

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* Ilnan, and *Laffiteina* sp., *Cuvillierinella* sp. and *Bolivinopsis* sp. occur separately. Characteristic megafaunal elements are *Biradiolites baylei* Toucas, *Boumonia adriatica* Pejovic, *B. triangularis* Plenar et Zucchi - Stofa, *B. problematica* Plenar et Zucchi - Stofa, *B. parva* Pejovic, *B. aff. retolata* (Astre), *Radiolites angeioides* (Lapeirouse), *Gyropleura* sp. and *Apriocardia* 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 *Boumonia*. 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)

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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

thickness is between 5 and 150 m. This series represents the first clastic-carbonate transition episode.

3. Quartzitic conglomerates, up to 800 m thick. They represent high-gradient fluvial deposits which have accumulated during episodes of high discharge. Intercalations of sandstones and mudstones are common.

4. Quartzitic sandstones and mudstones, corresponding to low-gradient fluvial deposits. A gradual deepening is assumed.

5. Lenses of neritic limestones with *Nerinea*, bivalves, echinoids, corals, *Palorbitolina* (*Palorbitolina*) *lenticularis*, *Sabaudia minuta*, etc. Towards the northern part of the syncline the thickness is up to 150 m. These limestones represent the second clastic-carbonate transition episode. It is suggested that they have been deposited during a relative drop of sea level. Palynological investigations have yielded the following association: *Oligospaeridium* complex, *Chytroisphaeridia spinosa*, *Michystridium dellandrei*, and *Classopolis* sp.

The age of the unit is probably Albian.

CRETACEOUS BIOZONE CATEGORIES BASED ON PLANKTONIC FORAMINIFERA - SIGNIFICANCE AND PROBLEMS

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In the last 60 years several biostratigraphic zonations based on planktonic foraminifera have been proposed. Some of them were considered as standard zonations, e.g. these of Sigal (1977), VAN HINTE (1976), and more recently these of ROBASZYNSKI & CARON (1979), ROBASZYNSKI et al. (1984) and CARON (1985). Other authors prefer local biostratigraphic zonations (see: GASINSKI 1983, 1988). Consequently, different biozone categories have been used by almost every author: Interval Biozones, Partial Concurrent Range Zones, Concurrent Range Zones, Taxon Range Zones, etc.

The stratigraphic importance of a number of species is still controversial (e.g. *P. praebuxtorfi*;) the coexistence of others (e.g. *R. reicheli* and *R. greenhornensis*) is doubtful. The palaeo-biogeographical distribution of several planktonic index species is questionable, especially in the Tethyan realm. *W. archaeocretacea* may serve as an example. Its occurrence in the Carpathian through is still disputed although it is the marker of a biozone in many standard zonations.

Different concepts and interpretations must be harmonized in order to put the correlation with planktonic foraminifers on a sound basis.