

Australian Threatened Species

Grey Nurse Shark *Carcharias taurus*

Conservation Status

Commonwealth: east coast population - Critically Endangered; west coast population - Vulnerable (*Environment Protection and Biodiversity Conservation Act 1999*)

NSW: Endangered (*NSW Fisheries Management Act 1994*)

QLD: Endangered (*Nature Conservation Act 1992*)

QLD: Protected (*Fisheries Act 1994*)

VIC: Protected (*Fisheries Act 1995*)

VIC: Threatened (*Flora and Fauna Guarantee Act 1988*)

TAS: Protected (*Fisheries Regulations 1996*)

WA: Protected (*Wildlife Conservation Act 1950*)

Lifestyle of the Grey Nurse Shark

Grey Nurse Sharks are more active at night, when they feed upon fish, smaller sharks, rays, squid and crustaceans.



What do they look like?

Grey Nurse Sharks have large, stout bodies, a pointed snout with many rows of visible teeth and small eyes. They are grey to grey-brown on top, paler underneath and sometimes have reddish or brownish spots on their backs. Despite their appearance, Grey Nurse Sharks are not a threat to divers or swimmers and actually have a very placid nature.

The sharks have two large dorsal fins of similar size. The tail is distinctive as the top lobe is larger than the bottom. Their upper body is bronze-coloured, while the underside is paler. Juveniles tend to have darker spots on the lower half of their body which fade as they get older.

Where do they live?

Grey Nurse Sharks tend to live in shallow inshore waters. Their preferred habitats have sandy-bottomed gutters or rocky caves and are close to inshore rocky reefs or islands. There are two populations of Grey Nurse Sharks in Australia – the east coast population lives along the coast of New South Wales and southern Queensland, and the west coast population is distributed in the southwest coastal waters of Western Australia.

Male sharks reach sexual maturity at 4 - 6 years of age, and females at 6 - 8 years. Both males and females mature at about 2.2m and reach a total length of about 3.6m. Pups measure an average of 1m in length at birth.

The breeding of Grey Nurse Sharks is quite unusual. Mating occurs mainly in autumn and is followed by a 9 - 12 month gestation period, and the young are born in winter. Towards the end of the gestation period, the more fully developed embryos eat the less developed embryos and unfertilised eggs within the female shark's uterus. As a result, only two pups are produced per litter – one in each uterus. Grey Nurse Sharks tend to breed only once every two years. This is the lowest reproductive rate of any shark and makes it more susceptible to external pressures that increase mortality.

What is threatening them?

Grey Nurse Sharks have suffered a decline over recent years, resulting in the listing of the east coast population as 'critically endangered'. A New South Wales Fisheries survey in 2000 revealed that the number of Grey Nurse Sharks in New South Wales could be as low as 292 individuals.

Although the sharks are protected today, they were commercially fished quite extensively in the past. Illegal fishing still occurs, and accidental capture by both commercial and recreational fishers also poses a serious threat.

Key habitat sites for Grey Nurse Sharks are often favoured fishing sites, and there have been various reports of recreational fishers accidentally catching Grey Nurse Sharks. Scuba divers have observed a large number of the sharks with hooks and lines in their mouths. Some survive the injuries they sustain from fishing gear, but many don't. An autopsy of a Grey Nurse Shark in 2000 revealed that the cause of death was the perforation of the stomach wall by numerous small hooks of the type used by recreational fishers.

In the 1950s and 1960s, the misconception that Grey Nurse Sharks were 'man-eaters' led to intensive fishing efforts by spearfishers using explosive headed spears. The sharks' placid nature made them easy targets.

Beach safety nets, designed to keep out sharks that are dangerous to humans, can also trap the harmless Grey Nurse Shark.

Conservation Action

- Community groups and individual divers are assisting New South Wales Fisheries with surveys of Grey Nurse Sharks and their habitats
- Research is being undertaken by various universities and government agencies in order to increase understanding about habitat requirements, diet and movements
- WWF is working to raise awareness within the community about Grey Nurse Sharks and how best to protect them
- A recently completed Threatened Species Network (TSN) Community Grant in southeast Queensland mapped Grey Nurse Shark habitat
- A current TSN Community Grant in the eastern and western tuna and billfish fisheries is working with commercial fishers to trial de-hookers and line-cutters in order to safely and quickly remove by-catch from fisheries
- The Grey Nurse Shark recovery team has worked with divers and diving clubs to develop a set of guidelines for diving in Grey Nurse Shark areas. These tell divers how to behave around sharks to help protect the species and its habitat.



The Threatened Species Network is a community-based program of the Australian Government's Natural Heritage Trust and WWF Australia.

Did you know...

- Male Grey Nurse Sharks bite females during the courtship process. In the breeding season it is common to see small scars on the females
- The sharks are able to swallow air at the surface of the water in order to give them buoyancy control
- They have large, sharp teeth, but they are not very strong and break easily
- The Grey Nurse Shark was the first protected shark in the world when it was listed under NSW legislation in 1984.

How you can help

- Remove any rubbish or fishing gear that you see in the water or on the beach
- Refrain from fishing in Grey Nurse Shark areas
- If diving, report any tagged Grey Nurse Sharks to New South Wales Fisheries or the Queensland Environmental Protection Agency
- If fishing, report any Grey Nurse Sharks accidentally caught to New South Wales Fisheries or the Queensland Environmental Protection Agency
- Contact the Threatened Species Network in your state and participate in volunteer work
- Learn more about threatened species and their habitats.

Contacts and References

New South Wales Fisheries
Ph: 1300 550 474
Visit: www.fisheries.nsw.gov.au

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You can also find out more information about Australia's threatened species by calling the Department of the Environment and Heritage Community Information Unit on freecall 1800 803 772 or by visiting www.deh.gov.au/biodiversity/threatened.

Photo

Grey Nurse Shark
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