



Encrusting micro-organisms from the Upper Jurassic - Lower Cretaceous İnalti Carbonates (Central Pontides, Turkey): Remarks on reefal / peri-reefal facies development

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A detailed taxonomical study was carried out for the identification of encrusting micro-organisms including Bacinella-type structures, *Calciostella jachenhausenensis*, *Crescentiella morronensis*, *Iberopora bodeuri*, *Koskinobullina socialis*, *Labes atramentosa*, *Lithocodium aggregatum*, *Perturbatacrusta leini*, *Pseudorothpletzella schmidi*, *Radiomura cautica*, *Sarsteinia babai*, *Terebella lapilloides* and *Thaumatoporella parvovesiculifera*. Among these microencrusters, *Perturbatacrusta leini*, *Iberopora bodeuri*, *Calciostella jachenhausenensis*, *Pseudorothpletzella schmidi* have been taxonomically revealed for the first time in Turkey. Within the biostratigraphic frame of the İnalti carbonates consisting of *Mesoendothyra izjumiana* zone (Kimmeridgian), *Calciostella jachenhausenensis* zone (Lower Tithonian – Upper Tithonian) and *Protopeneroplis ultragranulata* zone (Upper Tithonian – Berriasian), carbonate sedimentation occurred in 5 depositional environments comprising slope, fore-reef, reef, back-reef and lagoonal environments. Majority of the reefal deposits of the İnalti carbonates can be classified as coral-microbial-microencruster boundstones and frequently occur associated with back-reef and fore-reef deposits within Kimmeridgian – Berriasian interval. A shallowing and a subsequent deepening in the Berriasian have been revealed by the examination of stacking patterns and vertical evolution of the microfacies. Based on the observed microfacies and general features of micro-encrusting organisms it has been concluded that İnalti Limestones share many similarities with the reefal carbonate deposits of Intra-Tethyan domain in terms of microfacies types and microencruster content. These similarities manifest the extension of the European Upper Jurassic – Lower Cretaceous reef belts to the northern Turkey.