



# SPECIES FACT SHEET

## Sharks



*Stegostoma fasciatum*

Although tiger sharks are by far the most abundant large shark in Shark Bay, many other species are found in the bay. Below is a list of species reported from Shark Bay.

### Order Carcharhiniformes (Ground Sharks)

Carcharhiniformes is the most diverse order of sharks and includes the widest range of species distributions. Four of the eight families have representative species found in Shark Bay, most of which are from the family Carcharhinidae.

Species in the family Carcharhinidae can be found throughout tropical and temperate marine environments and range in habitat use from nearshore coastal environments to offshore oceanic waters. Almost all carcharhinids have a reproductive mode known as placental vivipary, which is unusual for fish. Embryos are nourished by a yolk sac that ultimately becomes a placenta, forming a vascular connection with the mother allowing nutrients to be obtained directly from the mother's blood stream until the young are fully developed and birthed. Tiger sharks (*Galeocerdo cuvier*) are the only exception and exhibit aplacental vivipary, in which the yolk sac is the only nutrient supply for the developing sharks. Most sharks in this family are obligate ram ventilators which means that they must actively swim in order to move water across their gills, however, whitetip reef sharks (*Triaenodon obesus*) can rest on the bottom and actively pump water over their gills to breathe. This family also includes the only sharks known to tolerate or live in freshwater. Bull sharks (*Carcharhinus leucas*) and river sharks (*Glyphis* spp.) are euryhaline and are known to venture long distances into freshwater systems.

Species in the family Sphyrnidae can all be distinguished by their unique head shape. This shape may allow for increased sensory capabilities of electromagnetic and visual stimuli along with increasing the maneuverability of the shark for prey capture. All of the sphyrnids give birth to live young and like most of the carcharhinids exhibit placental vivipary. They are generally found in tropical and subtropical seas and can sometimes be found in large schools around seamounts and other large structures. Like many sharks, hammerheads must swim to breathe and are particularly sensitive to loss of gill ventilation. Consequently, the release of live hammerheads from fisheries bycatch is rare.

The hemigaleids and triakids share many similarities with the carcharhinids and sphyrnids, however, they have a spiral valve intestine instead of a scroll-type intestinal valve. Species from the family Triakidae can further be distinguished due to the lack of precaudal pits.

Common name	Scientific name	Max. Length	Diet*	IUCN Status
<b>Family: Carcharhinidae (Whaler Sharks)</b>				
Pigeye shark	<i>Carcharhinus amboinensis</i>	280 cm	E,F,C,Ce	Data Deficient
Grey reef shark	<i>Carcharhinus amblyrhynchos</i>	255 cm	F,C,Ce	Near Threatened
Bronze whaler shark	<i>Carcharhinus brachyurus</i>	295 cm	E,F,Ce	Near Threatened
Spinner shark	<i>Carcharhinus brevipinna</i>	300 cm	F,Ce	Near Threatened
Nervous shark	<i>Carcharhinus cautus</i>	150 cm	F,C,Ce,S	Data Deficient
Silky shark	<i>Carcharhinus falciformis</i>	330 cm	F,C,Ce	Least Concern
Blacktip shark	<i>Carcharhinus limbatus</i>	250 cm	E,F,C,Ce	Near Threatened
Dusky shark	<i>Carcharhinus obscurus</i>	365 cm	E,F,C,Ce	Near Threatened
Sandbar shark	<i>Carcharhinus plumbeus</i>	240 cm	F,C,Ce	Near Threatened
Tiger shark	<i>Galeocerdo cuvier</i>	550 cm	E,F,C,Ce,D,R,S	Near Threatened
Lemon shark	<i>Negaprion acutidens</i>	300 cm	E,F,C,Ce	Vulnerable
Milk shark	<i>Rhizoprionodon acutus</i>	178 cm	F,C,Ce	Least Concern
<b>Family: Sphyrnidae (Hammerhead Sharks)</b>				
Scalloped hammerhead	<i>Sphyrna lewini</i>	350 cm	E,F,Ce	Near Threatened
Great hammerhead	<i>Sphyrna mokarran</i>	600 cm	E,F,Ce	Endangered
<b>Family: Hemigaleidae (Weasel Sharks)</b>				
Australian Weasel shark	<i>Hemigaleus australiensis</i>	110	Ce	Not Listed
<b>Family: Triakidae (Houndsharks)</b>				
Whiskery shark	<i>Furgaleus macki</i>	160 cm	F,Ce,C	Least Concern

\*E=elasmobranchs, F=bony fishes, C=crustaceans, Ce=cephalopods, D=marine mammals, R=reptiles, S=snakes

## Order Lamniformes (Mackerel Sharks)

Shark Bay has species from two of the seven families found in the order Lamniformes.

Species in the family Lamnidae include the fastest and most hydrodynamic sharks to roam the seas. They have a conical snout, fusiform body, a heavily keeled caudal peduncle, a lunate tail (crescent shaped for maximum speed), and all are obligate ram ventilators. The shortfin mako (*Isurus oxyrinchus*) is probably the fastest shark alive. There are five species of lamnid sharks, all of which exhibit aplacental vivipary. In addition they are oophagous (egg eating) where the mother continues to produce unfertilized eggs that the developing young eat in the womb as nourishment. Lamnid sharks also have a unique organization of their circulatory system known as a counter-current heat exchange system. This allows them to maintain body temperatures above that of their surroundings and allows them to maintain higher activity levels in cold water. In fact, the white shark (*Carcharodon carcharias*) is thought to be highly migratory and can actively hunt in cold waters.

There are three species of odontaspids. All are fairly similar in appearance with heavy bodies, conical snouts and very long slender cusped teeth. These sharks reproduce by aplacental vivipary with the strongest shark in each uterus eating the other sharks (known as intrauterine cannibalism or adelphophagy). Grey nurse sharks (*Carcharias taurus*) can take in air to adjust their buoyancy, appearing sometimes to hover just above the bottom.

Common name	Scientific name	Max. Length	Diet*	IUCN Status
<b>Family: Lamnidae (Mackerel Sharks)</b>				
White shark	<i>Carcharodon carcharias</i>	600 cm	E,F,D	Vulnerable
Shortfin mako shark	<i>Isurus oxyrinchus</i>	400 cm	F,Ce,D	Near Threatened
<b>Family: Odontaspidae (Grey Nurse Sharks)</b>				
Grey Nurse shark	<i>Carcharias taurus</i>	320 cm	E,F	Vulnerable

\*E=elasmobranchs, F=bony fishes, Ce=cephalopods, D=marine mammals

### Order Orectolobiformes (Carpetsharks)

The waters of Shark Bay have representatives from four of the seven families that make up the Orectolobiformes, including the largest known fish in the world. The family Orectolobidae can be distinguished by their benthic lifestyle and wide, flattened heads with long barbels and robust jaws. They are usually camouflaged in coloration and prefer tropical and subtropical waters. They do not need to swim to breath and can sometimes be found resting under ledges of reefs or in holes of rocky areas and are sometimes seen 'crawling' across rocky reefs using their pectoral fins. Orectolobids exhibit aplacental vivipary and usually give birth to 20 or more young.

The family Hemiscylliidae consist of bottom dwelling oviparous (egg laying) sharks that tend to prefer tropical shallow waters associated with either intertidal, sandy, rocky, or reef habitats. They do not have to swim to breath and can maneuver into very tight spaces using their strong pectoral fins and long tails. They are also sometimes referred to as catsharks or bamboo sharks.

The families Stegostomatidae and Rhincodontidae each contain only a single species, the zebra shark (*Stegostoma fasciatum*) and the whale shark (*Rhincodon typus*), respectively. Larger zebra sharks can be easily identified by their leopard-like coloration (hence it's other common name in Australia, the leopard shark), ridges running along the dorsal surface, and a tail almost as long as the entire body. Young zebra sharks are back with white stripes. Zebra sharks lay eggs (oviparous) on the ocean floor and juveniles have a zebra-like coloration until they are about 70 cm in length. Although the whale shark also has ridges running along the dorsal surface and a spotting pattern, it is easily recognized due to its pelagic lifestyle and large size; it is the largest known fish in the world. Little is known about their reproductive biology but they exhibit aplacental vivipary with broods of at least 300 young.

Common name	Scientific name	Max. Length	Diet*	IUCN Status
<b>Family: Orectolobidae (Wobbegongs)</b>				
Western wobbegong	<i>Orectolobus hutchinsi</i>	149 cm	F,C	Not listed
Gulf wobbegong	<i>Orectolobus halei</i>	206 cm	E,F,C,Ce	Not listed
<b>Family: Hemiscylliidae (Longtail Carpetsharks)</b>				
Grey carpetshark	<i>Chiloscyllium punctatum</i>	135 cm	F,C,Ce,W	Near Threatened
<b>Family: Stegostomatidae (Zebra Shark)</b>				
Zebra Shark	<i>Stegostoma fasciatum</i>	235 cm	M,F,C,S	Vulnerable
<b>Family: Rhincodontidae (Whale Shark)</b>				
Whale Shark	<i>Rhincodon typus</i>	1200cm	P	Vulnerable

\*E=elasmobranchs, F=bony fishes, C=crustaceans, Ce=cephalopods, S=snakes, M=mollusks, W=worms, P=zooplankton

