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Comparative Sedimentology and Stratigraphy of Deep-Water Siliciclastics of the Mírov Culm and Part of the Zábřeh Crystalline Complex

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Sedimentologic and stratigraphic examination of selected localities in the Mírov Culm and a part of Zábřeh Crystalline Complex (Northern Moravia) indicates that both areas are composed of siliciclastic turbidites and related deep-water deposits showing a remarkable similarity in facies composition and meso- to microscale cyclic development. Four major facies were described and interpreted as hemipelagic muds, possible contourites, low density- and high density turbidity current deposits (Facies E2.2, E1.3, D2.3, C2.3, B1.1, A2.5 and A1.4 of Pickering et al. 1986). Facies composition and occurrence of distinct thinning- and fining-upward autocyclic units, interpreted as products of a channel migration, indicate deposition in a submarine middle fan environment, which is supported by trace fossil assemblages of *Nereites* ichnofacies. As suggested by previously published, sparse biostratigraphic data, both the Mírov Culm and the respective part of Zábřeh Crystalline Unit are possibly Devonian in age. The resemblance foreshadowed above may have ensued from a fact that both the units were deposited jointly in a single depositional setting. Examination of stratigraphic way-up indicators (normal grading, sole marks) revealed that some sections in both the units have been tectonically inverted, thus indicating a complicated tectonic fabric of the study area.

As we assume, though comprising two different geologic units the study area may represent a single, deep-marine turbidite depocentre which, providing that it is of Devonian age, is the most interior, topmost, and oldest tectonic unit of the Moravo-Silesian Culm.

Chloritoid-Biotite Assemblage as a Witness of Intermediate MP/LP-Metamorphism in the Královský Hvozd Unit, Moldanubicum, Bohemian Massif

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The Královský Hvozd Unit (KHU) belongs to the least metamorphosed areas in the whole Moldanubicum. It comprises a region in the SW part of the Bohemian Massif, in the north separated from the Kdyně-Neukirchen basic Massif (already Bohemicum) by the Central Bohemian Fault (CBF).

In the northern margin of the Královský Hvozd Unit, bound by CBF, fine-grained garnet-chlorite-muscovite schists occur. Garnet grains are small in size (up to 1 mm) and show a strongly prograde metamorphic evolution. Spessartine component decreases from core to rim (55 mol% - 25 mol%) and almandine (35 mol% - 55 mol %) or pyrope (5 mol% - 12 mol%) components increase, as well as the content of grossular (8 mol% - 18 mol%). X^{Fe} ratio decreases from core to rim from 0.9 to 0.8. Plagioclase is pure albite (An_{02} - An_{03}) and muscovite conserves a higher phengitic substitution (3.38 $Si^{p.f.u.}$). Biotite is still unstable and thus Fe-Mg exchange between garnet and muscovite could be delimited. Garnet-muscovite thermometry yields temperature values of 425-450°C, and phengite barometry of associated metagranites gives pressure estimation of 8-10 kb. Therefore, the data presented testify to MP/LP Barrovian greenschist facies conditions of the metamorphism in the northern margin of KHU and SW margin of conventional Moldanubicum.

The structurally underlying rocks form mostly medium-grained mica schists. Their equilibrium assemblage changes from staurolite-biotite-garnet (the latter partly consumed) to andalusite-garnet-staurolite. The textural features indicate crossing the univariant reaction curve grt+chl+ms=