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ABSTRACT BOOK

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Lower Aptian *Chondrodonta* beds in shallow-water carbonates of the Tethyan Realm

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Chondrodonta is an oyster-like bivalve quite common in Cretaceous carbonate platforms, with a worldwide distribution. A particularly high concentration of this organism seems to be present in stratigraphic intervals straddling the Oceanic Anoxic Events 1a and 2. However, a clear cause-effect relationship has not emerged yet and therefore it is not completely understood whether the environmental disturbances caused by the OAEs may have, somehow, favored the flourishing of *Chondrodonta*. In this work we present a detailed stratigraphic, sedimentological and geochemical analysis of two stratigraphic sections from the Lower Aptian Apulia Carbonate Platform (Italy) and Arabian Plate (Oman), in which *Chondrodonta* beds are present. The *Chondrodonta* bed analyzed in the Apulia Carbonate Platform (Gargano Promontory) occurs within low-energy inner-platform peritidal cycles of the San Giovanni Rotondo Limestones. The bed, 140 cm thick, is a floatstone to rudstone in the lower part and becomes a boundstone, with shells in life-position, in the uppermost 50 cm. The shells are still articulated and show a high concentration increasing toward the top of the bed. The *Chondrodonta* bed sampled in the Arabian Peninsula (Jebel Akhdar, Northern Oman) occurs in the top-most part of the moderate-energy inner shelf limestones of the Shuaiba Formation. The bed, 40 cm thick, is a floatstone to rudstone with a high concentration of shells, mostly still articulated. Sedimentological and taphonomical data are presented in order to highlight similarities between the shell beds coming from the two different localities. Geochemical analyses, supported by biostratigraphic data, enable us to precisely correlate the two sections and place the timing of the OAE1a. Furthermore, they allow to characterize the *Chondrodonta* beds in terms of elemental and isotopic composition in order to discuss the possible link between these shell beds and the OAE1a.

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