

## Changes in oxic regime in the Turonian of the Úpohlavý section (Czech Cretaceous Basin)

MARKÉTA HOUDKOVÁ<sup>1</sup> and RADOVAN PIPÍK<sup>2</sup>

1 – Institute of Geology and Palaeontology, Faculty of Science, Charles University, Albertov 6, 128 43  
Prague 2, Czech Republic

2 – Earth Science Institute, Slovak Academy of Sciences, Ďumbierska 1, SK-974 11 Banská Bystrica,  
Slovak Republic

The class Ostracoda has been studied at the Úpohlavý quarry, which is an important paleontological site of the Turonian in the Czech Cretaceous Basin with abundant and well-preserved invertebrate and vertebrate fauna. Twenty samples from marl and limestone of Jizera and Teplice formation were collected in which 36 marine Upper Turonian ostracods species have been identified. Ostracods of the studied profile are characterized by gradual increase of species richness and decline in dominance of *Cytherella cf. ovata* (Roemer, 1840). The lowest diversity is observed in the dark marl of the Jizera formation and the highest diversity in the limestone and marl of the Teplice formation. The order Platycopida prevails on the order Podocopida in the Jizera formation, in which percentages of Platycopida specimens is in the range 67-89%, while its percentage in the Teplice formation is lower, in the range 25-59%. Using the Platycopida Signal Hypothesis in a sense of Whatley et al. (2003), which compares percentages of Platycopida and Podocopida, a low O<sub>2</sub> content in Jizera formation and in the Coprolite bed (monotonous dark marl) of Teplice formation is supposed. This is in accordance with low number of species (5-11 per sample) and with higher TOC content (0.34-0.74 %). With the beginning of limestone and marl sedimentation of the Teplice formation a number of species increases (6-27 per sample), the TOC content decreases (0.11-0.38%) and a sedimentation reflects the oxic conditions with diversified ostracod fauna.

**Acknowledgement:** Many thanks to doc. M. Košťák and doc. K. Holcová (both Charles University in Prague) for their scientific and technical help. This work was supported by the VEGA agency (project No. 2/0056/15).

### References:

Whatley, R. C., Pyne, R. S. & Wilkinson, I. P. 2003. Ostracoda and palaeo-oxygen levels, with particular reference to the Upper Cretaceous of East Anglia. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 194, 355–386.