

Trilobites of the Carboniferous Limestone facies from boreholes in North Moravia (Czech Republic)

Trilobitová fauna vápencového vývoje karbonu ve vrtech severní Moravy (Česká republika) (Czech summary)

(2 text-figs, 1 plate)

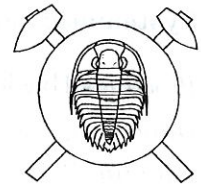
JIŘÍ KRÁL – ILJA PEK

Přírodovědecká fakulta Univerzity Karlovy, Viničná 7, 128 44 Praha 2

Přírodovědecká fakulta Univerzity Palackého, Svobody 26, 771 46 Olomouc

Submitted October 29, 1992

Viséan trilobites of the Carboniferous Limestone facies found in the boreholes into the basement of the Outer Carpathians in North Moravia belong to three taxa – *Paladin* (*Paladin*) aff. *mucronatus* (Mc' Coy, 1844), *Archegonus* sp. indet., and *Phillipsia* (*Phillipsia*) sp. which are briefly described and discussed.



Geological setting

Trilobites of the Carboniferous Limestone facies of North Moravia were found in the exotic boulders and blocks of Paleogene Menilite and Cretaceous Istebná Formations, in intercalations of calcareous shales of the Moravice Formation (middle Viséan) near the town of Osoblaha, and in deep boreholes into the basement of the Outer Carpathians. The trilobites from exotic boulders were mentioned by Bouček and Přibyl (1954), Hörbinger, Pek and Vaněk (1985). The finds from the Osoblaha area are subject of current studies of authors. The presented paper deals with trilobites found in deep boreholes into the basement of flysch units of the Outer Carpathians. The material is rare, fragmentary and poorly preserved, which all precludes exact determinations. The research is also complicated by the fact that biostratigraphy of lower Carboniferous trilobites is more precisely known in the Culm facies than is the case in the Carboniferous Limestone facies (cf. Engel and Morris 1983, G. et R. Hahn 1988, G. et R. Hahn and Brauckmann 1988, Tilsley 1988, G. Hahn 1990). Up till now, only the Tournaisian subspecies *Moschoglossis decorata silesica* Chlupáč and Řehoř, 1970 was described from North Moravia.

The biostratigraphy and lithology of boreholes is discussed in the paper of Řehoř (1976), who mentioned also the finds of trilobites.

The boreholes from which the studied material derives reached the Devonian–Carboniferous boundary inside of the limestone sequence where the carbonate sedimentation persisted locally up to the Tournaisian (Chlupáč and Řehoř 1970). However, a local interruption of sedimentation of a different range (in the interval Famennian to Viséan) is common. Higher in the

sequence, conglomerate layers occur, followed by a clastic–calcareous sequence with subordinate intercalations of claystones (shales) with numerous brachiopods, corals, goniatites etc. (Kumpera 1972, 1983) and sporadic trilobites. The goniatites in the shale intercalations allow a correlation with the Culm facies (Řehoř 1976). The described sequence passes upwards gradually into clayey and silty shales with Viséan fauna of the Culm facies which is terminated by the typically developed Štúr Horizon (lower Namurian Subzone E₁). In the borehole Vysoká CHO–9, the transition from the Devonian into the Carboniferous is evidently continuous, only with the reduced rate of sedimentation.

The described trilobites come from the following boreholes (for geographic situation see text-fig.1): Vysoká CHO–9, Dolní Žukov NP–339, Tichá NP–522 and Polanka NP–561. All material is deposited in the collections of the Ostrava Museum (abbreviation OM + inventory number).



Fig.1. Schematic geographical position of deep boreholes in the Outer Carpathian area (Northern Moravia)