

## **Egerian Deposits from the South-western Part of the Pannonian Basin, Croatia**

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Egerian deposits occur only in north-western part of Croatia, i. e., Hrvatsko Zagorje Basin (PAVELIĆ et al. 2003). Despite of many researches in that area, the stratigraphy of the Egerian deposits is still not clear.

New sedimentological, micropalaeontological and palynological analyses were carried out on the deposits from the lithostratigraphic column at locality Cerje Jesenjsko in Zagorje Basin, in the north-western part of Croatia, in order to define the boundaries between local formations: Meljan Formation (Lower Egerian) and Golubovec Formation (Upper Egerian). The deposits are grouped into three facies: massive to laminated marls and clays, normally graded sands and pyroclastic breccias.

Massive to laminated marls and clays dominate in the lower and middle part of the succession. They contain abundant foraminiferal association and numerous dinocysts. The association of foraminifera *Haplophragmoides carinatus*, *Cribostrumoides subglobosus*, *Reticulophragmium acutidorsatum*, *Vaginulinopsis gladius*, *Bolivina liebusi*, *Uvigerina mexicana*, *Cibicoides similis*, *Heterolepa costata*, *Subbotina* cf. *galavisi*, *Globigerina ouachitaensis*, *Globigerina wagneri* and *Globigerinella megaperta* indicates Egerian age (CICHA et al. 1975; RÖGL et al. 1998). Dinocysts are dominated by *Chiropteridium galea*, *Deflandrea phosphoritica*, *Homotryblium tenuispinosum*, *Polysphaeridium* sp. and *Spiniferites ramosus*. Dinocyst assemblages point out on *Chiropteridium* Abundance Subzone (Chi) – upper part of *Distatodinium biffii* Interval Zone (Dbi) of the uppermost Oligocene age (BRINKHUIS et al. 1992).

The marls and clays were deposited on the shelf with terrestrial influence. In the upper part of the succession the respectable flow of pyroclastic material occur together with debris flow deposits at the top indicating re-deposition from shallow marine environment. Radiometric measurements that were carried out on andesites from the Lepoglava Quarry in vicinity, gave the K/Ar age of  $22.8 \pm 0.7$  Ma (ŠIMUNIĆ & PAMIĆ 1993). That data is in accordance with our palaeontological results, which suggest the Late Egerian age of the upper part of the succession.

The sedimentary succession on the Cerje Jesenjsko locality, starting with shelf deposits and ending with prodelta deposits shows coarsening-upward tendency, and generally suggests progradation of the delta system.

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