

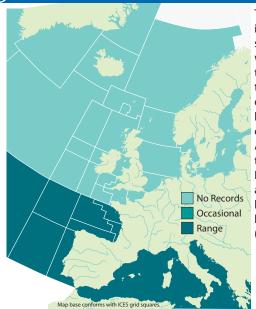
COMMON NAMES

White Shark, Great White Shark, White Pointer, White Death, Man Eater, Uptail, Tommy, Jumping Shark, Mudshark, Grand Requin Blanc (Fr), Jaquetón Blanco (Es).

)SYNONYMS

Squalus carcharias (Linnaeus, 1758), Carcharias lamia (Rafinesque, 1810), Squalus (Carcharhinus) Iamia (Blainville, 1825), Carcharias verus (Cloquet, 1817), Carcharias rondeletti (Bory de Saint-Vincent, 1829), Squalus (Carcharias) vulgaris (Richardson, 1836), Carcharodon smithii (Müller & Henle, 1838), Carcharodon rondeletii (Müller & Henle, 1839).

DISTRIBUTION



The White Shark is a wide ranging species found worldwide in temperate and tropical seas. In the east Atlantic it is known from the Bay of Biscay to South Africa, including the Mediterranean. It is possibly found around the UK but this has not been confirmed (Compagno, 2001).

Moderately long, conical snout.

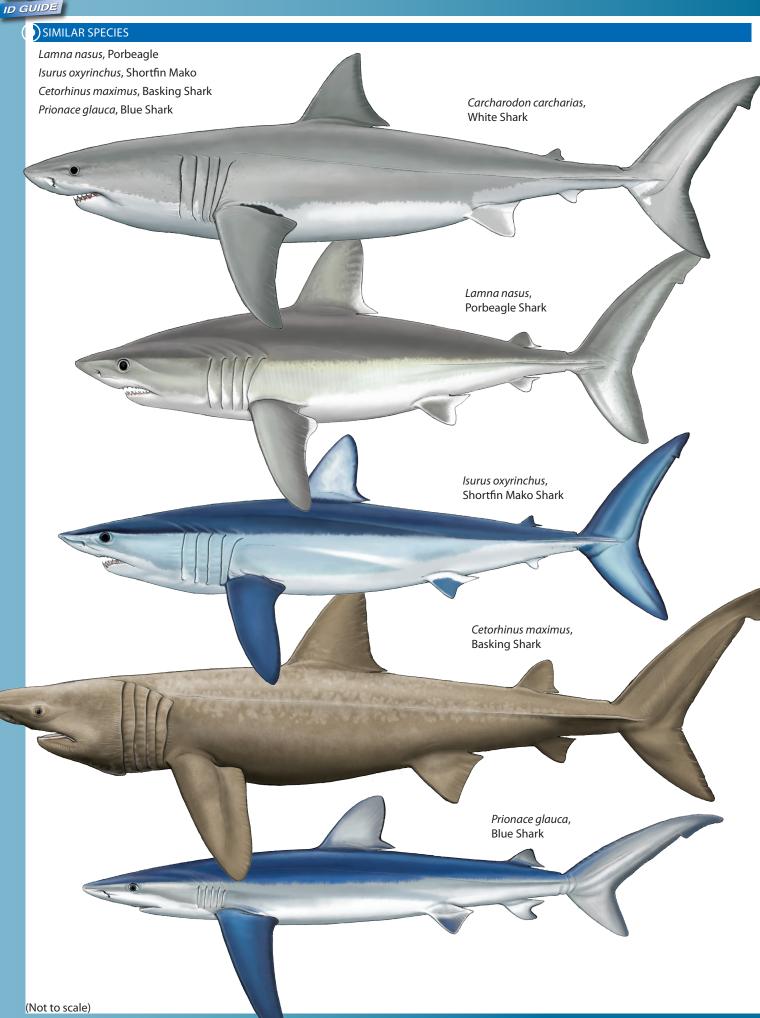
- Long gill slits.
- Large first dorsal fin with dark free rear tip.
- Minute second dorsal and anal fins.
- Strong lateral caudal keels, no secondary keels.
- Crescent-shaped caudal fin.
- Dark grey, brown grey or blackish dorsally.
- White ventrally.
- Distinct line between colours.
- Huge, flat, triangular, serrated teeth.

The White Shark is a huge, bulky shark with a moderately long, conical snout and long gill slits. The first dorsal fin is large with a dark free rear tip, the second dorsal and anal fins are minute. There are strong lateral keels with no secondary keels on the caudal peduncle. The caudal fin is crescent shaped with almost equally sized lobes. The teeth are distinctively triangular and flat with serrated edges. Dorsal colouration is dark grey to brown-grey or blackish with a distinct line between this and the white ventral surface. The upper surface of the pecetoral fins is dark, standing out from the white of the lower flanks (Compagno, 2001).



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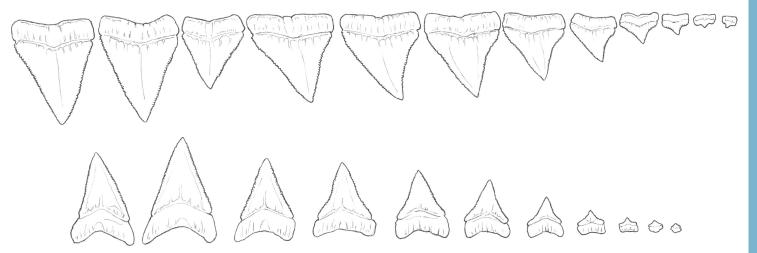






)TEETH

The teeth are huge, flat, triangular and serrated in both jaws. At any one time there are 44–52 in total. These broaden as the animal grows allowing larger, mammalian prey to be taken (Compagno, 1984).



ECOLOGY AND BIOLOGY

) HABITAT

The White Shark is primarily a coastal and offshore species around continental and insular slopes. It is a highly migratory species known to travel across oceanic basins and well into the tropics. It often comes close to the shoreline and has been found in shallow bays and estuaries, although it is not known to enter freshwater. It can be found from the surface to the bottom in epicontinental waters and occasionally ranges down the continental slope to at least 1,875m (Fergusson *et al.*, 2000; Martins and Knickle, Unknown).

Like other Lamnid sharks, the White Shark has a 'rete mirable' systems that allows it to maintain its body temperature above that of the surrounding water (Martin, 1992). This is a rare trait among fishes, only the mackerel sharks (Lamnidae), tunas (Thunnini) and billfishes (Xiphiidae, Istiophoridae) having evolved this ability (Weng and Block, 2004). This adaptation allows the shark to range much further into the temperate regions than cold-blooded species and explains its relative abundance along the Atlantic coasts of Europe and the US (Martin, 1992). It seems to have a preference for sea surface temperatures of 15-22°C but has been recorded from 7-27°C (Martin, Unknown).

DIET

The White Shark is primarily a piscivore although it will take almost any prey, including carrion. Prey groups reported include cetaceans, pinnipeds, sea birds, marine reptiles, chondrichthyans, teleosts, echinoderms, crustaceans, molluscs, plants and algae. For a full report of the food items described for the species, see Martin (2003) (Martin, 2003).

REPRODUCTION

Female White Sharks reach sexual maturity between 400 and 500cm total length, males between 350 and 410cm. It is an ovoviviparous species with the embryos nourished through oophagy, feeding on unfertilised eggs produced by the mother (Compagno, 2001). Whilst in the uterus, embryos swallow the teeth they shed, possibly as a means of conserving calcium (Martins and Knickle, Unknown). The gestation period is unknown but could be 12 months or more, reproduction is possibly biennial. Litter sizes vary from two to possibly 14 young with the pups measuring 120–150cm at birth (Compagno, 2001).

)EGGCASE

N/A







COMMERCIAL IMPORTANCE

Mainly a bycatch species, the White Shark is of limited commercial importance for traditional bulk products such as meat and liver oil. However, its jaws, teeth and fins are extremely valuable so it is targeted across its range by commercial and recreational fishermen (Compagno, 2001). Cage diving where the White Shark is relatively abundant is an expanding industry, generating a significant amount of money from sustainable use of the sharks (Martin, 2003).

THREATS, CONSERVATION, LEGISLATION

The White Shark is taken as bycatch and targeted using longlines, specialised heavy line gear, rod and reel, fixed bottom gillnets, floating inshore gillnets, pelagic gillnets, fish traps, herring weirs, trammel nets, harpoons, bottom and pelagic trawls and purse seines (Compagno, 2001). Its jaws, teeth and fins are highly valuable and its meat can be fresh or preserved for human consumption. Due to its coastal habitat it is also extremely vulnerable to bather protection programmes such as beach netting. Combined with its low reproductive potential and apparently low natural abundance, it is vulnerable to anthropogenic pressures (Fergusson *et al.*, 2000).

The White Shark is protected off South Africa, the Maldives, Australia, California, the US Atlantic Seaboard and Gulf Coast and in much of the Mediterranean. Unfortunately, enforcement of this protection is weak in some areas and is of limited effectiveness for such a migratory species (Martin, Unknown; Fergusson *et al.*, 2000).

IUCN RED LIST ASSESSMENT

Vulnerable (2000).

HANDLING AND THORN ARRANGEMENT

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

Carcharodon carcharias



REFERENCES

COMPAGNO, L. J. V. 2001. Sharks of the World: An Annotated and Illustrated Catalogue of Shark Species Known to Date. Volume 2. Bullhead, Mackerel and Carpet Sharks (Heterodontiformes, Lamniformes and Orectolobiformes). FAO. Rome, Italy.

FERGUSSON, I., COMPAGNO, L., MARKS, M. 2000. *Carcharodon carcharias*. In: IUCN 2009. IUCN Red List of Threatened Species. Version 2009.1. www.iucnredlist.org.

MARTIN, R. A. 1992. Fire in the Belly of the Beast. ReefQuest Centre for Shark Research. http://elasmo-research.org.

MARTIN, R. A. 2003. Field Guide to the Great White Shark. ReefQuest Centre for Shark Research. Vancouver, Canada.

MARTIN, R, A. Unknown. Brief Overview of the Great White Shark (*Carcharodon carcharias*). ReefQuest Centre for Shark Research. http://elasmo-research.org.

MARTINS, C., KNICKLE, C. Unknown. White Shark. Florida Museum of Natural History. www.flmnh.ufl.edu/fish/.

WENG, K. C., BLOCK, B. A. 2004. Diel Vertical Migration of the Bigeye Thresher Shark (*Alopias superciliosus*), a Species Possessing Orbital Retia Mirabilia. *Fish. Bull.* 102: 221–229.

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