

CRETACEOUS FACIES EVOLUTION IN A POLYPHASIC TECTOGENETIC BELT. THE SOUTH APUSENI MOUNTAINS

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The south Apuseni mountains are the only territory within the Alpine-Carpathian branch of the Tethys where active continental margin units are well developed. Together with the complex tectonic frame, the polyphase tectonics has given rise to a variety of facies during Cretaceous times.

During the early Cretaceous, Aptychus beds, flysch - sometimes with interbedding spilitic lavas - and Wildflysch were deposited. Shelf sediments and flysch were deposited after the Mid Cretaceous tectogenesis. Although the Pre-Gosau tectogenesis in the south Apuseni mountains is not very accentuated, it is followed by a wide-spread Gosau transgression. Until the Laramian phase became effective flysch, passing into Wildflysch in the Upper Senonian, was deposited in basinal zones.

LOWER CRETACEOUS MICRO-BIOSTRATIGRAPHY OF DJEBEL OUST BASED ON BENTHONIC AND PLANKTONIC FORAMINIFERA (TUNISIA)

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The Berriasian-Albian sections of the locality Djebel Oust and of the area of Djebel Zaghouan in Tunisia are well known for their quality. They have been studied in detail by Z. STRANIK, E. MENCIK, L. MEMMI, and J. SALAJ (1972), E. BUSNARDO and L. MEMMI (1972), L. MEMMI (1965, 1979, 1981), L. MEMMI and A.-L. MAAMOURI (1974), L. MEMMI and F. SALAJ (1975), A.-L. MAAMOURI and F. SALAJ (1978), J. SALAJ (1976, 1984, 1989), P. DONZE, G. LE HEGARAT, and L. MEMMI (1975), as well as by P.F. BUROLLET, L. MEMMI and A.M. RABET (1983).

J. SALAJ proposed at the meeting of the Working Group on Pelagic Facies of IGCP Project 262 in Urbino, 1989, to study these sections as supporting sections for the Lower Cretaceous of the Tethyan realm. With the exception of the Valanginian, they are well exposed as well as rich in mega- and microfauna and in microfossils. J. SALAJ (1980) has therefore the establishment of Lower Cretaceous boundary stratotypes in these sections.

Mr. F. ZARGOUNI, director of the Service Géologique National de Tunisie, initiated

work on two Aptian-Albian sections in the are of Djebel Oust. These sections had already been investigated in the frame of the Vth African Micropaleontological Colloquium in Tunis, 1974. They have now been surveyed cartographically. Based on over 300 samples, the lithology, facies, microfacies and biostratigraphy have been investigated and documented.

The benthonic and planktonic foraminifera zonation (Tab. 1) is based on the first occurrence of index forms in the sections. Compared with former subdivisions, the biostratigraphic resolution has been considerably improved.

The individual zones are rich in benthonic and planktonic foraminifera. Their variability is considerable. The foraminifera are well preserved and show no traces of redeposition. In portions with turbidites, samples were taken from parts which had not been affected by turbiditic activities.

The sections have been correlated with Berriasian-Albian sediments of the Vocontian trough, which had been investigated by M. MOULLADE (1966, 1977), R. BUSNARDO, J.-P. THIEULOY, M. MOULLADE et al. (1979), and by A. ARNAUD-VAN-NEAU, H. ARNAUD, J.-P. THIEULOY and M. ARGOT (1987).

BIOZONATION OF LOWER CRETACEOUS SEQUENCES IN THE WESTERN CARPATHIANS, CSFR

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Together with microfacies and microplankton, the distribution of other fossil groups has been examined in well-documented Lower Cretaceous sections of the Western Carpathians.

Biostratigraphic markers of co-occurring groups of organisms enabled the authors to compare various para-biostratigraphic scales.

Ammonites are too rare in the Western Carpathians to be applicable for a zonation of the Tithonian/Berriasian boundary beds. The localization of the J/K boundary is mainly based on the calpionellid distribution (Crassicollana/Calpionella zones boundary). Although radiolarians have lost their importance as rock-forming organisms during late Jurassic time, a change in the composition of radiolarian associations at the J/K boundary is evident. Other evidence for this boundary is provided by the mass eruption of nannococones and the appearance of new nannoplankton forms.

The Berriasian/Valanginian boundary is mainly drawn with calpionellids, less commonly with radiolarians or nannoplankton. Despite the abundance of microfossils,