Ammonite stratigraphy of the Santonian (Upper Cretaceous) in the type area of the Gosau Group (Northern Calcareous Alps, Austria)

Summesberger, H. 1,*; Kennedy, W.J. 2, Wagreich, M. 3, Tröger, K.-A. 4, Skoumal, P. 5

1) Geological-Palaeontological Department Museum of National History, Vienna, Austria,
   *E mail: herbert.summesberger@nhm-wien.ac.at
2) Oxford University, Museum of Natural History, Oxford, UK
3) Department of Geodynamics and Sedimentology, University of Vienna, Austria
4) Institut für Geologie, Technische Universität Freiberg, Freiberg/Sa., Germany
5) Bastiengasse 56, 1180 Vienna, Austria

In the Gosau area (Gosau/Upper Austria/ Russbach/Salzburg) the Placenticeras polyopsis Zone (Santonian) can locally be subdivided by ammonite assemblages into three subzones.

A) Eulophoceras natalense Subzone (early Santonian).

Eulophoceras natalense appears in the basal Santonian together with Nowakites savini, Texanites quinquenodosus and Cladoceramus undulatoplicatus. “Hemitissotia randoi” Gerth 1961 frequent in the basal Santonian is the juvenile stage of Eulophoceras natalense, and is its synonym. Texanites quinquenodosus extends through the early and middle Santonian until about 20 m below the occurrence of the Late Santonian Placenticeras paraplanum.

B) Muniericeras gosauicum Subzone (middle Santonian).

Muniericeras gosauicum occurs abundantly together with Texanites quinquenodosus, Parapuzosia corbarica and baculitids in the Randobach area (Russbach, Salzburg).

C) Placenticeras paraplanum Subzone (late Santonian).

Placenticeras paraplanum occurs together with abundant Placenticeras polyopsis, Boehmoceras arculus and Boehmoceras krekeleri and Eulophoceras jacobi and Diaziceras austriacum. Reginaites is the only representative of the Texanitidae. The highest ammonite occurring in the Schattau section (Russbach, Salzburg) is Texasia dentatocarinata which seems to be already close to the base of the Campanian. Also indicative for the late Santonian is Marsupites laevigatus. Cordiceramus muelleri muelleri and Sphenoceramus ex gr. pachti/cardissoides occur in a remarkable cluster of articulated specimens in the late Santonian. In a local mass occurrence of Micraster coranguinum rostratus the planktic foraminifera Globotruncanita elevata and Globotruncanita stuartiformis have their first (local) appearance. Dicarinella asymetrica is still present up to the top of the Schattau section, indicating the asymetrica total range zone or the asymetrica-elevata concurrent range zone according to planktic foraminiferal zonations. Nannofossils give evidence for nannofossil standard zones CC17 and UC12–13.