determined from the Stoliczkaia dispar ammonite zone of the Zirc Limestone Formation. These data suggest an Upper Albian-Lower Cenomanian age.

LOWER CRETACEOUS AMMONITE BIOSTRATIGRAPHY AND SEQUENCE STRATIGRAPHY

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The Lower Cretaceous succession along the Rio Argos (Caravaca, SE Spain) consists of a cyclic alternation of marly coccolite limestone and marlstone beds. Ammonites constitute 99% of the megafossils. In this continuous Tethyan pelagic section of Barriasien to Barremian age, the position of the various system tracts has been determined and dated by ammonite biostratigraphy. There are several sequences in addition to those marked by Hag et al. (1988) on the Mesozoic-Cenozoic cycle chart.

In this succession, several important turnovers in the ammonite fauna could be demonstrated. Similar turnovers also occur elsewhere in the Mediterranean province at the same stratigraphic levels. They are accompanied by minima in the number of species. These oligotaxis minima are preceded by beds in which the extinction rate greatly exceeds the origination rate. This rate is reversed in the beds following the minima. Accordingly, the ammonite composition of the subjacent and the suprajacent subzones differs considerably.

The supraregional distribution of the zones implies a supraregional cause of the faunal changes: They are ascribed to severe eustatic sea-level drops (Hoedemaeker, 1983). During these drops, the shelf biotopes of many ammonite species were pushed over the shelf edge and severely telescoped. This enhanced selection pressure and ultimate extinction. In the Rio Argos section the levels of faunal turnovers are very close to or coincide with sequence boundaries in which the rates of relative sea-level drops are greatest.

Invariably, oligotaxic minima/faunal turnover dirctly follow pronounced maxima in the number of concurrent ammonite species. These polytaxic maxima are of supraregional significance as well.

They correlate well with major incursions of warmwater organisms into the boreal basins of north Germany (KEMPER & WIEDEROTHM 1987; MUTTERLOSE, 1988, 1991) and equally with major transgressions on platforms of the Mediterranean region (ARNAUD - VANNEAOU, & ARNAUD, 1991) and other part of the world. The maxima are therefore interpreted as coinciding with the highest sea-level stands. The rate of the immediately following relative sea level drops was therefore extraordinarily severe.

However, not each sequence boundary is accompanied by a faunal turnover; this

is only the case in those following polytaxic maxima. Faunal minima/turnovers coincide with every fourth or fifth sequence boundary. In general, there are five ammonite (sub)zones in between. They represent a cyclicity in between the second and third order cycles and correspond to the long-term variations of the average sea level ("niveau moyen de la mer") of Arnaud-Vanneau & Arnaud (1991). We would expect these sequence boundaries to be type-1 boundaries. However, only two type-1 boundaries have hitherto been established within the Berriasian / Barremian interval (HAG et al., 1988). The one along the so-called Late Cimmerian Unconformity (Be7, HAG et al: 128.5 m.y.) is indeed accompanied by a rapid faunal turnover. The following one (V1, HAG et al: 126 m.y.) had no influence at all on the ammonite fauna. This implies that it is not the low sea level stand that causes the faunal turnover, but rather the exceptionally severe sea-level drop.

MID-CRETACEOUS DINOFLAGELLATE CYSTS OF HUNGARY

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Within the framework of IGCP Project 262 (Tethyan Cretaceous Correlation), a multidisciplinary research programme focusses on Hungarian Cretaceous sequences. The present study concentrated on the dinoflagellate cyst content of core samples from the boreholes Jasd-42 and Vértessomló-8. From the Jasd-42 borehole, (which is located in the north Bakony Mountains) the interval Upper Albian to Lower Cenomanian was investigated; from Vértessomló-8 which was drilled in the Geresce Mountains, the Lower-Middle(?) Albian was investigated.

The study included: (1) a palynofacies analysis, (2) the determination of the marine/continental ratio and (3) the quantitative analysis of the dinoflagellate cyst content. Based on the palynological content, some interpretations of ages, palaeo-environments and interregional correlations were defined more precisely. The compositional shifts in Late Albian-Early Cenomanian assemblages match perfectly the 3rd order eustatic cycles.