

CRETACEOUS FORAMINIFERA OF THE GOSAU GROUP (KRAPPFELD, CARINTHIA)

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The sequence of the Gosau Group in the Krappfeld area (van Hinte, 1963) is divided into the Windisch Formation, Mannsberg Fm., Wendel Fm. and Pemberger Fm., and ranges from the Campanian to the Maastrichtian. The entire succession measures more than 2000m and consists of limestone, marly limestone, calcarenite, conglomerate and breccias. Eocene sediments form the sedimentary cover. One of the most continuous sections of the Upper Cretaceous measured belongs to the Pemberger Fm. located near Wietersdorf (Krappfeld, Carinthia) has recently been investigated.

The section consists of dark-grey marl, light-grey to pink limestone (wacke-, pack- and rudstone), grey marly limestone, light-grey calcarenite, light-grey, green and black conglomerate and light-grey, green and black breccias. A total thickness of about 118m was measured. The section shows well bedded deposits of flysch character, which were affected by a complex fault system that results in different dipping of the beds. 14 sedimentary cycles were recognized all starting with fine breccias except the last one. The base of cycle 14 is represented by a 12m thick mega-breccia which is due to a tectonic event during the Campanian-Maastrichtian. The mega-breccia is overlain by well bedded limestones, which are followed by marly limestone and marls to the top of the unit. Each cycle represents a fining upward sequence.

Throughout the section foraminifera, red algae, small phytoklasts and ostracods could be observed from thin sections as well as from sieved residues of some bulk samples. Rudist, bivalves and echinid fragments are obtained most of them are described by van Hinte (1963) and Schreiber (1979, 1980). The mega-breccia passes into rudstone facies (approx. 5m thickness). It yields bivalves (*Radiolites* sp., *Hippurites* sp., *Inoceramus* sp.) and also a huge number of foraminifera which are represented by planktic (*Globotruncana* sp. and ?*Globigerina* sp.) and benthic taxa (*Gyroidinoides* sp., *Gavelinella monterelensis*, *Gavelinella* sp., *Pseudotextularia* sp., *Heterohelix* cf. *globifera*, *Lagena* sp., *Nodosaria* sp. and ?*Cibicides* sp.) and ostracods (*Xestoleberis* sp. and ?*Cytheretta* sp.). Out of three sieved samples (basal, middle and upper part of the section) the P/B ratio has been concluded: lower part (sample 20R): nearly 100% planktic foraminifera; middle part (sample 81R): 70/30 P/B; upper part (sample 22L): 50/50 P/B.

The P/B ratio of the microfossil assemblage shows that the relative abundance of planktic foraminifera declines along the section. This indicates a shallowing of the depositional environment, which is also reflected by the occurrence of rudists within the mega breccia that derive from sublithoral settings.

References

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Zeitschrift/Journal: [Berichte der Geologischen Bundesanstalt](#)

Jahr/Year: 2008

Band/Volume: [74](#)

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Artikel/Article: [Cretaceous Foraminifera of the Gosau Group \(Krappfeld, Carinthia\) 85-86](#)