Freshwater calcareous algae from the Gosau of Kainach. Correlation of the Santonian sediments of Kainach Gosau (Austria) and the Transdanubian Range (Hungary)

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In the frame of the Austrian-Hungarian cooperation, we identified for the first time *Munieria grambasti* BISTRICKY ssp. *sarda* CHERCHI et al., a freshwater calcareous alga, in the Bitumenmergel-Formation (Bituminous Marls) from the Gosau of Kainach and the Coal of Geistthal.

Munieria grambasti BISTRICKY ssp. *sarda* CHERCHI et al., a Characea, occuring together with gyrogonites at certain places in rock-forming quantity, proves that the Bituminous Marl, together with the Geistthal Coal, is a freshwater formation. On the other hand, unambigously, there are intercalations containing the sclerosponge *Didemnoides moreti* (DURAND DELGA) in the Bituminous Marl, and sometimes planktonic foraminifera can be also observed. In several beds freshwater and marine biota occur together. That partly permit the conclusion concerning the rapid fluctuation of the conditions of the freshwater / marine sedimentation.

The sporadic foraminifera and palynomorpha data do not make possible a more exact stratigraphic classification of the Bituminous Marls within the Senonian; we agree with the Santonian age as pointed out by GRÄF, 1975. The Bituminous Marl Formation of the Kainach Gosau including the Geistthal Coal can be correlated with the Ajka Coal Formation of the Transdanubian Range on the basis of the freshwater series with *Munieria grambasti* BISTRICKY ssp. *sarda* CHERCHI et al. of the coal deposits, and of the marine intercalations in its upper part.

According to the most recent data in the Sümeg Süt 22 borehole - which penetrated the type section of the Ajka Coal Formation and of the Jákó Marl Formation (formerly *Cyclolithes* and *Gryphaea* Marl), which continuously develops from it - in the marine intercalations of the upper part of the Ajka Coal Formation *Dicarinella concavata* (BROTZEN) was

found. This suggests that the age of the formations is Santonian (but not uppermost Santonian; BODROGI et al., in press). From the Csabrendek Cr 2 borehole, drilled near the Süt 22 borehole, from the *Cyclolithes* Marl (lower Csingervölgy Member of the Jákó Marl Formation) SUMMESBERGER determined the ammonite *Placenticeras polyopsis* (DUJARDIN) (SUMMESBERGER & SIDO in PARTENYI, 1984).

All the Bituminous Marl samples in Gosau of Kainach were devoid of nannoplankton. On the contrary the Central Basin Series (Hauptbeckenfolge) West of St. Bartholomä and the Cement Marl Formation at Reiteregg, on the basis of nannoplankton shows Early Campanian age.

References

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