

Hammerhead Sharks in NSW – a guide for fishers

INTRODUCTION

Hammerhead sharks are a warm-temperate to tropical species of shark with a wide ranging distribution. They can be found from the surf line out to sea and from the surface down to at least 275m.

Despite their reputation, hammerhead sharks are not considered dangerous to humans. Many populations of hammerhead sharks around the world have suffered serious declines in abundance, due to harvest for their meat and valuable fins.

Hammerhead sharks can be readily recognised by the prominent flattened keels that form the characteristic hammer-shaped head, called a 'cephalofoil'. The exact purpose of the cephalofoil is debated, with various theories proposed, including that it provides hydrodynamic lift, improves vision and manoeuvrability, increases the area and spatial arrangement of sensory organs and can be used for prey manipulation.

HAMMERHEAD SHARKS IN NSW

There are nine recognised species of hammerhead sharks worldwide, of which three occur in NSW waters; the Great Hammerhead Shark (*Sphyrna mokarran*), Scalloped Hammerhead Shark (*Sphyrna lewini*), and Smooth Hammerhead Shark (*Sphyrna zygaena*).

In NSW, Great Hammerhead and Scalloped Hammerhead Sharks have undergone significant declines in abundance and are facing a high risk of extinction in the near future. As a result, in 2012 the Great Hammerhead Shark was listed as a vulnerable species and the Scalloped Hammerhead Shark was listed as an endangered species in the *NSW Fisheries Management Act 1994*.

The Smooth Hammerhead Shark is not listed as threatened or protected in NSW, however the species is subject to other fisheries regulatory measures. It is imperative that the species is

correctly identified before retaining a caught individual to ensure that it is not a threatened hammerhead species. This guide is designed to assist fishers with identifying hammerhead sharks in NSW.



Scalloped Hammerhead Shark. Photo by Frederic Buyle

LEGAL IMPLICATIONS

In accordance with the *NSW Fisheries Management Act 1994* it is illegal to catch and keep, buy, sell, possess or harm Great Hammerhead and Scalloped Hammerhead Sharks without a specific permit or other appropriate approval.

For vulnerable species, penalties can include fines of up to **\$55,000 and/or up to one year in prison** for recreational fishers.

For endangered species, penalties can include fines of up to **\$220,000 and/or up to two years in prison** for recreational fishers.

Authorities must consider the impact of development proposals on threatened species. Where there is likely to be a significant impact, a detailed species impact statement is required.

5 THINGS YOU CAN DO TO HELP

1. Take a moment to study this guide and familiarise yourself with the appearance of the three hammerhead sharks species that occur in NSW.
2. If you catch a Great Hammerhead or Scalloped Hammerhead Shark (or other protected species), release it carefully causing least possible harm.
3. Follow the fishing rules in marine parks and other protected areas, and follow the bag and size limit regulations for all species.
4. Report illegal or suspect fishing activities by:
 - » Contacting your nearest Fisheries Office;
 - » Using the Fishers Watch Phone line **1800 043 536**; or
 - » Completing the online report from: www.dpi.nsw.gov.au/fisheries/compliance/report-illegal-activity
5. Participate in the NSW DPI Protected and Threatened Species Sighting Program.

If you catch or see a Great Hammerhead or Scalloped Hammerhead Shark, record the details and send the information to the NSW DPI Threatened Species Section by emailing: fisheries.threatenedspecies@dpi.nsw.gov.au or completing the online report form: <http://www.dpi.nsw.gov.au/fisheries/species-protection/report-it>



Scalloped Hammerhead Shark. Photo by Frederic Buyle;

WHAT IF YOU ARE NOT SURE?

If you catch a hammerhead shark and are not sure which species it is, release the shark back to the water with minimal harm. Significant penalties apply for buying, selling, possessing or harming any threatened or protected species in NSW.



Great Hammerhead Shark. Photo by Frederic Buyle

FOR MORE INFORMATION

NSW DPI has produced factsheets on the Great Hammerhead and Scalloped Hammerhead Sharks.

The identification guide for sharks and rays for use by commercial fishers also provides additional information on identifying the different species of sharks in NSW waters.

These publications are available on-line at the NSW DPI website: www.dpi.nsw.gov.au

Alternatively, contact the NSW DPI Threatened Species Section:

Port Stephens Fisheries Institute
Locked Bag 1
Nelson Bay NSW 2315

Email: fisheries.threatenedspecies@dpi.nsw.gov.au

Fishing regulations may change during the life of this publication. It is the responsibility of fishers to ensure they are acting within the law at all times.

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (September 2015). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of the Department of Primary Industries or the user's independent adviser.

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SCALLOPED HAMMERHEAD SHARK (*Sphyrna lewini*)

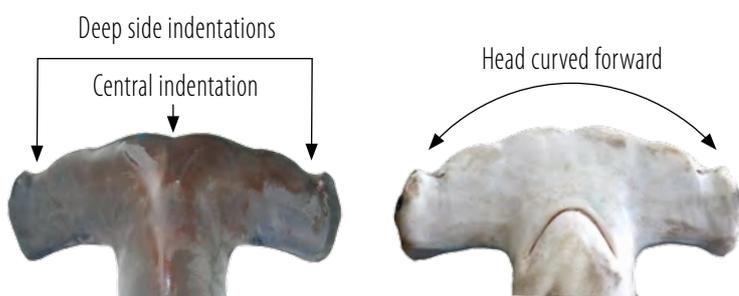
STATUS IN NSW: ENDANGERED

Colour: Olive, bronze or brownish grey above and lighter coloured below. Little or no fin markings. The underside of the pectoral fin tips are dusky in colour.

Size: Born at 45 – 50 cm and can grow to 350 cm.

Reproduction: Males mature at 140 – 160 cm; females at about 200 cm. Produce litters of 13–23 young after a gestation of 9–10 months.

Remarks: The Scalloped Hammerhead Shark sometimes forms large migratory schools. The species is similar in appearance to the Smooth Hammerhead Shark, except the Scalloped Hammerhead Shark has a distinctive central indentation on its head.



Upper teeth are relatively small and smooth edged or occasionally finely serrated

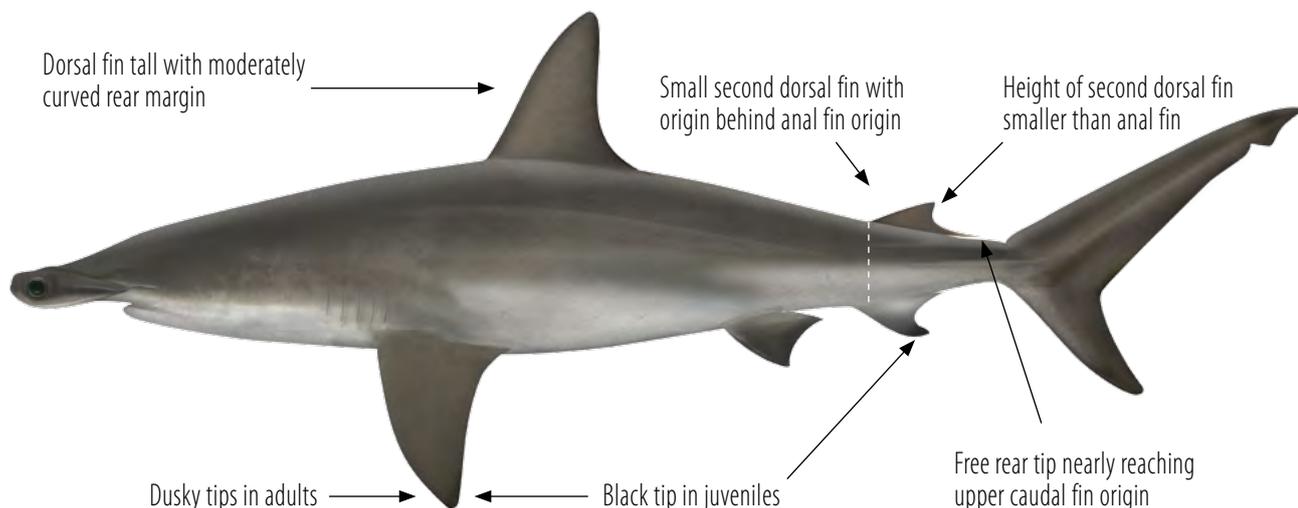


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GREAT HAMMERHEAD SHARK (*Sphyrna mokarran*)

STATUS IN NSW: **VULNERABLE**

Colour: Bronze to greyish brown above and lighter coloured below. No fin markings in adults; second dorsal fin tip is dark in juveniles.

Size: Born at about 65 cm and can grow to 600 cm (though rarely exceeding 450 cm).

Reproduction: Males mature at about 225 cm and females at about 210 cm. Produce litters of 6–33 young after a gestation of 11 months.

Remarks: The Great Hammerhead Shark's hammer-like head is almost rectangular in shape, and it has a distinctively tall and elongated dorsal fin. It is generally a solitary species that is highly migratory.

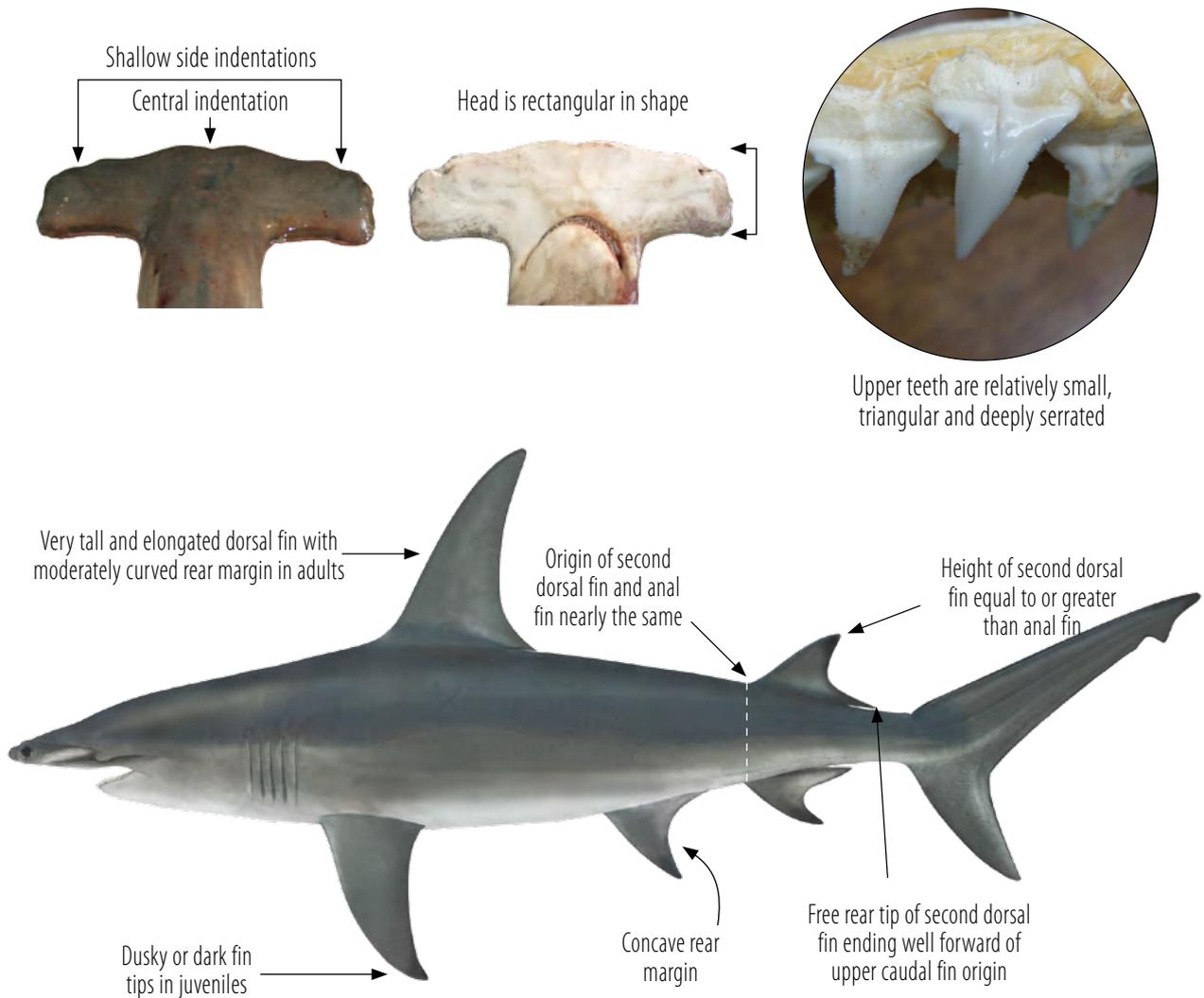


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SMOOTH HAMMERHEAD SHARK (*Sphyrna zygaena*)

STATUS IN NSW: NOT THREATENED OR PROTECTED

Colour: Olive to dark greyish above and white in colour below. Dusky colouring beneath the tips of the pectoral fins.

Size: Born at 50–60 cm and can grow to 350 cm.

Reproduction: Males mature at about 250 cm; females at about 265 cm. Produce litters of 20–50 young after a gestation of 10–11 months.

Remarks: Unlike other hammerhead sharks, the Smooth Hammerhead Shark lacks an indentation in the centre of its head. The species occasionally forms large migratory schools.

Most interactions with hammerhead sharks in NSW are likely to be with Smooth Hammerhead Sharks. The species is currently not threatened or protected in NSW, however it is imperative that the species is correctly identified to ensure that it is not a threatened hammerhead shark species.

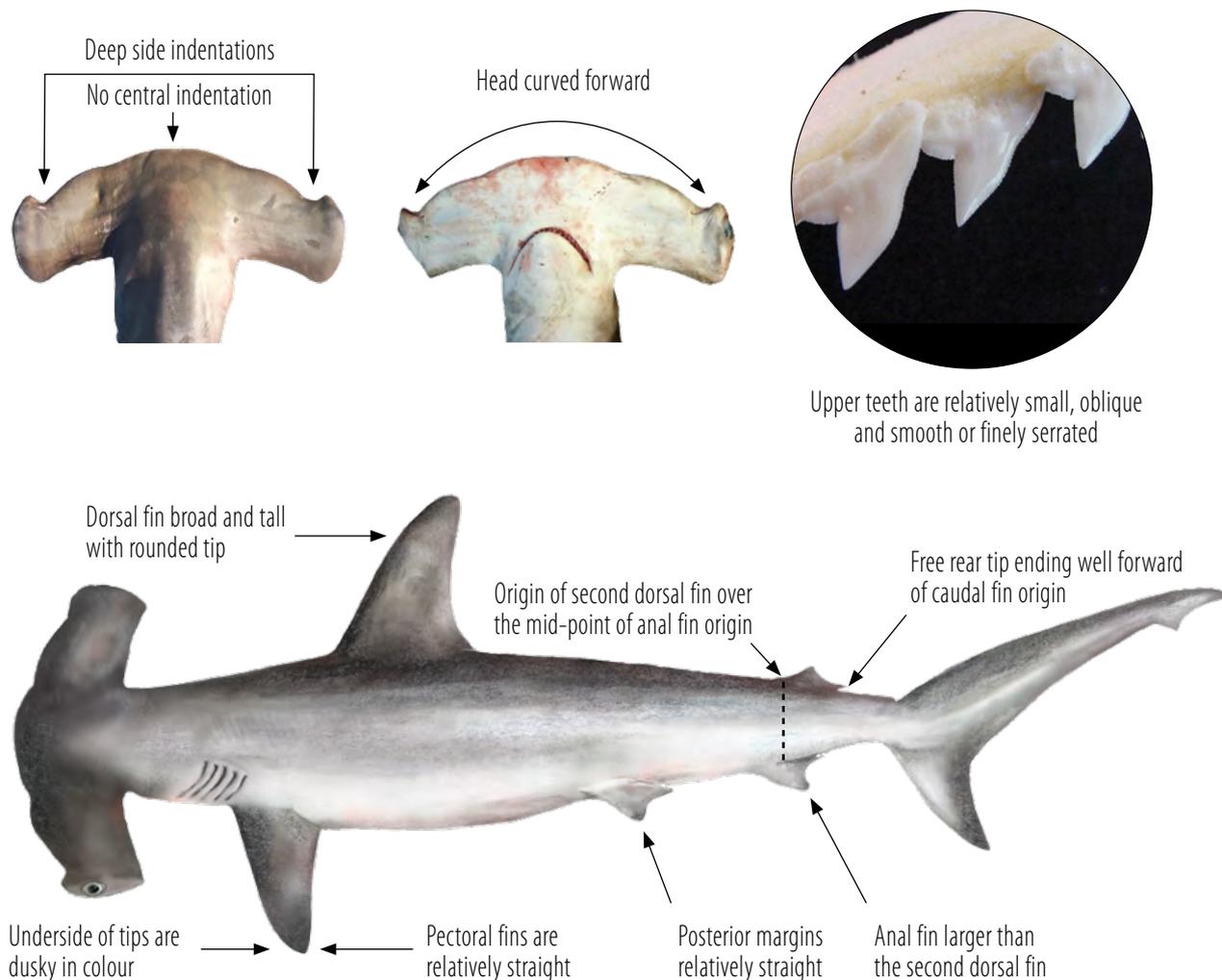


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