

Sinemurian biostratigraphy of the Tannscharten section near Reichraming (Lower Jurassic, Schneeberg Syncline, Northern Calcareous Alps)

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Lower Jurassic pelagic to hemipelagic sediments are known to form a significant element of the northernmost tectonic units of the Northern Calcareous Alps (e.g. Ternberg-, Reichraming-, Frankenfels-, and Lunz-nappes). In the Reichraming Nappe comprising the Lower Jurassic Tannscharten locality, Liassic cephalopod-bearing deposits are recorded in a deep water limestone facies, the Allgäu Formation (= "Lias Fleckenmergel").

Lower Jurassic ammonites were collected from deep water limestone of the Tannscharten section southwest of Reichraming (Upper Austria, Northern Calcareous Alps). The outcrop provides a rich Upper Sinemurian (Lower Jurassic) ammonite fauna of the Allgäu Formation. The area is situated in the westernmost part of the Schneeberg Syncline in the north of the Reichraming Nappe (High-Bajuvaric Unit). The ammonite fauna consists of seven different genera, each apparently represented by 1-2 species. Echioceratids are the most frequent components (*Echioceras*, *Leptechioceras*, *Paltechioceras*), followed by the phylloceratids (*Juraphyllites*, *Partschiceras*), and oxynoticeratids (*Gleviceras*, *Paroxynoticerias*). *Juraphyllites libertus*, *Partschiceras striatocostatum*, *Gleviceras paniceum*, *Echioceras quenstedti*, *Echioceras raricostatoides*, *Paltechioceras boehmi*, *Leptechioceras meigeni*, *Leptechioceras macdonnelli* and *Paltechioceras oosteri* are new for the Schneeberg Syncline and allow for the first time a detailed biostratigraphy of the *Echioceras raricostatum* Zone. The assemblage is correlated with other faunae from Austria, Germany, United Kingdom, France, Switzerland and Romania. The cephalopod fauna consists of a mixing of the Northwest European Province and the Mediterranean Province. The detailed biostratigraphy based on ammonites is presented.

The ammonite data are the first step in a detailed biostratigraphic scheme for the westernmost part of the Schneeberg Syncline, a tectonic key-area in the Reichraming Nappe (Northern Calcareous Alps). More investigations on this important occurrence of the Allgäu Formation will take place within a planned project on the Jurassic and Lower Cretaceous climate. The project comprises the present work as part of the basic framework. Additional ammonite collections (bed-by-bed) will be carried out in the next decade to precise the exact position of zone-, subzone- and biohorizon-boundaries. Analyses will include palaeomagnetism, isotopic composition and geochemical analyses along with a detailed biostratigraphy based on micro- and nannofossils.