Finds of ichnofossils in the Ordovician of the Rožmitál Trench (Czech Republic)

Nálezy ichnofosilií v ordoviku rožmitálské brázdy (Czech summary)

(1 text–fig., 1 plate)

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The first evidence of biota in the Kosov Formation (Uppermost Ordovician) of the Rožmitál Trench, the trace fossils of *Planolites* ichnosp., have been found. The underlying Voltuš Formation yielded the trace fossils *Palaeophycus* ichnosp., *Planolites* ichnosp., and *?Helminthopsis* ichnosp.

The Ordovician of the Palaeozoic near Rožmitál pod Třemšínem – the Rožmitál Trench according to Havlíček in Chlupáč et al. (1992) is represented by the Voltuš Formation (Arenigian to ?Kralodvorian) and by the Kosov Formation probably of the Kosovian Stage (Havlíček 1977). Only the Arenigian and the Middle to Upper Berounian are evidenced palaeontologically in the Voltuš Formation (Havlíček 1977, Mikuláš 1984, Havlíček in Chlupáč et al. 1992).

Sequence of sandy shales and sandstones below the Voltuš Formation, 50 to 150 m thick, was referred by Havlíček (1977) to the Kosov Formation. Therefore, it is the only post–Cambrian formation of the Rožmitál Trench, directly identified with an unit of the Palaeozoic in the Prague Basin. The identification is based on the position between the Berounian and the Silurian, and conformable lithology. However, the Kosov Formation in the Rožmitál Trench has not yielded any fossils so far.

The only evidence of biota in the Kosov Formation in the Rožmitál area represent the trace fossils *Planolites* ichnosp. (Pl. I, figs. 4–7). I found them in 1990 in debris on the fields SW of the church at Starý Rožmitál (Nr. 1 in a sketch map in fig. 1) and NW of Voltuš (Nr. 2 in the map). *Planolites* is also the most frequent ichnofossil of the Kosov Formation in the Prague Basin (Mikuláš 1992). However, it is a widespread ichnogenus, documenting only a benthic life during the sedimentation.

Weathered grey–green silty shales of the Voltuš Formation were exposed (as debris only) about 800 m SE of Voltuš in 1987 (fig. 3 in the map). I found here the trilobite *Dalmanitina* sp., gastropods, mollusks, orthocone nautiloids, plates of cystoids, and three–dimensionally preserved trace fossils *Planolites* ichnosp. (Pl. I, fig. 3; three specimens), *Palaeophycus* ichnosp. (Pl. I, fig. 1; three specimens) and *?Helminthopsis*

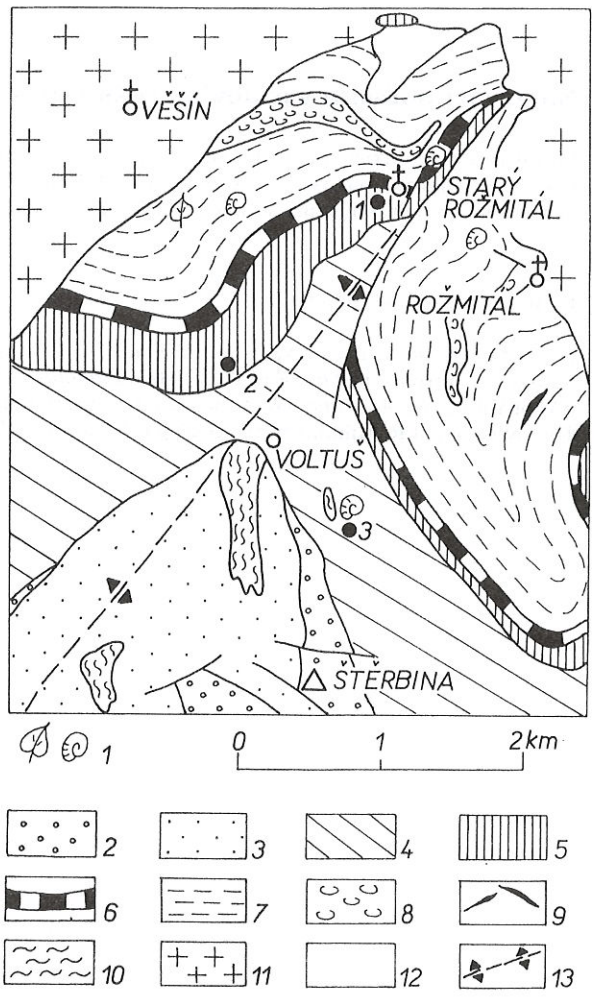

Fig. 1. Geological sketch map of the vicinity of Rožmitál (after V. Havlíček 1977)
1 – occurrences of flora and fauna; *2* – Klouček Conglomerate (Cambrian); *3* – Hořice Sandstone (Cambrian); *4* – Voltuš Formation; *5* – Kosov Formation; *6* – Starý Rožmitál Formation (Silurian); *7* – Věšín Formation; *8* – Bezděkov Conglomerate, *9* – diabase dykes; *10* – hybrid granitoids; *11* – Central Bohemian Pluton; *12* – Neogene; *13* – axis of the Voltuš Anticline. 1, 2, 3 – finding places of trace fossils

ichnosp. (Pl. I, fig. 2; two specimens). This is the only trace fossil assemblage documented so far in the Voltuš Formation.

The search for trace fossils in the Palaeozoic near Rožmitál is promissable particularly in the Devonian Věšín Formation. It, however, is limited by a total lack of natural exposures, as consequence of the Tertiary base–levelling of the whole area.

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Translated by the author

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Nálezy ichnofosilií v ordoviku rožmitálské brázdy

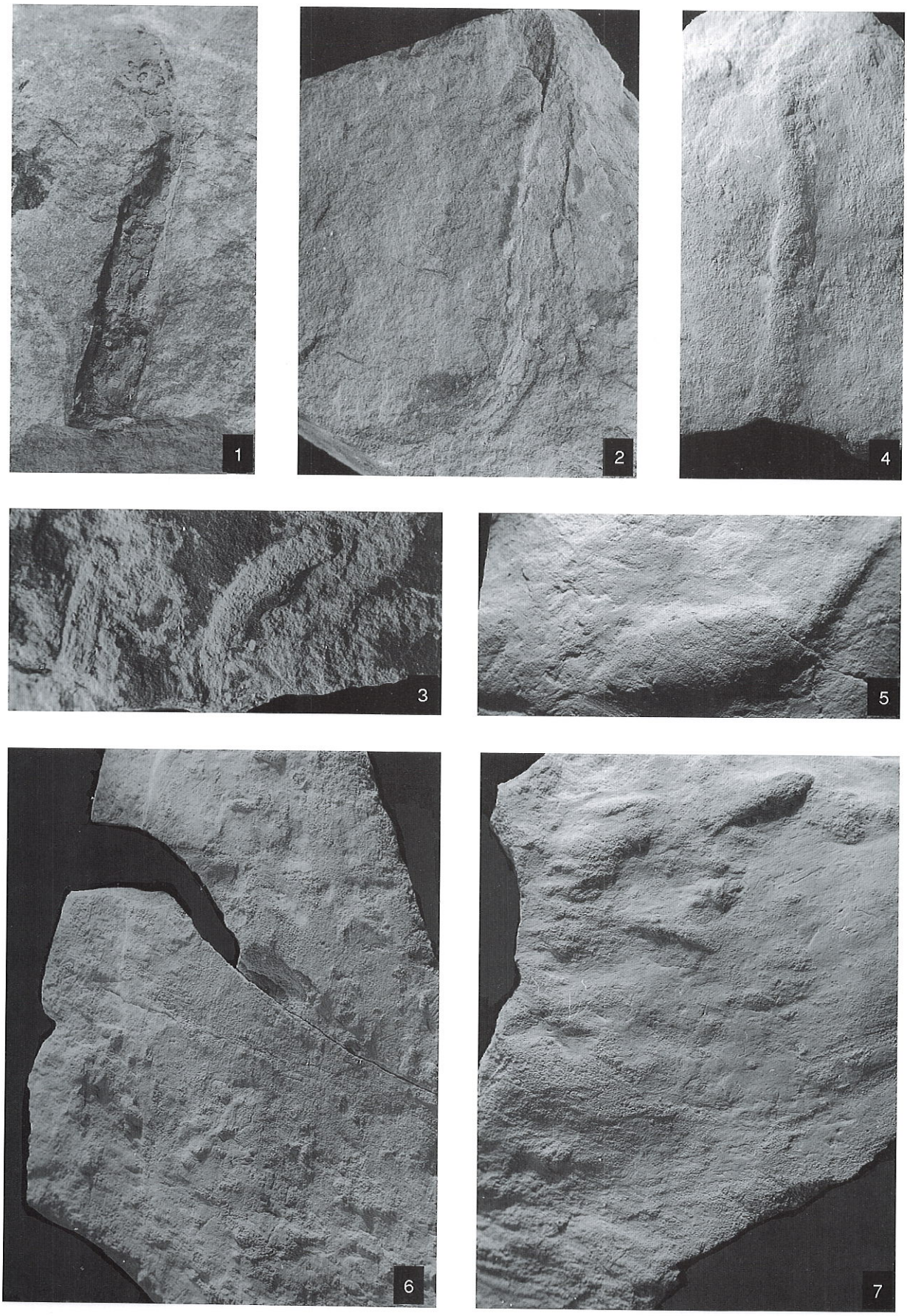
Dosud jedinými důkazy přítomnosti organismů v kosovském souvrství rožmitálského paleozoika jsou nálezy ichnofosilie *Planolites* ichnosp., nalezené u Starého Rožmitálu a u Voltuše. V podložním voltušském souvrství (arenig – ?kralodvor) byly u Voltuše nalezeny v prachovcích stopy *Planolites* ichnosp., *Palaeophycus* ichnosp. a *?Helminthopsis* ichnosp.

Explanation of plate I

1 – *Palaeophycus* ichnosp.; x2.0; 2 – *?Helminthopsis* ichnosp., x1.3; 3 – *Planolites* ichnosp.; x2.5. Ordovician, the Voltuš Formation, a trench 800 m SE of Voltuš. 4–7: *Planolites* ichnosp.; x1.5. Ordovician, the Kosov Formation, debris on the field NW of Voltuš (fig. 4, 5) and SW of the church at Starý Rožmitál (fig. 6, 7).
The collection of R. Mikuláš in the Geological Institute, Czech Academy of Sciences, Prague.

Photos by the author

R. Mikuláš: Finds of ichnofossils in the Ordovician of the Rožmitál Trench (Pl. I)



For explanation see p. 242