonly accepted: the decay of radioactive elements in orogenic belts with substantial crustal thickening (HP–LT orogens, e.g. Alps and Himalayas), and conduction/convection of mantle heat in 'thinner' belts (LP–HT orogens, e.g. Variscan) (Sylvester 1998). Within Central Europe are widespread volumetrically rather small post-orogenic calc-alkaline metaluminous and, more rarely, peraluminous granitoid plutons whose emplacement was connected with brittle tectonics developing at the twilight of the Variscan orogeny (~ 310–290 Ma group 4 of Finger et al. 1997). In the Czech part of the Moldanubian (South Bohemian) Batholith, such a petrographic and geochemical character has been ascribed to the Pavlov and Ševětín granites (e.g., Matějka, 1991, Klečka & Matějka, 1996, Matějka & Janoušek, 1998, René et al., 1999).

In the composite Ševětín Massif (20 km N of České Budějovice) three main granite pulses can be distinguished: (1) the oldest, two-mica Deštná granite with cordierite ± andalusite (SE part of the massif), (2) biotite–muscovite Ševětín granite (BMG), constituting most of the granite pluton, and (3) fine-grained biotite Ševětín granite (BtG) forming only minor bodies. Concerning the Ševětín granites, the whole-rock geochemical signature of the BtG is less evolved than that of the BMG. The former shows lower SiO_2, Na_2O, K_2O and A/CNK accompanied by higher TiO_2, FeO_t, MgO, Al_2O_3 and CaO. The BtG is also characterized by higher contents of Rb, Sr, Cr, Ni, La, LREE, Eu and Zr than the BMG.

The initial Sr isotopic ratios for four of the Ševětín samples are nearly uniform regardless their petrology (BtG or BMG), showing fairly evolved character of the parental magmas ($^{87}Sr/^{86}Sr_{300}$ = 0.70922–0.70950) with sample BR484 being even more radiogenic ($^{87}Sr/^{86}Sr_{300}$ = 0.71290). The initial epsilon Nd values are all highly negative ($\varepsilon^{300,Nd}$ = -7.4 to -8.0; BR484: $\varepsilon^{300,Nd}$ = -9.2) and this is reflected by high two-stage Nd model ages ($T^{Nd,DM}$ = 1.60–1.75 Ga).

Ševětín granites are probably fairly late, with indirect evidence indicating an age comparable with Mauthausen Group in Austria (~ 300 Ma). This statement is consistent not only with similarities in the whole-rock geochemistry and Sr isotopic compositions (even though the Nd isotopic signatures of the two do differ profoundly) but also with occurrence of Ševětín granites close to late major regional fault forming a part of Blanice Graben generated during the late Variscan extensional collapse. Moreover, the shallow intrusion level is supported by the morphology of minute zircon and apatite crystals and the Ab–Qz–Or normative compositions.

Both the Ševětín granites (BtG and BMG) are coeval; their Sr–Nd isotopic compositions and whole-rock geochemistry correspond to LP–HT dehydratation melting of largely quartz–feldspathic metasediments, geochemically matching the typical Moldanubian paragneisses ($^{87}Sr/^{86}Sr_{300}$ > 0.713 and $\varepsilon^{300,Nd}$ < -9.5). Some role for a relatively primitive component with low time-integrated Rb/Sr and Sm/Nd ratios ($^{87}Sr/^{86}Sr_{300}$ ~ 0.705 and $\varepsilon^{300,Nd}$ > -7) is also envisaged. These could have been undepleted or slightly enriched mantle-derived magmas or partial melts of metabasic rocks. Both BtG and BMG can be linked by up to *c.* 10 % of (nearly) closed system biotite–plagioclase fractional crystallization. The observed minor Nd isotopic heterogeneity could be explained by an influx of slightly isotopically and geochemically different melt batch(es) into periodically replenished and tapped magma chamber (RTF).