

Integrated biostratigraphy and sealevel dynamics at the Santonian – early Campanian Schattau section – Northern Calcareous Alps, Austria

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The Schattau section displays a Santonian to early Campanian transgressive sequence with a rich micro- and macro fossil fauna. A framework based on planktonic foraminifera, calcareous nannoplankton, ammonite, echinoid and crinoid biostratigraphy provides the foundation for a high resolution assessment of palaeoecologic changes in planktonic and benthic foraminiferal communities and local biostratigraphy (see Wagreich et al., 2009).

The Santonian Hochmoos Formation (representing shallow water environments with the Sandkalkbank Member at the top of this unit) is overlain by the Santonian to Campanian Bibereck Formation (recording a distinct increase in water depth). The stratigraphically older subsections of the outcrop yield abundant miliolids and some rotaliid foraminiferal taxa (*Quinqueloculina* sp., *Spiroloculina fassistomata*, *Hoeglundia* spp., *Gavellina* spp.) and the larger benthic foraminifer *Nummofallotia* cretacea. A transgressive episode is recorded in the uppermost Hochmoos Formation's Sandkalkbank Member – consequently larger benthic foraminifera disappear and miliolids become a rare -, planktonic foraminifera an abundant element in deposits assigning to the stratigraphically youngest part of the Schattau section, the Bibereck Formation. Globotruncanids and marginotruncanids are frequently found. The planktonic/benthic foraminifera ratio rises from zero to ~50%. The benthic foraminiferal fauna is characterised by tubular and bi- and triserial agglutinated foraminifera (e.g. *Ammobaculites* spp., *Dorothia* spp., *Gaudryina* spp., *Tritaxia* spp.) as well as spiral calcareous benthic foraminifera (*Gavellina* spp., *Lenticulina* spp.). Accordingly, the younger deposits at the Schattau section record an outer neritic to upper slope environment. Planctonic foraminifera indicate the *Dicarinella asymetrica* and the lowest Globotruncanita elevata biozone: The top of the Schattau section records the last appearance of the planktonic foraminifera *Dicarinella asymetrica* and *Sigalia* sp. (*decoratissima*?) - two index fossils for the Santonian, and the first appearance of *Globotruncanita elevata*.

References:

Wagreich, M., Summesberger, H., Kroh, A., 2010. Late Santonian bioevents in the Schattau section, Gosau Group of Austria – implications for the Santonian – Campanian boundary stratigraphy. *Cretaceous Research*, 31, 2, 181-191