

Ammonite stratigraphy in Early Cretaceous sedimentary rocks of the central Northern Calcareous Alps (Salzburg, Austria)

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In a well preserved complete succession from the Late Jurassic to the Early Cretaceous outcropping in hemipelagic marls determinable ammonites were found at the Leube quarry (Salzburg). Stratigraphy with ammonites is not known from the quarry until now, only PLÖCHINGER found 1955 in marly limestones *Fuhriella michaelis* (UHLIG, 1902) and 1968 in greenish-grey marls *Bochianites neocomiensis* (D'ORBIGNY, 1842) and *Kilianella roubaudiana* (D'ORBIGNY, 1850). The first new found ammonites occur over thin bedded radiolarian turbidites in greenish-reddish marly limestones. Greenish-grey-brown marls with plant remnants are also ammonite bearing and the highest ammonite level is between the marl-limestone succession above the marls. For the ammonite zonation we follow REBOULET et al. (2009). *Lytoceras* sp. and *Phylloceras* sp. are not of biostratigraphic interest. The occurrence of *Spiticeras* sp. and *Berriasella* sp. shows the uppermost Late Berriasian (*Subthurmannia boissieri* Zone) and the lower part of the Early Valanginian (*Tirnovella pertransiens* and *Busnardoites campylotoxus* Zone) (DRUSCHITS 1973, VASICEK et al. 1999). A little bit higher the appearance of *Fuhriella michaelis* (UHLIG, 1902) gives still an earliest Valanginian age (*Tirnovella pertransiens* and *Busnardoites campylotoxus* Zone (VASICEK et al. 1999, WIPPICH 2003). *Kilianella roubaudiana* (D'ORBIGNY, 1850) is known from the Late Berriasian (*Subthurmannia boissieri* Zone, VASICEK et al. 1999) and the Early-Late Valanginian (*Tirnovella pertransiens-Saynoceras verrucosum* Zone, DRUSCHITS 1973, WIPPICH 2003). Here it occurs with *Bochianites neocomiensis* (D'ORBIGNY, 1842) which is known from the Early Valanginian (*Tirnovella pertransiens* and *Busnardoites campylotoxus* Zone, VASICEK et al. 1999, WIPPICH 2003) and also from the Late Valanginian (*Saynoceras verrucosum* Zone, VASICEK & FAUPL 1999, LUKENEDER 2004, LUKENEDER & REHAKOVA 2004). Therefore the age for the marly part of the profile is here first described with ammonites from the *Subthurmannia boissieri* Zone of Late Berriasian to the *Busnardoites campylotoxus* Zone of Early Valanginian. To declare a strict Berriasian-Valanginian boundary more detailed stratigraphic information is needed. The first ammonite dating defines clearly the age range of the investigated succession as a time equivalent of the Schrambach (Marls and hemipelagic limestones) and the Lower Rossfeld Formation (Marls and marl-turbiditic limestone sequence). Interestingly the facies, lithology and thickness of both formations here is different from the type-locality

of the Schrambach and the Rossfeld Formation further to the south.

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The geology and sedimentology of the Hochreithberg (Salzburg): Cherty limestones and breccias as a tool for palaeogeographic reconstructions in the Late Jurassic of the central Northern Calcareous Alps

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On top of the Mount Hochreith, east of Golling (Tennengau, Salzburg) in the central Northern Calcareous Alps (NCA), are since PLÖCHINGER (1977) cherty limestones of the Hochreith Formation known. Firstly interpreted as part of the Valanginian Lower Rossfeld Formation nowadays the radiolarian-spicula pack- to wackestones with chromite, apatite and garnet (WOLETZ in PLÖCHINGER 1977 and own data) are dated by radiolarians and give a Late Kimmeridgian-Early Tithonian age (KRISCHE et al. 2008). In deeper parts of the profile some breccia layers occur in between the cherty limestones. The blackish grey cherty