

The Upper Viséan rugose corals in the microbial-sponge-bryozoan-coral bioherm in Kongul Yayla (Taurides, S. Turkey)

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The Anatolide-Tauride Block (OZGÜL 1984) is an assemblage of 6 tectono-stratigraphic units elongated E-W. In its centre the Geyik Dağı unit is considered to be autochthonous. All other units are allochthonous; these are the Bozkır, Bolkar Dağı and Aladağ units in the north, and the Antalya and Alanya units in the south. In the Hadim area, only the Aladağ and Bolkar Dağı units contain Mississippian sedimentary rocks (OZGÜL 1997). In the latter unit, the Viséan succession consists of shallow-water limestones intercalated into shales. ÖZGÜL (1997) attributed a Viséan-Serpukhovian age to the limestones (Zindancık Member) and concluded that they are intercalated in contemporaneous shales. TURAN (2000) considers that all the limestone lenses of the Kongul Formation are allochthonous blocks ("Zindancık metaolistromu", Devonian to Permian in age) included into a thick flysch sequence of supposed Triassic age.

The bioherm of Kongul Yayla (located between Hadim and Taşkent) shows four main lithological units reflecting distinct growth stages from the base to the top:

(1) the basal bioclastic beds made of coarse bioclastic rudstones overlaid by a bafflestone with *Siphonodendron pauciradiale* containing numerous multithecoporid tabulate coral.

(2) the core facies formed of microbial floatstones and wackestones poor in macrofauna at its base but the diversity increases upward: lithisid sponges, fistuliporid bryozoan, pelmatozoans, brachiopods, foraminifers and corals. The solitary rugose are: *Axophyllum* aff. *pseudokirsopianum*, *A.* aff. *kirsopianum*, *Caninophyllum* aff. *archiaci*, *Palaeosmilia murchisoni* and *P.* aff. *multiseptata*. The colonial rugose corals are all of fasciculate growth form: *Siphonodendron pauciradiale*, *S. irregulare* and *Espiella* sp. In the upper part of the bioherm, microbial communities, michelinid tabulate corals and small solitary undissepimented corals (*Amplexocarinia* aff. *cravenensis* and *Rotiphyllum densum*) form microbial boundstones.

(3) the crest in the uppermost part of the bioherm is a coral-chaetetid capping bed formed by large (1 m-scaled) colonies of *Lithostrotion maccoyanum* and *Chaetetes* sp. Despite of their exceptional size, the colonies seems to have fought against sediment fouling and burial (or microbial coating?), because many of them show disrupting growth on the topmost surface of the colonies and rejuvenescence features.

(4) the bioclastic facies containing reworked material from the bioherm in lateral and overlying positions to it. The entire bioherm is topped by siltstones with thin bioclastic horizons, often slumped. The fauna is the same than in the reef but reworked (?) and coated by microbial micritic laminae. These rudstones are covered by shales and siltstones containing bioclasts and solitary rugose corals related to *Sochkineophyllum* sp.

Preliminary biostratigraphic dating is based on rugose corals. The occurrence of *Siphonodendron pauciradiale* at the base and of *Lithostrotion maccoyanum* at the top of the bioherm, and without younger fauna, indicate a Warnantian age (Asbian, RC7 β biozone of POTY et al. 2006). The bioclastic rudstones and the shale above the bioherm are also Viséan in age, because the solitary rugose coral (*Sochkineophyllum* sp.) has been collected near the contact with the reef.

The Kongul Yayla reef shares many similarities with contemporaneous reefs in Europe and North Africa, especially to the Cracoean reefs from northern England by the incorporation of sponges and corals into a microbial framework (ARETZ & HERBIG 2003). The rugose coral assemblage (*Siphonodendron*, *Lithostrotion*, *Palaeosmilia*, *Axophyllum*) is very similar to those described from England (ARETZ & HERBIG 2003), Southern Spain (COZAR et al. 2003) and Northern Africa (ARETZ & HERBIG 2008) witnessing the affinities of this part of the Palaeotethys with the Western European Realm. Facies and the coral fauna argue for an European affinity of the Anatolian terrane.

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