MAASTRICHTIAN BIVALVE BIOSTRATIGRAPHY - DOES THE CONCEPT TETHYS STILL HAVE A MEANING TOWARDS THE END OF THE CRETACEOUS?

An. V. Dhondt

Koninklijk Belgisch Instituut voor Natuurwetenschappen, Brussels, Belgium

In the latest Campanian - Maastrichtian interval inoceramid and pectinid species have been used or can be used as index fossils.

Among the inoceramids, *Trochoceramus* species are restricted to the latest Campanian - Lower Maastrichtian interval, and the individual species are shorter lived. Similary the monospecific genera *Spyridoceramus* and *Tenuipteria* can be used thus for recognising different Maastrichtian zones.

Among the pectinids *Merklinia palassoui* (LEYMERIE, 1851) (= *Pecten catalaunicus* VIDAL, 1921 = *P. peromatus* COTTREAU, 1922) is indicative for the Lower Maastrichtian from Cuba to Oman; *Microchlamys acuteplicata* (ALTH, 1850) is indicative for the Upper Maastrichtian from Maastricht to the Middle Est.

The geographical distribution of the taxa from lower Cretaceous strata is clearly either temperate of Tethyan, possibly indicating distributions mainly by occur in both realms and their distributions are probably along latitudinal currents.

CHARACTERISTIC FOSSIL ASSEMBLAGES BELOW THE K/T BOUNDARY IN THE NW PART OF THE ADRIATIC CARBONATE PLATFORM

K. Drobne*, B. Ogorelec & M. Plenicar***

*Paleontoloski institut Ivana Rakovca, Ljubljana
**Geologisky zavod, Ljubljana

In the area where Guido Stache has established the Liburnian Formation, Upper Cretaceous (Maastrichtian) and Paleocene beds are outcropping. According to Stache, the Liburnian Formation represented the transition between marine Cretaceous beds and marine beds containing foraminifera of the genus *Alveolina*. The strata are characterized by numerous oscillations of sea level and by abundant environmental changes. Based on the observations in coal pits- among them those between Lipica and Vremski Britof- Stache recorded sections continuously passing the Cretaceous / Tertiary boundary. These observations were confirmed by later researchers.

Changes between marine assemblages and those of brackish and freshwater origin with characeans and lagynophores occur further to the south, close to former land areas.

Cretaceous and Paleocene limestones occur north of the coal basin towards the Vipava valley, at the supposed margin of a larger marine depression.

In order to localize the K/T boundary, 1-2 m of the Maastrichtian and several meters of the beds overlying the boundary were investigated in detail in several traverses. Characteristic foraminifera include *Rhapydionina liburnica* (Stache) (locally predominating) in association with *Moncharmontia* sp., *Cuneolina ketini* Ihnan, and *Laffitteina* sp., *Cuvillierinella* sp. and *Bolivinopsis* sp. occur separately. Characteristic magafaunal elements are *Biradiolites bayfei* Toucas, *Bournonia adriatica* Pejovic, *B. triangularis* Plenicar et Zucchi - Stolfa, *B. problematica Plenicar et Zucchi - Stolfa, B. parva* Pejovic, *B. aff. retrolata* (Astre), *Radiolites angeioides* (Lapeirouse), *Gyropleura* sp. and Apricardia sp. The associations disappear a few decimetres below the K/T boundary.

In this facies, the time interval may be dated by Rhapydionina liburnica, Moncharmontia sp., Murciella sp. and assemblages of *Bournonia*. In the shallow marine environment the K/T boundary is also confirmed by higher concentrations of Co, Ni, Cr, V, As, Ce, Sm, Zr, and Ga.

SILICICLASTIC- CARBONATIC TRANSITIONS IN THE LOWER CRETACEOUS TRANSGRESSIVE SERIES OF THE ALMOPIAN SUBZONE IN THE ARIDAEA AREA (NORTHERN GREECE)

A. Galeos,[*], F. Pomoni-Papaioannou[*], S. Tsaila-Monopolis[**] and Chr. Ioacim[*]

[*]IGME, Athens
[**] University of Patras

The Aridaea Loutra unit of the Almopian subzone consists of a metamorphic, pelagic, volcano-sedimentary series. Its thickness is more than 1000 m. This series forms the bedrock of an ophiolite complex which was deposited during the Upper Jurassic subduction. It is overlain transgressively by a thick series of Lower Cretaceous siliciclastic rocks which form a syncline. The rocks are coarse-grained in the NW and fine-grained in the NE.

The siliciclastic sequence is mainly composed of coarse-grained sediments with an average thickness of 2000 m towards the center of the syncline. From base to top the following lithostratigraphic units have been distinguished:

1. The transgressive basal unit formed by ophiolitic conglomerates

2. Reef limestones with ophiolitic material, containing corals, sponges, etc. The corals were growing contemporaneously with the deposition of ophiolitic clastics. The