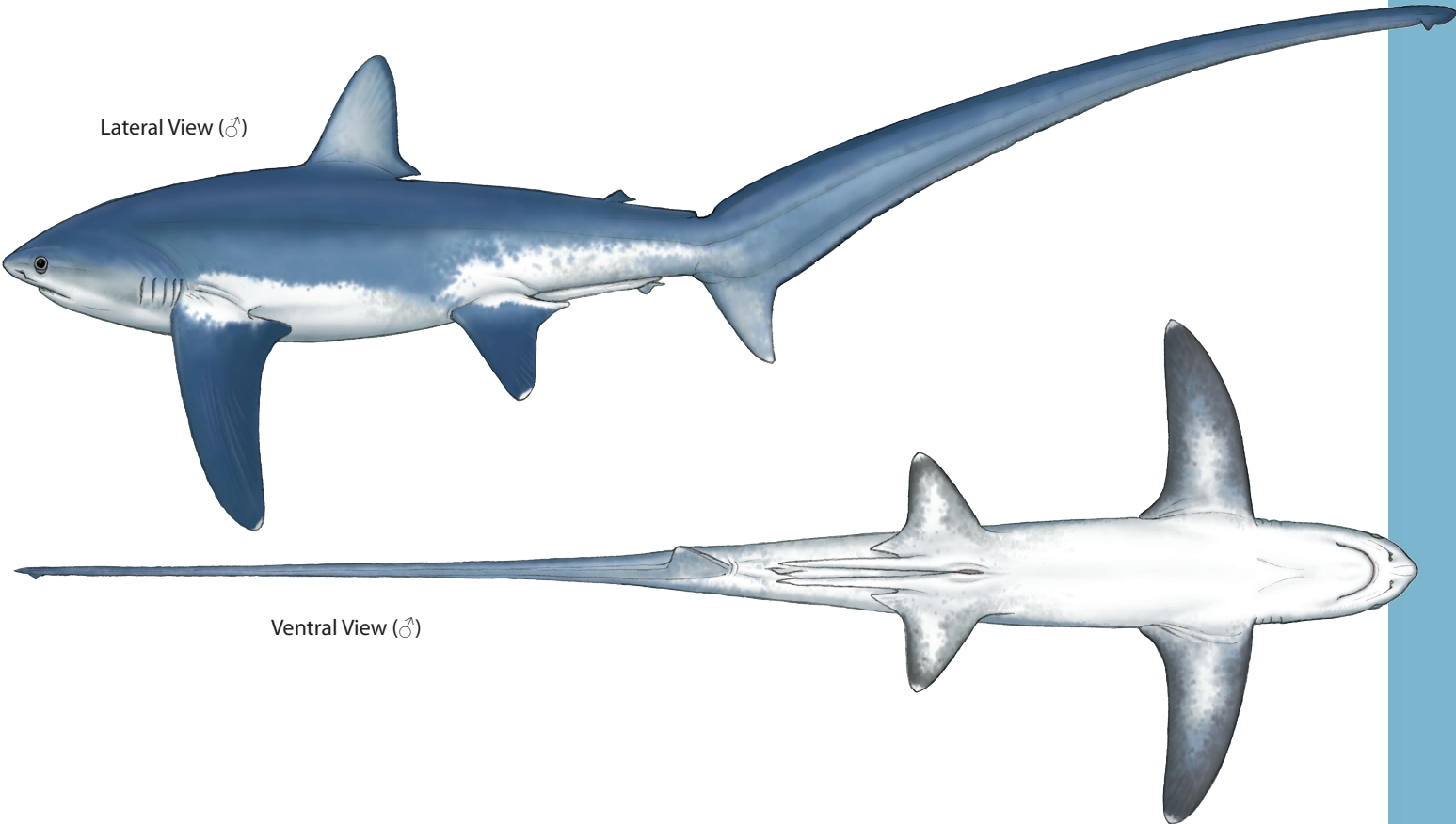


Lateral View (♂)



Ventral View (♂)

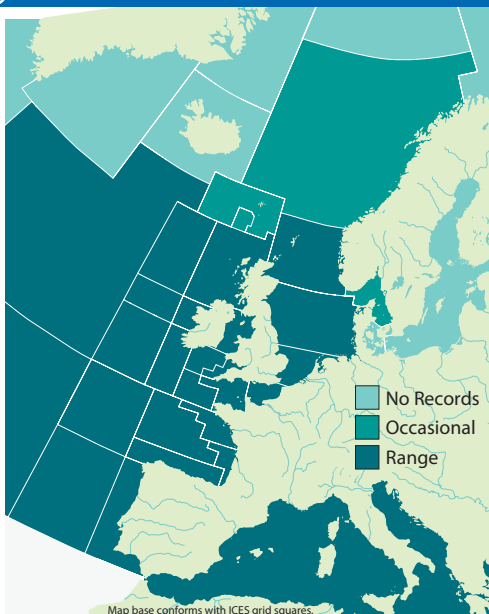
COMMON NAMES

Thresher Shark, Thrasher Shark, Common Thresher Shark, Fox Shark, Grayfish, Sea Fox, Slasher, Swingletail, Swiveltail, Thintail Thresher, Whip-Tailed Shark, Zorro Thresher Shark, Renard (Fr), Faux (Fr), Zorro (Es), Chichi Espada (Es).

SYNONYMS

Squalus vulpes (Gmelin, 1789), *Alopias macrourus* (Rafinesque, 1810), *Galeus vulpecula* (Rafinesque, 1810), *Squalus alopecias* (Gronow, 1854), *Alopecias barrae* (Perez Canto, 1886), *Alopecias chilensis* (Philippi, 1901), *Alopecias longimana* (Philippi, 1901), *Vulpecula marina* (Garman, 1913), *Alopias caudatus* (Phillipps, 1932), *Alopias greyi* (Whitley, 1937).

DISTRIBUTION



The Thresher Shark is found almost worldwide in tropical to cold temperate seas. In the east Atlantic it is known from Norway and the British Isles to Cape Province, South Africa, including the Mediterranean Sea. It is also found throughout the west Atlantic, Pacific and Indian Oceans (Compagno, 2001).

APPEARANCE

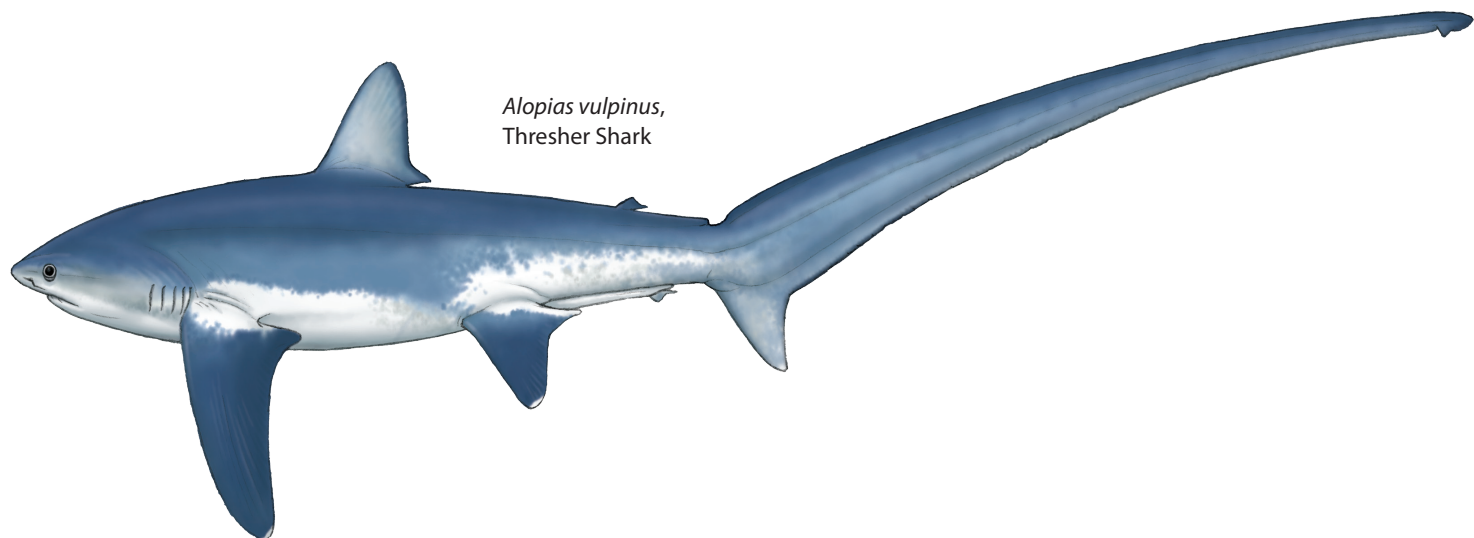
- Long dorsal caudal lobe, about as long as rest of shark.
- Large pectoral and first dorsal fins.
- Tiny second dorsal and anal fins.
- Over 29 rows of small teeth in each jaw.
- Dorsally grey, brown, blue or blackish.
- Pectoral, pelvic and dorsal fins blackish.
- Sometimes white dots on pectoral, pelvic, and caudal fin tips.
- Ventrally white, extending over the pectoral fin bases.

The Thresher Shark is named for and easily recognisable by its extremely long tail, the upper lobe of which can be as long as the rest of the shark. The first dorsal fin and pectoral fins are large. The second dorsal fin and anal fins are tiny. The snout is sharply pointed with a small mouth containing 29 rows of small teeth in each jaw. The mouth has labial furrows (Compagno, 2001).

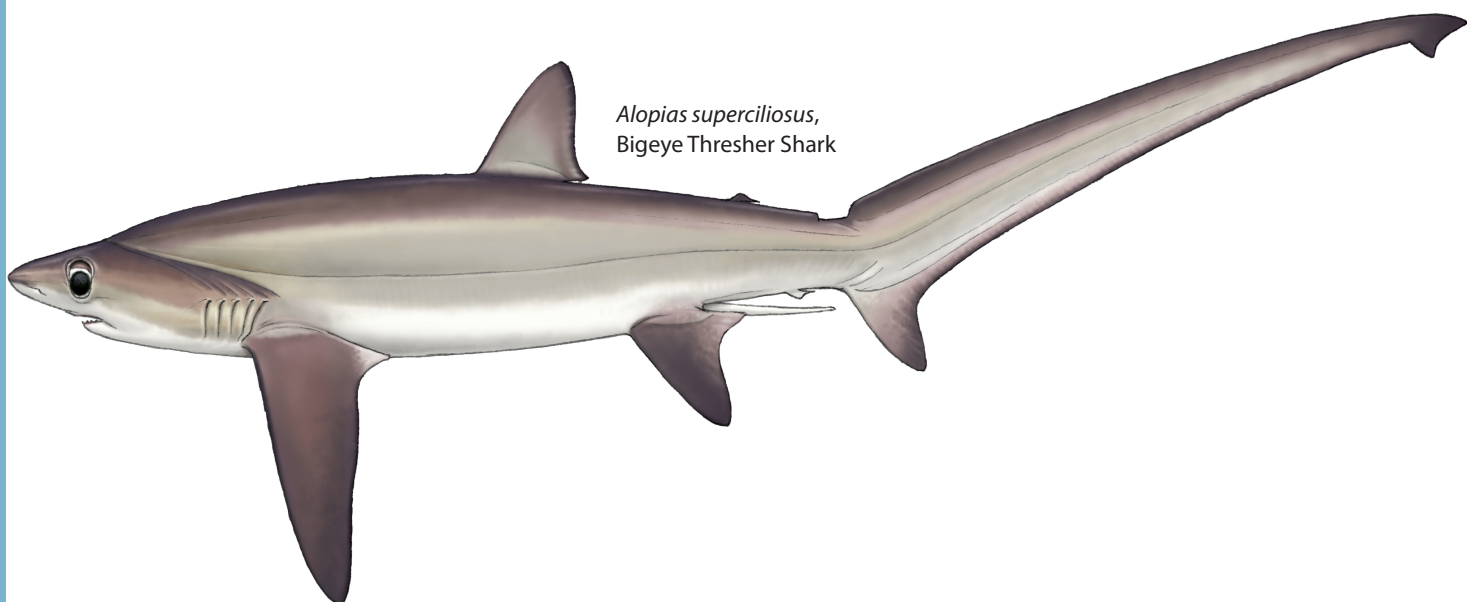
The Thresher Shark has irregular white markings on its underside whilst the rest of the body can be brown to blue-grey with metallic hues on the flanks. The ventral white colouring extends above the pectoral fins leaving a conspicuous 'bald patch.' There can be white markings on the pectoral, dorsal and caudal fins (Compagno, 2001).

SIMILAR SPECIES

Alopias superciliosus, Bigeye Thresher Shark



Alopias vulpinus,
Thresher Shark

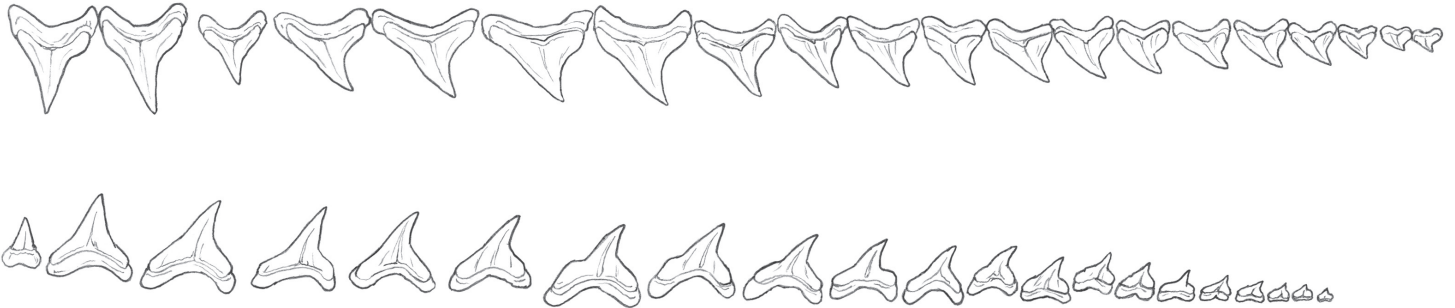


Alopias superciliosus,
Bigeye Thresher Shark

(Not to scale)

TEETH

Small, blade-like, smooth edge-curved teeth. 40 (20–20) in the upper jaw, 42 (21–21) in the lower jaw (Jordan, Unknown).



ECOLOGY AND BIOLOGY

HABITAT

In the open ocean the Thresher Shark is commonly found from the surface down to depths of at least 336m (1,100ft) (Compagno, 2001). Some sources claim maximum depths of 550m (1,800ft) but these reports are difficult to verify (Carpenter, 2009). The species is most abundant 40–75 miles from land in temperate regions as it gives birth inshore and the pups stay in shallow, coastal waters, only venturing further into the open ocean when closer to maturity (Smith *et al.*, 2008). It has been noted that the Thresher Shark segregates by size and sex. In the Gulf of Cadiz and waters off northeast Morocco, near-term female dominated schools move shoreward in spring, presumably to give birth. Towards the end of spring neonates and gravid females dominate with no adult males found (Smith *et al.*, 2008).

Like other Lamnid sharks, the Thresher Shark has a 'rete mirabile' 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 similar cold-blooded species and explains its relative abundance along the temperate Atlantic coasts of Europe and the U.S.A. (Martin, 1992).

DIET

The Thresher Shark has developed an unusual method of hunting. Working either alone or in small groups, it bunches up small to medium sized schooling fish then stuns and disorients them using its tail. The shark then takes the dazed fish. Similar behaviour has been recorded in whales, dolphins and some other fish, however none of these are so highly adapted to this method of feeding (Jordan, Unknown). Apart from schooling fish such as mackerels, bluefishes and needlefishes, the Thresher Shark is known to feed on squid, octopi, crustaceans, and has been recorded using its tail to kill seabirds (Goldman *et al.*, 2002).

REPRODUCTION

A 2008 study of the species in California and Oregon waters concluded that males and females mature at approximately the same length (303cm TL ♀, 293-311cm TL ♂) and age (5.3 years ♀, 4.8 years ♂). Reproduction appears to be annual, with mating in the northeast Atlantic taking place in midsummer (Smith *et al.*, 2008).

The Thresher Sharks is ovoviviparous, meaning that the young develop within the mothers body in a primitive uterus (Smith *et al.*, 2008). They are nourished by yolk-filled egg capsules that are continually produced by the mother for the unborn young to consume. This is known as oophagy or oviphagy and is a form of intrauterine (within-the-womb) cannibalism (Martin, 1994). The gestation period appears to be 9 months and it has been suggested that, as the rete mirabile system warms the uteri, development is hastened in the Alopiidae and Lamnidae sharks (Smith *et al.*, 2008; Martin, 1992). Average litter size is between 2 and 4 pups although the maximum recorded is 7. These pups are born already measuring 114-160cm (3.7-5.2ft) (Smith *et al.*, 2008).

COMMERCIAL IMPORTANCE

The Thresher Shark is regularly landed by longline and trawl fisheries, particularly in the Mediterranean Sea and northeast Atlantic Ocean. It is also highly sought by Russia and Japan in the northwest Indian Ocean and central Pacific Ocean. It is a popular game fish due to its hard fighting nature and habit of breaching when hooked. Its meat is used for human consumption and its liver oil is processed for vitamins. Its fins are also highly prized for sharkfin soup and its skin can be used as leather (Compagno, 2001).

THREATS, CONSERVATION, LEGISLATION

The Thresher Shark is an important economic species in many areas and is taken in large numbers, including the Mediterranean Sea and northeast Atlantic. Regularly landed as bycatch in long-line and trawl fisheries, its meat is highly prized fresh but can also be salted/dried and the fins are used for sharkfin soup in much of Asia. The oil from its liver can be processed for vitamins and its hide is usable for leather. The Thresher Shark is also sought by recreational anglers for its fighting ability and food value (Goldman *et al.*, 2002).

The Thresher Shark reproduces more regularly than Bigeye and Pelagic Thresher Sharks but has still proved highly vulnerable to intensive fishing efforts. In 1977-1978, a drift-net fishery was established to target the Thresher Shark off the west coast of the USA. After less than a decade the population was showing signs of serious decline. Since the fishing pressure was greatly reduced in the mid 1980's a certain amount of stock re-growth has been observed but the population is estimated to still be at half of pre-fishing levels. This has led to concern about populations in less well managed fisheries around the globe (Smith *et al.*, 2008).

In the northeast Atlantic, The Thresher Shark is covered by EC Regulation No. 1185/2003 which prevents the removal of shark fins at sea and the subsequent discard of the body. This applies to all vessels operating in EC waters, as well as to EC vessels operating anywhere (CPOA Sharks, 2009). However some countries issue Special Fishing Permits which allow finning to take place.

IUCN RED LIST ASSESSMENT

Vulnerable (2008).

Near Threatened in northeast Atlantic.

HANDLING

- Handle with care.
- Long tail extremely dangerous when hooked.
- Sharp teeth and abrasive skin.

REFERENCES

- CARPENTER, K. E. 2009. *Alopias vulpinus* (Lowe, 1841), Thintail Thresher. FishBase. www.fishbase.com.
- 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.
- GOLDMAN, K. J., MEMBERS OF THE SHARK SPECIALIST GROUP. 2002. *Alopias vulpinus*. In: IUCN 2008. 2008 IUCN Red List of Threatened Species. www.iucnredlist.org.
- JORDAN, V. Unknown. Thresher Shark. Florida Museum of Natural History. www.flmnh.ufl.edu/fish/.
- MARTIN, R. A. 1992. Fire in the Belly of the Beast. ReefQuest Centre for Shark Research. <http://elasma-research.org>.
- MARTIN, R. A. 1994. From Here to Maternity. ReefQuest Centre for Shark Research. www.elasma-research.org.
- SMITH, S. E., RASMUSSEN, R. C., RAMON, D. A., CAILLIET, G. M. 2008. The Biology and Ecology of Thresher Sharks (Alopiidae). From: Camhi, M. D., Pikitch, E. K., Babcock, E. A. (Eds.) 2008. Sharks of the Open Ocean: Biology, Fisheries and Conservation. Blackwell Publishing. Oxford, UK.
- 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.

Text: Richard Hurst.
Illustrations: Marc Dando.

Citation

Shark Trust; 2010. An Illustrated Compendium of Sharks, Skates, Rays and Chimaera. Chapter 1: The British Isles and Northeast Atlantic. Part 2: Sharks.

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