Biostratigraphy and facies analysis of the Upper Cretaceous platform carbonates of the Anamas-Akseki Autochton in the Central Taurides, S Turkey

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The Upper Cretaceous platform carbonate successions of the Anamas-Akseki Autochton (western Central Taurides, S Turkey) include bauxite deposits. There is an agreement on that the basal limestones of the bauxite are of the Cenomanian age, while the overlying limestones range from the Cenomanian to the Senonian or uncertain in age according to the published age data. Biostratigraphic and facies analysis of the Madenli and Doğankuzu outcrop sections permit to more precisely dating of the platform emersion periods. The Cenomanian is represented by grey-coloured, well-bedded limestones intercalated with pinkish sparitic and yellowish grey dolomitic beds. The middle to upper Cenomanian benthic foraminiferal assemblage consists of mainly Chrysalidina gradata, Pastrikella balcanica (Association 1). The lower part of the unconformably overlying massive limestones contains long-ranging taxa such as Cuneolina pavonia, Spiroloculina sp., Nezzazata sp. (Association 2) and can be assigned to the uppermost Cenomanian or Turonian. The upper part of the massive limestones with mm-scale rudist fragments contains a different assemblage comprising Minuoxia sp., Arenobulimina sp., Accordiella conica and rare Fleuryana adriatica (Association 3) which is placed to the Campanian. The top of the massive limestone unit is truncated by a disconformity surface with minor bauxite deposit. The unconformably overlying limestones are characterised a by alternation of white laminated-dolomitic limestones and rudist-bearing limestones with intercalations of collapse breccias. They are assigned to the middle-upper Maastrichtian based on the presence of Rhapydionina liburnica and Fleuryana adriatica (Association 4). The Upper Cretaceous shallow carbonate platform is unconformably overlain by Lower Eocene limestones which do not contain rudists and the pre-existing foraminiferal assemblage. It is assigned to the Lower Eocene based on the presence of a different assemblage comprising abundant dasycladacean algae, Valvulina aff. triangularis and rare Laffitteina sp. (Association 5). The Upper Cretaceous succession is characterised by inner platform environments including peritidal and shallow subtidal environments with occasional subaerial exposures. Biostratigraphic and sedimentologic analysis revealed that the first major emersion period of the platform is between Cenomanian-Turonian(?) and Campanian and second one corresponds to the early Maastrichtian.

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