

Biostratigraphy of the Gosau-Group (Upper Cretaceous; Eastern Alps).

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The Gosau-Group of the Eastern Alps comprises a series of synorogenic formations from Late Turonian to Eocene age. Terrestrial to deep marine clastic sediments reflect the different phases of the orogeny. The sediments are trapped in isolated synorogenic basins, each of them with its own subsidence and sedimentation history (WAGREICH 1991). Abundant and diverse macrofossil faunas are indicative for a shallow marine environment for periods of slow subsidence and nearshore conditions. Correlation is based on ammonoids (KENNEDY & SUMMESBERGER 1996) and inoceramids (TRÖGER & SUMMESBERGER 1994) as well as on micro- and nanofossils (e.g. WAGREICH 1992). Palynological investigations (SIEGL-FARKAS 1994, DRAXLER 1997) integrated with nanofossil research (WAGREICH & SIEGL-FARKAS 1996) in terrestrial environments lead to results correlatable with stratigraphical scales in marine sediments. The transgression in the western part of the Eastern Alps (Brandenberg, Tyrol) is of Upper Turonian age (*deverianum*-Zone; SUMMESBERGER & KENNEDY 1996). The lower part of the *Subprionocyclus neptuni*-zone is represented by a terrestrial coalbearing formation the Gosau basins of Brandenberg, Strobl-Weissenbach and Neualpe/Rußbach (Salzburg). Marine conditions re-occurred towards the end-Turonian *Germari*-Zone (KAPLAN & KENNEDY 1994) represented by *Reesidites minimus* (HAYASAKA & FUKADA) and *Barroisiceras haberfellneri* (HAUER) and co-occurring *Didymotis costata* (FRIC) and *Mytiloides scupini* WALASZCZYK & TRÖGER. *Forresteria alluaudi* (BOULE, LEMOINE & THÉVENIN) seems to indicate Early Coniacian (Bad Ischl; SUMMESBERGER 1985). Mid-Coniacian ammonite faunas with *Peroniceras*, *Tissotioides* and *Metatissotia*, *Scaphites* (SUMMESBERGER 1985) are present together with *Cremnoceramus* div. sp. and *Platyceramus* div. sp. at Strobl/Weissenbach and Nussenseebach. Late Coniacian ammonites (e.g.: *Gauthiericeras margae* (SCHLÜTER) and *Paratexanites serratomarginatus* (REDTENBACHER)) occur in the Upper Coniacian S of Salzburg. Late Coniacian *Volviceras* occurs in the basin of Gosau. Basal Santonian is marked by the co-occurrence of *Texanites* and *Cladoceramus undulatoaplicatus* (TRÖGER & SUMMESBERGER 1994). In the Late Santonian *Placenticeras polyopsis* (DUJARDIN) is abundant. ammonites and inoceramids are rare in the Campanian due to flyschoid sediments and conditions below CCD. Recently discovered faunas from the Gams basin (Steiermark) are of Early (*Bidorsatum*-Zone) and of Late (*Phaleratum*-Zone) Campanian age. Late Campanian ammonites and inoceramids occur rather in the shallower marine deposits of the Neue Welt basin situated at the eastern end of the Alps (e.g. *Pseudokossmaticeras brandti* (REDTENBACHER)). Also *Pachydiscus neubergicus* (HAUER) indicative for the Maastrichtian occurs only in the eastern and southern part of the Northern Calcareous Alps. Abundant Upper Campanian/Maastrichtian inoceramids of the Neue Welt basin first described by ZITTEL (1862-1868) are currently under study (TRÖGER).

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