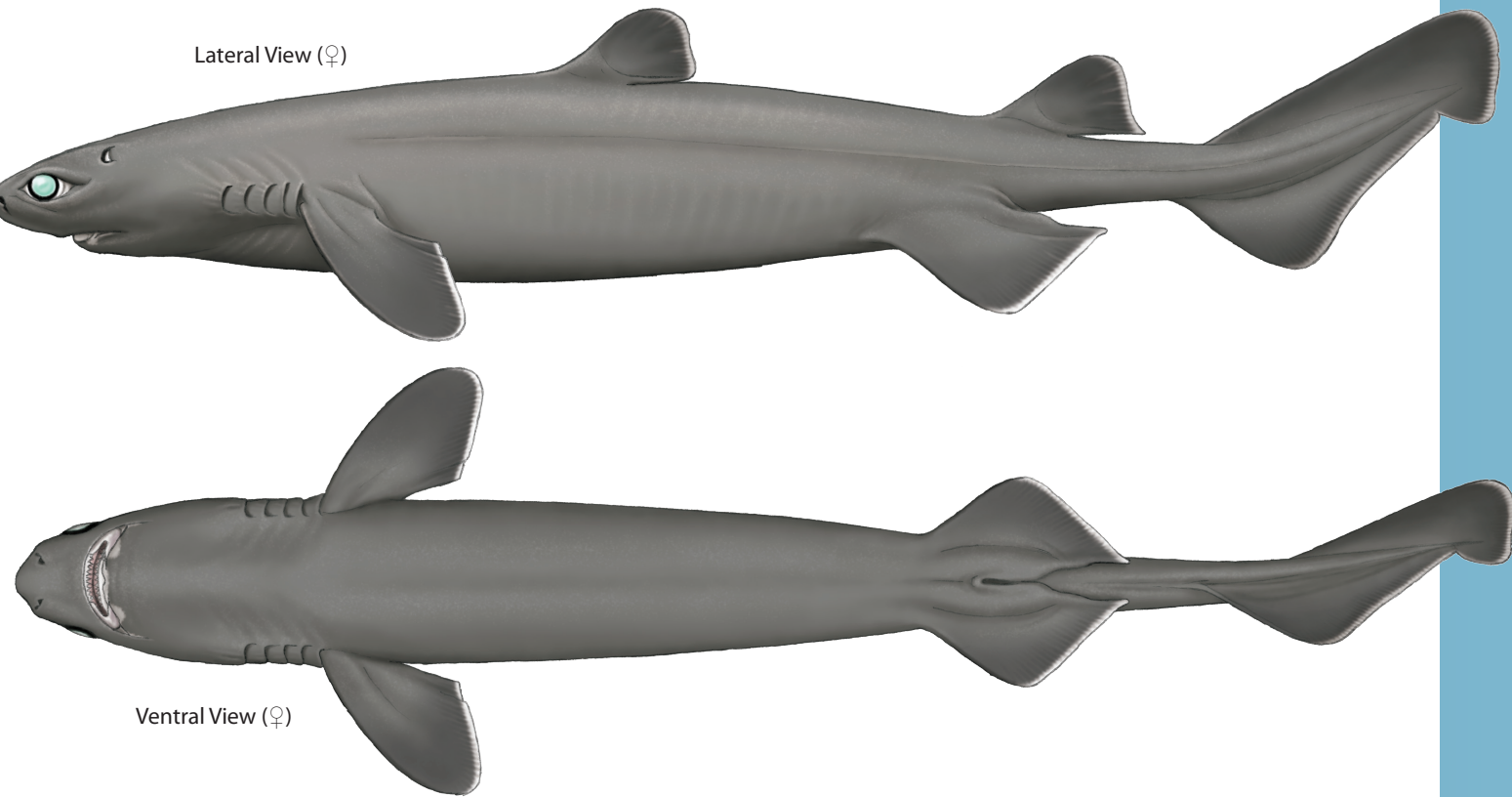


Lateral View (♀)

Ventral View (♀)



COMMON NAMES

Kitefin Shark, Black Shark, Darkie Charlie, Seal Shark, Squalo Liche (Fr), Carrocho (Es), Chokoladehaj (Dk), Schokoladenhai (De), Valse Doornhaai (Nl).

SYNONYMS

Dalatias tachiensis (Shen & Ting, 1972), *Pseudoscymnus boshuensis* (Herre, 1935), *Scymnorhinus brevipinnis* (Smith, 1936), *Scymnorhinus licha* (Bonnaterre, 1788), *Scymnorhinus philippi* (Whitley, 1931), *Scymnus vulgaris* (Cloquet, 1822), *Squalus americanus* (Gmelin, 1789), *Squalus licha* (Bonnaterre, 1788), *Squalus nicaeensis* (Risso, 1810), *Squalus scymnus* (Voigt, 1832), *Dalatias sparophagus* (Rafinesque, 1810), *Scymnus aquitanensis* (de la Pylaie, 1835).

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. Also known from the western Atlantic Ocean, the western Indian Ocean and the Pacific Ocean (Compagno, 1984).

APPEARANCE

- Moderately sized shark with a short, blunt snout.
- No spines associated with dorsal fins.
- No anal fin.
- No obvious lower caudal lobe.
- Teeth in lower jaw distinctively triangular and serrated.
- Colouration from greyish black to reddish brown.
- Often poorly defined black spots on dorsal surface.
- Fin margins white or translucent and tail tipped black.
- 180cm maximum length.

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 first dorsal fin originates just behind the pectoral fins and is slightly smaller than the second. There are no associated spines and no anal fin. The tail has a well developed upper half with a large terminal lobe. The lower half of the tail is small, almost non-existent as a definite lobe (Bester and Burgess, Unknown).

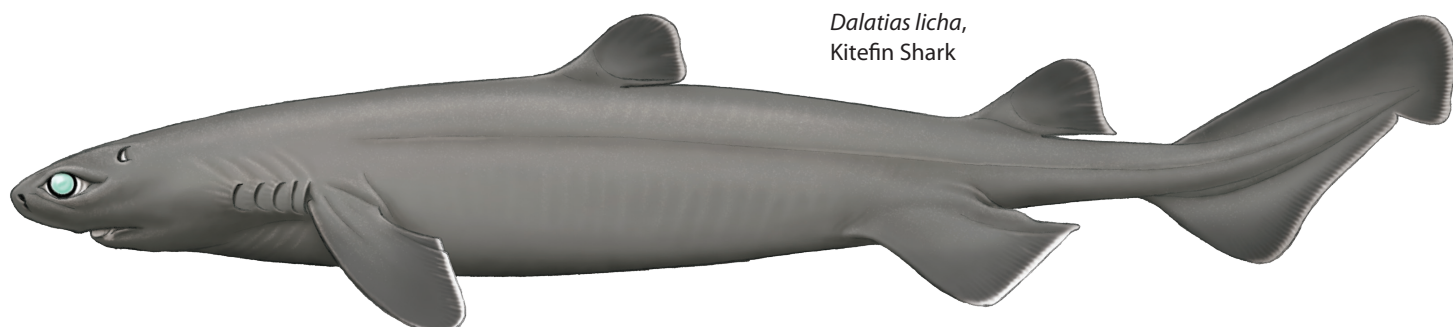
The colouration does not vary significantly, usually deep brown to greyish black. The only patterns on the dorsal surface are poorly defined black spots, white or translucent margins to the fins and a black tip to the tail (Bester and Burgess, Unknown).

SIMILAR SPECIES

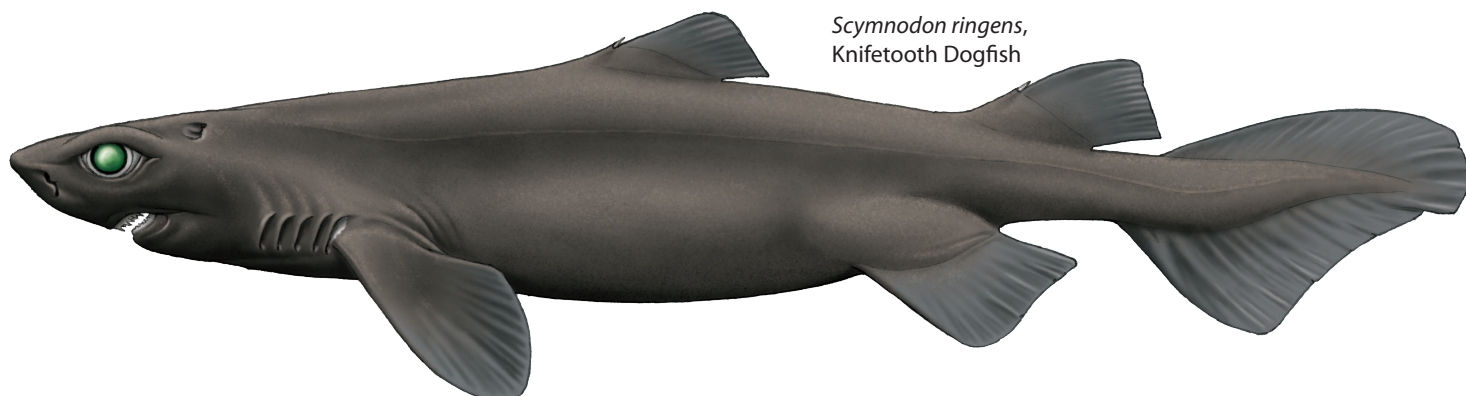
Scymnodon ringens, Knifetooth Dogfish

Centroscymnus coelolepis, Portuguese Dogfish

Zameus squamulosus, Velvet Dogfish



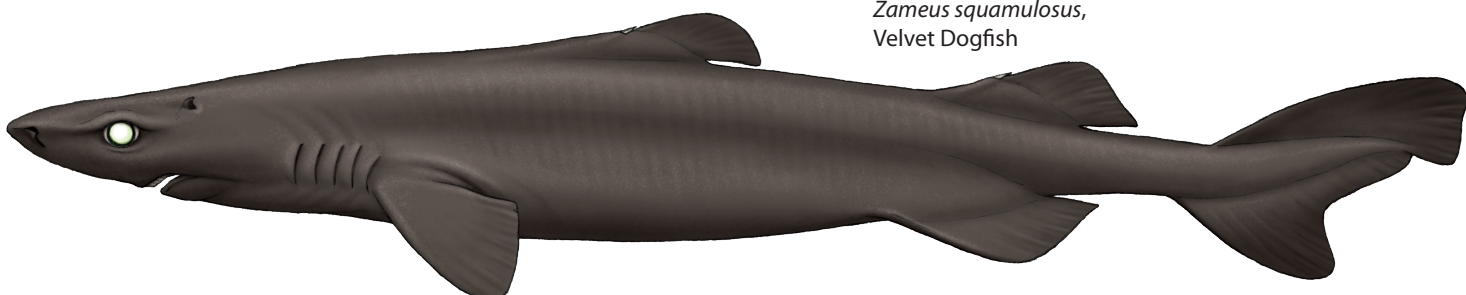
Dalatias licha,
Kitefin Shark



Scymnodon ringens,
Knifetooth Dogfish



Centroscymnus coelolepis,
Portuguese Dogfish

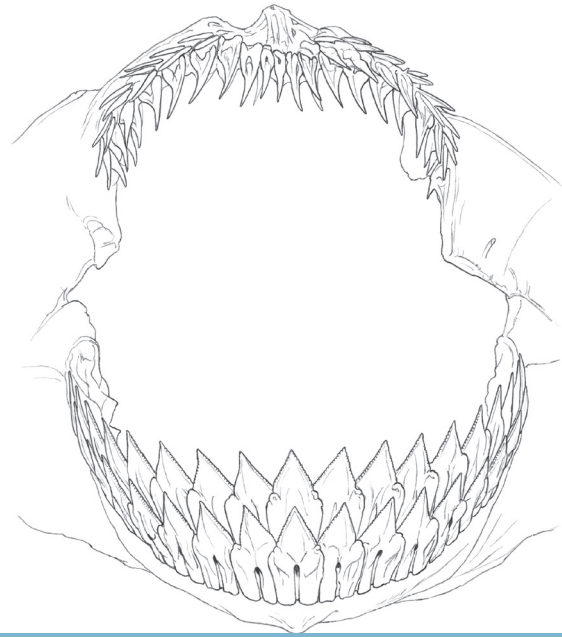
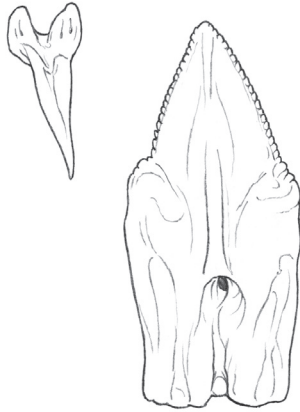


Zameus squamulosus,
Velvet Dogfish

(Not to scale)

TEETH

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 combined with no anal fin. Its upper teeth are slender and awl shaped, curving outward toward the corners of the mouth (Bester and Burgess, Unknown).



ECOLOGY AND BIOLOGY

HABITAT

The Kitefin Shark occurs on the outer continental shelf to at least 1,800 metres, although it has been found as shallow as 37m. It is most common below 200m. It is normally encountered either on or near the substrate but readily ranges well off the bottom and is often caught in the water column. It does not appear to form schools or aggregations (Bester and Burgess, Unknown).

EGGCASE

N/A

DIET

The Kitefin Shark 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 (Compagno, 1984).

REPRODUCTION

Mature males have been found measuring 77–121cm in length. Mature females have been found measuring 117–159cm in length. An ovoviparous species, the Kitefin Shark gives birth to litters of 10–16 young each measuring about 30cm in length (Bester and Burgess, Unknown). 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 (Capacé *et al.*, 2008).

COMMERCIAL IMPORTANCE

Sought for its squalene-rich liver oil and flesh in Japan, its liver oil in South Africa and to be ground into fishmeal in the east Atlantic. There is currently no commercial interest in the west Atlantic (Bester and Burgess, Unknown).

THREATS, CONSERVATION, LEGISLATION

Records from the Portuguese and Azores directed fisheries for the Kitefin Shark suggest that it is extremely vulnerable to anthropogenic pressures. Off the Azores, it 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 (Perrotta, 2004).

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 the Kitefin Shark) such as late maturity, long gestation periods and few young, populations are unlikely to recover for many years if irresponsibly exploited (Compagno and Cook, 2008).

In ICES 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. profundorum*) in sub-area XII (CPOA Shark, 2009).

IUCN RED LIST ASSESSMENT

Near Threatened (2008).

Vulnerable in northeast Atlantic.

HANDLING AND THORN ARRANGEMENT

- Handle with care.
- Sharp teeth.
- Abrasive skin.

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Illustrations: Marc Dando.

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