

**New insights into micro- and macrofaunal assemblages from the uppermost Hauterivian *Pseudothurmannia* beds of the Polomec hill (Western Carpathians, Slovakia)**

Hyzný, M.<sup>1,\*</sup>, Józsa, S.<sup>1</sup>, Rybár, S.<sup>1</sup>, Halássová, E.<sup>1</sup>, Lukeneder, A.<sup>2</sup>, Setoyama, E.<sup>3</sup>

1) Comenius University, Bratislava, Slovakia, \*E-mail: hyzny.matus@gmail.com

2) Natural History Museum, Vienna, Austria

3) University of Utah, Salt Lake City, USA

Outcrops with well-exposed strata of the *Pseudothurmannia* beds, characteristic ammonoid-rich Tethyan successions of the uppermost Hauterivian, are rare in Central Europe. In Slovakia, the best studied section of the *Pseudothurmannia* beds is located on the Polomec hill on the foot of the Strážovské vrchy Mts. (northeastern Western Carpathians), close to Lietavská Lúčka village. On the Polomec hill numerous outcrops are located in a large quarry with several levels; one of them exposes the *Pseudothurmannia* beds. The exposed strata consist of marly limestones of the Maiolica-type Mráznica Formation.

In the latest decade, rich assemblages of ammonoids, calcareous nannoplankton, planktonic foraminifera and smaller benthic foraminifera were collected bed-by-bed from the studied section consisting of approximately 6 metres (38 beds) of continuous sequence. This portion of the otherwise much larger section was selected because of a potential to locate the Hauterivian–Barremian stratigraphic boundary. An abundant ammonoid fauna of the *Pseudothurmannia* beds consists mainly of the heteromorphic taxa of the families Crioceratitidae (Crioceratites, *Pseudothurmannia*) and Emericiceratidae (Honoratia, Paraspiticeras) and a typical upper Hauterivian ammonoid fauna with *Lytoceras*, *Phylloceras*, *Phyllopachyceras*, *Plesiospitidiscus*, *Acrioceras* and *Megacrioceras*. The ammonoid-dominated macrofauna is accompanied by locally abundant lamellaptychi, belemnites, rare brachiopods and crinoids. The biostratigraphy is based on the ammonoids (*Pseudothurmannia ohmi* Zone) and calcareous nannoplankton (*Litraphidites bollii* NC5B and NC5C zones).

Concerning agglutinated foraminifera, the LO of *Protomarssonella subtrochus* at the base of the studied section was observed. Within the section rare to occasional taxa include *Saccamina* sp., *Reophax helveticus*, *Scherochorella minuta*, *Eobigenerina variabilis*, *Pseudobolivina varians*, *Verneuilinoides neocomiensis* and *Praedorothia hauteriviana*. Common or relatively abundant are *Haplophragmoides* spp., *Cribrostomoides* spp., *Conglophragmium* spp. or *Trochammia* spp. The most abundant species belong to astrorhizid and ammodiscid genera *Rhabdammina*, *Batysiphon*, *Lagenammia*, *Tolypammia*, *Rhizammina*, *Glomospirella*, *Ammodiscus* and *Glomospira*.

Interestingly, the quantitative distribution of the foraminifera shows several events of decreasing quantity. Although deep-water agglutinated foraminifera are taxonomically not very diverse, several short-term changes in the morphogroup composition were identified. Some of these changes are correlated with changes recorded in microfacies, planktonic foraminifera and calcareous benthic foraminifera (spirulinids, miliolids and nodosarids). Within the section agglutinated foraminifera assemblages display two events of quantitative decline. Some of these declines can be equivalent to the anoxic Faraoni Level in the *Pseudothurmannia ohmi* Zone (*Pseudothurmannia mortilleti* Subzone), which was considered to be coeval with the *Pseudothurmannia* beds.