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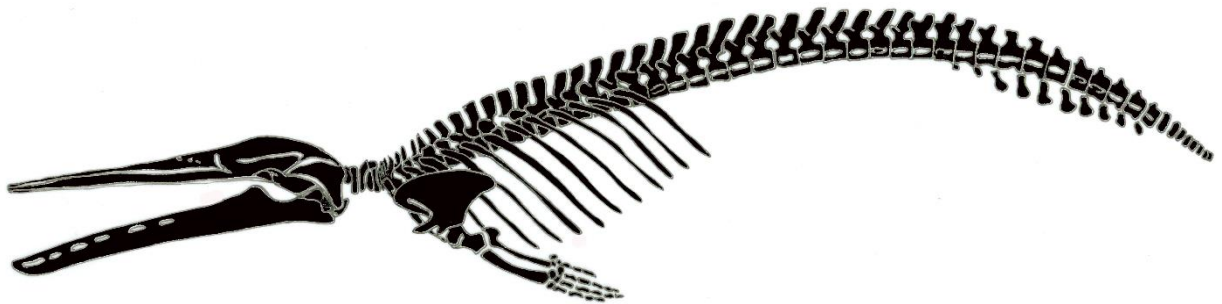


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*A cura di*

Giuseppe MARRAMÀ & Giorgio CARNEVALE

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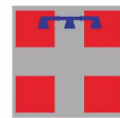
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## The fossiliferous Plio-Pleistocene section of Baia Massolivieri (Siracusa, Eastern Sicily)

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A rich marine fauna from Plio-Pleistocene sediments cropping out in the Massolivieri Bay (E Sicily) was studied. The section, 7 m thick, comprises Pliocene marls with joined valves of *Neopycnodonte cochlear* and *Terebratulula terebratulula*, followed by 20 cm thick yellow silts with *Amusium cristatum*, *T. terebratulula* and *T. scillae* (Gelasian), overlain by 10 cm of cemented sands with *A. islandica* moulds (Calabrian). Over 1.5 m of biogenic sands with *Ophiomorpha*, bryozoans (*Idmidronea* and *Reteporella*) and serpulids follow upwards. The succession ends with 2.5 m thick calcarenites rich in calcareous algae (maerl facies), *Pecten jacobaeus*, *Glycymeris* and bryozoans. We focused on the yellow silts, due to their rich and diversified fossil content, studied through volumetric and picking sampling and in situ determination of bones of the pygmy right whale *Caperea marginata*. A total of 31 taxa was delivered among bryozoans, bivalves, serpulids, echinoids, gastropods and crustaceans such as *Coronula bifida*, plus some teeth of osteichthyes and chondrichthyes. Teeth and vertebrae of *Carcharodon carcharias* were first recorded from Gelasian sediments of Sicily. Apart from the Pliocene marls indicative of deep-sea, fossils and sedimentological features of the overlying Pleistocene succession suggest a mid-shelf paleoenvironment. Particularly, the yellow silts and the *Arctica* layer denote lower hydrodynamic conditions compared to the overlying sands containing a Coastal Detritic paleobiocenosis. A cold paleoclimate is suggested by the Boreal Guest *A. islandica* and other cold-taxa. The finding of small-sized teeth of the extinct shark *Otodus megalodon* from Pliocene sediments close to the studied section, leads to hypothesize a reduction in size of this apical predator as a response of selective spatial and ecological pressures in the Pliocene Mediterranean before its extinction. This opens new research on interspecific competition between the Megatooth survivor and the white shark during Pliocene.