

## **Benthic foraminiferal assemblages and microfacies analysis of the Upper Cretaceous-Paleocene (?) platform carbonate sequence in the Central Taurides, S Turkey**

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The Upper Cretaceous succession outcropping in the area known as Anamas-Akseki Autochthon or Geyikdağı Unit, which is situated western part of the Central Taurides, consists of approximately 500 m thick purely platform carbonate sediments. Integrated microfacies/facies studies and biostratigraphic analysis of the Kuyucak stratigraphic section provided to recognise depositional settings and benthic foraminiferal biozones. The Upper Cretaceous begins with Cenomanian limestones intercalated with limestone breccias (Unit 1) containing mainly *Pseudorhapydionina dubia*, *Cuneolina pavonia*, *Nezzazata simplex* (Association 1) and unconformably overlies the Lower Cretaceous (Barremian-Aptian) limestones with *Vercorsella laurentii*, *Praechrysalidina infracretacea* and *Salpingoporella hasi*. The Cenomanian limestones include benthic foraminiferal packstone/wackestone, peloidal packstone/wackestone and mudstone microfacies deposited restricted platform conditions. Intercalations of emersion breccias suggest sporadic subaerial exposure of the platform. The Cenomanian succession are truncated by an unconformity characterised by locale bauxite infills. Immediately above the unconformable surface, dolomitic limestones and rudistid limestones (Unit 2) are assigned to the upper Campanian based on the benthic foraminiferal assemblage (Association 2) comprising mainly *Murciella cuvillieri*, *Pseudocyclammina sphaeroidea*, *Accordiella conica*, *Scandonea samnitica* and *Fleuryana adriatica*. The upper Campanian limestones composed of dominantly benthic foraminiferal packstone/wackestone microfacies deposited in shallow water environments with low water energy, subjected to restriction in water circulation. The following limestones of the Unit 2 is characterised by sporadic intercalation of “open shelf” *Orbitoides*, *Omphalocyclus*, *Siderolites* assemblage (Association 3), assigned to the Maastrichtian, in addition to pre-existing “restricted platform” species. *Pseudedomia hekimhanensis* and *Helenocyclina beotica* are occasionally accompanied this association. In the upper half of this biozone, the *Rhapydionina liburnica* subzone (Association 3b) is distinguished by the first occurrences of *Valvulina* aff. *triangularis*, *Loftusia minor* as well as the nominal species. The Maastrichtian limestones with sporadically open marine influence consist mostly of bioclastic/microbioclastic (rudist-bearing) wackestone/packstone/grainstone, benthic foraminiferal packstone/wackestone with rudist fragments and peloidal/intraclastic packstone/wackestone microfacies deposited in shallow subtidal-subtidal (lagoonal) environments characterised by different hydrodynamic regimes (low to high energy). The Upper Cretaceous succession passes upwardly into 70 meters thick limestones and clayey limestones (Unit 3) which do not contain rudists and pre-existing foraminiferal assemblage with one exception *Valvulina* aff. *triangularis*. Variable amounts of ostracoda, Discorbidae, Miliolidae, dasycladacean algae and *Stomatorbina* sp. (Association 4) occur into muddy-rich microfacies suggesting restricted conditions with low water energy. A probable Paleocene age is proposed for the Unit 3 based on the occurrence of *Valvulina* aff. *triangularis* and *Stomatorbina* sp. which were previously recorded from Paleocene of peri-Tethian platforms. The Upper Cretaceous-Paleocene(?) platform carbonate succession is unconformably overlain by conglomerate, limestone with Nummulites and siliciclastic sediments of the Eocene age.

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