Kitefin Shark, *Dalatias licha*

SHARK TRUST

SHARK FACTS

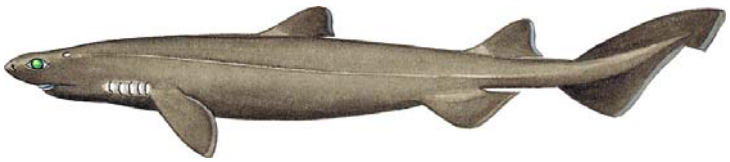
THE SHARK TRUST
4 Creykes Court,
5 Craigie Drive,
The Millfields,
Plymouth PL1 3JB

Tel: (+44) (0) 1752 672008/672020
Fax: (+44) (0) 1752 672008
Email: enquiries@sharktrust.org
Website: www.sharktrust.org

Registered charity No.: 1064185
Registered Company No.: 3396164

The Shark Trust supports the European Elasmobranch Association

Description



Kitefin Shark © Marc Dando

The Kitefin Shark is a moderately sized deep-sea shark with a slender trunk and short, blunt snout. The gill openings are short and the mouth is mildly arched with thick lips. The 1st dorsal fin originates just behind the pectoral fins and is slightly smaller than the 2nd. There are no associated spines. There is no anal fin. The tail has a well developed upper half with a large terminal lobe. The lower half of the tail is not expanded as a definite lobe[1].

The teeth of the Kitefin Shark are a useful identification tool as it is the only known species from the North Atlantic with triangular, serrated lower teeth and no anal fin. Its upper teeth are slender and awl shaped, curving outward toward the corners of the mouth[1].

Colouration does not vary significantly, usual deep brown to greyish black. The only patterns on the dorsal surface are poorly defined black spots, white or translucent margins to the fins and a black tip to the tail[1].

Distribution

Kitefin Shark Distribution

A widespread but sporadically distributed species. Encountered in the east Atlantic from Scotland and the southern North Sea to Cameroon, including the western Mediterranean. In the west Atlantic it is known from Georges Bank to the northern Gulf of Mexico. In the western Indian Ocean it has been found off South Africa and southern Mozambique. In the Pacific it can be found from Japan to New Zealand and the Hawaii Islands[3].

Biology

Habitat

Occurs on the outer continental shelf to at least 1,800 metres, although it has been found as shallow as 37 metres. Most common below 200 metres. Normally encountered either on or near the substrate but readily ranges well off the bottom and is often caught in the water column. Does not appear to form schools or aggregations[1].

Kitefin Shark Head © Marc Dando

Diet

D. licha feeds on a huge variety of prey including smelt (Argentinidae), viperfishes, scaly dragonfishes, barracudinas, greeneyes, lanternfishes, gonostomatids, cod, ling, whiting and other gadids, hake, grenadiers, deepwater scorpionfishes, bonito, gempylids, epigonids, and chaunacid anglers, but also skates, catsharks (Galeus), spiny dogfish (Squalus, *Etmopterus* and *Centrophorus),* squid, octopi, amphipods, isopods, shrimp and lobsters, polychaetes and siphonophores. The presence of fast, pelagic species such as bonito suggests either scavenging or a means of ambush not yet recorded such as that employed by the related Cookiecutter Sharks (*Isistius*). Young Kitefin Sharks eat more cephalopods than adults which seem to prefer crustaceans and other sharks[3].

Reproduction

Mature males have been caught measuring 77 – 121 cm in length. Mature females have been caught measuring 117 – 159 cm in length. An ovoviviparous species, *D. licha* gives birth to litters of 10 – 16 young each measuring about 30 cm in length[1]. Very little else is known of its life history parameters except that the size of the female is related to the number of pups in a litter, meaning that larger females are more valuable to population recovery[2].

Conservation Status

Records from the Portuguese and Azores directed fisheries for this species suggest that it is extremely vulnerable to anthropogenic pressures. Off the Azores *D. licha* was targeted for its liver oil from the early 1970's. This was a small scale artisanal fishery using hand lines and catches peaked at a total of 2,239 tons in 1981. In the mid 1980's, a large industrial fleet joined the fishery using bottom gillnets. In 1991 900 tons were landed. This had fallen by 98% to 18 tons in 1998, the year in which the fishery became uneconomical and ceased[5].

This situation is not unique to the Azores with deepwater fisheries expanding in both depth range and fishing effort around the world. Due to the life history characteristics of deep-sea sharks (including *D. licha*) such as late maturity, long gestation periods and few young, populations are unlikely to recover for many years if irresponsibly exploited[4].

In I.C.E.S. sub-areas V, VI, VII, VIII and IX a Total Allowable Catch (TAC) of 1,646 tons (2008) applies to the deepwater sharks *Centroscymnus coelolepis, Centrophorus granulosus, C. squamosus*, *Deania calcea*, *Dalatias licha*, *Etmopterus princeps*, *E. spinax*, *Centroscyllium fabricii*, *Galeus melastomus*, *G. murinus* and all *Apristurus* spp. Additionally, these species have a TAC of 20 tons in sub-area X and a TAC of 49 tons (including *Deania histricosa* and *D. profondorum*) in sub-area XII (CPOA Shark; 2009).

What You Can Do

- Release any Kitefin Shark's caught but send all details (date, location of capture, size, sex and any other features) to the Shark Trust (enquiries@sharktrust.org)
- Support the Shark Trust to help conserve the species (www.sharktrust.org)
- Visit the Shark Alliance website (www.sharkalliance.org) for more information on European shark fisheries

References

1. Bester, C; Burgess, G; Unknown. Kitefin Shark. Florida Museum of Natural History. http://www.flmnh.ufl.edu/fish/
2. Capacé, C; Hemida, F; Quignard, J, P; Mourad Ben Amor, M; Reynaud, C; 2008. Biological Observations on a Rare Deep-Sea Shark, *Dalatias licha* (Chondrichthyes: Dalatiidae), off the Maghreb Coast (south-western Mediterranean. *Pan-American Journal of Aquatic Sciences* 3(3): 355-360
3. Compagno, L, V, J; 1984. Sharks of the World: An Annotated and Illustrated Catalogue of Shark Species Known to Date. Volume 4, Part 1. Hexanchiformes to Lamniformes. Food and Agriculture Organisation of the United Nations. Rome.
4. Compagno, L, J, V; Cook, S, F; 2008. *Dalatias licha*. In: I.U.C.N. 2008. 2008 I.U.C.N. Red List of Threatened Species. http://www.iucnredlist.org/details/6229
5. Perrotta, R, G; 2004. Kitefin Shark, *Dalatias licha* (Dalatiidae), Fishery in the North Eastern Atlantic and some Recommendations for Elasmobranchs Exploitation. *Revista de Investigación y Desarollo Pesquero*, N° 16: 97 – 101.