

Family Carcharhinidae

Requiem sharks

The family of about 12 genera and 58 species of large sharks is found worldwide in tropical and subtropical waters. It is distinguished from all other families of sharks by having an anal fin, five gill-slits, a streamlined body, several rows of triangular teeth in the jaws, two dorsals without an anterior spine, and a short head, not laterally widened to a “hammer” shape. The largest species of the family is the tiger shark *Galeocerdo cuvier*, reaching up to 7 m. However, most requiem sharks reach 3 m or less. One species, the bull shark, regularly enters freshwater habitats and penetrates up to 4000 km inland in the Amazon. It is known to breed in freshwaters and occurs in some lakes in Central America and New Guinea, where it is the

victim of massive overfishing. All requiem sharks reproduce viviparously, with internal fertilization. Unlike many other sharks, they do not feed their young with unfertilised eggs in the uterus, and they are not cannibalistic. Several marine shark species have been reported from the Shatt al Arab in Iraq. To identify them, identification resources about marine sharks must be consulted. **Further reading:** Ebert et al. 2013 (diversity); Nelson et al. 2016 (diversity).

Carcharhinus leucas

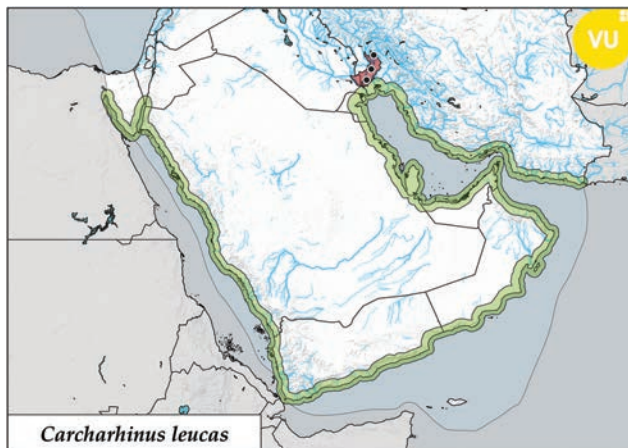
Common name. Bull shark.

Diagnosis. Only shark in freshwaters in West Asia. Size up to 3400 mm TL, usually up to 2000 mm TL have been estimated in Iraqi freshwaters.

Distribution. In West Asia, in Persian Gulf basin, where it enters Euphrates-Tigris drainage. In Iran, migrates into Karun and Khawr-e Bahmanshir. In Iraq, once regularly upriver to Baghdad, but currently only up to Basra due to dams. Worldwide in warm temperate to tropical seas. Absent from Mediterranean and very rarely reported from Atlantic coast of Western Sahara. Reported to enter freshwater almost throughout its range, including Amazon, Gambia, Ganges, Mississippi, San Juan (and Lake Nicaragua), Zambezi, and many rivers in southern Africa, New Guinea, and Australia.

Habitat. Continental shelf waters to a depth of about 150 m, but usually less than 30 m. Frequently found in estuarine and freshwater areas of lower and middle reaches of rivers. Brackish and freshwater habitats are major nursery areas.

Biology. Euryhaline, moves freely between marine and freshwater. Tolerates hypersaline conditions up to 53 ‰. Life span is about 14 years. Matures at about 6 years to a length



Carcharhinus leucas; South Africa. © Shutterstock/Carlos Aguilera/133701370.

of 1600–2250 mm TL for females and 1800–2300 mm TL for males. Gestation period is 10–11 months and up to 13 embryos are reported. Usually, gives birth in estuaries. Juveniles are between 560 and 810 mm TL. Can swim up to 180 km in 24 hours. One of the most dangerous sharks. Freshwater attacks are rare but responsible for most shark attacks in shallow estuarine and coastal waters worldwide. Carnivorous, feeding near bottom on vertebrates such as fish, elasmobranchs, sea turtles, sea snakes, and large invertebrates such as crabs, sea urchins, and cephalopods. Juveniles usually take fish.

Conservation status. VU; still found in Iraqi and Iranian freshwaters. Worldwide heavily depleted with declining populations. Commonly caught in commercial and recreational fisheries. Usually not a target species but caught as by-catch or as part of a multispecies fishery. Has been commercially exploited for its skin, liver oil, and meat, with fins currently being the main product.

Further reading. Fowler et al. 2005; Coad 2015a (biology, distribution).

Freshwater shark attacks. Imagine standing knee-deep in the river, washing your fishing gear after a successful day's work. Suddenly, you hear a splash beside you, and then you fall because a shark has taken a bite out of your wade. You cannot get up because you do not have a clam, and then you see the shark coming back through the murky water. This nightmare is a bull shark attack and has happened many times. Bull sharks are often found in shallow estuarine waters, entering rivers hundreds of kilometers upstream of the estuary. They frequently hunt along shores, and their activities are likely to overlap with those of humans. Bull sharks are among the most dangerous sharks in the world, if not the most dangerous. From Iraq and Iran, 45 freshwater bull shark attacks were reported between 1938 and 1970, 19 of which were fatal. This represents 34 % of all shark attacks in freshwater worldwide, making the northern Persian Gulf one of the most dangerous freshwater areas in the world for shark attacks. Of course, we should not compare these figures with the number of fatal car accidents in the same region.

Further reading. Coad 2015a (shark attacks in the Persian Gulf).



Large lowland rivers are the freshwater habitat of *Carcharhinus leucas*, as here in lowermost Shatt al Arab in Iraq.