

## Contributions to the lithostratotype of “Hofergrabenmergel” (Hochmoos Formation, Lower Gosau Subgroup; Coniacian/Santonian; Upper Austria)

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### Abstract

The “Hofergrabenmergel” on their classical locality in Sattelgraben (currently used topographic name for “Hofergraben”) and outcrops in Finstergraben and Schattau in the Gosau region, Northern Calcareous Alps, Upper Austria, represent the upper section of the Hochmoos Formation, which is part of the Lower Gosau Subgroup. The Hofergrabenmergel (name coined by KOLLMANN, in PLÖCHINGER, 1982) are represented by soft grey marls in part rich in corals, gastropods and bivalves. According to the present knowledge this predominantly shallow-marine macrofossil-rich marly sequence is in the Hofergraben up to several tens of metres thick and comprises the nannozones UC11 and ?UC12 correlated with the Upper Coniacian–Middle Santonian. Some of the nannofossil assemblages contain *Lithastrinus grilli*, the other ones *Prediscosphaera* cf. *grandis*, *Lucianorhabdus cayeuxii* (species B sensu WAGREICH, 1992) and *Reinhardtites levis*. The foraminiferal assemblages are dominated by benthonic taxa and confirm a stratigraphical range from the *Dicarinella concavata* to *Dicarinella asymetrica* zones. The ostracod fauna from the Hofergraben is very poor. Main faunal elements are *Bairdia* and *Cytherella*. The palynomorph assemblage corresponds to *Oculopollis Complexiopollis* Dominance Zone (Coniacian–Santonian). Dinocyst assemblages mainly consist of the forms tolerating salinity changes such as *Dinogymnium*, *Odontochitina*, *Xenascus* which suggest shallow marine conditions. Chorate dinocysts *Spiniferites*, *Florentinia* indicating litoral to neritic environment rarely occur. We consider the Hofergrabenmergel basically as sediments of a shallow marine muddy water environment. In the upper part of the coral marls sequence light-yellowish limestone beds, rich in corals, gastropods and bivalves are intercalated and also dark grey bituminous calcareous layers up to a few dm thickness occur. The occasional presence of non-marine algae in part of the marls points to freshwater influence from river-estuaries.

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