

Paleocene–Eocene calcareous nannofossil biostratigraphy from the Gams area (Gosau Group, Northern Calcareous Alps, Austria)

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The sedimentary succession of the Gosau Group at Gams in the Northern Calcareous Alps (NCA) comprises deposits of late Turonian to early Eocene (Ypresian) age (Egger *et al.*, 2004). In the Gams area, Cretaceous-Paleogene boundary intervals (K/Pg), as well as Paleocene-Eocene boundary intervals (P/E), are exposed. The Nierental Formation and the Zwieselalm Formation in the eastern outcrop area (upper Gosau Subgroup, Campanian – Ypresian) are composed of deep-water deposits, mainly coarse mass flow deposits, sandy turbidites, and hemipelagites.

Samples were collected from several outcrops and investigated for their calcareous nannofossil and calcareous dinoflagellate content. The investigated interval covers a stratigraphic age from Selandian to early Ypresian.

Biostratigraphically, the calcareous nannofossil assemblages allowed correlation of the studied outcrops to five standard biozones: NP5 – *Fasciculithus tympaniformis*

Zone, NP6 – *Heliolithus kleinpelli* Zone, NP9 – *Discoaster multiradiatus* Zone, NP10 – *Tribrachiatulus contortus* Zone, and NP11 – *Discoaster binodosus* Zone. The NP7 – *Discoaster mohleri* Zone and NP8 – *Heliolithus riedelii/Discoaster nobilis* Zone were not identified in this area, which may indicate a gap in the succession and/or a carbonate-free interval barren of nannofossils. In addition, the following calcareous dinoflagellate species were identified: *Calciadinellum albatrosianum*, *Cervisiella operculata*, *Pernambugia* cf. *tuberosa*, *Thoracosphaera heimii*, *Thoracosphaera* cf. *prolata*, and *Thoracosphaera* spp.

References

- Egger, H., Rögl, F. & Wagreich, M. 2004. Biostratigraphy and facies of Paleogene deep-water deposits at Gams (Gosau Group, Austria). *Annalen des Naturhistorischen Museums in Wien. Serie A für Mineralogie und Petrographie, Geologie und Paläontologie, Anthropologie und Prähistorie*: 281–307.