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*Physeter macrocephalus* Linnaeus, 1758 - S. Nicola Arcella (Calabria, S-Tyrrhenian Sea)



**The Cetacean biodiversity in the Italian Seas (Mammalia Cetacea).** The Cetaceans are the marine Mammals more specialized for life in the aquatic environment, having achieved during their evolution profound morphological, anatomical and physiological adaptations. The Cetaceans are considered up to now a monophyletic taxon (Order Cetacea Brisson, 1762), but recent studies at the molecular level have shown that they are closely related to the Order Artiodactyla, considered probably a paraphyletic group. This means that some groups (especially the hippos) are more closely related to Whales than with the other animals of this order. Modern phylogenetic analysis take Artiodactyls and Cetaceans for monophyletic clade of Cetartiodactyla Montgelard, Catzeflis et Douzery, 1997. The Order Cetartiodactyla was adopted by the International Whaling Commission in 2003, by I.U.C.N. (Red List of Threatened Species, Version 2015.3) and by the Committee on Taxonomy of the Society for Marine Mammalogy (List of October 2014). Most zoologists, however, still consider the living Cetaceans as a separate order, with 90 described species divided into two suborders, Odontoceti Flower, 1867 (Toothed Whales), and Mysticeti Flower, 1864 (Baleen Whales): the first one with 10 families and 76 species (with one species, *Lipotes vexillifer*, "possibly extinct", and one Sousa un-named species, Australian Humpback Dolphin); the second one is divided into four families with 14 species. The Cetofauna of the Mediterranean basin can be considered as a subset of the North Atlantic one with 23 regular species, as they live, breed and feed in this sea: no species is endemic, they are abundantly widespread species in all the oceans of the globe. Eight of them are sighted on a regular basis in Italian seas: one species of Mysticeti, the Fin Whale *Balaenoptera physalus* (Linnaeus, 1758) (Balaenopteridae) and seven species of Odontoceti: the Sperm Whale *Physeter macrocephalus* Linnaeus, 1758 (= *P. catodon*) (Physeteridae); the Cuvier's Beaked Whale *Ziphius cavirostris* Gray, 1865 (Ziphiidae); and five species of the family Delphinidae (the Short-Beaked Common Dolphin *Delphinus delphis* Linnaeus, 1758, the Common Bottlenose Dolphin *Tursiops truncatus* (Montagu, 1821), the Striped Dolphin *Stenella coeruleoalba* (Meyen, 1833), the Risso's Dolphin *Grampus griseus* (G. Cuvier, 1812), and the Long-Finned Pilot Whale *Globicephala melas* (Traill, 1809)). In Italian waters there are also other species considered as "irregular" since there is no certainty that they reproduce, but there may allocate for some periods: the Common Minke Whale *Balaenoptera acutorostrata* Lacépède, 1804, and three dolphin species (the Killer Whale *Orcinus orca* (Linnaeus, 1758), the False Killer Whale *Pseudorca crassidens* (Owen, 1846) and the Rough-Toothed Dolphin *Steno bredanensis* (Lesson, 1828)). Concerning other species there are very few records: North Atlantic Right Whale *Eubalaena glacialis* (Müller, 1776) (Mysticeti Balaenidae), the Humpback Whale *Megaptera novaeangliae* (Borowski, 1781) (Balaenopteridae), the Dwarf Sperm Whale *Kogia sima* (Owen, 1866) (Kogiidae), and two species of Ziphiidae, the Sowerby's Beaked Whale *Mesoplodon bidens* (Sowerby, 1804) and the Gervais' Beaked Whale *Mesoplodon europaeus* (Gervais, 1855). Cetaceans are protected at international level by CITES (Appendices I and II), by the Habitats Directive (Council Directive 92/43/EEC of 21 May 1992) on the conservation of natural habitats and of wild fauna and flora (annex II and IV), and a lot of species are mentioned on the IUCN Red List of Threatened Species. At European level some species are protected by the "Barcelona Convention" on the Protection of the Marine Environment and the Mediterranean Coast (and its new Application Protocol relative to Special Protection Zones and the Biological Diversity in the Mediterranean adopted on 1995), the "Bonn Convention" on the Conservation of Migratory Species of Wild Animals, the "Bern Convention" relative to the Conservation of European Wildlife and Natural Habitats, and by the Agreement on the Conservation of Cetaceans in the Black Sea Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS). For these reasons the Cetaceans are protected by special laws in many countries.