

SHARKS, DIVERS AND SQUALOPHOBIA

By EduOff

Fear of sharks and other sea monsters has been with us for a while. In fact, fear of being eaten must be a basic survival fear from our very early primate history. Unfortunately, the story and later the film 'Jaws' has brought it into sharp focus onto the great white shark, demonising it. This is a comparatively rare shark but it can grow large and it can be lethal. Let's examine this fear and see if it is altogether justified. Later you may like to look closely at how much this fear diminishes your activities in the ocean and the fun you have from diving.

Fear per se generally arises from the unknown; i.e ignorance. Reduce ignorance, replace it with understanding and respect, and much of the fear evaporates. This is what separates rational modern man from the superstitious and the primitive. Ill-informed political and media hype does little to improve this.

Potentially dangerous sharks

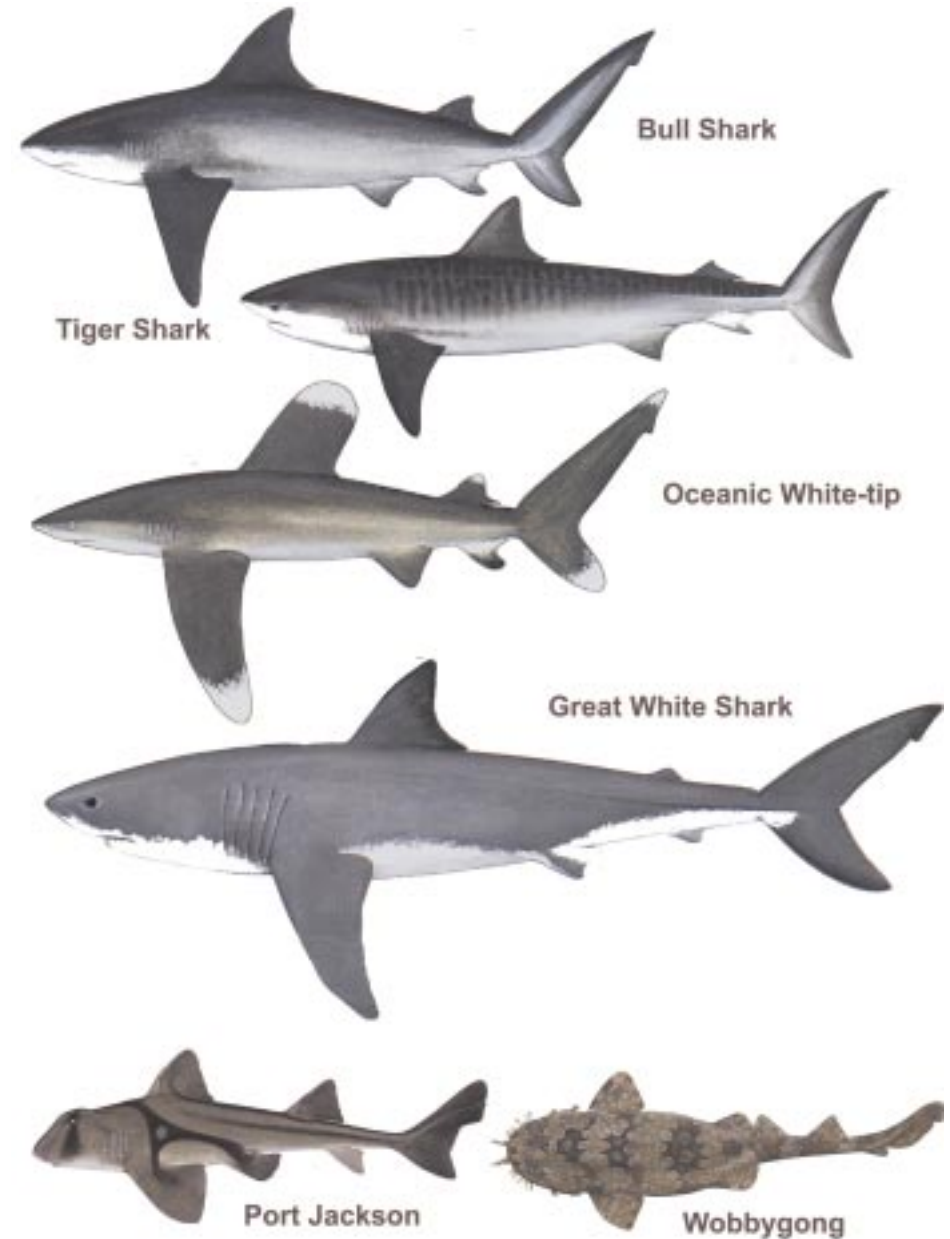
Most large sharks (excepting the filter feeders such as the huge basking shark and giant whale shark), over about 2.5 metres are potentially dangerous to humans; in that they can. Whether they will is quite another matter, depending on conditions, hunger, opportunity, their safety, and mainly food preference. Most sharks feed on fish, rays, smaller sharks, octopi, squid, crustaceans, turtles and birds. Divers are not on that list. Any large shark and most small ones should be treated with respect. Among 'dangerous' shark species are: -

The bull shark (Carcharhinus leucas). This potentially aggressive, omniverous shark is found inshore in tropical, warm, temperate seas (Sydney to Perth) and is the only species that penetrates far into turbid fresh water systems, gaining some recent notoriety in the Swan River. It matures at 2 m, reaches over 3 m, is unpredictable and can harass spearfishermen. However, many of us and most diving schools dive in Perth's Swan River, without even a nibble.

The tiger shark (Galeocerdo cuvier) has a particularly big mouth, maturing at 3 m and reaching 6 m. This relatively warm water shark is particularly active at night, coming close inshore and near the surface, is an indiscriminate feeder (scavenger) and appears very confident. It has characteristic vertical stripes. Several club members have seen them without feeling threatened.

The rare oceanic white tip (Carcharhinus longimanus) is a warm- but open-ocean shark. It matures at about 2 m and reaches 3 m. Its back is bronzy grey and is paler underneath. It has characteristic very large, rounded, white tipped fins and can be very persistent. It is seldom seen.

The great white shark (Carcharodon carcharias). The great white shark is as poorly understood as it is rare. Although it has a global distribution, it prefers cooler waters of the Great Australian Bight, southern South Africa and N California. In common with the Mako (Isurus oxyrinchus), it has a heat exchanging circulatory system, allowing it to maintain a body temperature above that of the ambient seawater. Thus, it is very active and has a substantial need for 'high energy food'. It is born at about 1.3 m, eats mainly fish, rays and other sharks until it reaches 3 m, when it is big enough to include marine mammals (seals, sealions, whale calves). It sexually matures at 3.5-4.0 m and can attain 6.0 m. Its back is slate blue-grey to grey-brown with a white underside and the boundary between the two is marbled and very distinct. It has a characteristic crescent-shaped tail driven by substantial musculature in its thick caudal keel. It is a substantial shark, that can accelerate in a moment from a gentle cruise to full charge. It hunts by surprise, cruising the bottom until it spots a likely target silhouetted against the surface. Surprisingly, it is generally quite circumspect, often curious and targets its prey accurately.



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Other sharks

However, there are many, many others (see *Sharks and Rays of Australia* by Last and Stevens, 1994, published by CSIRO) that are far less intimidating. An example is the cute Port Jackson Shark (*heterodontus portusjacksoni*) which we often see off Rottnest. This little fella feeds mainly at night on shellfish and sea-urchins, hatches at 230 mm, matures at 750 mm, reaches 1.5 m and is mainly found by divers lying up in caves during the day.

Those that have been to Aqwa have seen their collection of grey nurse sharks and sandbar sharks in the main tank and many divers have been in the tank with them, despite their appearance. Wobbegongs are sharks too, that are often seen locally. Although they are shy, don't pull a wobbys tail or you might get a few unexpected lacerations! Leave a resting shark be! So, get to know them and be able to recognise them; take an interest!

Encounters with potentially dangerous sharks – what to do and what not

Don't flee, this may be seen as an opportunity and don't flap those hands or appear injured. Keep calm, move slowly, bunch up the team and look very 'big'; a very good reason for buddy diving. The shark will probably take a quick look, identify you as 'not food' and just go about its business elsewhere. Try to identify the shark. This fleeting glimpse is by far the most common scenario. When diving, a good lookout is essential; don't get too focussed on the small stuff. This may possibly result in more shark sightings.

Unusual behaviour and persistence

Down-thrust pectoral fins and/or an arched back are signs of aggression and possibly territorial behaviour. Move out of the way and if they persist, go back to the boat. Persistent circling indicates interest in some food you may have or they think you have, which they detect with a very sensitive sense of 'smell' - let them have it and get out of the way – they generally lose interest and go away quite quickly. This is a much less common scenario.

Sharks in company can be bold. Being 'buzzed' can be quite un-nerving but is fortunately extremely rare. Keep your head, keep the team bunched up and go back to the boat slowly and deliberately. Sometimes returned aggression helps – a sharp bang on the nose with a camera or stick, but it can precipitate snapping. Above all, keep hands and arms well tucked in. Generally the shadow of the boat and boat 'noises' are intimidating to the shark, that will move off and patrol at a distance.

The great white

It frequents our WA shores more often when the whales are in passage. Very occasionally some quite large ones come close in-shore, looking for a feed. They like to patrol the 'bubble line', which divides water disturbed by the surf from clearer water further out. Fish leaving the poor visibility of the surf zone are surprised and caught. This is also frequented by surfers, sometimes in the early morning or near sunset – the time when the sharks are looking for a feed and their slate grey or brown dorsal camouflage is most effective.

Surfers can be mistaken for seals and this leads to a very few close encounters and, occasionally, a very rare attack. Surfers need to wisely assess and accept the risks they are taking, avoid poor light conditions, those grey days with an 'oily sea', and heed warnings of shark patrols, rather than expect their fellows to make the ocean safe for them. The sea, including its margins, is a wilderness and needs to be treated and respected as such.

Fortunately, diver encounters with great white sharks are extremely rare. In almost all unintended encounters, the great white may come in for a look and just go. Some enthusiasts have even deliberately snorkeled with them, but they are unpredictable and this is not recommended.

Deliberate exposure

Some tropical reefs have very large populations of small sharks. These generally are grey reef sharks (*Carcharhinus amblyrhynchos*), white tip reef sharks (*Triaenodon obesus*) and black tip

reef sharks (*Carcharhinus melanopterus*) and these can become quite used to divers. They are generally small (1-2 m) and go about their business patrolling the reef, looking for sick, injured or unwary fish. They can come quite close (2-5 m), flick a slitted eye over the diving group and swim on. Enjoy this opportunity to watch them in their element, for as long as your air lasts! Some reefs host huge shoals of hammerhead sharks at certain times of the year. These are there for their own purpose - mating, migration or whatever - and ignore watching divers. Some tour operators even deliberately feed sharks and this can be quite a show. Cage diving is an option for deliberate exposure to the large, dangerous ones (great white, tiger and oceanic white-tip). Deliberate exposure is an excellent antidote to squalophobia!

Dangerous conditions

Shark activity can increase in twilight conditions (dusk and dawn) and even small white-tip reef sharks become quite bold. This is their feeding time, so expect this. Night or late evening dives in the tropics should be in protected lagoons, rather than adjacent to very deep water, where the larger sharks are more common. Those grey evenings or early mornings near favoured hunting grounds of great white sharks should be avoided.

Line fishing activities, gutting fish and throwing the bits overboard or carrying bait in your BC or catch bag will attract sharks and make them agitated. When diving is in progress and well before it starts, discourage all line fishing or related activities from the boat. Sharks are opportunistic feeders. Going spear-fishing? - Good luck mate! Bleeding and struggling fish attract sharks like a magnet and the fish can become disputed property.

Minimising the risk

You are not part of a sharks normal diet. When a mob of divers enters the water, all blowing noisy bubbles and frightening the fish, most sharks run a mile. Dive in good visibility, and be wary near sources of food (seal colonies and fishing activities). The lone diver, or a diver separated from the group, is much more at hazard than a watchful buddy pair.

I'd give diving a much, much lower shark rating than surfing or spear-fishing. Attacks on even these high-risk fellas are comparatively rare – similar to being struck by lightning – so why the need for squalophobia? Those that prefer to reduce risks to nil can buy a reliable electronic shark repellent device, which even works on the great white shark, or even stay right out of the water!

Am I or was I squalophobic?

I met my first shark at age 15, while spear-fishing off the Mocambique coast. It was probably a grey reef shark. We gave each other a considerable fright; it went one way and I the other and that was the end of it. I definitely was squalophobic! Later encounters were in the Red Sea, where I spent a few magic moments photographing sharks, appreciating their beauty. My turning-point was a cage dive with a 4 m great white off Gansbaai, S Africa (see Logbook 83). That, and the education I was given by the very experienced tour operators, completely reversed my view of sharks. Subsequent experiences with smaller sharks were off the Maldives, Palau, Truk, Ningaloo and the Rowley Shoals (see Logbook 76, 88 and 82). That should be enough to let you make up your own mind. I like to think that fear has now been replaced by admiration and respect – even wonder!

What about all those teeth you ask? Dogs have teeth too - and you pat them! The sea is an extremely dilute solution of shit and sharks. You need to worry more about the shit than the sharks! Enjoy your shark encounter, if one happens; most other divers do!

Acknowledgements

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