

## BIOSTRATIGRAPHY AND PALEOECOLOGY OF THE UPPER OLIGOCENE – LOWER MIOCENE CALCAREOUS NANNOFOSSILS FROM THE ALBANIAN-THESSALIAN BASIN (ALBANIA)

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### Abstract

The Albanian-Thessalian intermontane Basin represents a narrow and elongate marine basin composed of molassic deposits, which extends on the direction SE to NW, from the Thessaly in Greece, up to Devolli, Korça, Gora and Mokra regions and further to the Librazhd, in Albania. Its substratum is represented by the deposits of Mirdita and Korabi zones. There are three distinct sedimentary molassic cycles: the first cycle was deposited during Middle Eocene, the second one comprise sequences from Middle Oligocene up to Lower Miocene, while the third cycle is Burdigalian to Langhian. The Oligocene to Miocene stratigraphic sequences have a thickness up to 4000 m. A number of samples from marls and silts were collected and analysed from section Bozdovec, situated near city of Korca.

Smear slides were prepared for all samples and quantitative analyses were performed by counting at least 300 specimens per sample. Different statistical methods were used for quantitative interpretations, with the goal of defining the paleoenvironmental changes using calcareous nannofossils assemblages.

The examined material contains good to moderate preserved calcareous nannofossil

assemblages, which are generally represented by: *Reticulofenestra minuta* (up to 70%), *R. bisecta* (up to 30%), *Cycligargolithus floridanus* (up to 19.67%), *Coccolithus pelagicus* (up to 17.5%), *Cy. abisectus* (up to 5%), *R. stavensis* (4%). The genus *Sphenolithus* reaches percentages up to 20.98 %, being represented by biostratigraphically important species like: *S. ciperoensis* (the marker species for top of *Sphenolithus ciperoensis* Zone NP25 and one of the index species LO which is used to define the Oligocene/Miocene boundary), *S. delphix*, *S. dissimilis*. The *Helicosphaera* genus is rare and discontinuous. We noticed the presence of: *Helicosphaera obliqua*, *H. recta*, *H. intermedia* and *H. euphratis*. Rare and irregularly distributed are: genera *Discoaster* and *Pontosphaera*, species *Ilseolithina fusa*, *Coccolithus miopelagicus* and *Zyghrablithus bijugatus*.

For paleoecological interpretations were used: *Coccolithus pelagicus*, *Reticulofenestra minuta*, *Cycligargolithus floridanus* and *Sphenolithus* gr. High amount of *R. minuta* and *Sphenoliths* point to warm well stratified paleoenvironment.

**Key words:** *Oligocene-Miocene, Albanian-Thessalian Basin (Albania), calcareous nannofossils, biostratigraphy, paleoecology*