

SUMMER SPATIAL DISTRIBUTION OF CETACEANS IN THE STRAIT OF GIBRALTAR IN RELATION TO THE OCEANOGRAPHIC CONTEXT.

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The Strait of Gibraltar, the only natural passage between the Mediterranean Sea and the Atlantic Ocean, characterized by a surface inflow of Atlantic waters and a deep outflow of dense Mediterranean waters, is inhabited by a large number of cetacean species. The present study focuses on the occurrence and the spatial distribution of cetacean species within the Strait in relation to oceanographic features. Shipboard visual surveys were conducted during the summers 2001 and 2002, covering 3 396 km. A total of 399 sightings of 7 cetacean species were realised. The spatial distribution of 6 odontocete species: common dolphins (*Delphinus delphis*), striped dolphins (*Stenella coeruleoalba*), long-finned pilot whales (*Globicephala melas*), bottlenose dolphins (*Tursiops truncatus*), sperm whales (*Physeter macrocephalus*), and killer whales (*Orcinus orca*) was examined with respect to the depth, the slope, the latitude and the longitude. These analyses indicate that these species could be ordered into three groups. A first group, with a northward tendency is composed by common and striped dolphins. Due to its at sea-location and feeding habits, this group is likely to be feeding on mesopelagic fishes or squids associated with the surface Atlantic waters. The second group, constituted by bottlenose dolphins, long-finned pilot whales and sperm whales is mainly found over the deep waters of the central part of the Strait. While the foraging ecology of bottlenose dolphins is still unclear, both sperm whales and pilot whales are most likely to be feeding on squids occurring in the deep Mediterranean waters. The third group, formed by killer whales (*Orcinus orca*) was always associated with blue fin tuna (*Thunnus thynnus*) fisheries occurring in the south western part of the Strait.