

## The Paleocene/Eocene transition in the NW part of the Paleogene Adriatic carbonate platform and the adjacent basin

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From the Late Cretaceous to the end of Early Eocene the NW margin of the Paleogene Adriatic Carbonate Platform bordered on a deeper sedimentary basin characterized by clastic sedimentation.

The present study concerns two sections of the Upper Paleocene/Eocene sediments: Nanos section (S slope of Mt. Nanos) with clastic basin sedimentation and, Sopada section (Trieste-Komen Karst) with sediments deposited in the shallow-water carbonate platform. The Nanos section was studied for planktonic foraminifera, calcareous nannoplankton, and ostracods. The Sopada section was studied for stable carbon isotopes. Larger benthic foraminifera were studied in both sections.

The age attribution of the Sopada sediments was done based on larger foraminifera. The presence of *Assilina azilensis* and *Glomalveolina levis* point out to SBZ 4, while Lower Eocene age (SBZ 5) was proven by occurrences of the index species *Alveolina aramaea* and *A. latior*. *Thomasella labyrinthica*, *Lacazina blumenthalii*, *Pseudolacazina donatae*, as well as ranikothalids, nummulitids and rotaliids were found in samples assigned to both biozones. CIE with pronounced negative  $\delta^{13}\text{C}$  values was detected in the upper part of the Paleocene corresponding to the extinction of some foraminiferal species. The assemblages found are comparable to those described from the Eastern Neotethys (e. g., Turkey and Egypt).

The occurrences of planktonic foraminifera *Morozovella aequa*, *M. acuta*, and *M. velascoensis* indicate P5 biozone (the uppermost Paleocene and the lowermost part of the Eocene) for the sediments from Nanos section. Calcareous nannoplankton assemblage studied from the same samples contains *Discoaster multiradiatus*, *D. lenticularis*, *D. mohleri* and several species of the genus *Fasciculithus*. Listed species along with complete absence of *Rhomboaster* spp., are characteristic for NP9 biozone or the uppermost Paleocene. While the deep-sea ostracod species *Cytherella* sp. is considered as autochthonous, the larger benthic foraminifera were transported into the basin from the shallower parts. The findings of spherical foraminiferal form were of particular interest, because of its similarity to species known from the Megathaya region (NE India) (Tewari, Drobne, Pugliese, Melis, unpublished data). The identification was a challenge for us – we presumed that forms belong to the genus *Aberisphaera*. Mt. Nanos probably was the easternmost end of geographic range of the genus. The presence of the species supports the hypothesis of a possible connection between these geographically remote areas, the Paleogene Adriatic Carbonate Platform and Megathaya region.