

BARREMIAN AMMONOIDS FROM THE NORTHERN CALCAREOUS ALPS (SCHNEEBERG SYNCLINE, EARLY CRETACEOUS, UPPER AUSTRIA)

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An Early Barremian ammonoid fauna from the Lower Cretaceous Schrambach Formation of the Schneeberg Syncline (Reichraming Nappe, Northern Calcareous Alps) yielded 8 genera, each represented by 1 or 2 species. The exclusively Mediterranean ammonoids are dominated by *Barremites* (54.2%) of the Ammonitina, followed by the Lytoceratina (22.9%), Phylloceratina (12.5%) and *Karsteniceras* (10.4%) from the Ancyloceratina.

The macrofauna is represented especially by ammonoids. The whole section yielded about 48 ammonoids. Due to the preservation (moulds) of the cephalopods and the lithologic character of the Schrambach Formation, collecting and preparing ammonoids is difficult. Probably one ammonoid zone defined by Reboulet et al. (2003) can be recognized.

The stratigraphic investigation of the ammonoid fauna revealed that the Hirner section comprises uppermost Lower Barremian sediments (probably *M. moutonianum* Zone or *C. darsi* Zone) and belongs exclusively to the Mediterranean Province.

Sorting and packing due to sedimentological or biological effects, and alignments or concentration due to transport or bottom currents, cannot be observed. The analysis of the macrofauna and the sedimentological data support the interpretation of a palaeoenvironment on the outer shelf to slope.

The presented paper is a further step toward correlating rare Barremian faunas (e.g. layers of ammonoid occurrences) in Lower Cretaceous sediments within the Northern Calcareous Alps. Most of the ammonoids found at the Hirner section were apparently abundant or accumulated in few beds over the whole section (e.g. *Barremites*-abundance zone). Such beds show extraordinary abundance of more or less one species (see Lukeneder, 2003). This was investigated on bedding planes from the Hirner section.

The main future investigation topics concerning these ammonoid abundance zones and biohorizons within the above-described framework will be the palaeoecological, palaeobiogeographic and biostratigraphic development of Lower Cretaceous ammonoid beds within the Northern Calcareous Alps.

References

- LUKENEDER, A. 2003. Ammonoid stratigraphy of Lower Cretaceous successions within the Vienna Woods (Kaltenleutgeben section, Lunz Nappe, Northern Calcareous Alps, Lower Austria). In: Piller W.E. (Ed.): *Stratigraphia Austriaca. Austrian Acad. of Sci. Series, "Schriftenreihe der Erdwissenschaftlichen Kommissionen"* 16, Vienna, 165-191.

REBOULET, ST., HOEDEMAEKER, P.J., AGUIRRE-
URRETA, M., ALSEN, P. & al. (20 other
authors) 2006. Report on the 2nd meeting
of the IUGS lower Cretaceous Ammonite

Working Group, the 'Kilian Group'
(Neuchatel, Switzerland, 8 September
2005). *Cretaceous Research*, 27, 712-
715.

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