

Fossil assemblages from the Middle Ordovician Šárka Formation at Praha – Červený vrch Hill (Prague Basin, Barrandian area)

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Abstract. The most important aspects of fossil assemblages from measured section at Praha – Červený vrch Hill are summarized, including comments on their composition and taphonomy. List of all discovered taxa is presented.

Key words: Acritarcha, Chitinozoa, Brachiopoda, Trilobita, Graptolithina, trace fossils, Šárka Formation, Ordovician, Prague Basin

Introduction

In 1999, vast temporary excavations at the building site at Praha-Vokovice (Egypťská Street) exposed a large section through volcanodetritic rocks and dark shales. This outcrop provided an exceptional opportunity to document a comparatively thick section and also to study its fossil content. Lithology of the disclosed shales corresponds well with the Middle Ordovician Šárka Formation, and also the collected fossil assemblage is of the early Middle Ordovician age.

However, assemblages of micro-, macro- and ichno-fossils show an irregular pattern of distribution in separate layers in the measured section. Individual groups of fossils are discussed in detail in series of papers published in this volume (Budil et al. 2003a, b, Chlupáč 2003, Fatka 2003, Kraft – Kraft 2003, Mikuláš 2003).

Materials and methods

The disclosed section was continuously measured, but sampling within particular layers was not equal in the sense of density and intensity because of different accessibility of separate parts of the section depending on construction works. However, several important, richly fossiliferous layers, ascertained during the excavation (e.g. layers Nos. 7–10, Budil et al. 2003, this volume) were most intensively examined already during the field research. Six samples have been micropaleontologically analysed, but only one sample provided moderately preserved organic-walled microfossils (acritarchs and chitinozoans), the other samples contained only indeterminable detritus of organic matter.

A question of tectonic affect arose already during field works. There are two main concepts in consideration:

The first concept supposes that the section is more/or less continual conserving the original superposition of layers, influenced especially by strike folds (see Budil et al. 2003a, this volume). Consequently, the occurrence of siliceous nodules in the layer No. 7 is interpreted as laterally restricted, although stratigraphic position of this level is uncertain.

The second concept, based on correlation of faunal assemblages, supposes a strong influence of tectonics in the section. According to this opinion, the original superposition is disrupted by overthrust(s) in the section. The layer No. 7 is interpreted to be dislocated (allochthonous) younger rocks (see Kraft and Kraft 2003, this volume).

Palaeontology

With the exception of the lowermost portion, a distinct dominance of phyllocarid crustaceans was recorded in the section. Such a dominance makes possible the designation “phyllocarid shale” as the most appropriate (see Chlupáč 2003, this volume).

In shales, among other fauna, graptolites were the most abundant. Linguliformean brachiopods were much less common and another fossil groups were rare to extremely rare.

In siliceous nodules rare but typical fauna of the Šárka Formation is present. The low species diversity can be explained by a low number of fossiliferous nodules in the studied section; most of nodules did not contain any fossil.

In general, fragmentary fauna dominated in the section, but several articulated arthropod remains were also found (e.g. *Pseudonaroia*). In shales the fossils occurred often concentrated in extended clusters on bedding planes and/or

Tab. 1. Comprehensive list of fossil taxa discovered at Praha – Červený vrch Hill. Numbers of separate layers of the measured section correspond to Fig. 2 in Budil et al. 2003a, this volume. Last column (*) – species recorded out of the section in shale debris

Taxa	Layer No.														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	*
<i>Aureotesta clathrata</i> var. <i>clathrata</i>												x			
<i>Baltisphaeridium</i> spp.												x			
<i>Comasphaeridium</i> sp. aff. <i>C. tonsum</i>												x			
<i>Dicrodiacrodium</i> sp. cf. <i>D. ancoriforme</i>												x			
<i>Ferromia</i> sp. aff. <i>F. pellita</i>												x			
<i>Leiosphaeridia</i> spp.												x			
<i>Micrhystridium</i> spp.												x			
<i>Polygonium</i> sp. aff. <i>P. gracile</i>												x			
<i>Solisphaeridium</i> sp.												x			
<i>Stelliferidium</i> spp.												x			
<i>Stephanodiacrodium stephanum</i>												x			
“ <i>Veryhachium trispinosum</i> ” group												x			
<i>Sagenachitina oblonga</i>												x			
<i>Cyathochitina campanulaeformis</i>												x			
<i>Lagenochitina</i> sp.												x			
<i>Belonechitina</i> sp. cf. <i>B. micracantha</i>												x			
? <i>Velatachitina</i> sp.												x			
Algae indet.								x		x					
Hexactinellida indet.								x							
Conulariida indet.								x							
Gastropoda indet.							x								
Modiomorphidae gen. indet.							x								
“ <i>Orthoceras</i> ” <i>bisignatum</i>							x								
Cephalopoda indet.															?
<i>Spondyglosella</i> sp.								x	x	x		x	x		
<i>Paterula incognita</i>								x		x					
<i>Cyrtotreta osekensis</i>								x		x					
? <i>Acrotreta</i> sp.								x		x					
<i>Eoconulus</i> sp.								?							
<i>Eodalmanella</i> ? sp.							x								
<i>Pseudonaraoia hammani</i>								x							
<i>Placoparia</i> (P.) cf. <i>cambriensis</i>								x	x						
<i>Ectillaenus katzeri katzeri</i>								x							
Asaphidae gen. indet.								x	?						
Ostracoda indet.															?
<i>Caryocaris wrighti</i>					x	x	x	x	x	x	x	x	x	x	
<i>Caryocaris subula</i>				x	x	x	x	x	x	x	x	x	x	x	
Palaeoscolecida indet.								?							x
<i>Lagyncystites</i> cf. <i>pyramidalis</i>							x								
<i>Dictyonema dubium</i>								x							
<i>Dendrograptus vokovicensis</i>								x							
<i>Dendrograptus</i> sp.								x		x					
<i>Ptilograptus suavis</i>								x							
<i>Acanthograptus</i> sp.								x		x					
“ <i>Dendrograptus</i> ” cf. <i>titanus</i>								x							
<i>Corymbograptus retroflexus</i>								x		x					
<i>Didymograptus</i> cf. <i>spinulosus</i>															x

Tab. 1, continued

Taxa	Layer No.														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	*
<i>Didymograptus</i> (s. l.) <i>stanislavi</i>								x							
<i>Didymograptus</i> (s. l.) sp. n.															x
<i>Aulograptus cucullus</i>								x							
<i>Acrograptus lipoldi</i>								?							
<i>Undulograptus novaki</i>							x	x		x					
<i>Undulograptus</i> sp. n.								x		x					
? <i>Bergaueria</i> isp.												x			
<i>Chondrites</i> isp.							x								
<i>Nereites</i> isp.												x			
? <i>Palaeophycus</i> cf. <i>P. tubularis</i>												x			
<i>Pilichnus dichotomus</i>		x		x	x	x	x	x	x	x	x	x	x	x	
<i>Planolites beverleyensis</i>												x	x	x	
<i>Skolithos linearis</i>							x								

in laminae associated with micaceous clastic material (Drost et al. 2003, this volume).

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