

## EGERIAN CALCAREOUS NANNOFOSSILS AND FORAMINIFERS (PALEOECOLOGY AND BIOSTRATIGRAPHY) FROM THE NORTH ALPINE FORELAND BASIN OF UPPER AUSTRIA

CORIC, Stjepan\*; RUPP, Christian

Geological Survey of Austria, Austria

stjepan.coric@geologie.ac.at

Alpine Foreland Basin, Egerian, paleoecology, biostratigraphy

To obtain a more accurate definition of the **Eferding Formation**, foraminiferal faunas and calcareous nannofossils of the outcrops Unterrudling and Polsenz were studied in detail. The Unterrudling Eferding Formation is developed on top of the shallow marine Linz-Melk Formation, Polsenz represents a younger part of the Eferding Formation. Moderately to bad preserved planktonic foraminifers from both sections (*Globigerina wagneri*, *Globorotaloides suteri*, *Globoturbotalita ouachitaensis*, *Beella rohiensis*; *Globigerinoides primordius*) are characteristic for the lower Egerian. Calcareous nannoplankton assemblages allow an attribution in uppermost NP25. Benthic foraminiferal faunas from Unterrudling suggest a deepening from a deeper neritic depositional environment in the lower part of the section to a bathyal one in the uppermost part. Calcareous nannoplankton indicate a stable marine environment, probably established by an unhampered communication with the open Paratethys Sea. The slightly younger Polsenz section was again deposited in a deeper neritic environment, characterized by unfavourable habitat conditions like stagnant bottom waters and repeated oxygen crisis recorded by poor and extremely low diverse benthic foraminiferal faunas. with occasionally high numbers of arenaceous foraminifera.

Lower Miocene sediments of core UE50 drilled in the surroundings of Linz/Ebelsberg were quantitatively examined to define the stratigraphical position of the **Ebelsberg Formation** and to investigate paleo-conditions during the lowermost Miocene in the North Alpine Foreland Basin. Stratigraphical analysis of the foraminiferal faunas represented by common *Gaudryinopsis austriacus*, *Amphicoryna danuviensis*, *Tenuitella minutissima* and *Tenuitellinata pseudoedita* gives an age of Upper Egerian (lower Aquitanian), which can be restricted to NN1 by means of calcareous nannofossils. Paleoecological analyses point out a deep neritic to bathyal marine realm with cold deep water and cool surface water with increasing eutrophication as a result of upwelling and short-time fresh-water influx. High organic production in the water column resulted in ongoing accumulation of organic material on the sea floor, which finally led to oxygen deficiency and to a drastic change in benthic foraminiferal faunas in the uppermost part of the core.