



A seasonal hotspot for *Cetorhinus maximus* in Apulia, Southern Italy, Mediterranean Sea

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A review of scientific and reliable grey literature, targeted interviews and collection of photos and videos carried out within **Operazione Squalo Elefante** and the **Mediterranean Large Elasmobranchs Monitoring (MEDLEM)** – both long-standing projects on *Cetorhinus maximus* in the Mediterranean Sea – identified the coastal waters of the South-Eastern Italian region of Apulia as a seasonal hotspot for basking sharks. Over 50 records of landings, strandings and sightings were collected between 1977 and 2013, mostly occurring between from January to March.

One 'hotspot' emerge in the Ionian sea, the Porto Cesareo-Gallipoli coast, an area connected to the Taranto Valley, one of the most important submarine canyons in the Mediterranean sea.

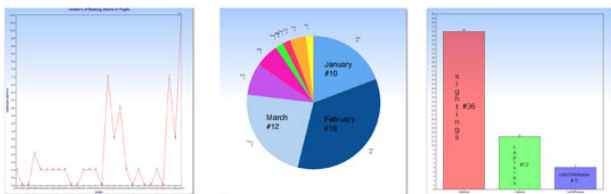
Peak years were recorded in 2001-3 and 2011-2013. The sharp increase in numbers since 2001, amounting to half of the total sightings, is most likely due to greater public awareness rather than a the actual growth in of the population of this shark, which is listed by IUCN as Vulnerable in the Mediterranean basin by the IUCN.



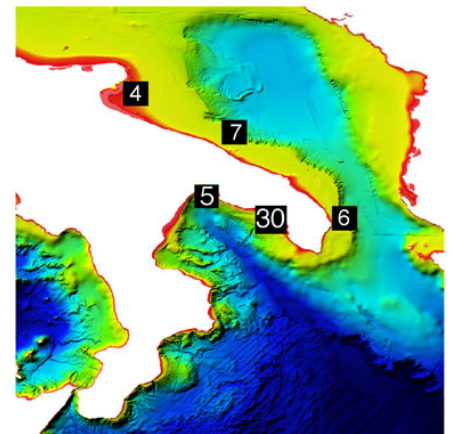
The basking shark (*Cetorhinus maximus* Gunnerus, 1765) is a very large, filter-feeding cold-water pelagic species. It is a migratory and widely distributed species, but only regularly seen in a few favored coastal locations. Much of the basking shark's life history, movements, population dynamics and general ecology have not yet been described, especially in the Mediterranean where Operazione Squalo Elefante described its seasonal presence in Sardinia (Central Mediterranean Sea).

Data Collection. Operazione Squalo Elefante carried out a review of scientific and reliable grey literature and integrated it with data collected by two of the Authors, who are resident in the area and part of the Italian network of marine strandings, and the MED-LEM project. The archives of a local, Regional newspaper and the internet were combed to retrieve videos and images of sightings/captures. A field trip on the southern part of Apulia was then carried out in Summer 2013 to collect data and set up a network of observers - that includes the Coast Guard, the Guardia Forestale, Navy, personnel of Marine Protected Areas, biologists, recreational and professional fishermen, dive centre operators, yachtsmen and journalists - to report future sightings and captures of basking sharks. More interviews will be conducted in future months in the Northern areas of Apulia.

Results: Between 1977 and 2013, 53 sightings/captures were recorded from Apulian waters (36 sightings, 12 captures, 5 caught/released), ranging in size from 300 to 800 cm TL. Aggregations of up to 3 animals were recorded. Sightings peak between January and March (40 in total). Peak years were recorded in 2001-2-3 and 2011-12-13.



One 'hotspot' emerges: 35 of the 53 sightings/captures recorded so far are from the Ionian sea, the deepest basin in the Mediterranean. The majority of records (30) are from the Porto Cesareo/Gallipoli area, at the mouth of the only canyon that cuts through the continental plateau towards the Taranto Valley, one of the most important submarine canyons in the Mediterranean sea. Sample from stranded-bycaught and museum specimen were collected and added to the Operazione Squalo Elefante sample collection for DNA and contaminants studies.



Conclusions: These reports suggest that basking sharks are regular seasonal visitors in coastal waters of Apulia, particularly its Ionian coast. The sharp increase in records since 2001 – from 12 between 1977 and 1999 to 41 between 2001 and 2013 – is most likely due to greater public awareness rather than a growth in population of this shark, which is listed by IUCN as Vulnerable in the Mediterranean basin.

These reports are of a casual nature and have a more limited value than sightings reported from properly structured effort-related surveys. However they can provide at a low cost general information on the distribution and relative abundance of this species. The enthusiastic participation of members of the public in Operazione Squalo Elefante has not only significantly increased our current knowledge on the presence of the basking shark in Italian waters, but it generated considerable public awareness. Such sighting schemes should therefore be encouraged in other potential basking shark hotspots.

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