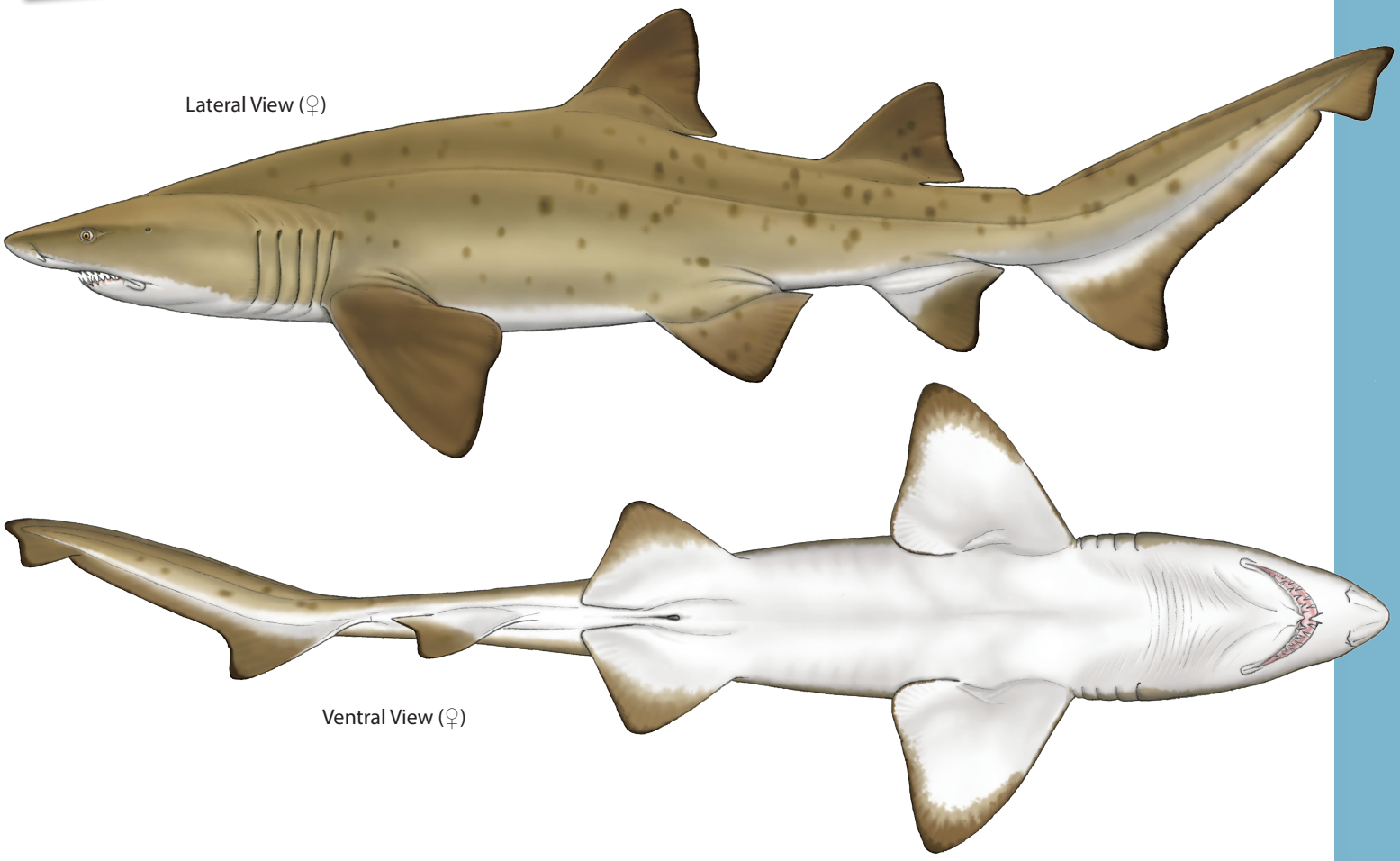
Sandtiger Shark

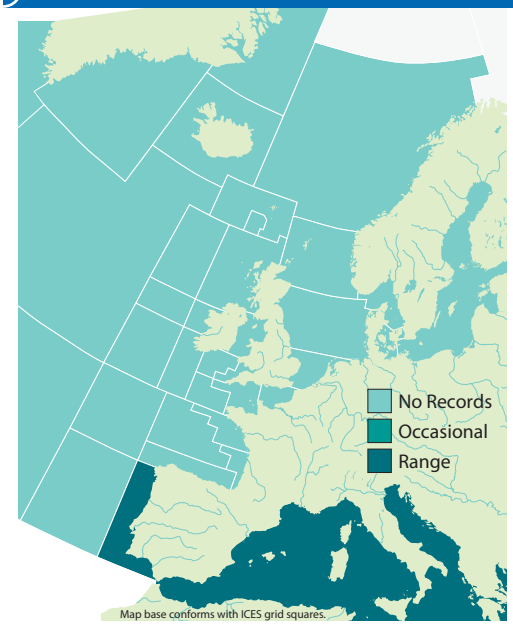
Carcharias taurus



SYNONYMS

Eugomphodus taurus (Rafinesque, 1810), *Squalus americanus* (Mitchell, 1815), *Squalus macrodous* (Mitchell, 1818), *Squlaus littoralis* (Le Sueur, 1818), *Carcharhinus griseus* (Ayres, 1842), *Odontaspis americanus* (Abbott, 1861), *Carcharias tricuspidatus* (Day, 1878), *Odontaspis cinerea* (Macleay, in Ramsay, 1880), *Carcharias cuspidatus* (Ogilby, 1888), *Lamna ecarinata* (Hemprich & Ehrenberg, 1899), *Carcharias arenarius* (Ogilby, 1911), *Carcharias owstoni* (Garman, 1913), *Squalus lixa* (Larrañaga, 1923), *Odontaspis platensis* (Lahille, 1928), *Odontaspis tricuspitatus* (Fang & Wang, 1932).

DISTRIBUTION



Carcharias taurus is found almost worldwide in tropical and warm temperate waters, with the exception of the eastern Pacific. Its distribution in the east Atlantic is patchy but stretches from the Mediterranean Sea to Cameroon (Compagno, L, J, V; 2001).

COMMON NAMES

Sandtiger Shark, Grey Nurse Shark, Raggedtooth Shark, Slender-tooth Shark, Spotted Sandtiger Shark, Ground Shark, Sand Shark, Requin Taureau (Fr), Toro Bacota (Es).

APPEARANCE

- Flattened, conical snout.
- Mouth long, extending behind eyes.
- Both dorsal fins and anal fin equally large and broad-based.
- First dorsal fin closer to pelvic fins than pectoral fins.
- No lateral caudal keels but upper precaudal pit present.
- Caudal fin asymmetrical but with a long ventral lobe.
- Light brown or light greenish-grey dorsally.
- Greyish white ventrally.
- May have scattered darker reddish or brown spots.

A large species reaching at least 318cm total length (possibly to 430cm), the Sandtiger Shark is similar in appearance to the Smalltooth Sandtiger Shark, *Odontaspis ferox*. It has a flattened, conical snout with a long mouth extending behind the eyes. Both dorsal fins and the anal fin are equally large and broad based. The first dorsal fin is closer to the pelvic fins than the pectoral fins. There are no lateral caudal keels but an upper precaudal pit is present. The caudal fin is asymmetrical but with a strong ventral lobe (Compagno, 2001).

The dorsal colouration is light brown to greenish-grey, fading to greyish white ventrally. Some individuals may have darker red or brown spots scattered across the body (Cooper, Unknown).

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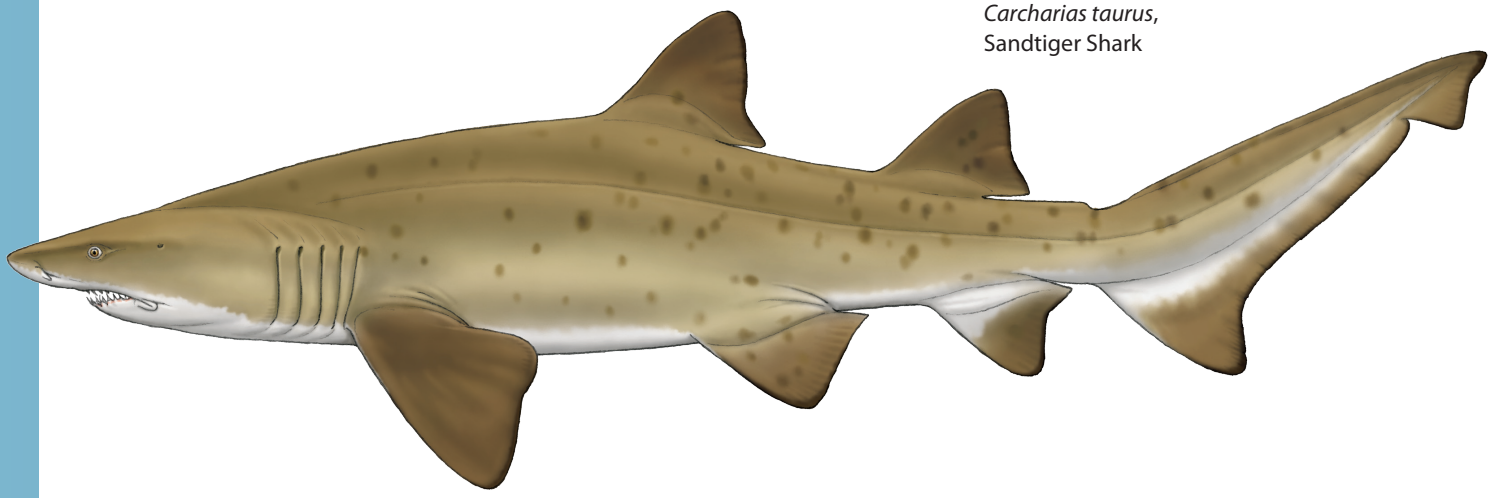
Sandtiger Shark

SIMILAR SPECIES

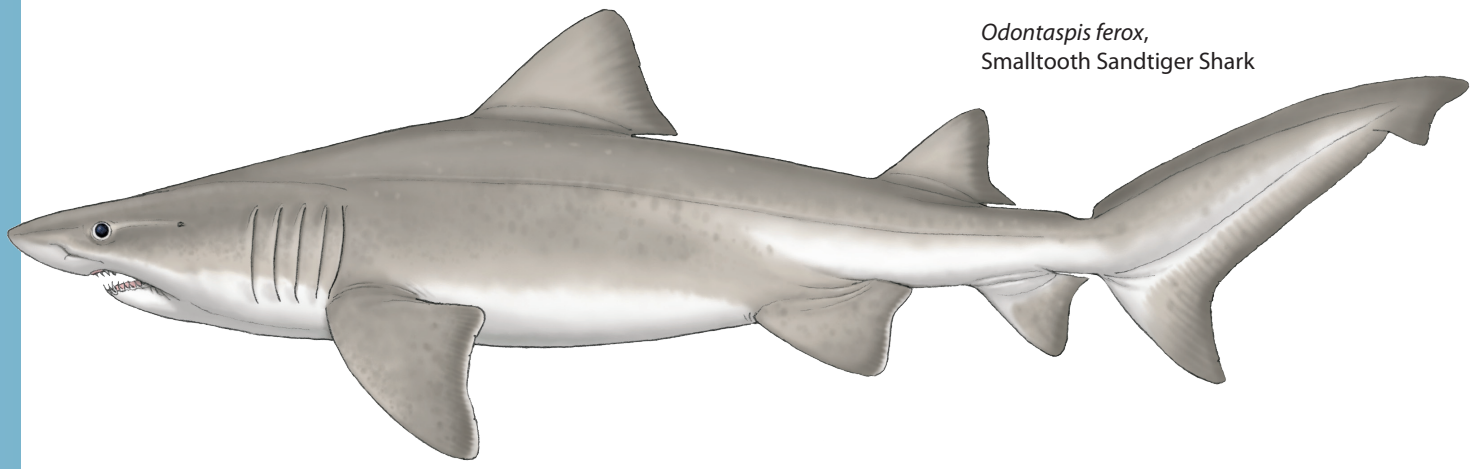
Odontaspis ferox, Smalltooth Sandtiger Shark

Ginglymostoma cirratum, Nurse Shark

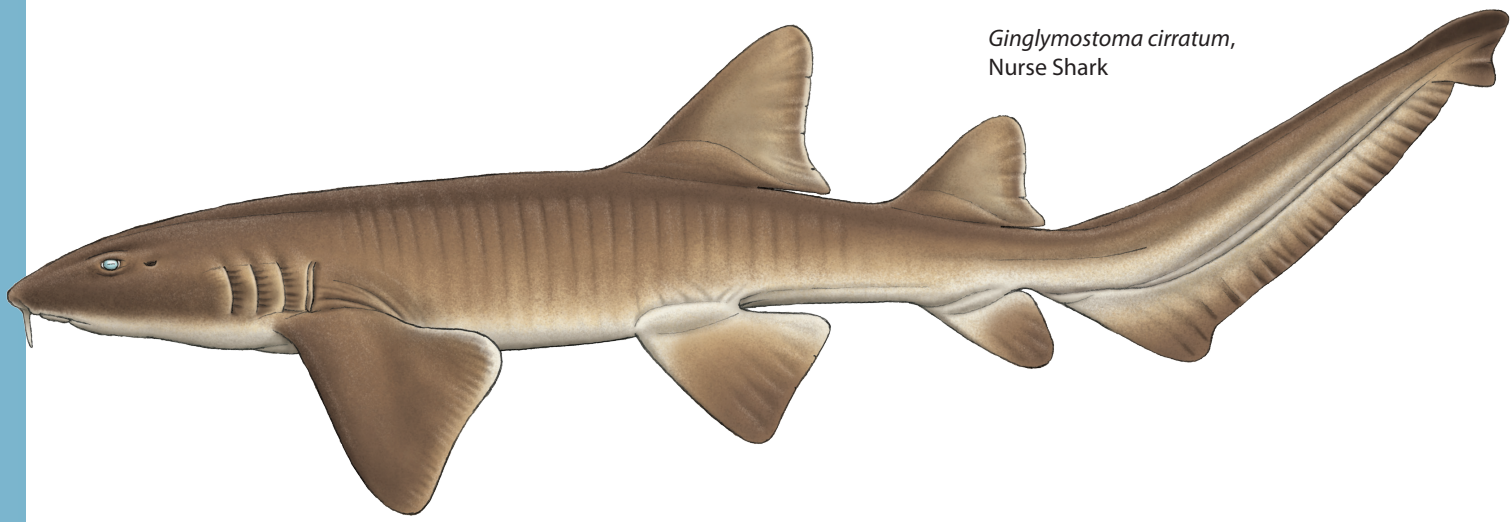
Carcharias taurus,
Sandtiger Shark



Odontaspis ferox,
Smalltooth Sandtiger Shark



Ginglymostoma cirratum,
Nurse Shark



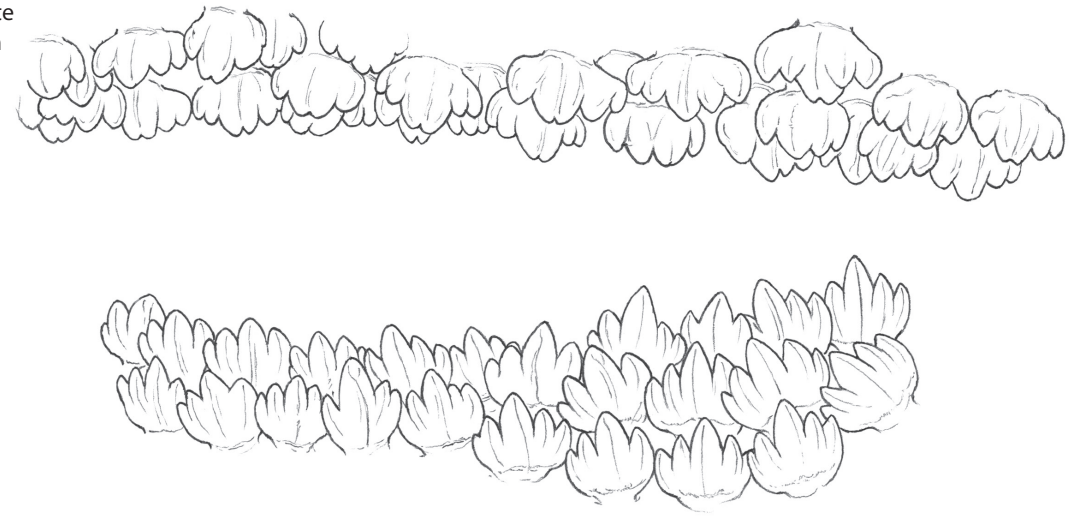
(Not to scale)

Sandtiger Shark

Carcharias taurus

TEETH

The teeth have prominent cusps with lateral cusplets. The front teeth of the upper jaw are separated from the rear teeth by small intermediate teeth. There are 44–48 upper teeth and 41–46 lower teeth (Cooper, Unknown).



ECOLOGY AND BIOLOGY

HABITAT

The Sandtiger Shark is an inshore species found to at least 190m around the surf zone, shallow bays, coral and rocky reefs and deeper areas around the outer continental shelves. It is predominantly demersal but can be seen throughout the water column. Migratory, it is known to move towards the poles during the warmer months and back towards the equator during cooler months (Cooper, Unknown).

DIET

The Sandtiger Shark feeds on a vast array of bony fish, listed by Compagno (2001) as herring (Clupidae), anchovies (Engraulidae), hake (Merluccidae), eels (Anguillidae), monkfish or anglers (Lophidae), cusk eels (Ophidiidae), lizardfish (Synodontidae), sea catfish (Ariidae), croakers (Sciaenidae), Australian salmon (Arripidae), morwong (Cheilodactylidae), rock blackfish or opaleyes (Girellidae), bluefish, elf or taylor (Pomatomidae), mackerel and bonito (Scombridae), butterfishes (Stromateidae), snappers (Lutjanidae), wrasses (Labridae), mullet (Mugilidae), spadefish (Chaetodipteridae), sea robins (Triglidae), flatheads (Platycephalidae), duckbills (Percophidae), midshipmen (Batrachodidae), sea basses (Serranidae), porgies or sea breams (Sparidae), jacks (Carangidae), remoras (Echeneidae), flatfish (Pleuronectiformes) including soles (Soleidae), American soles (Achiridae), Atlantic flounders (Scophthalmidae), righteye flounders (Paralichthyidae) and undoubtedly many others (Compagno, 2001).

Elasmobrach prey is listed as including requiem sharks (Carcharinidae), houndsharks (Triakidae), angel sharks (Squatinidae), skates (Rajidae), eagle rays (*Aetobatus* and *Myliobatis*, Myliobatidae) and Rajidae eggcases. Invertebrate prey includes squid (Loliganidae), crabs, lobsters and hermit crabs (Paguridae). Pinniped remains have also been recorded and wounds attributable to the species have been found on Franciscana Dolphins (*Pontoporia blainvillei*). Plant material has also been recorded, presumably ingested whilst feeding on other prey items (Compagno, 2001).

Schools of Sandtiger Sharks have been observed hunting cooperatively, surrounding schooling fishes and bunching them together to make feeding easier. They may also use tail slapping behaviour to scare prey (Compagno, 2001).

REPRODUCTION

Female Sandtiger Sharks mature at a total length of around 220cm and around 6 years of age. Males mature smaller and earlier at 90–195cm and 4–5 years of age. It is an ovoviviparous species with a gestation period of 8–9 months (Compagno, 2001). Like other lamnoids, the embryos are initially nourished by a yolk-sac and, once this is depleted, by unfertilised eggs constantly deposited in the uteri. Between these stages however, the embryos have a unique method of feeding (Martin, Unknown). At around 17cm they have fully functional teeth and at 26cm they are able to move around in the uterus (Compagno, 2001). The largest embryo in each uterus then kills and eats its siblings. This results in litters of only 2 pups (one from each uterus) measuring around 100cm in length and already experienced hunters (Martin, Unknown).

Sandtiger Shark

COMMERCIAL IMPORTANCE

The Sandtiger Shark is commercially important across much of its range. In the northern Pacific Ocean, northern Indian Ocean and tropical West Africa it is fished for food using handlines and gillnets. Elsewhere it is taken as bycatch in line and net fisheries. The flesh is used fresh or preserved for human consumption, its fins for sharkfin soup, its hide for leather, its liver is rendered for oil and its carcass can be processed or fishmeal (Compagno, 2001). The jaws and teeth are also valuable as curios and ornaments (Cooper, Unknown).

The Sandtiger Shark is a common aquarium species due to its hardy nature, large size and ferocious appearance. If properly cared for in a suitable tank it can live for many years. It is the only viviparous, aplacental elasmobranch species which employs a form of intrauterine cannibalism to mate in captivity (Henningsen *et al*., 2004). The species also inhabits coastal areas and popular dive sites such as shipwrecks where it is sought by recreational divers. It is occasionally taken by recreational anglers fishing from the shore, although many of these are returned alive (Cooper, Unknown).

THREATS, CONSERVATION, LEGISLATION

The Sandtiger Shark is classified in the IUCN Red List as vulnerable, meaning that populations have declined by at least 20% over 10 years or 3 generations, its population is fragmented and that its probability of becoming extinct in the wild in the next 100 years is at least 10% (Pollard and Smith, 2000). It is currently a prohibited species in the longline shark fishery off the east coast of the USA, meaning it must be immediately released if caught with minimal harm to the shark. Declines have been observed off Australia and South Africa because of commercial and recreational fishing and beach meshing. Now a protected species off Australia, recovery is proving very slow (Pollard and Smith, 2000).

IUCN RED LIST ASSESSMENT

Vulnerable (2000).

HANDLING AND THORN ARRANGEMENT

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

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