

Identifying sharks and rays



*A guide for
NSW commercial fishers*



NSW DEPARTMENT OF
PRIMARY INDUSTRIES

Important

If a shark or ray cannot be confidently identified using this guide, it is recommended that either digital images are obtained or the specimen is preserved.

Please contact NSW DPI research staff for assistance: phone **1300 550 474** or email **information-advisory@dpi.nsw.gov.au**

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Introduction

Many shark and ray species are caught by commercial fishing operations in New South Wales (NSW) waters and refined catch information is vital for the successful management of these species.

This guide is designed to assist commercial fishers identify sharks and rays potentially encountered in NSW waters. Sharks and rays not usually retained for commercial purposes have not been included in this guide.

Catch reporting arrangements for NSW commercial fishers require that any sharks and rays landed are correctly identified and recorded to the species or genus level using the codes provided by NSW Department of Primaries Industries (NSW DPI).

This guide contains simple, easy-to-use keys that highlight certain external distinguishing features for identification purposes. The keys are further supported by detailed species information and illustrations so that identification can be made with confidence.

If a landed shark or ray cannot be confidently identified using this guide, it is recommended that either digital images are obtained or the specimen is preserved. Please contact NSW DPI research staff for assistance. *Details may be found inside the front cover.*

References for this guide:

Compagno, LJV 1984. FAO Species Catalogue, Vol. 4, Sharks of the World. An annotated and illustrated catalogue of sharks known to date. FAO Fisheries Synopsis No. 125.

Daley, RK, Stevens, JD, Last, PR and Yearsley, GK 2002. Field Guide to Australian Sharks & Rays. CSIRO Marine Research, Hobart, Australia. 84pp.

Last, PR and Stevens, JD 1994. Sharks and Rays of Australia. CSIRO, Melbourne, Australia. 513pp.

McAuley, R, Newbound, D and Ashworth, R 2002. Field identification guide to Western Australian Sharks and Shark-like Rays. Department of Fisheries, Perth, Western Australia. (ISBN: 1 877098 03 5) 35pp.

NSW DPI commercial line fishing observer program, 2007-2008.

How to use this guide

In designing this guide, a basic level of general knowledge is assumed about the different types of sharks and rays encountered in NSW waters. Once a shark or ray has been caught and requires identification, choose the most appropriate key from the list below – refer to the glossary on page 6 for terminology. Keys can be found on pages 8-13.

- Key 1** Whaler sharks and other sharks of similar appearance to whalers – upper precaudal pit present
- Key 2** Sharks of similar appearance to whaler sharks – no precaudal pit
- Key 3** Mackerel (great white and mako), hammerhead and thresher sharks
- Key 4** Wobbegongs and some other patterned bottom-dwelling sharks
- Key 5** Sawsharks and other long-snouted sharks and rays

To begin identification start at the blue box and work your way through the key by assessing the primary distinguishing features until you identify the species.

In the case of the whalers and similar sharks, the primary distinguishing features include: the presence or absence of obvious physical features such as an upper precaudal pit, interdorsal ridge or dorsal fin spines; the relative sizes and/or positions of the dorsal fins; and the size and shape of the upper teeth. Correct assessment of these main distinguishing features via the keys should result in correct species identification.

Subsequently, turn to the appropriate page number of that species as indicated on the key and consider some of the secondary distinguishing features (which might involve teeth, body patterning or some of the primary features mentioned above), so that initial identification can be confirmed with a higher degree of confidence.

Tips

The primary distinguishing features of each species are highlighted in orange throughout the illustrated pages of this guide.

With some obvious exceptions, colouration and known distribution should not be considered reliable primary distinguishing features – they should only be considered as secondary features. For example, most whaler sharks can vary in upper body colouration between light grey and bronze, and so a bronzy coloured shark is not necessarily a 'bronze whaler'. Similarly, a whaler with black tips on its fins is not necessarily a 'common blacktip shark'.

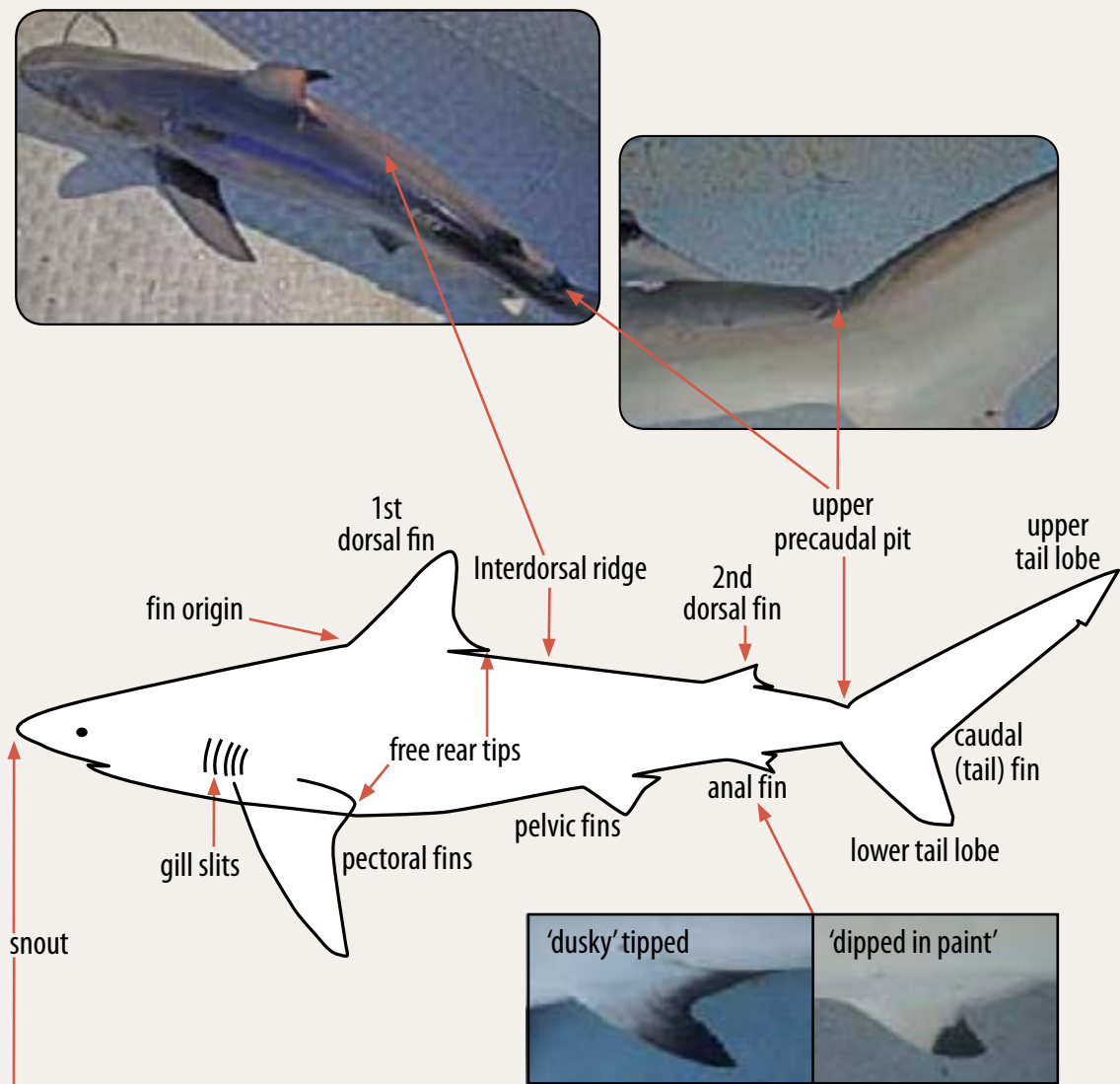
The known distribution of a species is just that – the known geographical distribution – and not a definitive boundary. Not enough is known about the distribution of sharks and rays in NSW waters to be able to use such information with absolute accuracy.

It should be noted that, in general, the most useful four features to look at in the case of most whalers and similar sharks is the presence or absence of an upper precaudal pit, interdorsal ridge, or dorsal fin spine; and the size and shape of the upper teeth. The larger teeth either side of the midpoint of the upper jaw are the teeth to inspect.

Glossary

anal fin	single fin located on the underside behind the pelvic fins
barbel	a slender sensory skin projection on the snout of some species
caudal fin	tail fin
caudal peduncle	the section behind the anal fin connecting the body to the tail
conical	cone-shaped
crest	hardened ridge of skin above the eyes of some species
cuspl	the main visible part of the tooth
cusplets	small secondary projections next to the main cuspl of tooth
denticles	very small tooth-like plates that form the abrasive surface on the skin
dorsal	refers to the upper surface of the shark
dorsal fins	fins on upper surface
dusky	graded and/or inconsistent grey to black colouration
fin origin	the forward-most point of attachment of a fin
flank	side of the body
free rear tip (of fin)	rear tip of loose flap behind the fin attachment
inner margin (of fin)	edge between the fin attachment and the free rear tip
interdorsal ridge	raised ridge of skin between the 1st and 2nd dorsal fins
keel	solid lateral fin-like projection – associated with caudal peduncle
lateral	refers to the side of the shark
leading edge (of fin)	forward-facing edge
margins (of fins)	leading or trailing edges
pectoral fins	located on underside of the head in sharks / forms the disc in rays
pelvic fins	paired fins located behind the pectoral fins
precaudal pit	notch-like indentation at the base of the caudal (tail)
serrated	saw-like or jagged
skin lobe	projection or flap of skin
spiracle	a respiratory opening behind the eyes of some species
sub-apical	below the tip
tassels	thin, branched skin lobes
trailing edge (of fin)	rear-facing edge
translucent	allows light through but not totally transparent
underside/ventral	refers to the undersurface of the shark
upper body	refers to the body surfaces above the level of the pectoral fins

Identifying parts of the shark



SHAPE OF SNOUT

nostril

mouth



blunt



short and rounded



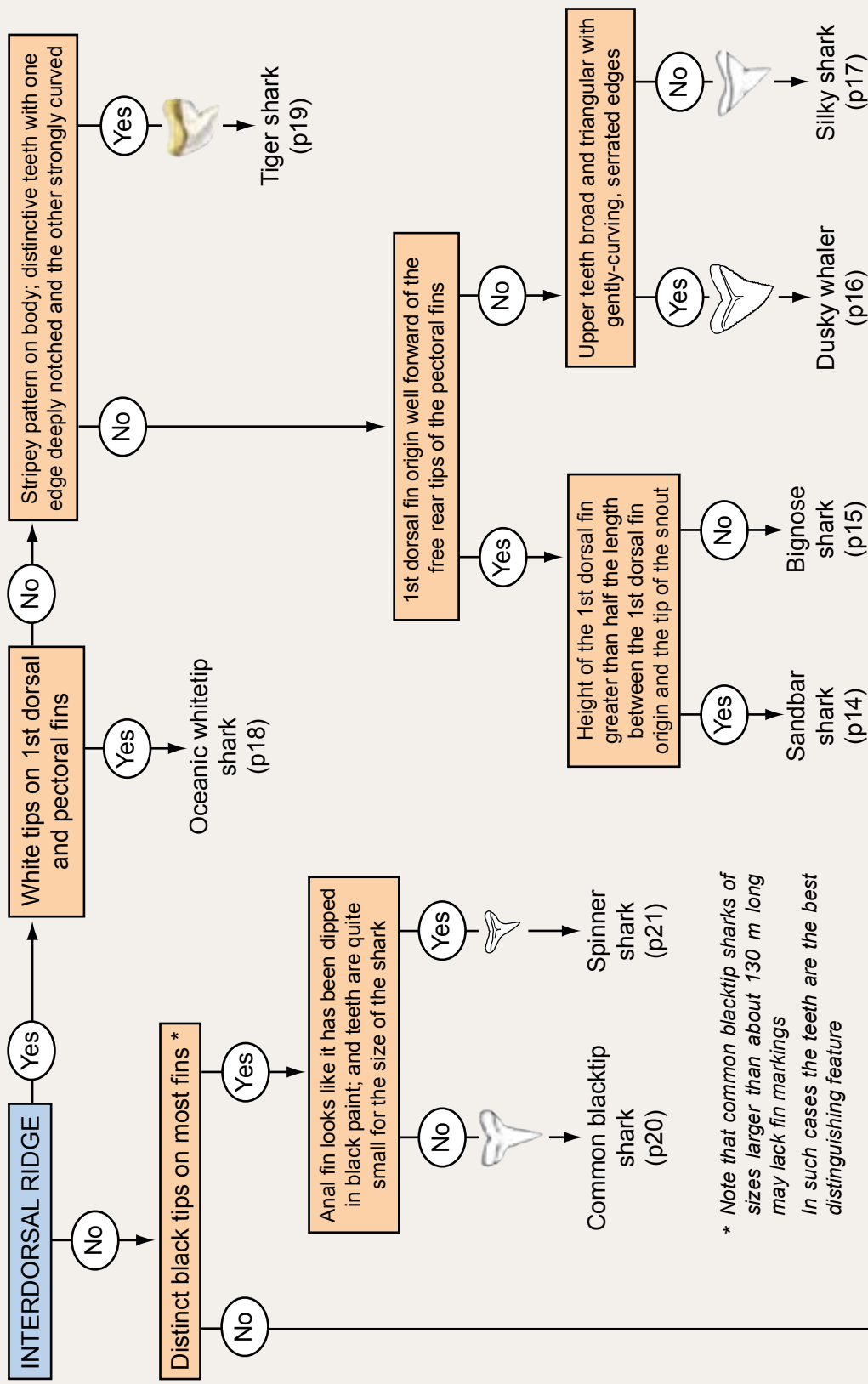
long and rounded



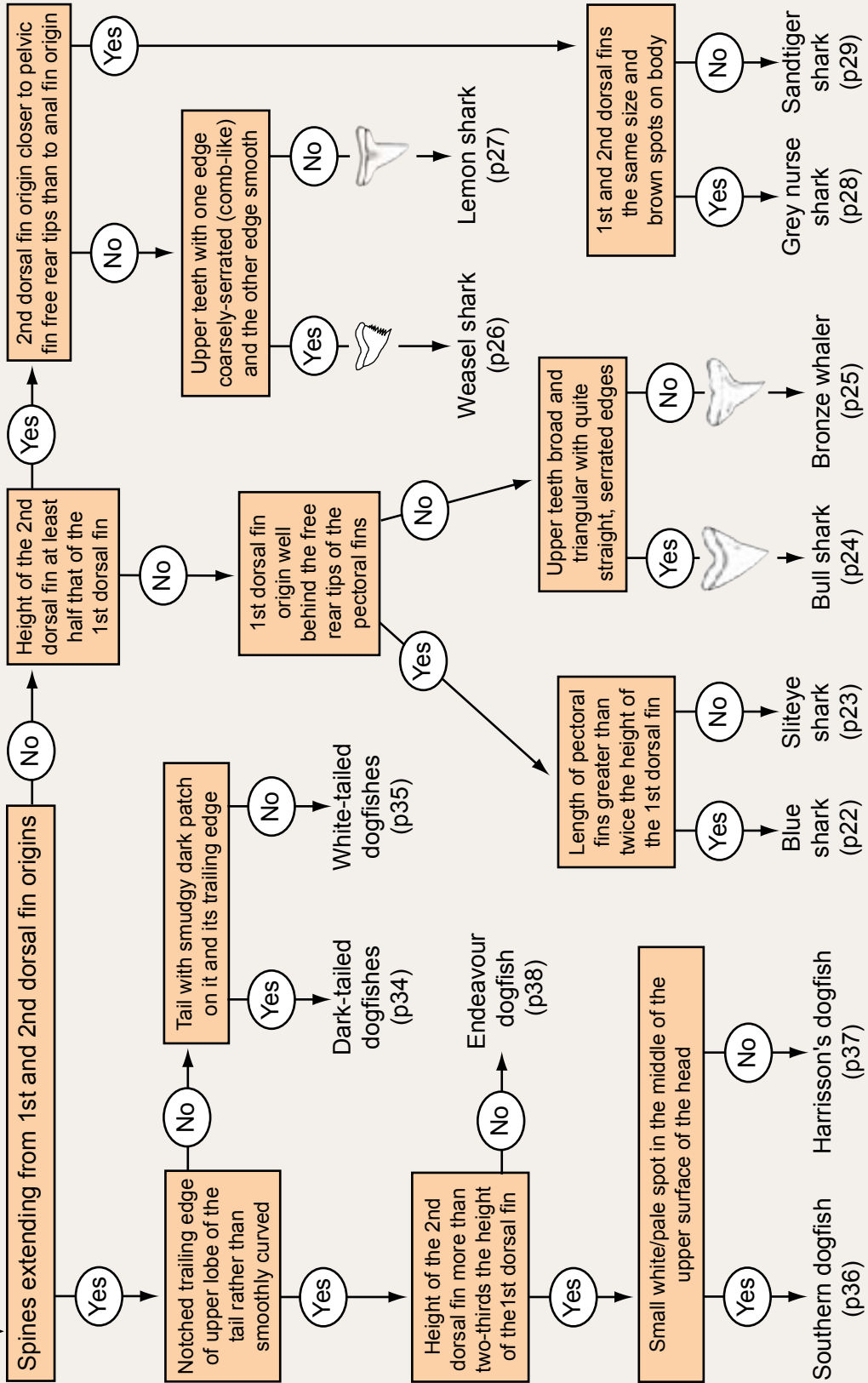
pointed

KEY 1: Whaler sharks and other sharks of similar appearance to whalers – upper precaudal pit present

KEY 1

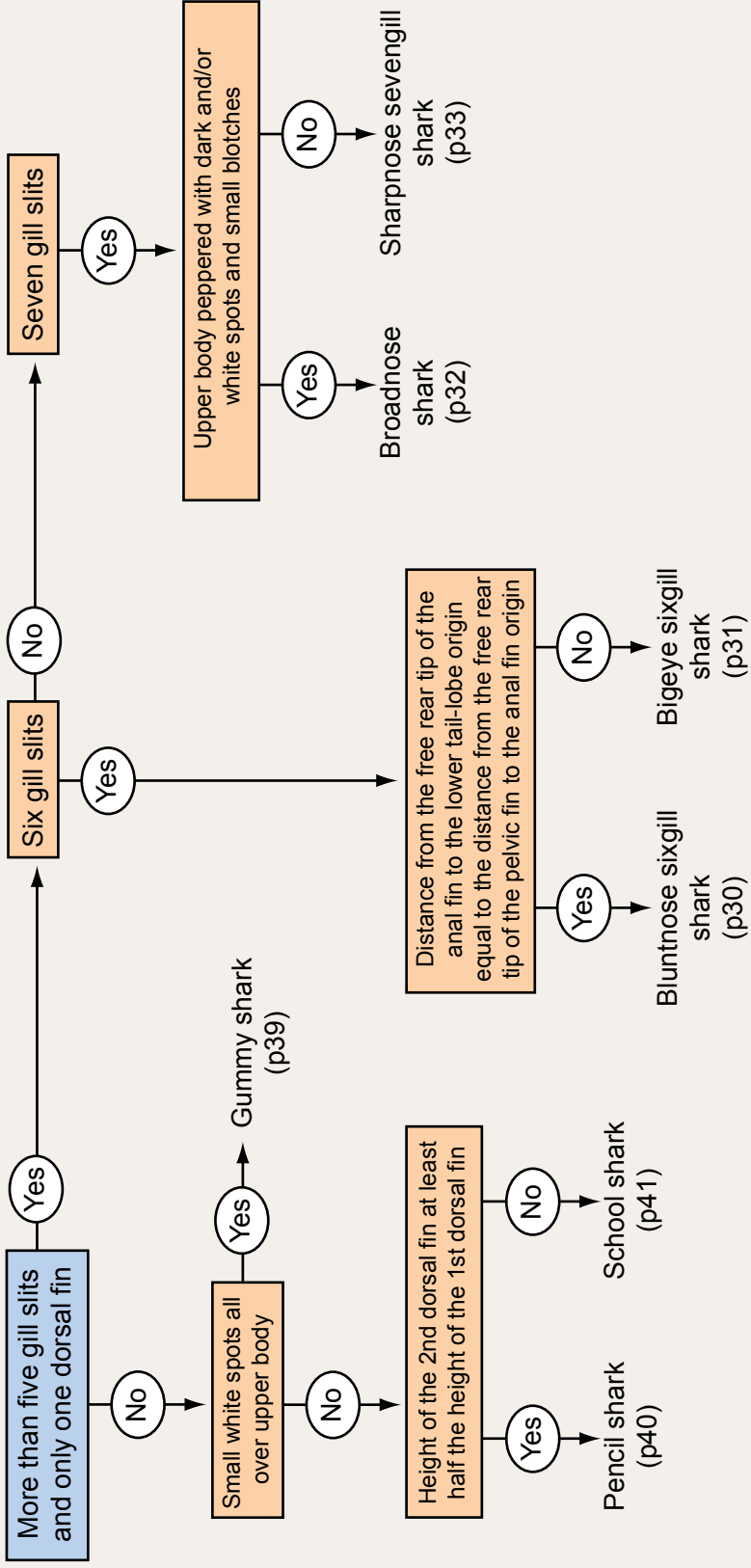


* Note that common blacktip sharks of sizes larger than about 130 m long may lack fin markings
In such cases the teeth are the best distinguishing feature



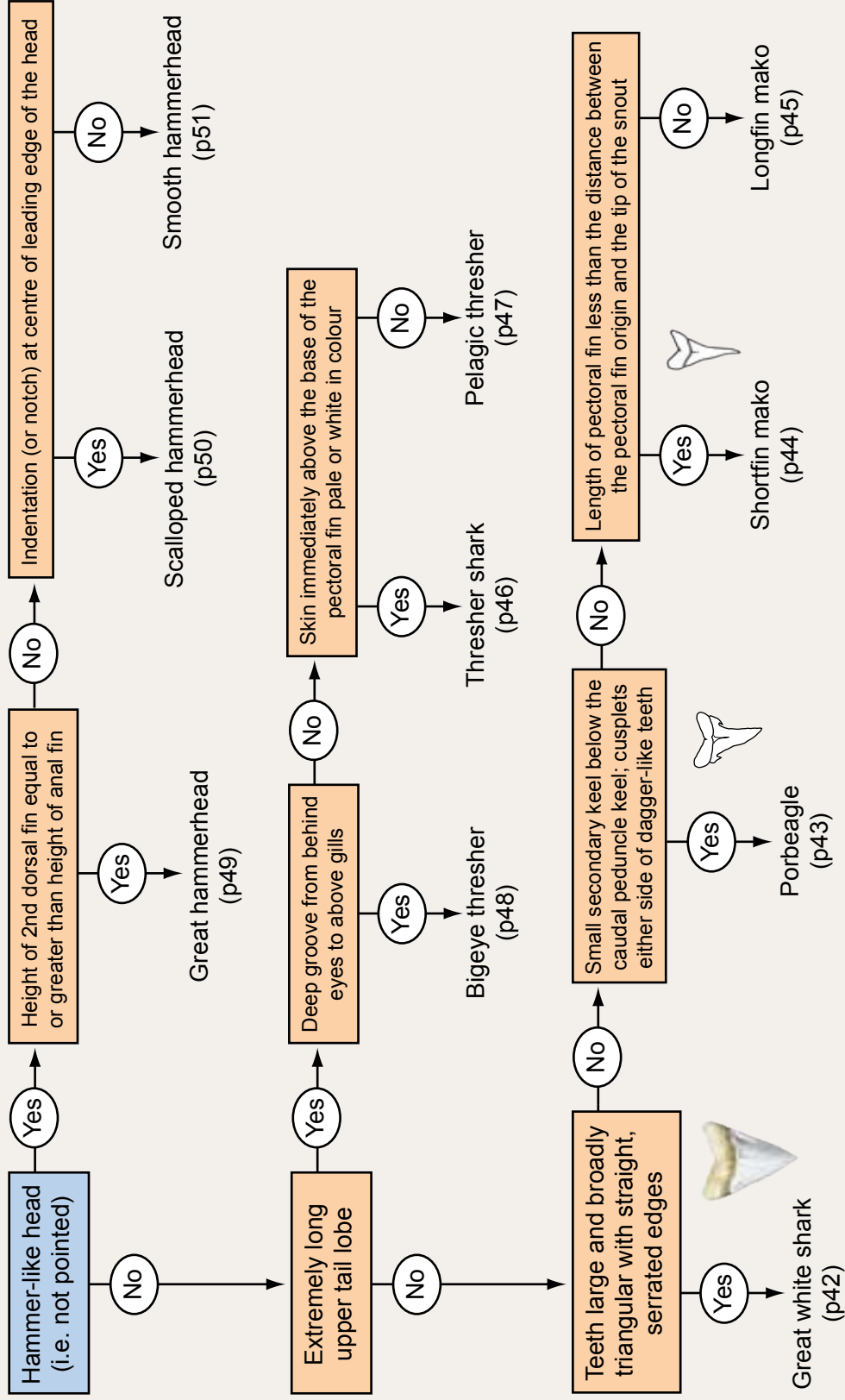
KEY 2: Sharks of similar appearance to whaler sharks – no precaudal pit

KEY 2



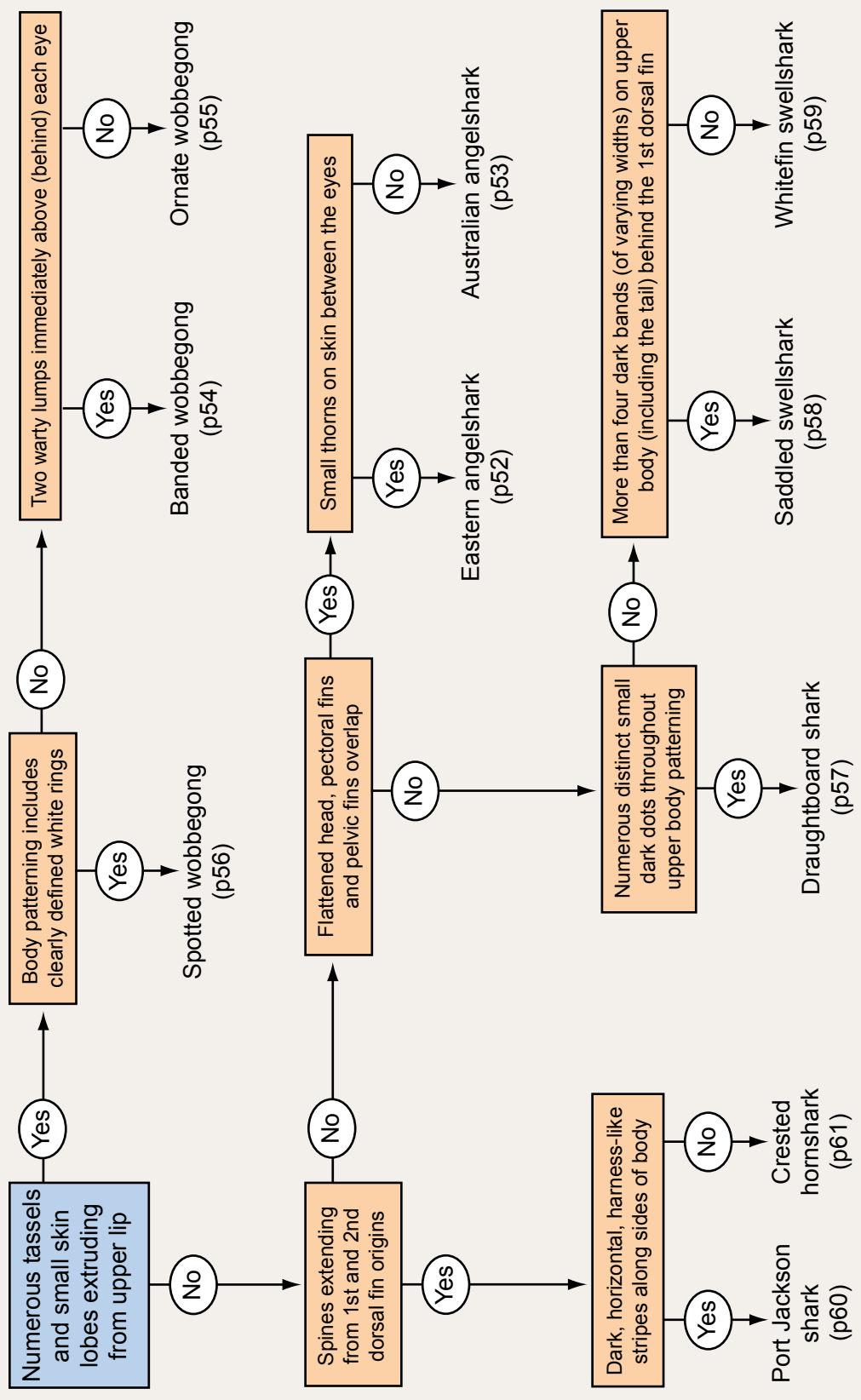
KEY 3: Mackerel (great white and mako), hammerhead and thresher sharks

KEY 3



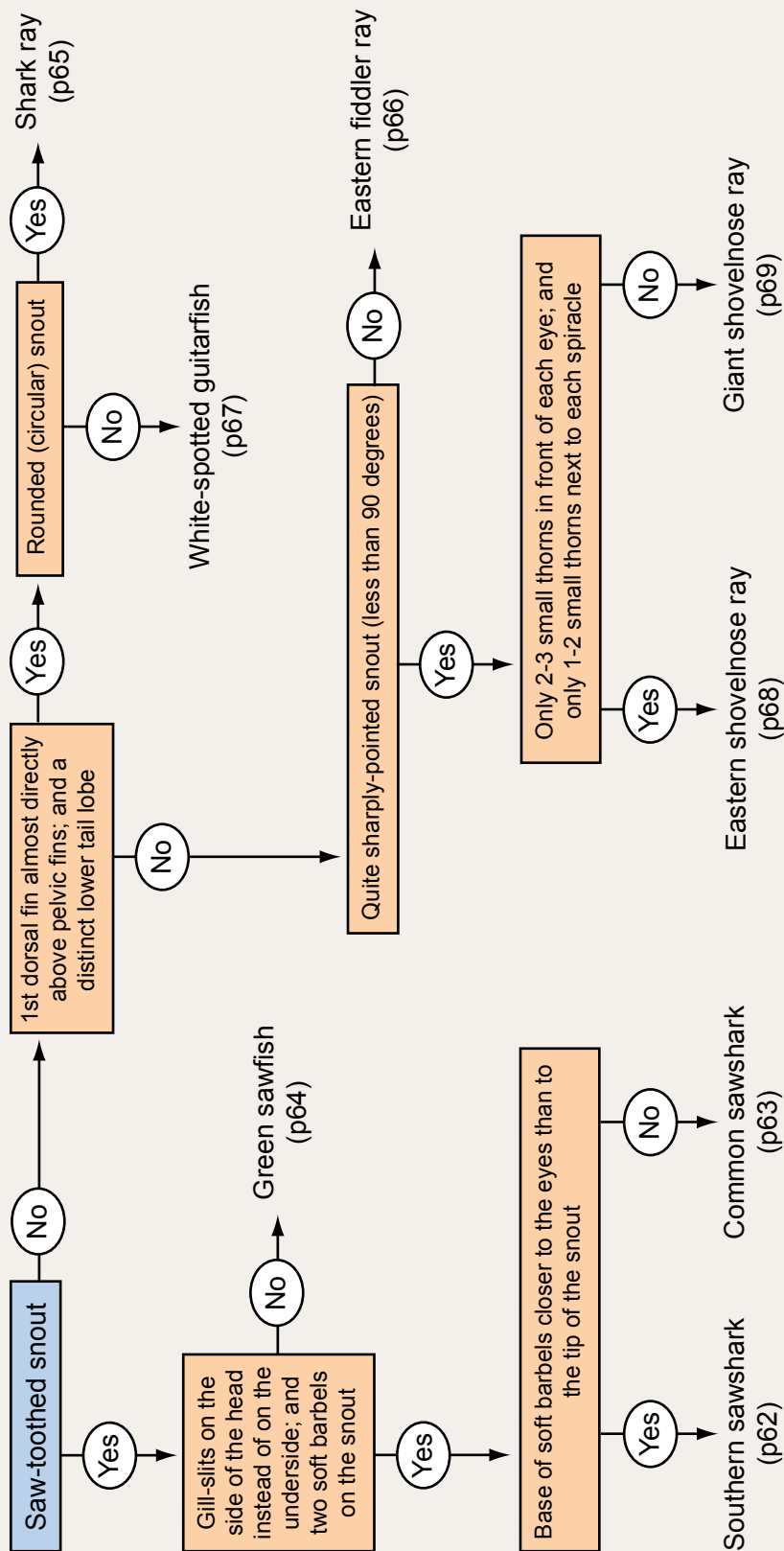
KEY 4: Wobbegongs and some other patterned bottom-dwelling sharks

KEY 4



KEY 5: Sawsharks and other long-snouted sharks and rays

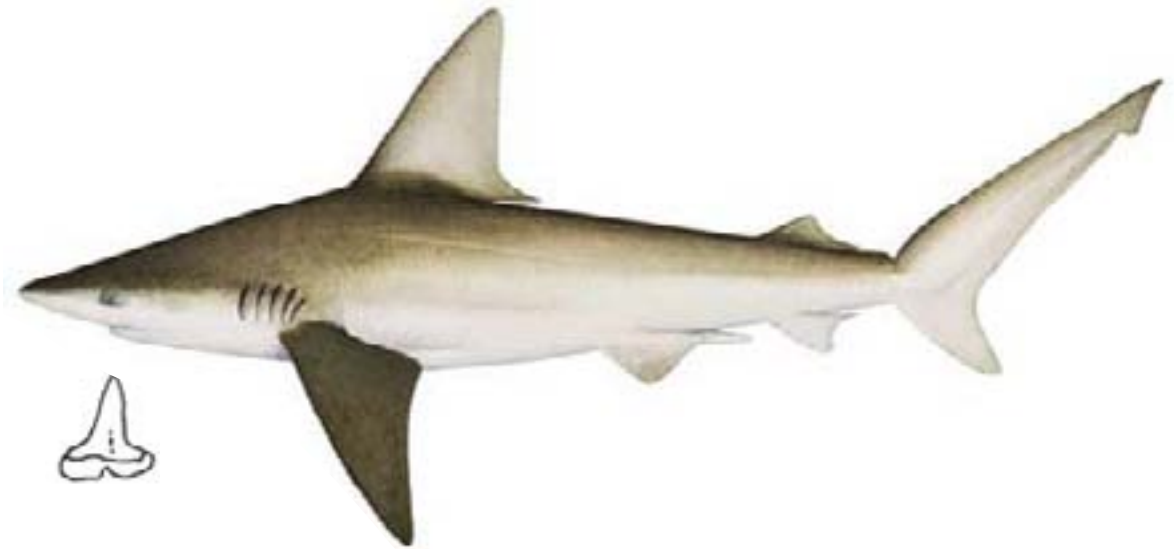
KEY 5



Sandbar shark

(*Carcharhinus plumbeus*)

NSW DPI code:
SHK-01



Distinguishing features

- Interdorsal ridge present
- ❶ 1st dorsal fin origin well forward of the free rear tips of the pectoral fins
- ❷ Distinctively tall 1st dorsal fin relative to body size
- Relatively rounded snout compared with the bignose shark
- ❸ Upper teeth broadly triangular; edges serrated and only very slightly curved

Colouration

- Pale-bronze to greyish-brown upper body; pale underside
- Fins usually have no distinctive markings

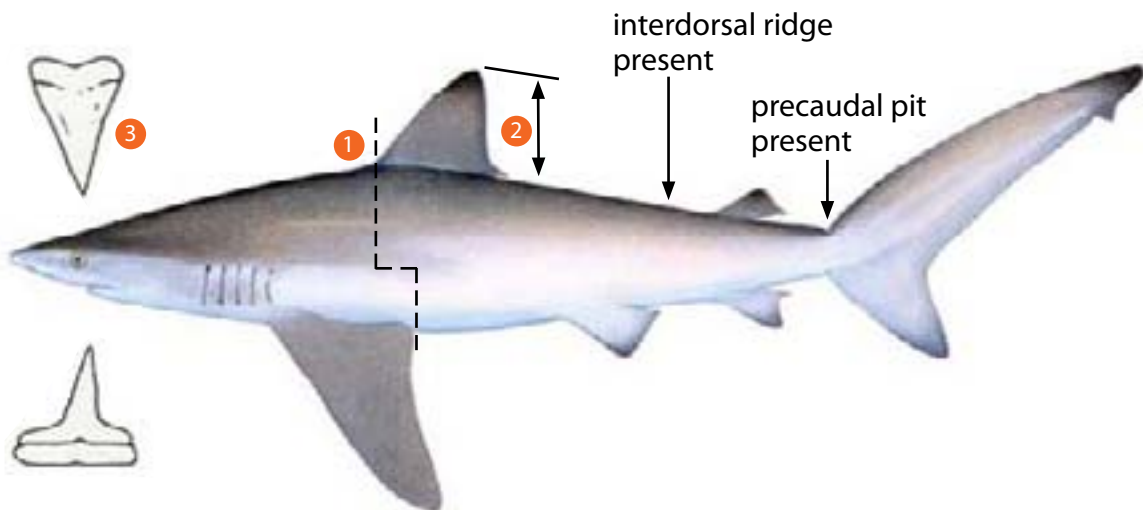
Size & Distribution

- Born ~55-75 cm; max ~ 240 cm
- Usually demersal in NSW coastal and shelf waters south to at least Port Macquarie; and to about 280 m depth

Bignose shark

(*Carcharhinus altimus*)

NSW DPI code:
SHK-02



Distinguishing features

- Conspicuous interdorsal ridge present
- ❶ 1st dorsal fin origin well forward of the free rear tips of the pectoral fins
- ❷ 1st dorsal fin nowhere near as tall as that of the sandbar shark
- Slightly longer and more blunt snout compared with the sandbar shark
- ❸ Upper teeth broadly triangular; edges serrated and more or less straight

Colouration

- Bronze to light-grey upper body; very pale underside
- Upper fins can have quite dark, dusky tips (mostly in juveniles)

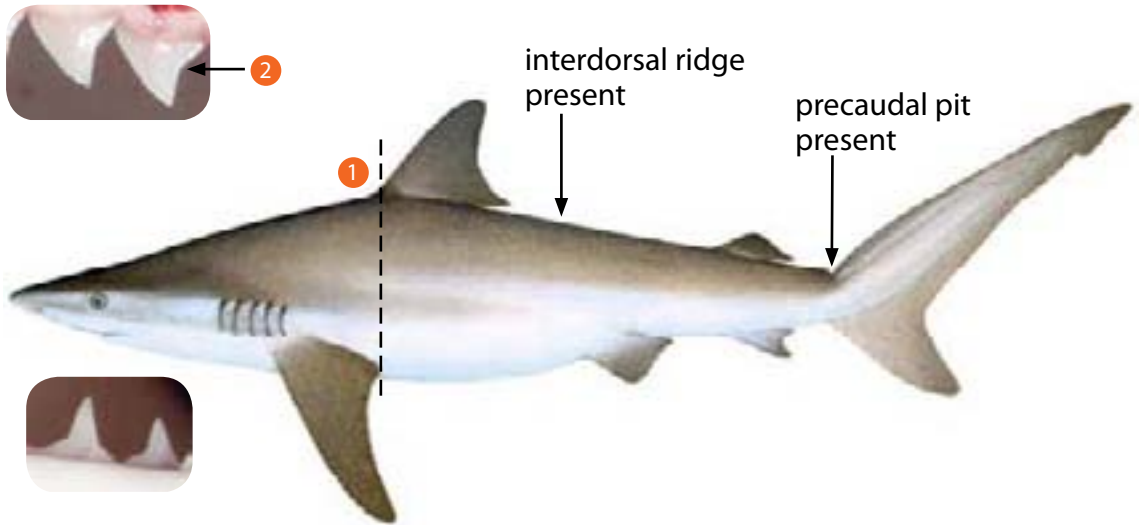
Size & Distribution

- Born ~ 60-75 cm; max ~ 300 cm
- Uncommonly reported from northern NSW waters
- Usually demersal in outer shelf and slope waters at depths of between 80 and 430 m

Dusky whaler

(*Carcharhinus obscurus*)

NSW DPI code:
SHK-03



Distinguishing features

- Low interdorsal ridge present
- ❶ 1st dorsal fin origin directly above or just behind the free rear tips of the pectoral fins
- ❷ Upper teeth broadly triangular; edges serrated and gently curved (i.e. no angular notch)
- Relatively short, rounded snout and thick (stout) body compared with the similar silky shark

Colouration

- Bronzy-grey to dark-grey upper body; pale underside
- Fins with indistinct dusky tips, more distinct in juveniles

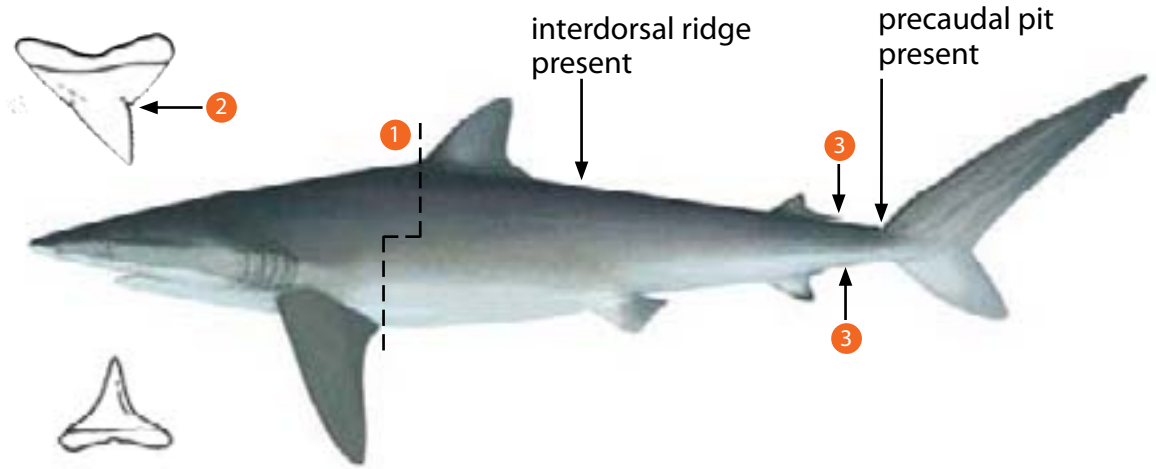
Size & Distribution

- Born ~ 70-100 cm; max. ~ 365 cm
- Usually demersal throughout NSW coastal and shelf waters to around 400 m depth

Silky shark

(*Carcharhinus falciformis*)

NSW DPI code:
SHK-04



Distinguishing features

- Interdorsal ridge present
- 1 1st dorsal fin origin well behind the free rear tips of the pectoral fins
- 2 Upper teeth broadly triangular; edges serrated with an angular notch halfway down one edge
- 3 Distinctively long free rear tips and inner margins on 2nd dorsal and anal fins
- Moderately long, narrowly-rounded snout and slender body compared with the similar dusky whaler

Colouration

- Uniform dark-brown to dark-grey upper body; very pale underside
- 1st dorsal fin plain; other fins sometimes with dusky tips

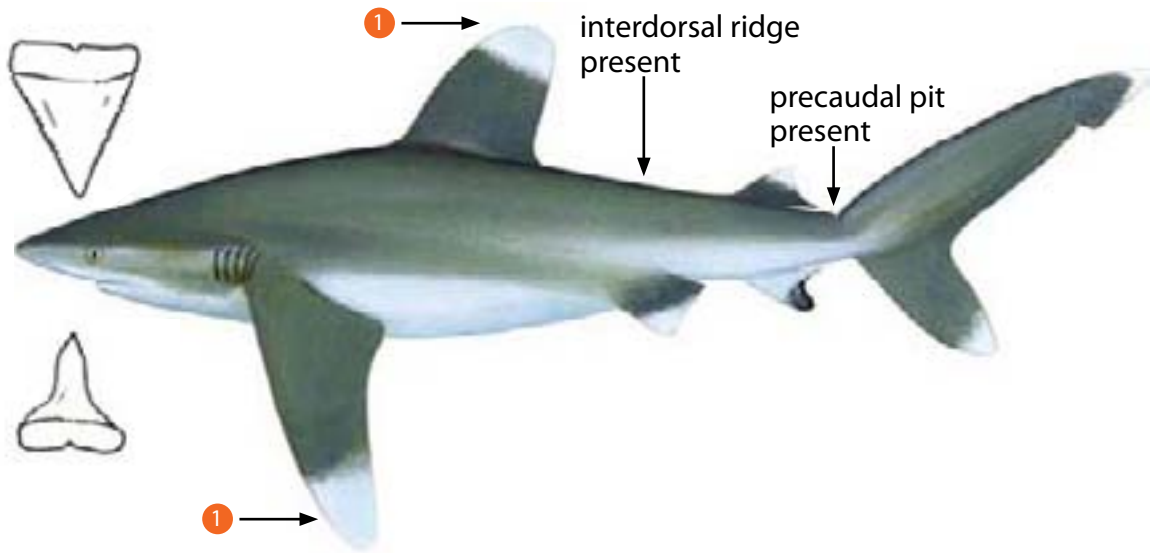
Size & Distribution

- Born ~ 70-85 cm; max. ~ 330 cm
- Pelagic coastal, shelf and oceanic waters off NSW south to at least Sydney
- Usually near surface; most abundant near the edge of the continental shelf

Oceanic whitetip shark

(*Carcharhinus longimanus*)

NSW DPI code:
SHK-05



Distinguishing features

- Interdorsal ridge present
- ❶ 1st dorsal, pectoral, pelvic and tail fins with white tips in specimens >130 cm long
- Huge, rounded 1st dorsal fin and very long, wide pectoral fins
- Quite stocky body with short, rounded snout
- Upper teeth broadly triangular; edges serrated

Colouration

- Bronzy-grey upper body; very pale underside - sometimes with a yellow tinge
- Most fins of specimens <130 cm long have dark tips that eventually change to white

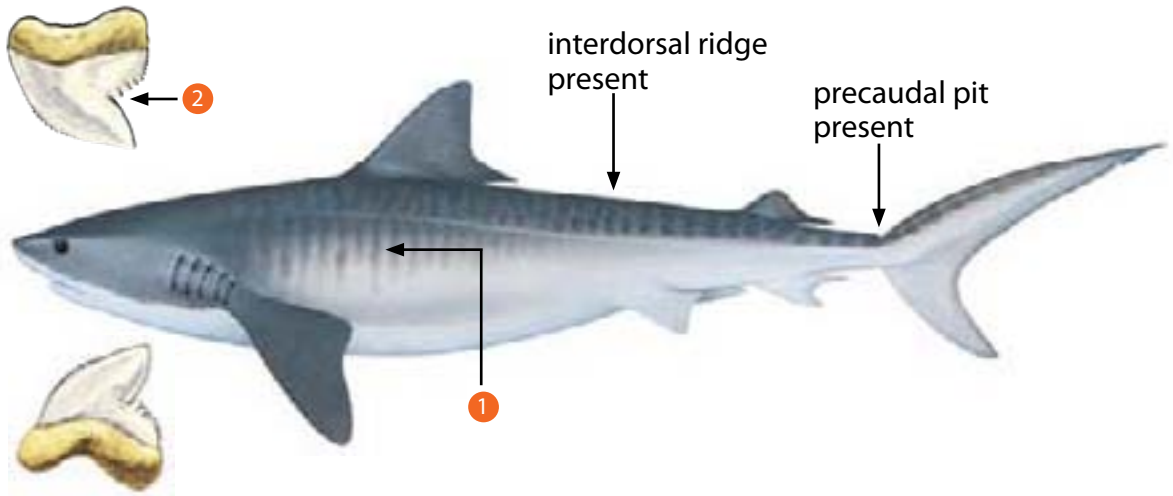
Size & Distribution

- Born ~ 60-65 cm; max. ~ 300 cm
- Pelagic oceanic species which sometimes comes close to shore in NSW waters

Tiger shark

(*Galeocerdo cuvier*)

NSW DPI code:
SHK-06



Distinguishing features

- Distinct interdorsal ridge
- ❶ Dark vertical bars on body of sharks up to 300 cm long, but bars faint or missing in larger adults
- ❷ Teeth in both jaws broad and coarsely serrated, with one edge deeply notched and the other convex
- Quite slender body with a relatively large head and blunt, almost square-shaped snout

Colouration

- Upper body grey, with vertical bars in sharks < 300 cm long; white underside
- Bars faint or missing in larger adults

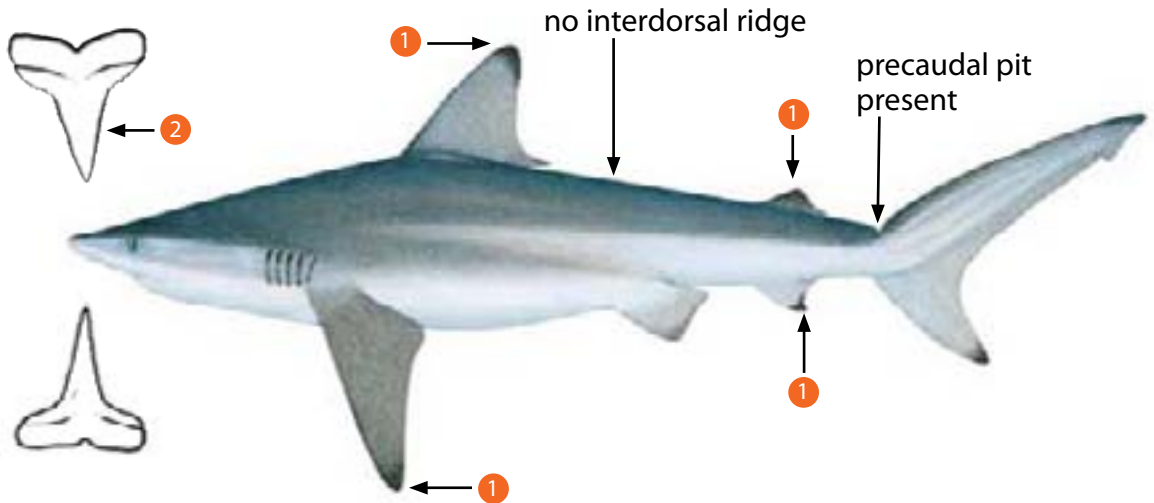
Size & Distribution

- Born ~ 51-76 cm; max. ~ 600 cm
- Pelagic and demersal; throughout NSW coastal waters to at least 150 m depth

Common blacktip shark

(*Carcharhinus limbatus*)

NSW DPI code:
SHK-07



Distinguishing features

- No interdorsal ridge
 - ❶ Most fins usually have black or dusky tips*, but anal fin does not have a distinctive 'paint-dipped' black tip (it is slightly dusky or pale-coloured)
 - ❷ Upper teeth serrated; relatively long, slender and erect (dagger-like) compared with those of the similar spinner shark
 - 1st dorsal fin origin slightly forward of the free rear tips of the pectoral fins
- * Note: larger adults may lack black tip – if so, carefully inspect teeth

Colouration

- Bronze to grey upper body; pale underside
- Most fins usually have black or dark dusky tips (some adults may lack distinctive fin markings)

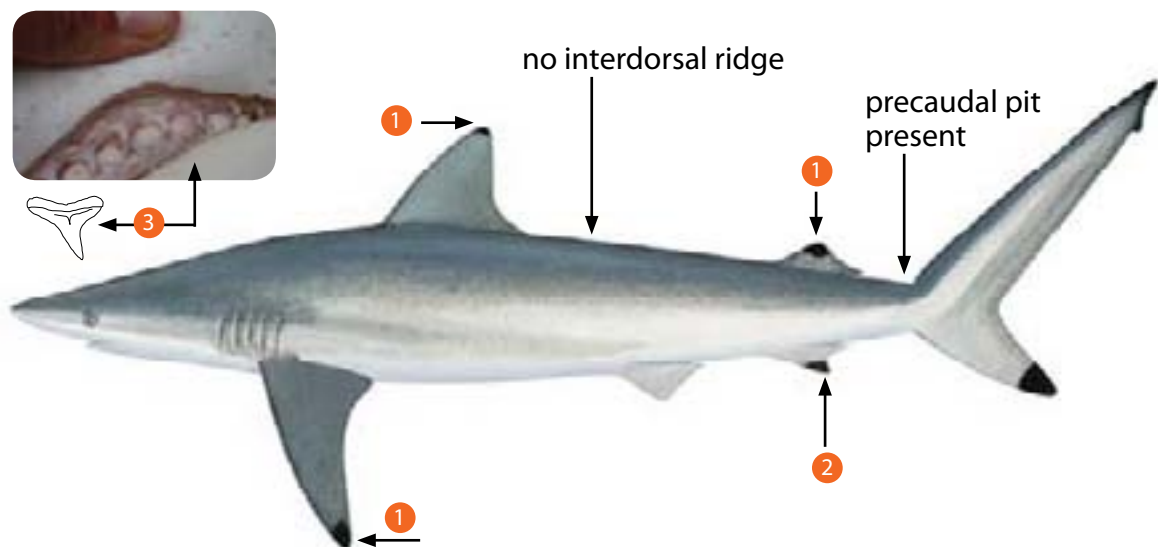
Size & Distribution

- Born ~ 40-70 cm; max. ~ 250 cm
- Pelagic and demersal in NSW coastal and shelf waters south to at least Sydney

Spinner shark

(*Carcharhinus brevipinna*)

NSW DPI code:
SHK-08



Distinguishing features

- No interdorsal ridge
- ❶ Most fins have black or dusky tips
- ❷ Anal fin almost always has distinctive black tip that looks like it has been dipped in black paint (i.e. not just a dusky colouration)
- ❸ Upper teeth slender and finely serrated; very small (even in large sharks) compared with the long, pointed teeth of the similar-looking common blacktip shark
- 1st dorsal fin origin in line with or slightly behind free rear tips of the pectoral fins

Colouration

- Bronze to grey upper body; pale underside
- Fins plain at birth (60-80 cm long) but black tips will have developed on most fins (except pelvic fins) by 130 cm long

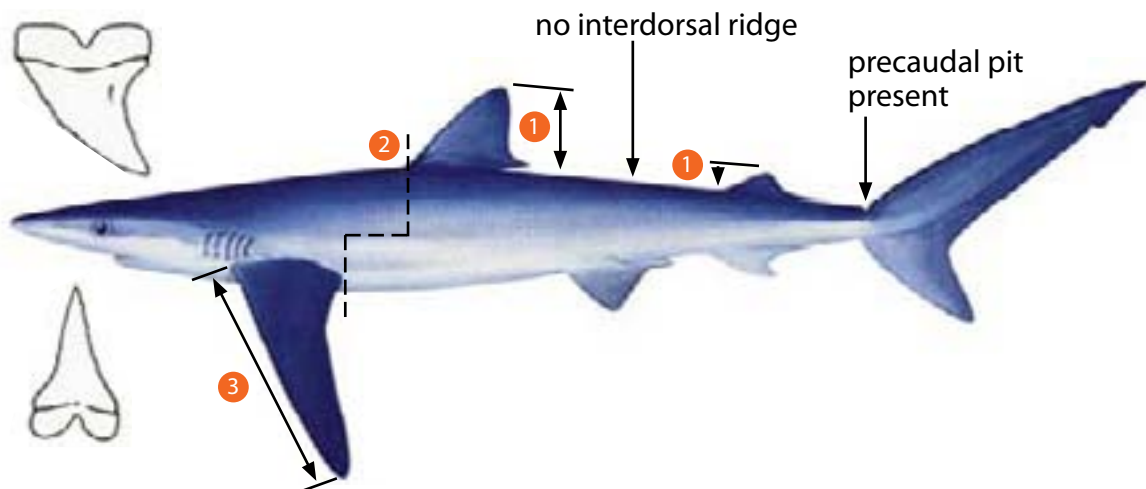
Size & Distribution

- Born ~ 60-80 cm; max. ~ 280 cm
- Usually demersal to at least 75 m depth in NSW coastal and shelf waters south to at least Jervis Bay

Blue shark

(*Prionace glauca*)

NSW DPI code:
SHK-09



Distinguishing features

- No interdorsal ridge
- No conspicuous fin markings
- No spines on dorsal fins
- ❶ 2nd dorsal fin less than half the height of the 1st dorsal fin
- ❷ 1st dorsal fin origin well behind the free rear tips of the pectoral fins
- ❸ Very long pectoral fins that are more than twice the length of the 1st dorsal fin
- Slender body with long snout
- Caudal peduncle with weak lateral keels
- Teeth with curved edges, not heavily indented

Colouration

- Bright blue (indigo blue) upper body that fades to grey quite quickly after death; white underside

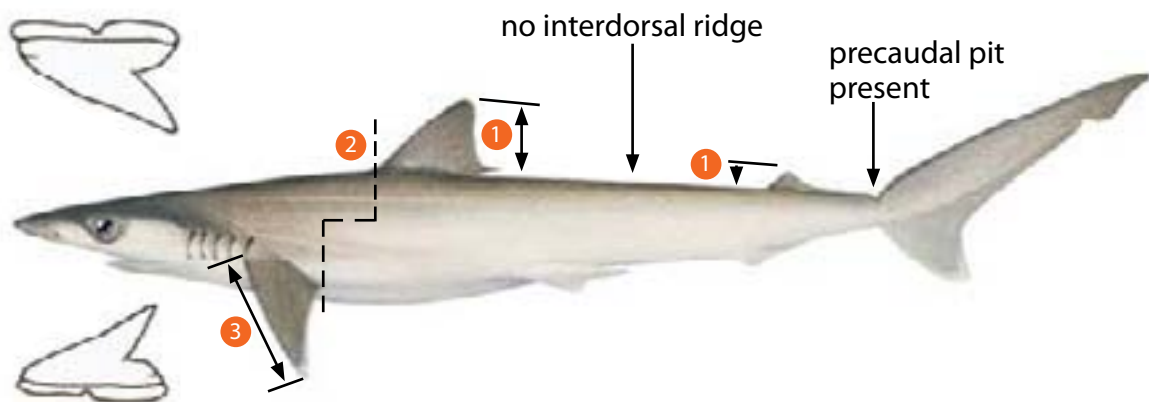
Size & Distribution

- Born ~ 35-50 cm; max. ~ 380 cm
- Pelagic – usually near surface; shelf and oceanic waters throughout NSW
- Most abundant near the edge of the continental shelf, but found closer inshore where the continental shelf is narrow

Sliteye shark

(*Loxodon macrorhinus*)

NSW DPI code:
SHK-10



Distinguishing features

- No interdorsal ridge
- No conspicuous fin markings
- No spines on dorsal fins
- ❶ 2nd dorsal fin less than half the height of the 1st dorsal fin
- ❷ 1st dorsal fin origin well behind the free rear tips of the pectoral fins
- ❸ Pectoral fins the same length as, or only slightly larger than the height of the 1st dorsal fin
- Small, slender shark with relatively large eyes for its size
- Small, smooth-edged teeth with one edge heavily indented
- 2nd dorsal fin origin behind anal fin attachment

Colouration

- Bronze to greyish upper body; pale underside
- Trailing edge of pectoral fins pale
- 1st dorsal and tail fins sometimes dark-edged

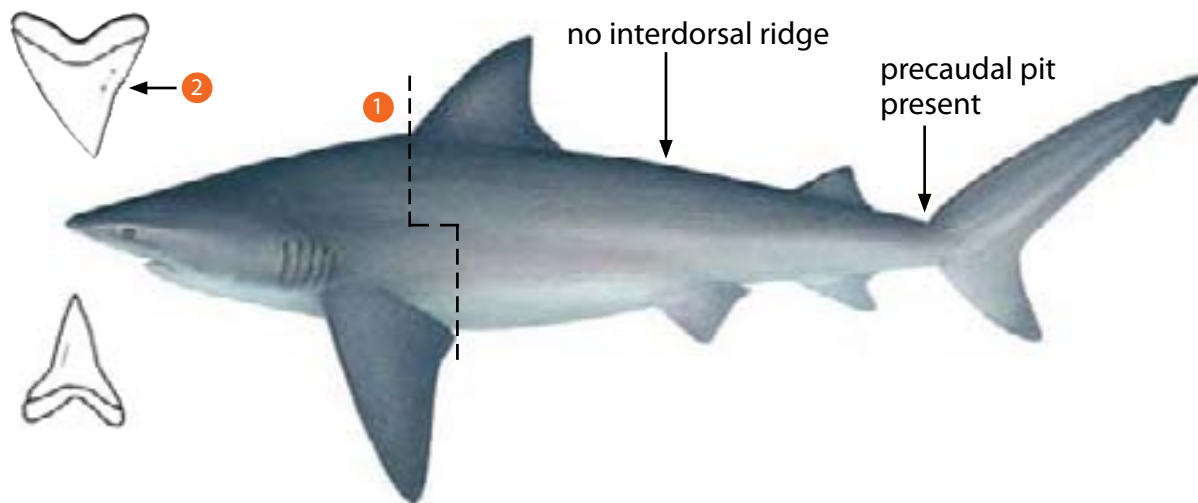
Size & Distribution

- Born ~ 40-45 cm; max. ~ 90 cm
- Demersal; possibly in far northern NSW coastal and shelf waters to at least 100 m depth

Bull shark

(*Carcharhinus leucas*)

NSW DPI code:
SHK-11



Distinguishing features

- No interdorsal ridge
- No distinctive fin markings in adults
- No spines on dorsal fins
- ① 1st dorsal fin origin forward of the free rear tips of the pectoral fins
- ② Upper teeth broadly triangular and heavily serrated with more or less straight edges
- Stout-bodied with a blunt snout compared with the bronze whaler
- Relatively large 2nd dorsal fin (usually about a third of the height of the 1st dorsal fin) compared with the bronze whaler

Colouration

- Grey upper body; pale underside
- Fins of adults with no distinctive markings, but juveniles often with dusky-black fin tips

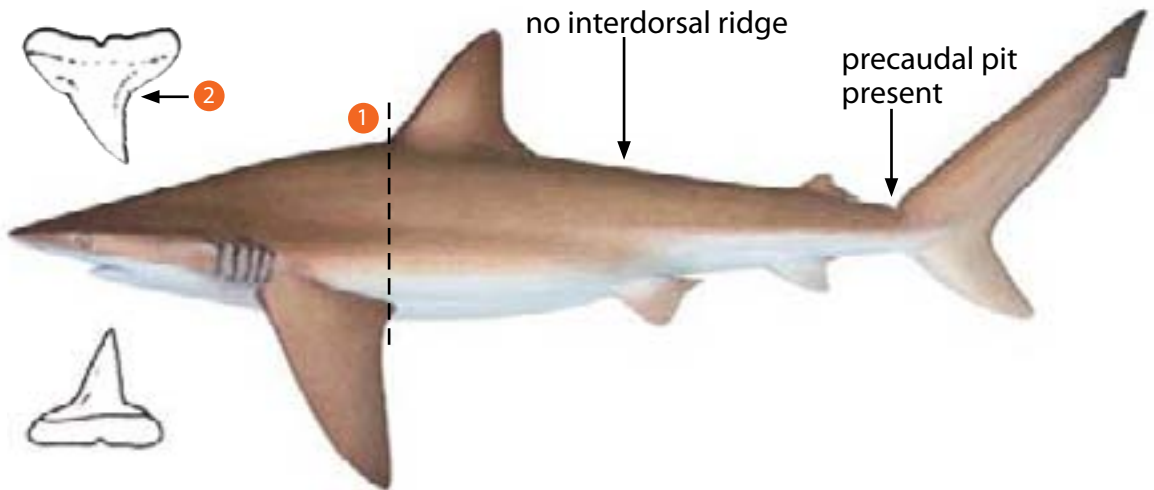
Size & Distribution

- Born ~ 55-80 cm; max. ~ 340 cm
- Usually demersal in NSW coastal and shelf waters (to at least 150 m depth), estuaries and rivers south to at least Wollongong

Bronze whaler

(*Carcharhinus brachyurus*)

NSW DPI code:
SHK-12



Distinguishing features

- Usually (i.e. almost always) no interdorsal ridge
- No distinctive fin markings
- No spines on dorsal fins
- ① 1st dorsal fin origin usually in line with or slightly forward of the free rear tips of the pectoral fins
- ② Upper teeth broad-based but narrowly triangular, distinctively curved (hook-shaped) and finely serrated
- Relatively long, rounded snout compared with the bull shark
- Relatively small 2nd dorsal fin (usually less than a quarter of the height of the 1st dorsal fin) compared with the bull shark

Colouration

- Bronze to greyish upper body; creamy white underside
- Fins lack distinctive markings although margins and tips can be dusky

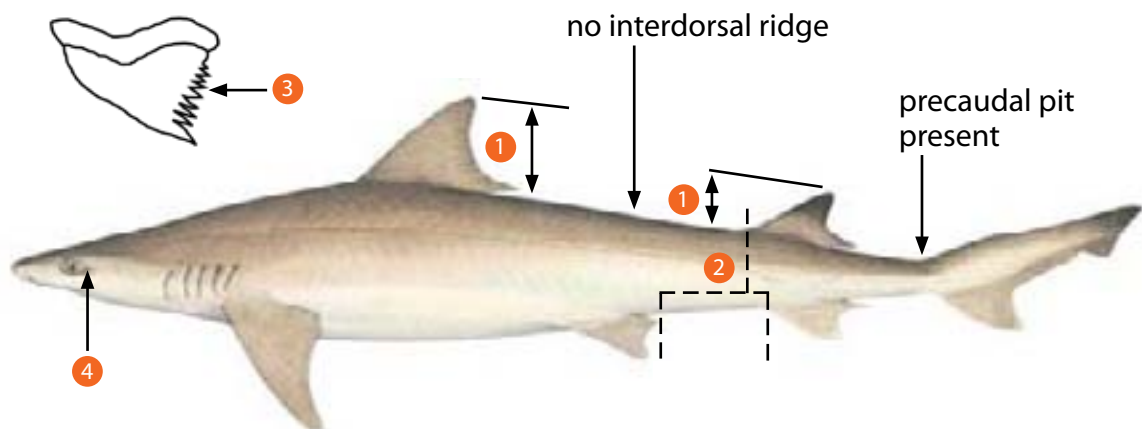
Size & Distribution

- Born ~ 60-70 cm; max. ~ 300 cm
- Pelagic and demersal; throughout NSW coastal waters to at least 100 m depth

Weasel shark

(*Hemigaleus australiensis*, previously known as *H. microstoma*)

NSW DPI code:
SHK-13



Distinguishing features

- No interdorsal ridge
- No conspicuous fin markings although tips might be dusky
- No spines on dorsal fins
- ❶ 2nd dorsal fin at least half the height of the 1st dorsal fin
- ❷ 2nd dorsal fin origin much closer to the anal fin origin than to the free rear tips of the pelvic fins
- ❸ Upper teeth with one edge coarsely-serrated (comb-like) and the other edge smooth
- ❹ Notch at back corner of each almond-shaped eye, and spiracles present

Colouration

- Greyish to bronze upper body; pale underside
- 2nd dorsal and upper tail fin tips usually dusky in smaller individuals but fading in larger ones

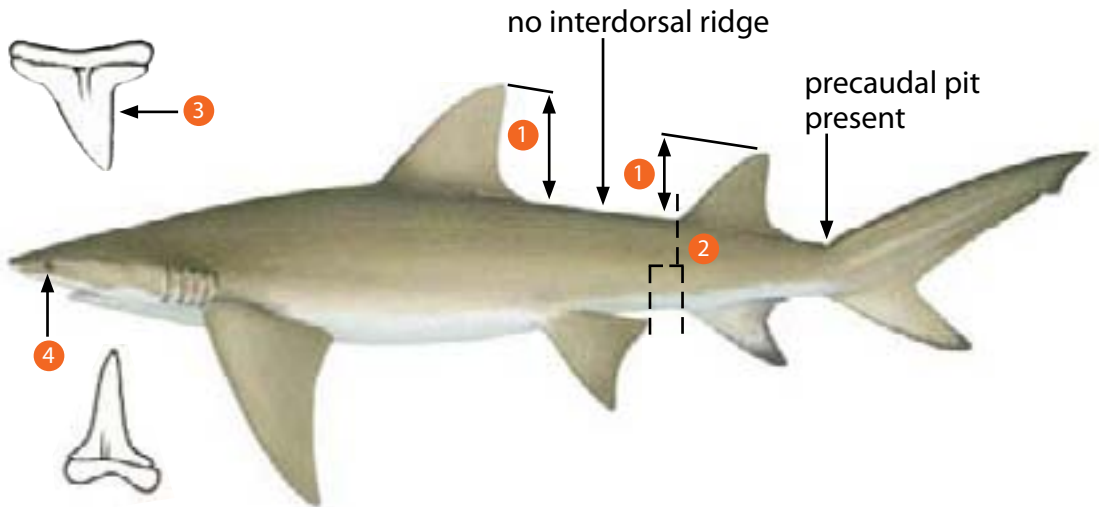
Size & Distribution

- Born ~ 30 cm; max. ~ 110 cm
- Usually demersal; possibly in far northern NSW coastal and shelf waters to ~170 m depth

Lemon shark

(*Negaprion acutidens*)

NSW DPI code:
SHK-14



Distinguishing features

- No interdorsal ridge
- No conspicuous fin markings
- No spines on dorsal fins
- ❶ 2nd dorsal fin at least half the height of the 1st dorsal fin
- ❷ 2nd dorsal fin origin closer to the anal fin origin than to the free rear tips of the pelvic fins
- ❸ Upper and lower teeth narrowly triangular and smooth-edged (dagger-like); no cusplets
- Stocky and robust body with broad, blunt snout
- ❹ Eye rounded in shape – no notch immediately behind eye

Colouration

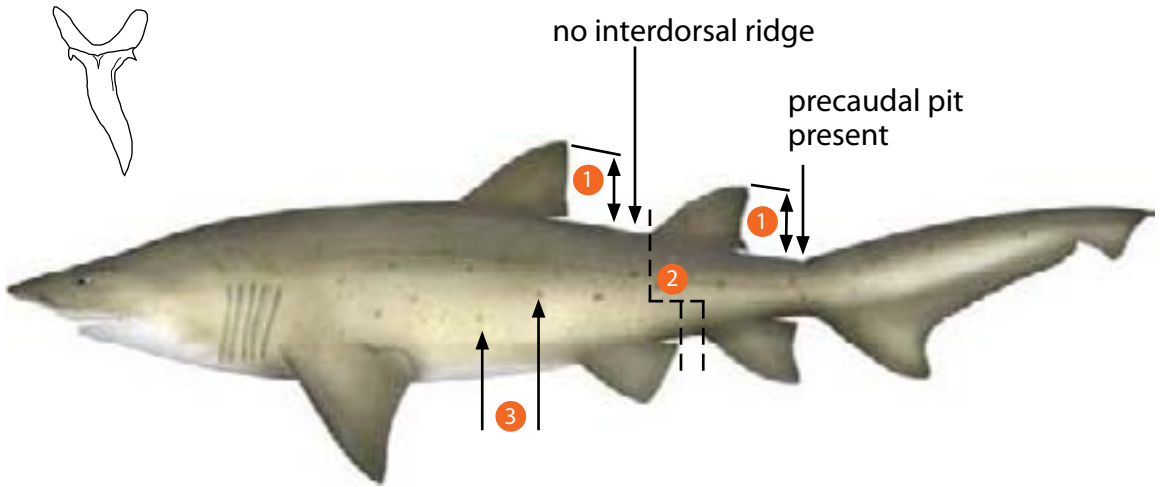
- Pale-yellow to light-brown or grey upper body; whitish underside
- No conspicuous fin markings

Size & Distribution

- Born ~ 50-70 cm; max. ~ 300 cm
- Usually demersal; possibly in far northern NSW coastal and estuarine waters to ~30 m depth

Grey nurse shark

(*Carcharias taurus*)



Distinguishing features

- No interdorsal ridge
- No conspicuous fin markings
- No spines on dorsal fins
- ❶ 1st and 2nd dorsal fins almost the same size
- ❷ 2nd dorsal fin origin closer to the free rear tips of the pelvic fins than to the anal fin origin
- ❸ Usually with brown spots on sides of the body (flanks)
- Anal fin similar in size to both dorsal fins
- Teeth long, thin, non-serrated (i.e. stiletto-shaped) and protruding from mouth; single cusplets either side of main cusp

Colouration

- Grey to bronze upper body; pale to white underside
- Dark spots of varying size on the flanks (and sometimes fins) are more distinct in juveniles

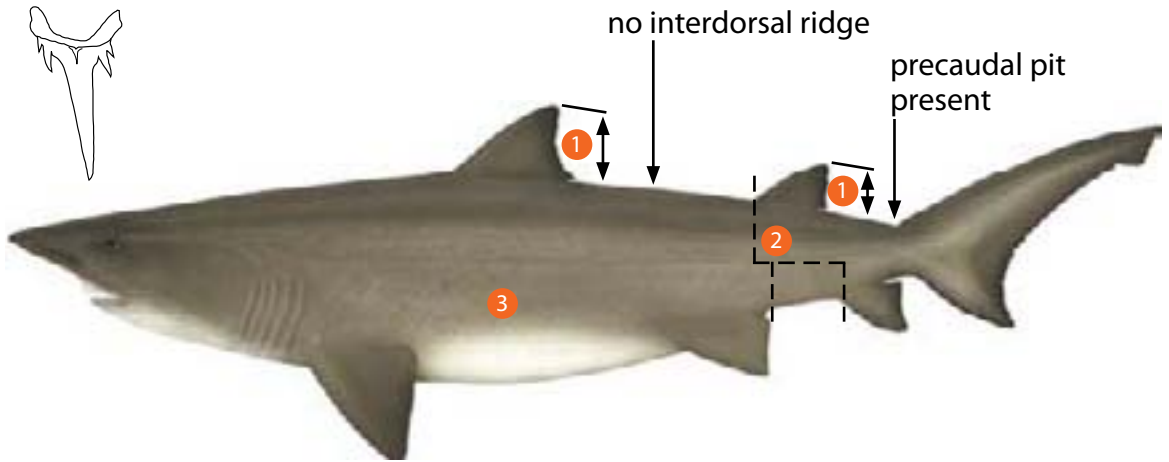
Size & Distribution

- Born ~ 100 cm; max. ~ 350 cm
- Demersal in coastal and possibly deeper shelf waters throughout NSW
- Known to occur inshore in small groups in deep gutters (15-40 m) around rocky outcrops, bombores and reefs

Sandtiger shark (Herbst's nurse shark)

PROTECTED

(*Odontaspis ferox*)



Distinguishing features

- No interdorsal ridge
- No conspicuous fin markings
- No spines on dorsal fins
- ❶ 2nd dorsal fin approximately three-quarters the height of the 1st dorsal fin
- ❷ 2nd dorsal fin origin closer to the free rear tips of the pelvic fins than to the anal fin origin
- ❸ Rarely with brown spots on body
- Anal fin similar size to 2nd dorsal fin, but smaller than 1st dorsal fin
- Teeth thin and pointy; twin or triplet cusplets either side of main cusp

Colouration

- Medium to dark grey upper body; pale to white underside
- Juveniles may have slightly dusky margins and tips on both dorsal fins and the tail
- Sometimes with darker spots scattered on the flanks

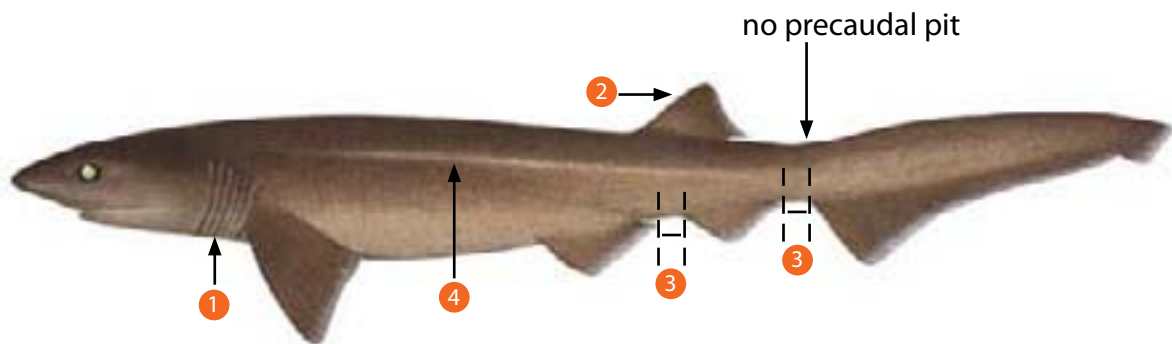
Size & Distribution

- Born ~ 100 cm; max. ~ 450 cm
- Demersal; usually in outer shelf and slope waters to 450 m depth throughout NSW; sometimes found closer to the coast

Bluntnose sixgill shark

(*Hexanchus griseus*)

NSW DPI code:
SHK-15



Distinguishing features

- 1 Six gill slits
- 2 One dorsal fin only
- 3 Distance between end tip of the anal fin and the lower tail-lobe origin very similar to the distance between end tip of the pelvic fin and the anal fin origin
- 4 Pale streak present along lateral line
 - Body bulky with short, wide, blunt snout
 - Single dorsal fin well back on the body

Colouration

- Light or dark grey to dark brown upper body; greyish-white underside
- Pale streak usually present along lateral line
- Fins with thin white trailing edges

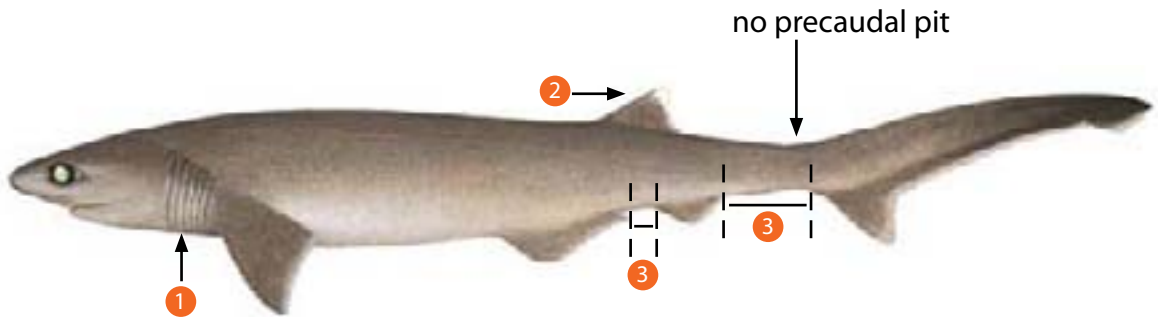
Size & Distribution

- Born ~ 65 cm; max. ~ 480 cm
- Demersal in shelf and upper slope waters to 2000 m depth – possibly along entire NSW shelf from north to south

Bigeye sixgill shark

(*Hexanchus nakamurai*)

NSW DPI code:
SHK-16



Distinguishing features

- 1 Six gill slits
 - 2 One dorsal fin only
 - 3 Distance between end tip of the anal fin and the lower tail-lobe origin more than twice the distance between the end tip of the pelvic fin and the anal fin origin
- No pale streak along lateral line
 - Body bulky with short, slender, blunt snout
 - Single dorsal fin well back on the body

Colouration

- Brownish-grey upper body; pale underside
- Fins with white trailing edges

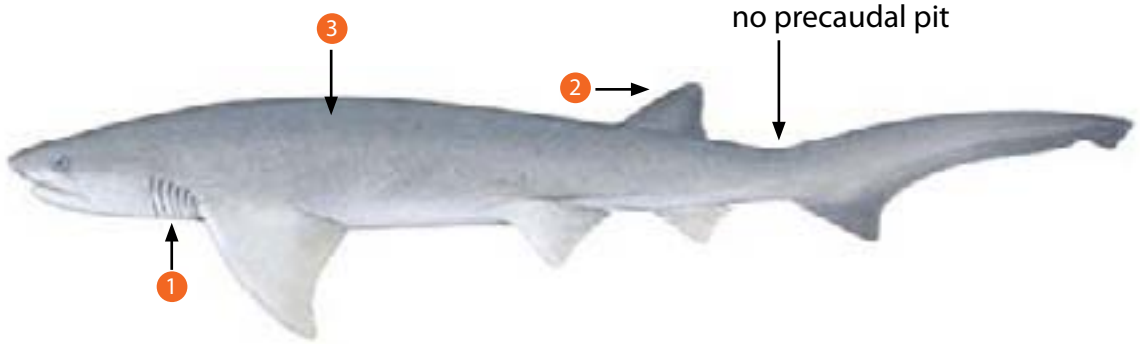
Size & Distribution

- Born ~ 40-45 cm; max. ~ 180 cm
- Demersal in shelf and upper slope waters of northern NSW south to at least Coffs Harbour
- Found at depths of between 100 and 700 m

Broadnose shark

(*Notorynchus cepedianus*)

NSW DPI code:
SHK-17



Distinguishing features

- ❶ Seven gill slits
- ❷ One dorsal fin only
- ❸ Upper body peppered with black and/or white spots
 - Distance between end tip of the anal fin and the lower tail-lobe origin very similar to the distance between end tip of the pelvic fin and the anal fin origin
 - Body bulky with short, wide, blunt snout

Colouration

- Silvery-grey to brownish upper body; white underside
- Upper body and fins sprinkled with black and white spots and small blotches

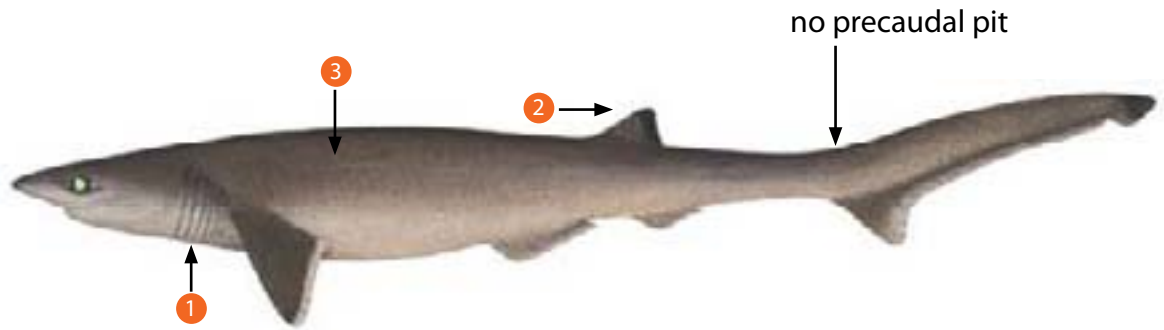
Size & Distribution

- Born ~ 40-45 cm; max. ~ 300 cm
- Demersal in coastal and shelf waters of southern NSW north to at least Sydney, and at depths of at least 150 m

Sharpnose sevengill shark

(*Heptanchias perlo*)

NSW DPI code:
SHK-18



Distinguishing features

- ① Seven gill slits
- ② One dorsal fin only
- ③ No spots or peppering on upper body
- Distance between end tip of the anal fin and the lower tail-lobe origin more than twice the distance between the end tip of the pelvic fin and the anal fin origin
- Body slender with narrow, pointed head

Colouration

- Plain brownish-grey upper body; pale underside
- Dark tips on dorsal fin and upper tail lobe

Size & Distribution

- Born ~ 25 cm; max. ~ 140 cm
- Demersal in all NSW shelf and upper slope waters down to at least 1000 m depth

Dark-tailed dogfishes

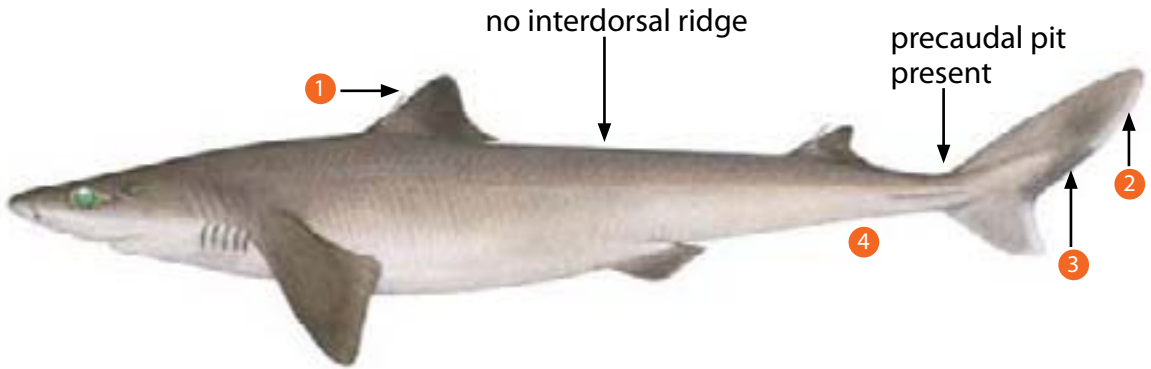
Greeneye dogfish - *Squalus choloroculus*

Northern greeneye dogfish - *Squalus montalbani*

Eastern longnose dogfish - *Squalus grahami*

NSW DPI code:
SHK-19

This example:
Northern greeneye dogfish



Distinguishing features

- No interdorsal ridge
- No distinct black tips on fins
- ① Prominent spines extending from 1st and 2nd dorsal fin origins
- ② Trailing edge of tail smoothly rounded and without sub-apical notch
- ③ Obvious but smudgy dark patch on the tail and at the centre of its trailing edge
- ④ Slender-bodied shark; anal fin absent
- Dorsal fins grey and commonly with slightly darker tip and trailing edge

Colouration

- Dark grey upper body; pale to white underside
- Tail mostly greyish with a broad darkish area along the centre the trailing edge
- Tips of upper and lower lobes of tail whitish

Size & Distribution

- Born ~ 20 cm; max. ~ 110 cm
- Demersal on outer shelf and upper slope in NSW waters at between 150 and 600 m depth

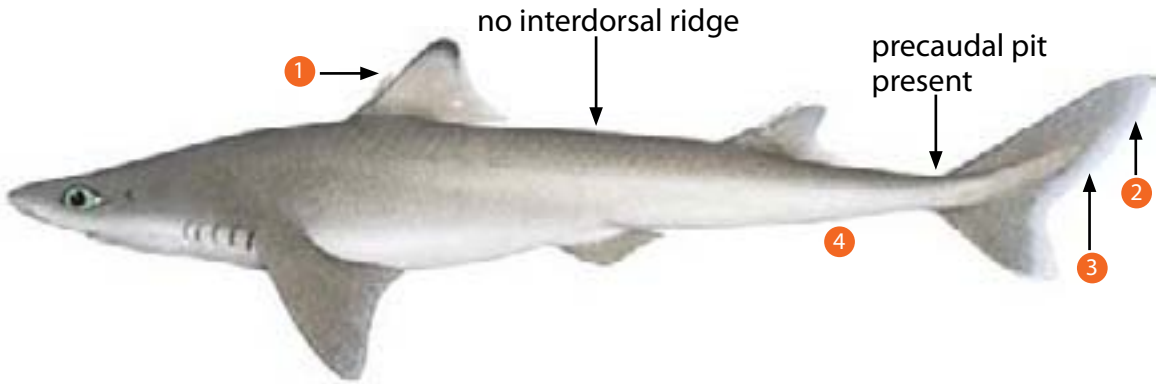
White-tailed dogfishes

Spiky dogfish - *Squalus megalops*

Eastern highfin dogfish - *Squalus albifrons*

NSW DPI code:
SHK-20

This example:
Spiky dogfish



Distinguishing features

- No interdorsal ridge
- No distinct black tips on fins
- ① Prominent spines extending from 1st and 2nd dorsal fin origins
- ② Trailing edge of tail smoothly rounded and without sub-apical notch
- ③ No dark patch on the tail – entire trailing edge of tail pale or white
- ④ Slender-bodied shark; anal fin absent
- Upper margins of dorsal fins may be slightly dark

Colouration

- Pale-greyish to brownish upper body; pale/white underside
- Tail mostly greyish with a white or very pale trailing edge

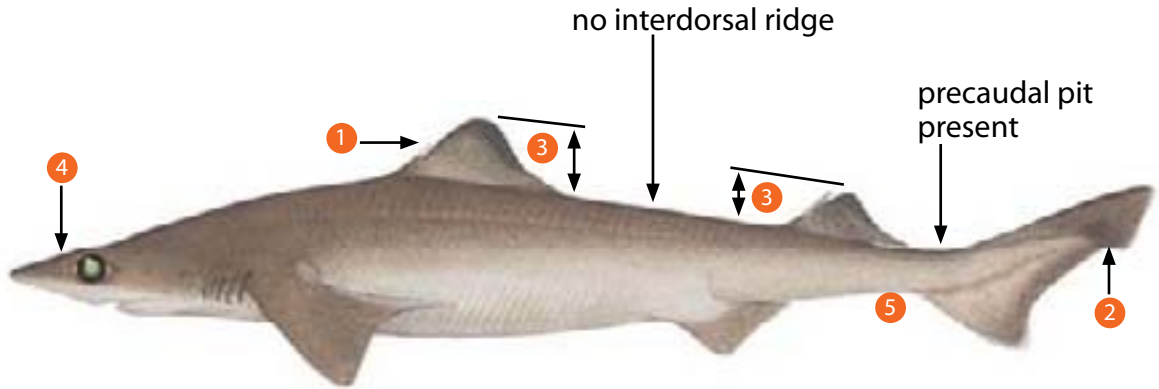
Size & Distribution

- Born ~ 20 cm; max. ~ 90 cm
- Demersal on outer shelf and upper slope in NSW waters at between 150 and 400 m depth

Southern dogfish

(*Centrophorus zeehaani*)

NSW DPI code:
SHK-21



Distinguishing features

- No interdorsal ridge
- No distinct black tips on fins
- 1** Prominent spines extending from 1st and 2nd dorsal fin origins
- 2** Trailing edge of tail with notch (or flap) – i.e. not smoothly rounded
- 3** Height of 2nd dorsal fin at least two-thirds that of the 1st dorsal fin
- 4** Small white spot in the middle of the upper surface of the snout
- Distance from snout tip to front corner of eye equal or slightly less than distance from front corner of eye to the spiracle
- 5** No anal fin

Colouration

- Upper body light brown in adults, grey in juveniles; pale underside
- Tips and trailing edges of dorsal fins can be dark, but much less so in adults
- Usually a small white spot in the middle of the upper surface of the snout

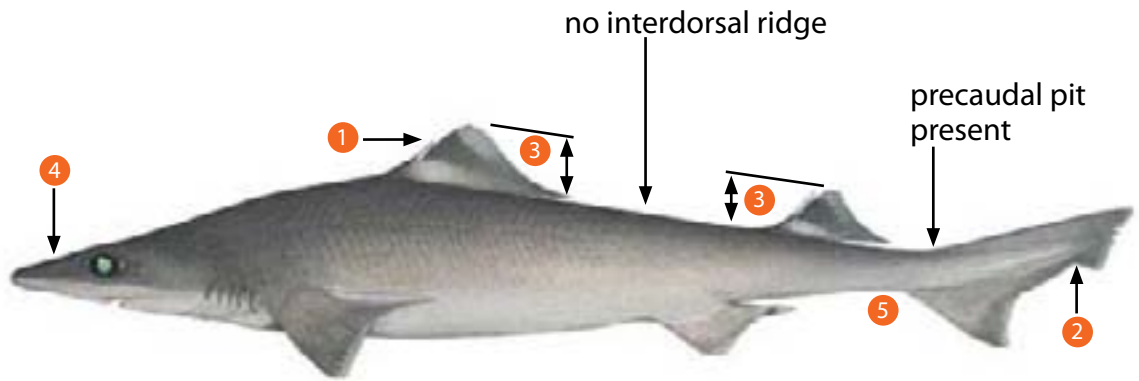
Size & Distribution

- Born ~ 40 cm; males max. ~ 90 cm; females max. ~ 110 cm
- Demersal on upper slope in NSW waters north to at least Crowdy Head, and at depths of between 250 and 800 m

Harrison's dogfish

(*Centrophorus harrissoni*)

NSW DPI code:
SHK-22



Distinguishing features

- No interdorsal ridge
- No distinct black tips on fins
- ① Prominent spines extending from 1st and 2nd dorsal fin origins
- ② Trailing edge of tail with notch (or flap) – i.e. not smoothly rounded
- ③ Height of 2nd dorsal fin at least two-thirds that of the 1st dorsal fin
- ④ No small white spot in middle of upper surface of snout
- Distance from the snout tip to the front corner of eye noticeably greater (about 1.4 x) than the distance from front corner of the eye to the spiracle
- ⑤ No anal fin

Colouration

- Light-greyish or brownish upper body; pale underside
- Tail mostly greyish with a slightly darker posterior half of tail-flaps
- Upper front of dorsal fins with dark patch; less obvious in adults
- Often a dark smudge around the bases of dorsal fins

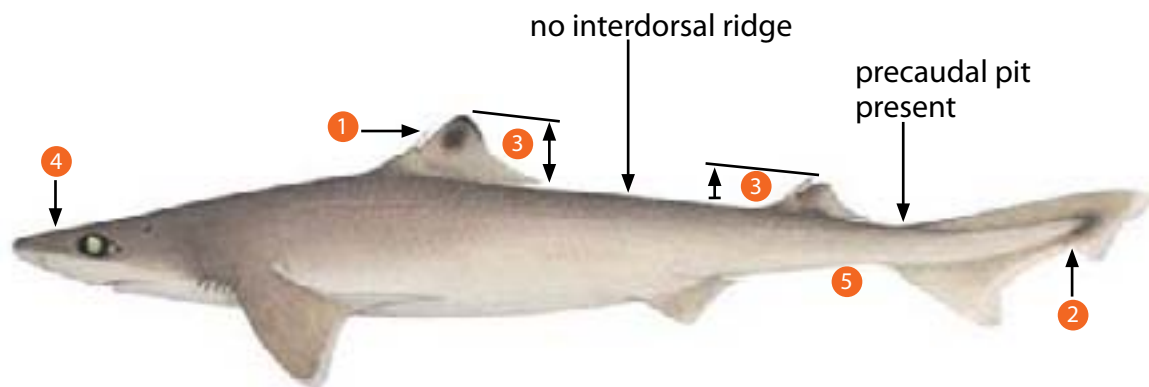
Size & Distribution

- Born ~ 40 cm; males max. ~ 95 cm; females max. ~ 110 cm.
- Demersal on upper slope in NSW waters north to at least Coffs Harbour, and at depths of between 250 and 1000 m

Endeavour dogfish

(*Centrophorus moluccensis*)

NSW DPI code:
SHK-23



Distinguishing features

- No interdorsal ridge
- No distinct black tips on fins
- ❶ Prominent spines extending from 1st and 2nd dorsal fin origins
- ❷ Trailing edge of tail with notch (or flap) – i.e. not smoothly rounded
- ❸ Height of 2nd dorsal fin about half that of the 1st dorsal fin
- ❹ No small white spot in middle of upper surface of snout
- ❺ No anal fin

Colouration

- Light-greyish or brownish upper body; pale underside
- Tail mostly greyish with a pale trailing edge
- Smaller individuals with dark blotches near the tip of the 1st dorsal fin

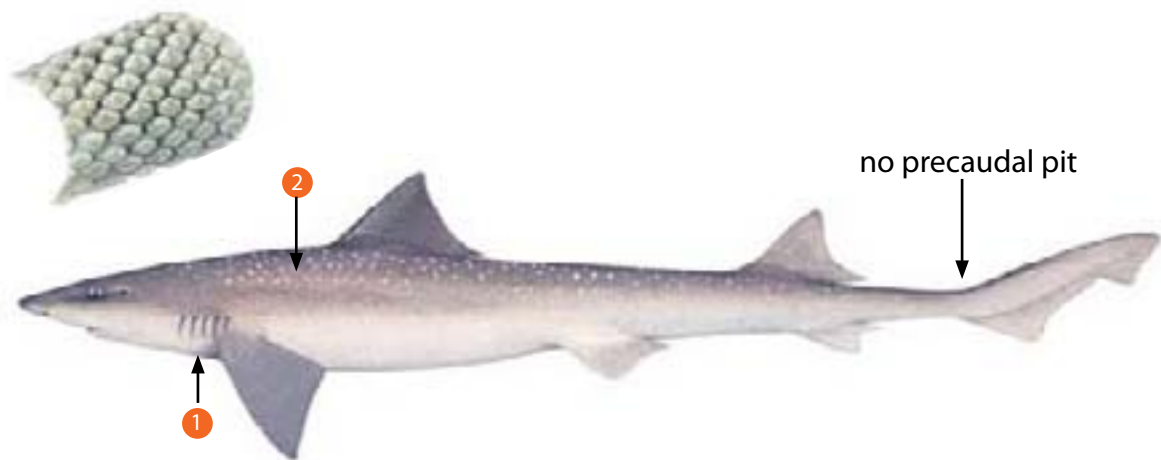
Size & Distribution

- Born ~ 40 cm; males max. ~ 85 cm; females max. ~ 95 cm
- Demersal on outer shelf and upper slope in NSW waters at between 150 and 650 m depth

Gummy shark

(*Mustelus antarcticus*)

NSW DPI code:
SHK-24



Distinguishing features

1. Five gill slits
2. Numerous small white spots on upper body; spots less prominent on northern NSW specimens
 - No spines extending from dorsal fin origins
 - Slender shark with 2nd dorsal fin about three-quarters the size of the 1st dorsal fin and much larger than the anal fin
 - 2nd dorsal fin origin in front of anal fin origin
3. Flat, crushing teeth

Colouration

- Greyish-brown on upper body with numerous small white spots; pale underside

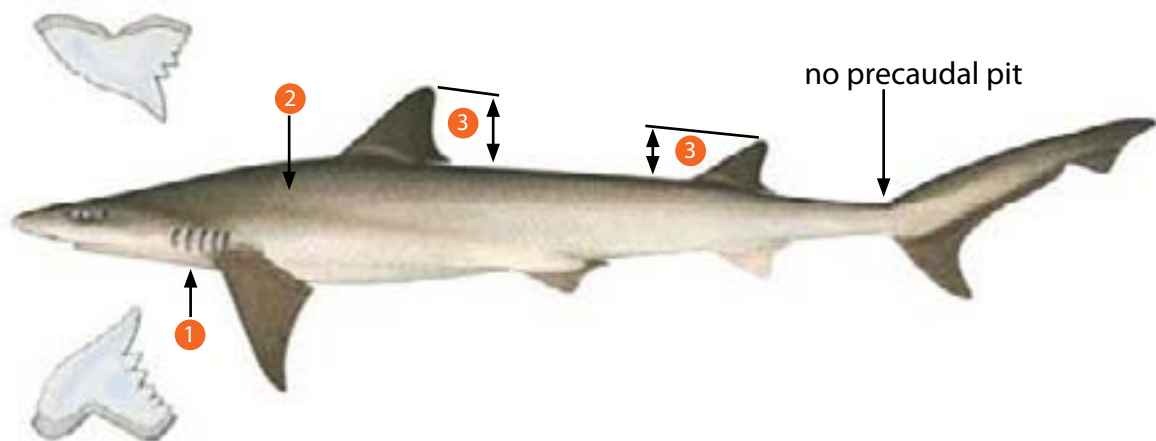
Size & Distribution

- Born ~ 30-35 cm; max. ~ 130 cm
- Demersal in coastal, shelf and slope waters throughout NSW to about 500 m depth

Pencil shark

(*Hypogaleus hyugaensis*)

NSW DPI code:
SHK-25



Distinguishing features

- ❶ Five gill slits
- ❷ No white spots on upper body
- ❸ 2nd dorsal fin more than half the height of the 1st dorsal fin and much larger than the anal fin
- Slender-bodied shark
- No spines extending from dorsal fin origins
- Teeth with very angled main cusp; comb-like serrations on one edge

Colouration

- Bronze to greyish-brown upper body; pale underside
- Dorsal and upper caudal fin dusky on tips

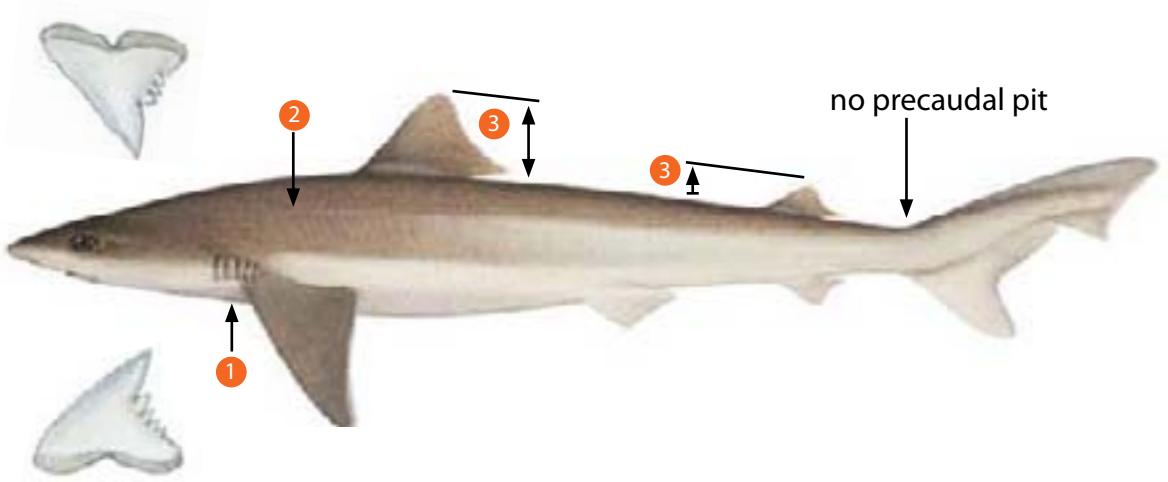
Size & Distribution

- Born ~ 35 cm; max. ~ 130 cm
- Demersal in coastal and shelf waters throughout NSW at depths of between 40 and 230 m

School shark

(*Galeorhinus galeus*)

NSW DPI code:
SHK-26



Distinguishing features

- 1 Five gill slits
- 2 No white spots on upper body
- 3 2nd dorsal fin clearly less than half the height of the 1st dorsal fin and about the same size as the anal fin
- Slender-bodied shark with a very large notch (flap) on the under side of the upper lobe of the tail fin
- No spines extending from dorsal fin origins
- Pointed, almost triangular teeth; serrations on the upper half of one edge

Colouration

- Bronze to greyish-brown upper body; pale underside
- Underside near snout tip often translucent

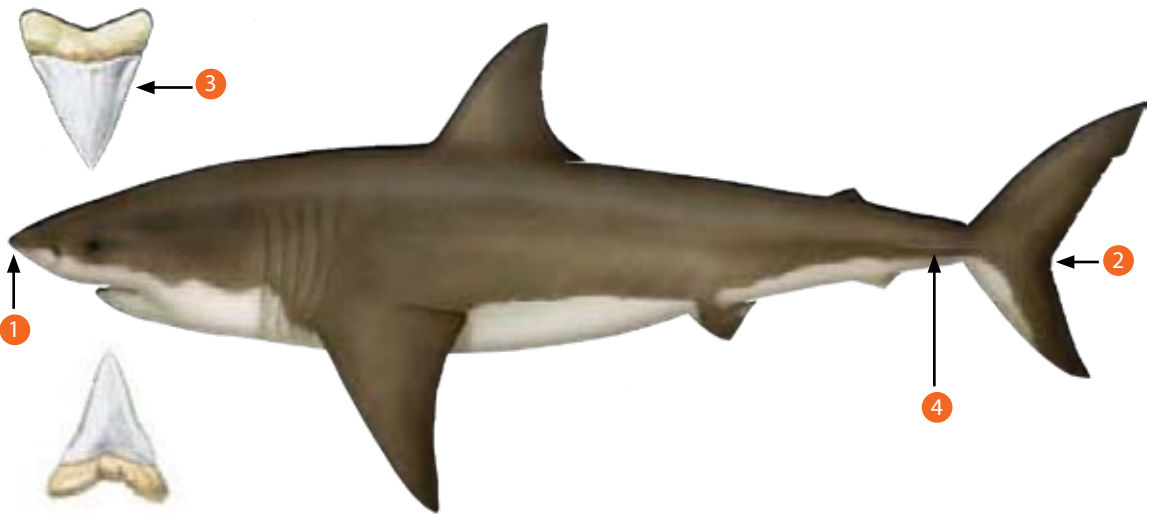
Size & Distribution

- Born ~ 30 cm; max. ~ 180 cm
- Demersal in coastal, shelf and slope waters throughout NSW

Great white shark

(*Carcharodon carcharias*)

PROTECTED
SHK-



Distinguishing features

- 1 Pointed, conical snout
- 2 Crescent-shaped tail – upper and lower tail lobes of quite similar length
- 3 Large, broadly triangular, serrated teeth
 - Pectoral fins usually with dusky tips on underside
- 4 Prominent lateral keel on caudal peduncle, but no secondary keel on caudal peduncle

Colouration

- Grey to brownish upper body, merging abruptly from that colour on the flanks to an entirely white underside

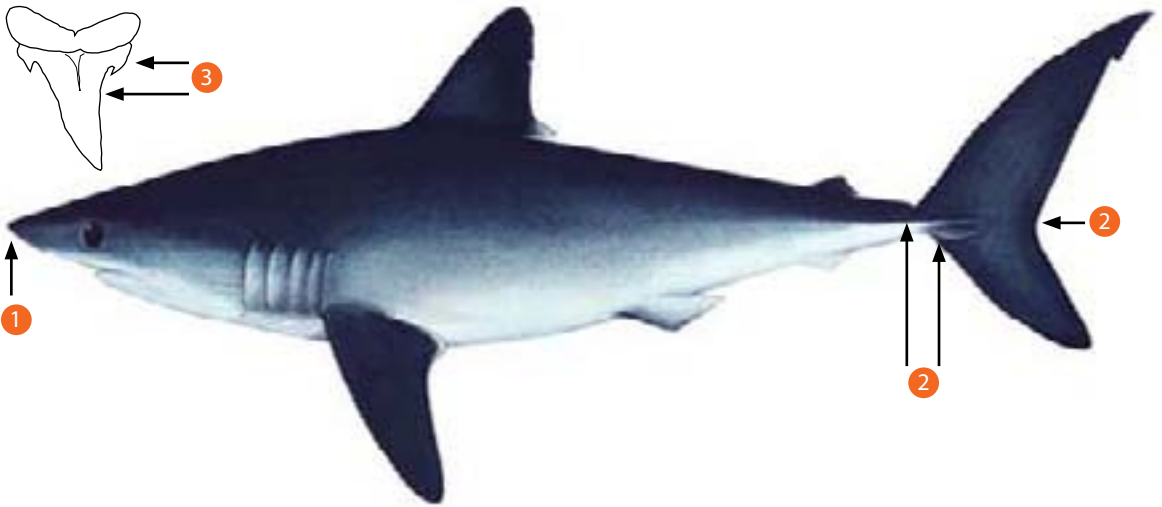
Size & Distribution

- Born ~ 130 cm; max. possibly ~ 700 cm
- Demersal and pelagic throughout coastal, shelf and oceanic waters of NSW to about 1200 m depth

Porbeagle shark

(*Lamna nasus*)

NSW DPI code:
SHK-27



Distinguishing features

- ① Pointed, conical snout
 - ② Crescent-shaped tail with secondary keel below the extension of the main caudal peduncle keel
 - ③ Moderately long, slender, smooth-edged teeth with a lateral cusplet on either side
- Body stout; snout relatively long and conical

Colouration

- Bluish-grey upper body; white underside
- Juveniles with dusky patches beneath pectoral fins and underside of gill slits

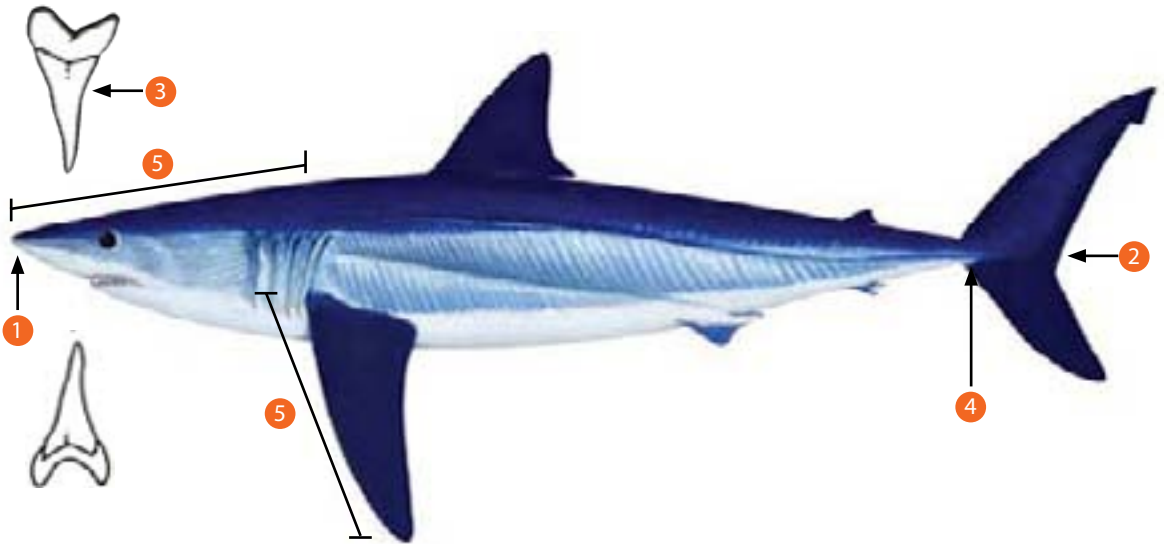
Size & Distribution

- Born ~ 70-80 cm; max. ~ 300 cm
- Uncommonly reported from pelagic shelf and oceanic NSW waters from the surface to at least 350 m depth

Shortfin mako shark

(*Isurus oxyrinchus*)

NSW DPI code:
SHK-28



Distinguishing features

- 1 Pointed, conical snout
 - 2 Crescent-shaped tail – upper and lower tail lobes of quite similar length
 - 3 Long, slender, pointed teeth (not serrated and without cusplets) that protrude noticeably from mouth
 - 4 No secondary keel on caudal peduncle
 - 5 Pectoral fin length slightly less than the distance between the pectoral fin origin and the snout tip
- Upper and lower teeth flexed, with tips reversed

Colouration

- Upper body indigo-blue, merging abruptly from lighter blue/silver on the flanks to an entirely white underside
- Underside of snout is white

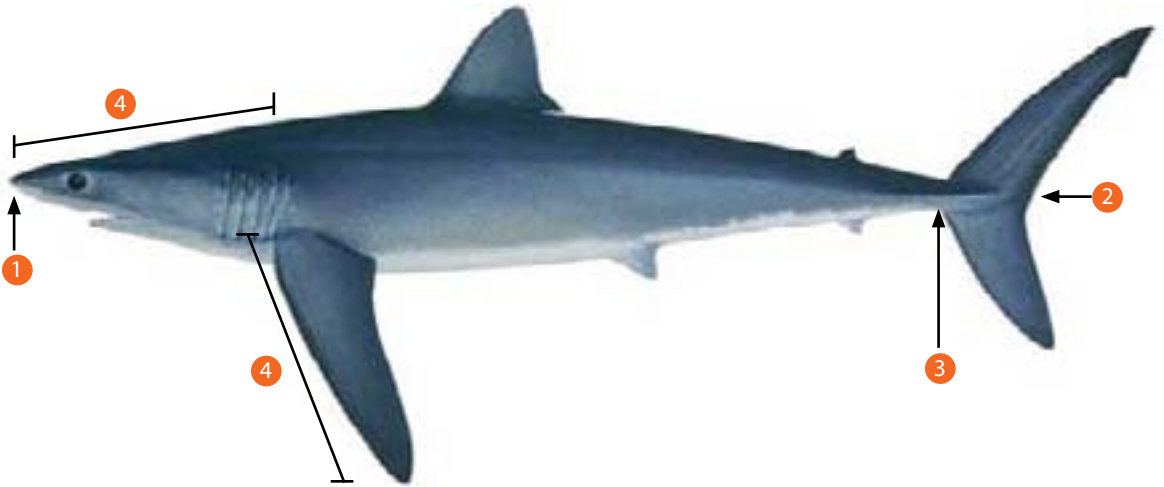
Size & Distribution

- Born ~ 70 cm; max. ~ 400 cm
- Pelagic throughout coastal, shelf and oceanic waters of NSW to at least 150 m depth

Longfin mako shark

(*Isurus paucus*)

NSW DPI code:
SHK-29



Distinguishing features

- ① Pointed, conical snout
- ② Crescent-shaped tail – upper and lower tail lobes of quite similar length
 - Long, slender, pointed teeth (not serrated and without cusplets) that protrude noticeably from mouth (teeth similar to shortfin mako)
- ③ No secondary keel on caudal peduncle
- ④ Pectoral fin length similar to, or greater than the distance between the pectoral fin origin and the snout tip
 - The cusps of upper and lower anterior teeth are straight, with tips not reversed

Colouration

- Dark slaty-blue or grey-black upper body; mainly white underside
- Underside of snout and jaws dark in adults and large juveniles

Size & Distribution

- Born 90-120 cm; max. ~ 420 cm
- Possibly in northern NSW waters (at least)
- Thought to be deep-dwelling in mostly offshore and oceanic waters

Thresher shark

(*Alopias vulpinus*)

NSW DPI code:
SHK-30



Distinguishing features

- ① Rounded and only slightly pointed snout
- ② Very long upper tail lobe – similar in length to body (excluding tail)
- ③ No groove on head
- ④ White patches above pectoral and pelvic fin origins
 - Eyes large, but do not extend onto the dorsal surface of the head
 - Head strongly arched between eyes

Colouration

- Blue-grey upper body with a metallic lustre when alive; white underside

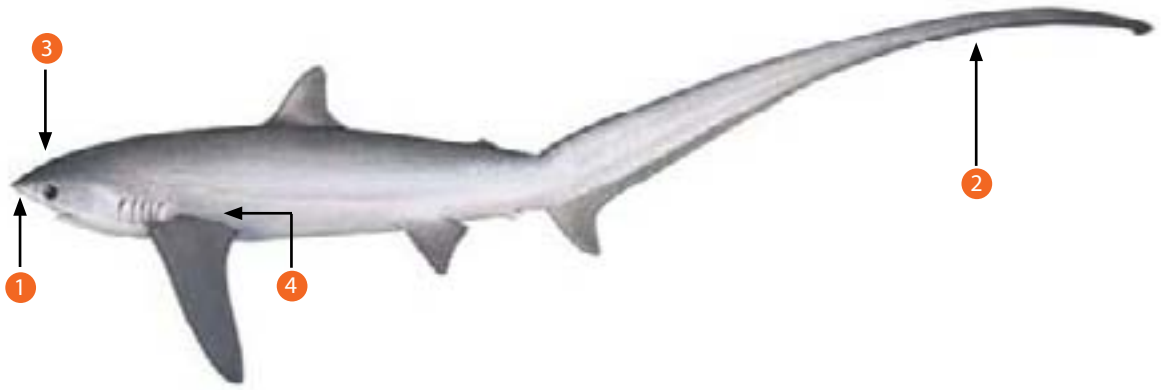
Size & Distribution

- Born ~ 115-150 cm; max. ~ 550 cm
- Mainly pelagic throughout coastal, shelf and oceanic waters of NSW to about 400 m depth

Pelagic thresher

(*Alopias pelagicus*)

NSW DPI code:
SHK-31



Distinguishing features

- ① Rounded and only slightly pointed snout
 - ② Very long upper tail lobe – similar in length to body (excluding tail)
 - ③ No groove on head
 - ④ Skin colouring immediately above pectoral and pelvic fin origins dark in colour (i.e. no white patches)
- Eyes large, but do not extend onto dorsal surface of head
 - Head strongly arched between eyes

Colouration

- Pale grey upper body; white underside
- Area above gills and flank region may have a metallic silvery hue

Size & Distribution

- Born ~ 100 cm; max. ~ 350 cm
- Pelagic; possibly in northern NSW waters

Bigeye thresher

(*Alopias superciliosus*)

NSW DPI code:
SHK-32



Distinguishing features

- ① Rounded and only slightly pointed snout
 - ② Very long upper tail lobe – similar in length to body (excluding tail)
 - ③ Pronounced groove from above the eyes and down each side of the head to above the gills
 - ④ Skin colouring immediately above pectoral and pelvic fin origins dark in colour (i.e. no white patches)
- Big eyes that extend onto dorsal surface of the head, which is nearly flat between the eyes

Colouration

- Purplish to violet-grey upper body; creamy white underside
- Flanks may have a metallic sheen

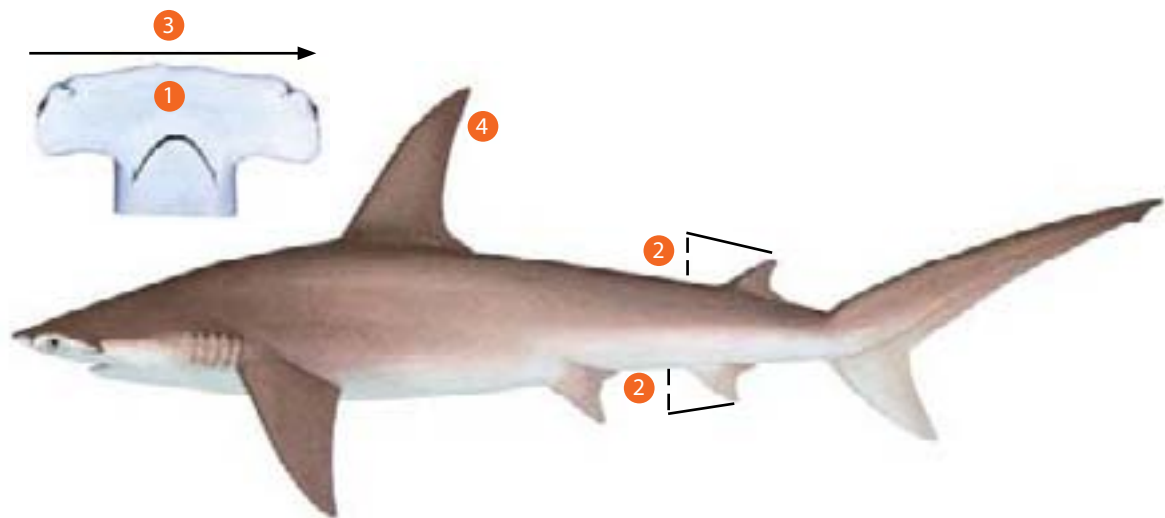
Size & Distribution

- Born ~ 65 -100 cm; max. ~ 460 cm
- Mainly pelagic throughout coastal, shelf and oceanic waters of NSW to about 500 m depth

Great hammerhead

(*Sphyrna mokarran*)

NSW DPI code:
SHK-33



Distinguishing features

- 1 Hammer-like head
- 2 Height of 2nd dorsal fin equal to or slightly greater than height of anal fin
- 3 Front margin of head nearly straight and with a slight indentation at its centre
- 4 Extremely tall, sickle-shaped 1st dorsal fin
 - Teeth with clear serrations

Colouration

- Bronzy to greyish-brown upper body; pale underside
- No fin markings in adults; 2nd dorsal fin tip dark in juveniles

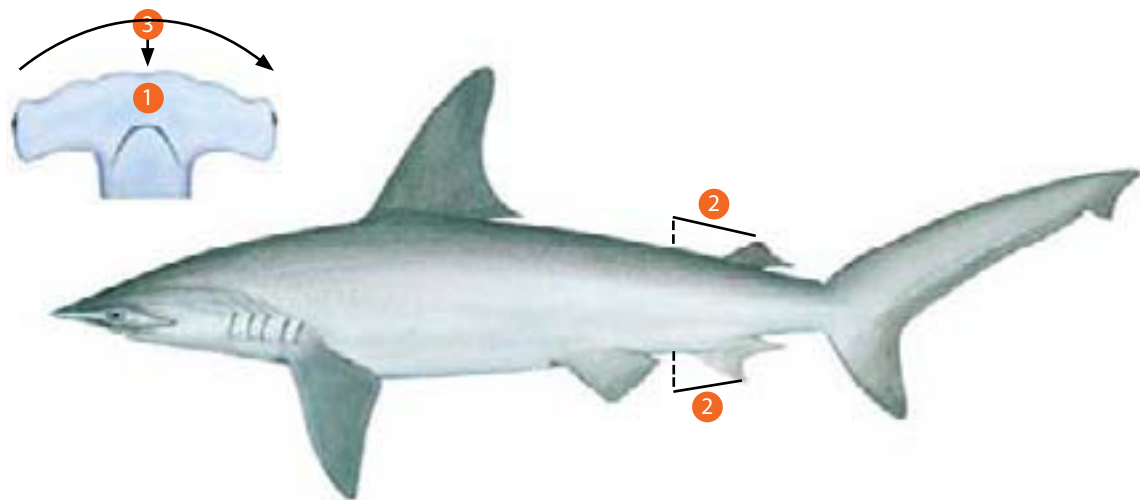
Size & Distribution

- Born ~ 60 cm; max. ~ 600 cm
- Pelagic and demersal throughout northern NSW coastal and shelf waters south to at least Sydney

Scalloped hammerhead

(*Sphyrna lewini*)

NSW DPI code:
SHK-34



Distinguishing features

- ❶ Hammer-like head
- ❷ 2nd dorsal fin smaller than anal fin
- ❸ Distinctive indentation in centre of front margin of the head
- ❸ Front margin of head curves back from the middle
 - Teeth smooth edged (or at most weakly serrated)

Colouration

- Olive-bronze to brownish-grey upper body; pale underside
- Underside of pectoral-fin tips dusky in adults; no other fin markings
- Pectoral, lower tail and 2nd dorsal fin tips dark in juveniles

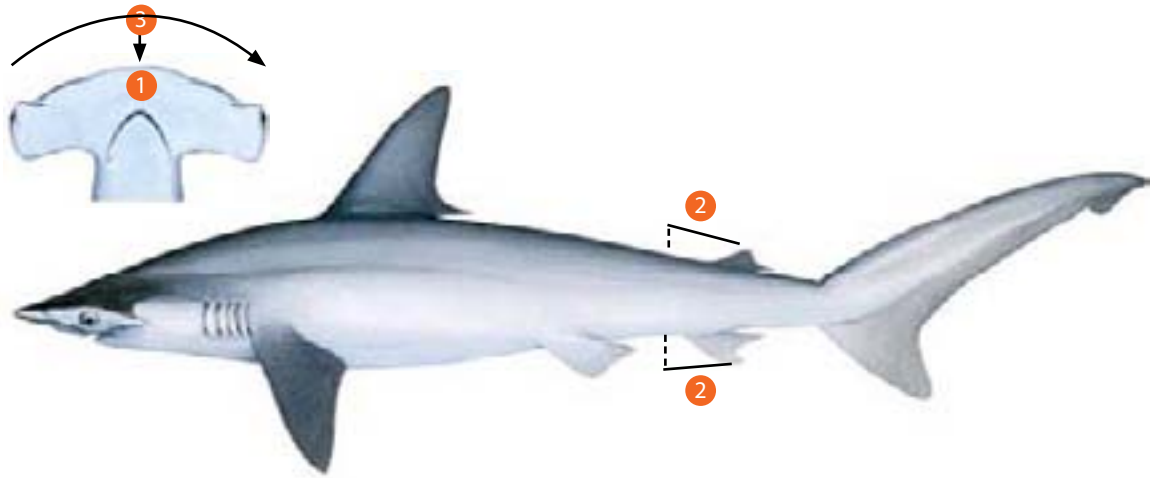
Size & Distribution

- Born ~ 45-50 cm; max. ~ 350 cm
- Pelagic and demersal throughout northern NSW coastal and shelf waters south to at least Sydney

Smooth hammerhead

(*Sphyrna zygaena*)

NSW DPI code:
SHK-35



Distinguishing features

- 1 Hammer-like head
- 2 2nd dorsal fin smaller than anal fin
- 3 No indentation in centre of front margin of the head
- 3 Front margin of head curves back from the middle
 - Narrow, slanting, finely serrated (occasionally smooth edged) teeth

Colouration

- Olive to dark-greyish brown upper body; white underside
- Ventral tips of pectoral fins dusky

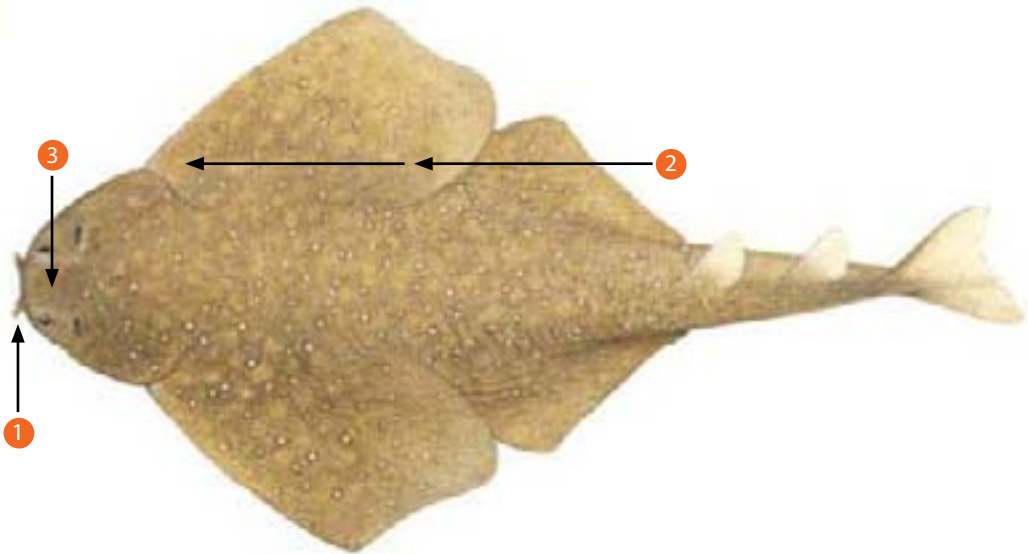
Size & Distribution

- Born ~ 50-60 cm; max. ~ 350 cm
- Pelagic and demersal throughout NSW coastal and shelf waters

Eastern angelshark

(*Squatina albiguttata*)

NSW DPI code:
SHK-36



Distinguishing features

- ❶ Two tasselled nasal barbels extruding from the upper lip in front of the eyes
 - No spines extending from dorsal fin origins
- ❷ Flattened head, pectoral and pelvic fins overlapping along the length of the body
- ❸ Top of head between eyes concave (depressed) with thorns present
 - Lower lobe of tail dominated by pale spots, with only a few dark spots present

Colouration

- Yellowish-brown upper body with numerous sharply defined small dark edged white spots; white underside
- Several lighter or darker brownish blotches scattered more-or-less regularly

Size & Distribution

- Born ~ 25-30 cm; max ~ 130 cm
- Demersal throughout shelf waters of NSW at depths of between ~ 50 and 400 m depth

Australian angelshark

(*Squatina australis*)

NSW DPI code:
SHK-37



Distinguishing features

- ① Two tasselled nasal barbels extruding from the upper lip in front of the eyes
 - No spines extending from dorsal fin origins
- ② Flattened head, pectoral and pelvic fins overlapping along the length of the body
- ③ Area on top of head between eyes flat or slightly raised with no thorns present
 - Numerous dark spots on lower lobe of tail

Colouration

- Sandy coloured upper body with dense pattern of small irregular white spots and flecks; underside uniformly pale
- Margins of pectoral and pelvic fins with white edges interspersed with dark markings

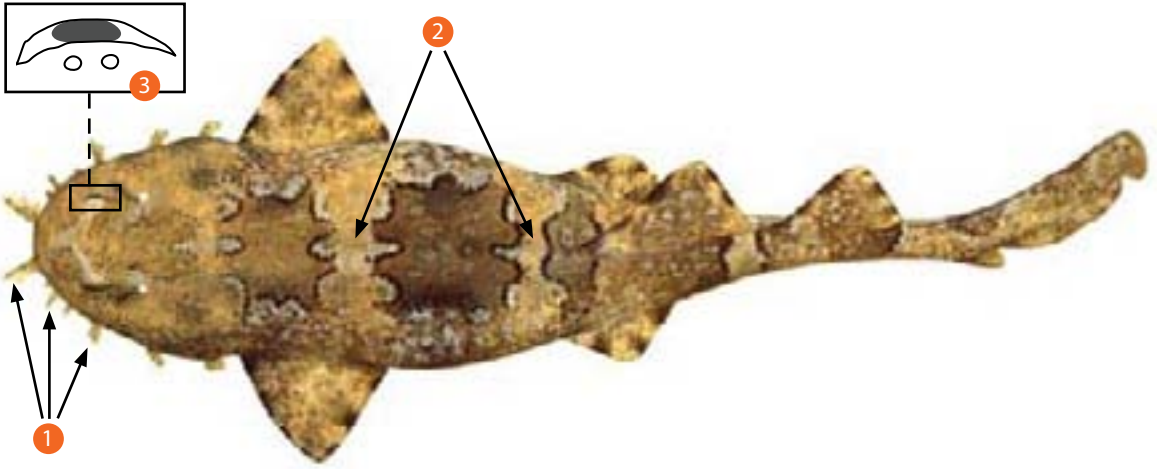
Size & Distribution

- Born ~ 25-30 cm; max ~ 120 cm
- Demersal throughout coastal and shelf waters of southern and central NSW north to at least Port Macquarie, and to about 150 m depth

Banded wobbegong

(*Orectolobus halei*)

NSW DPI code:
SHK-38



Distinguishing features

- 1 Numerous tassels and small skin lobes extruding from along the entire length of the upper lip
- 2 Any white patterning on dorsal surface not in the form of clear rings
- 3 Two wart-like 'knobs' above (immediately behind) the eyes
- Largest wobbegong in NSW; previously confused with ornate wobbegong
- Darker patterning than the spotted wobbegong
- No spines extending from dorsal fin origins

Colouration

- Light and dark brown upper body with 9 blotch-shaped saddles that have conspicuous black, corrugated borders; creamy white or yellow underside
- Light brown and grey freckle-like blotches between saddles

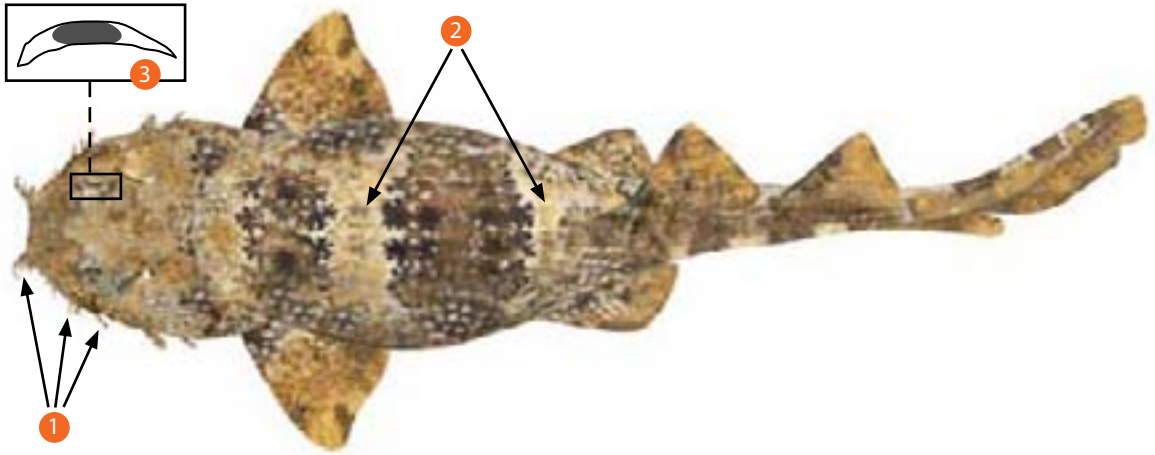
Size & Distribution

- Born ~ 25-35 cm; max. of at least 220 cm
- Demersal throughout shallow coastal and shelf waters of NSW to about 100 m depth

Ornate wobbegong

(*Orectolobus ornatus*)

NSW DPI code:
SHK-39



Distinguishing features

1. Numerous tassels and small skin lobes extruding from along the entire length of the upper lip
2. Any white patterning on dorsal surface not in the form of clear rings
3. No wart-like 'knobs' above (immediately behind) the eyes
 - Only grows to a maximum of ~ 110 cm
 - No spines extending from dorsal fin origins
 - Greener and greyer back than the banded wobbegong, and with a more 'speckled/freckled' upper body

Colouration

- Similar patterning to banded wobbegong
- Very ornate and multicoloured patterning
- Yellowish-brown to greyish-brown upper body with darker corrugated saddles; creamy white or yellow underside
- Light brown freckle-like blotches within and in-between saddles

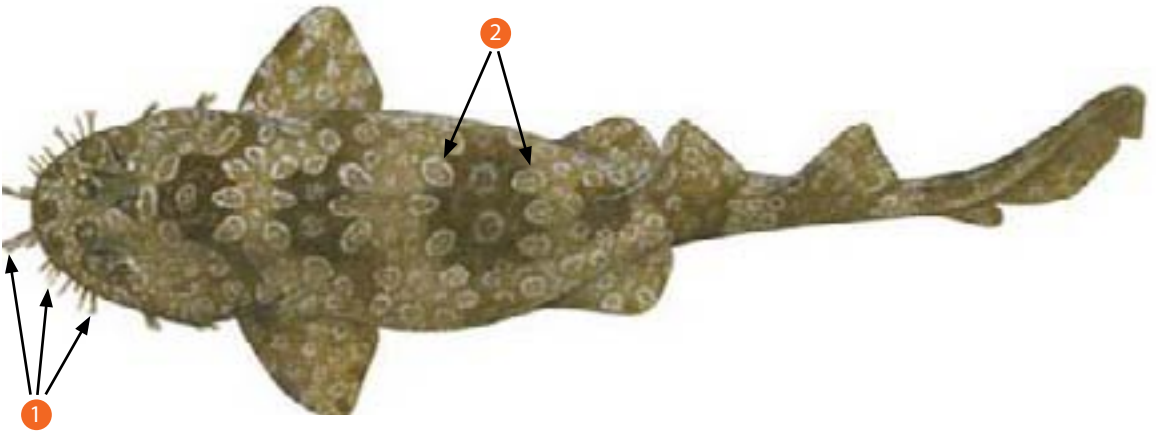
Size & Distribution

- Born ~ 20 cm; max. ~ 110 cm
- Demersal throughout shallow coastal and shelf waters of northern and central NSW south to at least Sydney, and to about 70 m depth

Spotted wobbegong

(*Orectolobus maculatus*)

NSW DPI code:
SHK-40



Distinguishing features

- ❶ Numerous tassels and small skin lobes extruding from along the entire length of the upper lip
- ❷ Distinctive pattern of white rings over entire dorsal surface
 - Distinctively paler in colour than other wobbegongs
 - No spines extending from dorsal fin origins

Colouration

- Pale yellow/brown upper body with slightly darker blotch-shaped saddles; creamy white or yellow underside
- Numerous white rings formed from chains of small white spots or flecks

Size & Distribution

- Born ~ 25 cm; max. of at least 170 cm
- Demersal throughout shallow coastal and shelf waters of NSW

Draughtboard shark

(*Cephaloscyllium laticeps*)

NSW DPI code:
SHK-41



Distinguishing features

- 1 No tassels or skin lobes extruding from the upper lip (although two simple nasal barbels present)
- No spines extending from dorsal fin origins; and head, pectoral fins and pelvic fins do not overlap
- 2 Numerous dark blotches and smaller, scattered, distinct dark dots on upper body
- Typically inflate their belly with water or air when captured
- Adults normally with a dark median stripe along midline of belly

Colouration

- Medium-brownish to greyish upper body ornamented with a dense array of dark blotches and smaller very dark dots; usually also with a scattering of pale flecks
- Pale underside adults normally with a dark median stripe along midline of belly

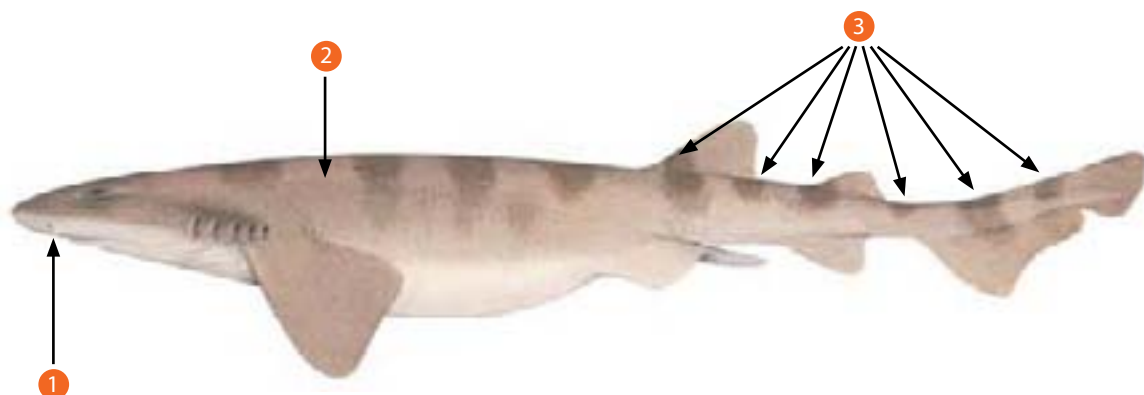
Size & Distribution

- Max: ~ 100 cm
- Demersal throughout coastal and shelf waters of southern NSW north to at least Jervis Bay, and at depths to ~ 350 m

Saddled swellshark

(*Cephaloscyllium variegatum*)

NSW DPI code:
SHK-42



Distinguishing features

- 1 No tassels or skin lobes extruding from the upper lip (although two simple nasal barbels present)
- No spines extending from dorsal fin origins; and head, pectoral fins and pelvic fins do not overlap
- 2 Few, if any, distinct dark dots on upper body
- 3 More than four dark bands or blotches on the upper body behind the 1st dorsal fin origin (including the tail)
- Typically inflate their belly with water or air when captured
- No dark stripe along midline of belly

Colouration

- Light brown upper body and sides with about 11 darker, weakly defined saddles of varying widths along its length; pale underside
- Distinct darker spot in the middle of many of the lighter patches above backbone

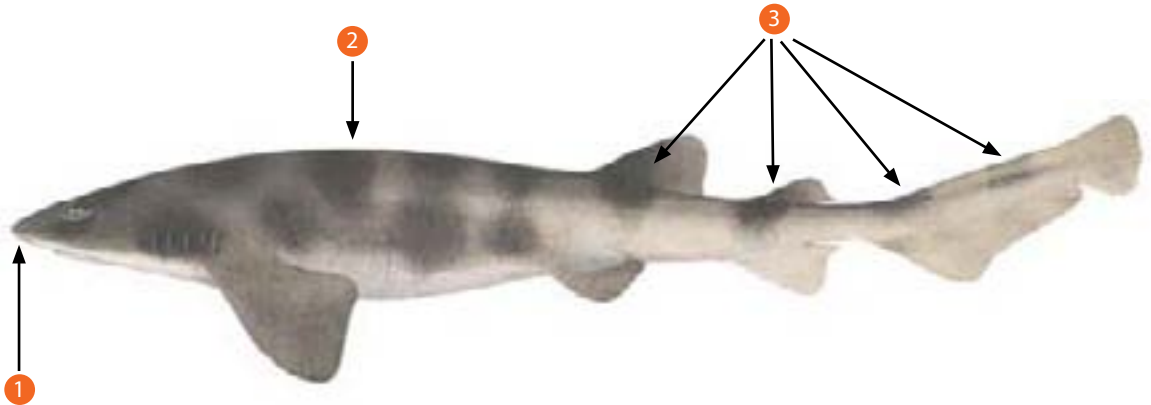
Size & Distribution

- Max: ~ 75 cm
- Demersal throughout outer shelf and upper slope waters of NSW south to at least Tathra, and at depths between 100 and 600 m

Whitefin swellshark

(*Cephaloscyllium albiginum*)

NSW DPI code:
SHK-43



Distinguishing features

- 1 No tassels or skin lobes extruding from the upper lip (although two simple nasal barbels present)
- No spines extending from dorsal fin origins; and head, pectoral fins and pelvic fins do not overlap
- 2 Few, if any, distinct dark dots on upper body
- 3 No more than four distinct dark bands or blotches on the upper body behind the 1st dorsal fin origin (including the tail)
- Typically inflate their belly with water or air when captured
- No dark stripe along midline of belly

Colouration

- Greyish-brown upper body and sides with several darker saddles and large blotches forming 9-10 cross-markings on upper body and tail; pale underside
- Narrow, pale margin on most fins

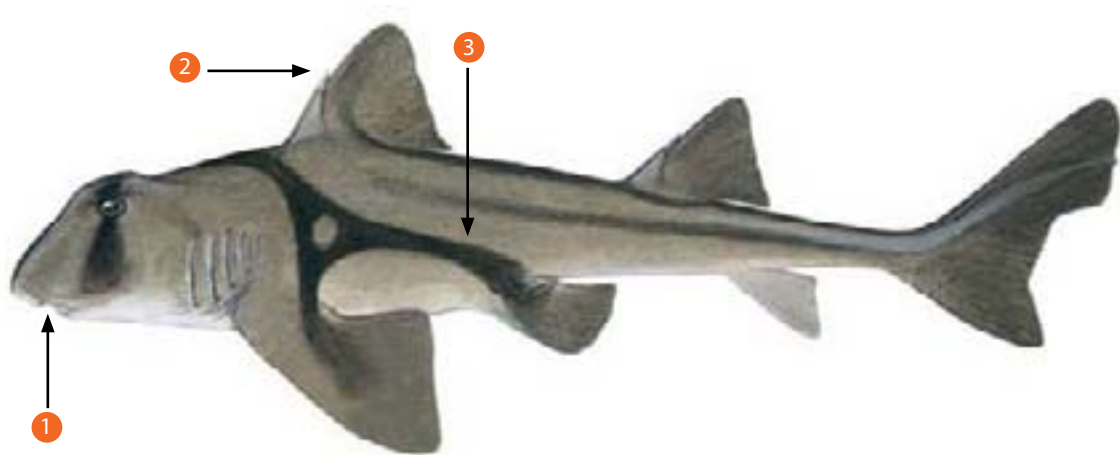
Size & Distribution

- Max: ~ 105 cm
- Demersal throughout outer shelf and upper slope waters of southern NSW north to at least Batemans Bay, and at depths between 125 and 550 m

Port Jackson shark

(*Heterodontus portusjacksoni*)

NSW DPI code:
SHK-44



Distinguishing features

- 1 No tassels or skin lobes extruding from the upper lip
 - 2 Prominent spines extending from origins of both dorsal fins
 - 3 Dark markings on body behind head in shape of a harness – thin horizontal stripes
- Box-like head shape
 - Crests above eyes slope away gradually behind eyes

Colouration

- Mostly greyish-brown upper body (including dorsal fins)
- Dark harness-like bar between eyes and in front of 1st dorsal fin origin extends onto upper surfaces of pectoral fins
- Oblique dark stripes extend horizontally towards tail

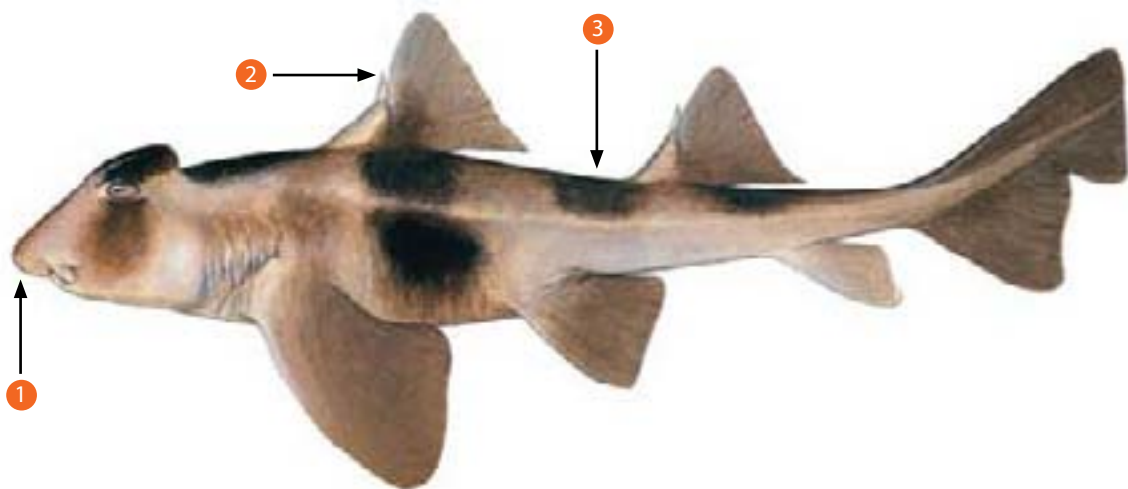
Size & Distribution

- Born ~ 20-25 cm; max. ~ 150 cm
- Demersal throughout coastal and shelf waters of NSW to about 300 m depth; most common in shallower coastal waters

Crested hornshark

(*Heterodontus galeatus*)

NSW DPI code:
SHK-45



Distinguishing features

- 1 No tassels or skin lobes extruding from the upper lip
- 2 Prominent spines extending from origins of both dorsal fins
- 3 Dark markings on body behind head in shape of saddles – i.e. no thin horizontal harness-like stripes
- Box-like head shape
- Very high crests above eyes terminating abruptly behind eyes

Colouration

- Mostly yellowish-brown upper body; pale dorsal fin
- Thick, dark vertical bars on either side of body below 1st dorsal fin
- Dark saddles between dorsal fins and behind 2nd dorsal fin

Size & Distribution

- Born ~ 20-25 cm; max. ~ 100 cm
- Demersal throughout coastal and shelf waters of northern and central NSW south to at least Batemans Bay, and to about 150 m depth

Southern sawshark

(Pristiophorus nudipinnis)

NSW DPI code:
SHK-46



Distinguishing features

- ❶ Long, saw-toothed snout with long, soft barbels (feelers) present
 - ❷ Gill slits located on the side of head – not entirely ventrally
 - ❸ Soft barbels (feelers) located noticeably closer to the eyes than to the saw-tip
- 17-19 large teeth on each side of snout

Colouration

- Light grey upper body; white underside
- Two faint brownish stripes along the top of the snout; sides of the saw are often darker

Size & Distribution

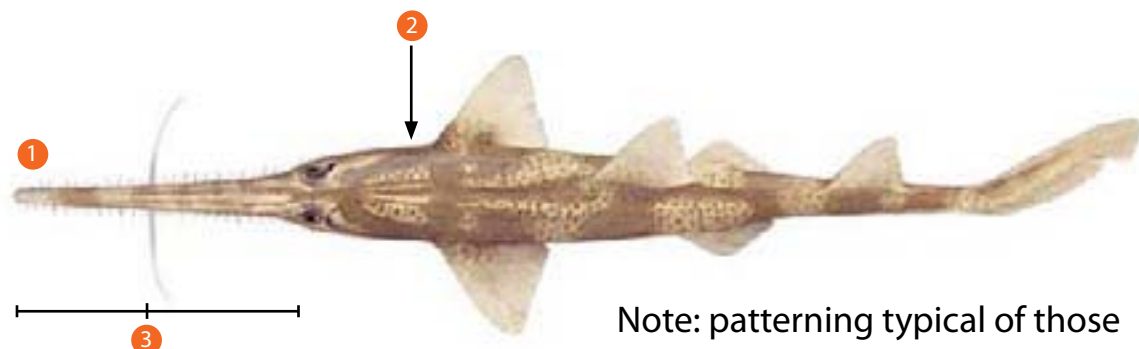
- Born ~ 25 cm; max. ~ 100 cm
- Demersal throughout coastal and shelf waters of southern and central NSW north to at least Newcastle, and at depths shallower than 75 m

Common sawshark

(*Pristiophorus cirratus*)

NSW DPI code:
SHK-47

* Note: recently declared synonymous with the 'eastern sawshark'



Note: patterning typical of those from southern NSW waters – further north there is probably no patterning.

Distinguishing features

- 1 Long, saw-toothed snout with long, soft barbels (feelers) present
- 2 Gill slits located on the side of head – not entirely ventrally
- 3 Soft barbels (feelers) located closer to the saw-tip than to the eyes (or at least halfway between them)
- 19-25 large teeth on each side of snout

Colouration

- Pale sandy-coloured upper body, although sometimes with dark brownish bands, blotches and spots in southern NSW waters; white underside
- Two thin, brownish stripes along the top of the snout; sides of the saw are often darker

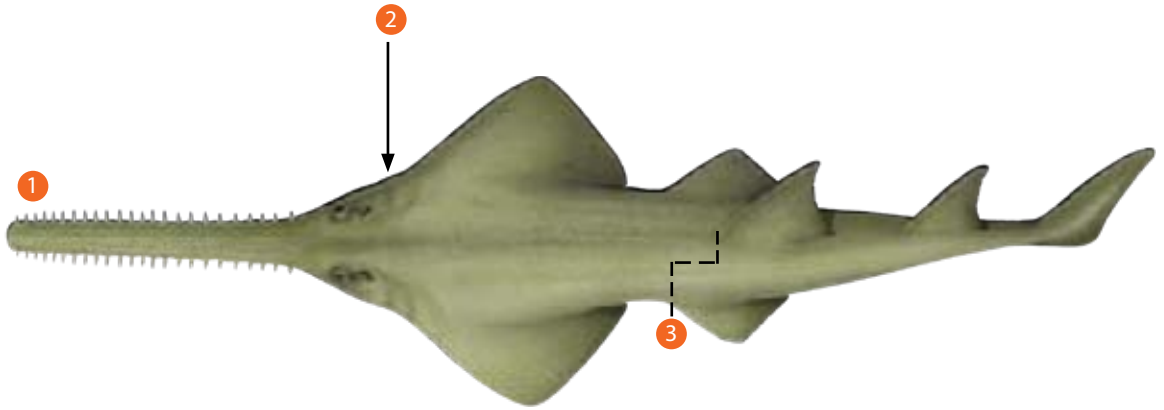
Size & Distribution

- Born ~ 30-40 cm; max. ~ 140 cm
- Demersal throughout coastal and shelf waters of NSW at depths between 40 and 300 m

Green sawfish

(*Pristis zijsron*)

PROTECTED



Distinguishing features

- 1 Long, saw-toothed snout without long soft barbels (feelers)
 - 2 Gill slits located entirely on white ventral surface
 - 3 Unlike sawsharks, the 1st dorsal fin origin is behind the pelvic fin origin
- 24-28 teeth on each side of saw that are more closely spaced nearer the saw-tip than near the mouth

Colouration

- Upper body greenish brown or olive with no obvious patterning; white underside

Size & Distribution

- Max. ~ 500 cm
- Extremely rare
- Demersal; possibly in northern coastal and shelf waters south to Sydney

Shark ray

(*Rhina ancylostoma*)

NSW DPI code:
SHK-48



Distinguishing features

- ① Snout without saw-teeth
- ② 1st dorsal fin directly above pelvic fins
- ③ Distinct lower lobe on tail
 - Circularly rounded head clearly demarcated from pectoral fin origins
 - Gill slits entirely on pale underside of head
 - Very deep-bodied with distinctive colouration and patterning
 - Large thorns on horny ridges located pre-dorsally on back

Colouration

- Bluish-grey with numerous white spots on back and tail; dark bands between eyes; mostly pale underside
- Colour more pronounced in juveniles; adults often brownish with faint spots and lines

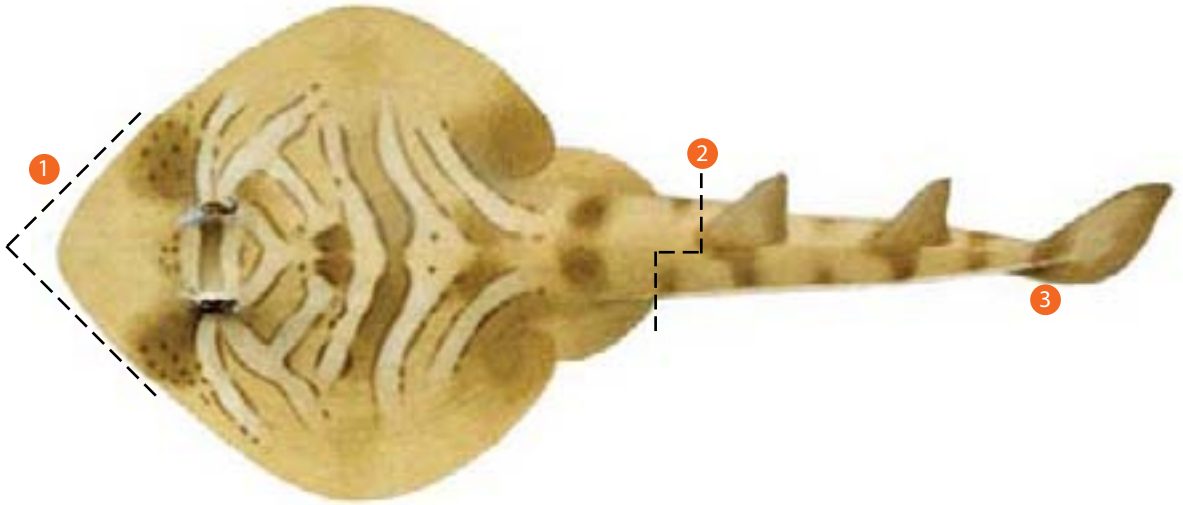
Size & Distribution

- Max: ~ 270 cm
- Demersal throughout coastal and shelf waters of northern and central NSW south to at least Sydney, and to about 100 m depth

Eastern fiddler ray

(*Trygonorrhina* sp.)

NSW DPI code:
SHK-49



Distinguishing features

- 1 Snout without saw-teeth (ray-shaped head)
- 2 1st dorsal fin well behind pelvic fins
- 3 No distinct lower tail lobe
- 1 Flat, oval-shaped, roundly-pointed, ornately-patterned head (>90-degree angle)
- Gill slits entirely on pale underside of head

Colouration

- Brown upper body with transverse, lightly coloured bands that have dark brown edges; pale yellowish-white underside
- Distinctive triangle- or diamond-shaped marking between the spiracles

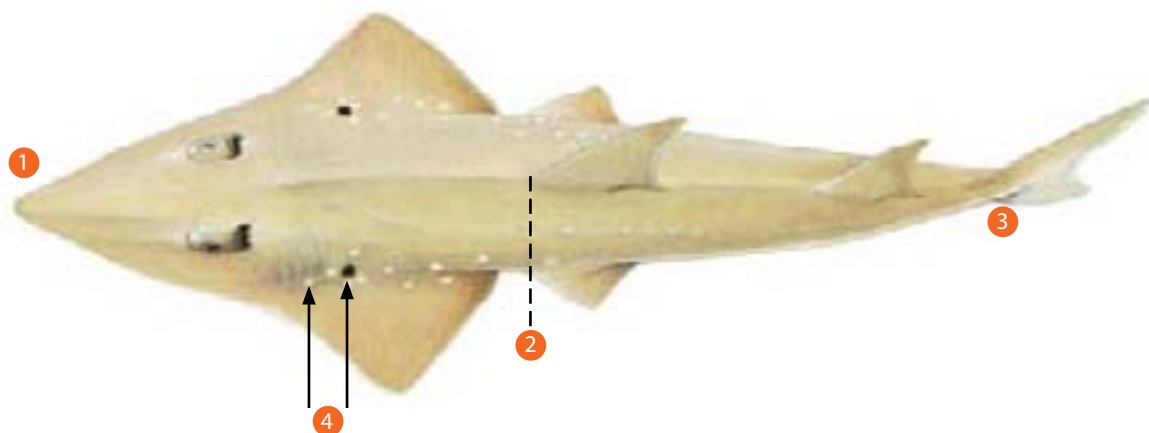
Size & Distribution

- Max: ~ 120 cm
- Demersal throughout coastal and shelf waters of NSW to about 150 m depth

White-spotted guitarfish

(*Rhynchobatus australiae*)

NSW DPI code:
SHK-50



Distinguishing features

- 1 Snout without saw-teeth
- 2 1st dorsal fin directly above pelvic fins
- 3 Distinct lower lobe on tail
- 1 Triangular, pointed head/snout
 - Gill slits entirely on pale under side of head, which merges smoothly with pectoral fins
- 4 White spots along each side of body, and 1-2 dark spots above the base of the pectoral fin
 - Small thorns along the mid-line ridge of the back

Colouration

- Mostly greyish to yellowish-brown upper body; pale underside
- 10-30 white spots along each side of the body to the rear of the 1st dorsal fin
- 1-2 dark spots above the base of the pectoral fin

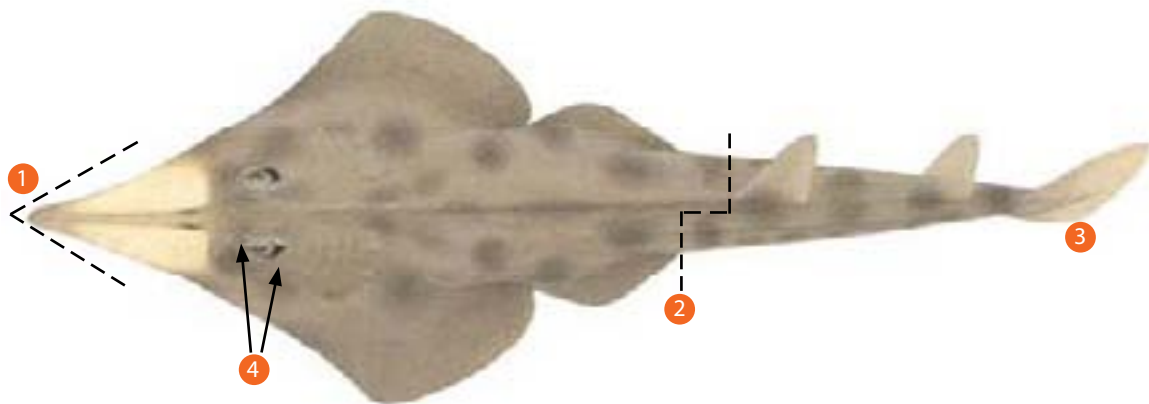
Size & Distribution

- Born: ~ 50 cm; max: ~300 cm
- Demersal throughout coastal and shelf waters of northern NSW south to at least Forster, and to about 100 m depth

Eastern shovelnose ray

(*Aptychotrema rostrata*)

NSW DPI code:
SHK-51



Distinguishing features

- ① Snout without saw-teeth
- ② 1st dorsal fin well behind pelvic fins
- ③ No distinct lower tail lobe
- ① Long, flat, triangular, sharply-pointed (i.e. < 90 -degree angle) snout and head
- ④ Only 2-3 small thorns in front of each eye and only 1-2 small thorns next to each spiracle
- Gill slits entirely on underside of head
- About 18-20 short, widely-spaced thorns along centre-line of head and pre-dorsal tail

Colouration

- Plain light brown upper body – sometimes with dusky blotches or light coloured speckles; mostly white underside
- Snout translucent, sometimes black underneath towards the tip

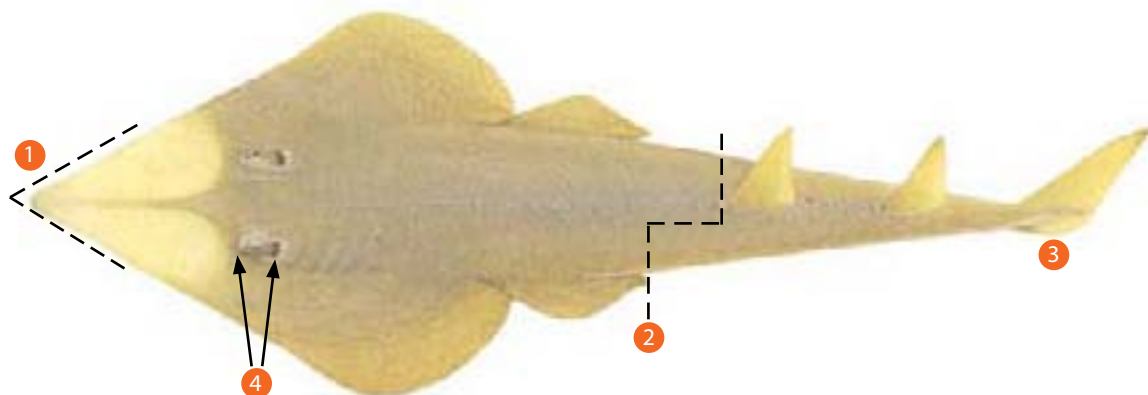
Size & Distribution

- Born: ~ 20 cm; max: ~ 120 cm
- Demersal throughout coastal and shelf waters of NSW to about 150 m depth

Giant shovelnose ray

(*Rhinobatos typus*)

NSW DPI code:
SHK-52



Distinguishing features

- ① Snout without saw-teeth
- ② 1st dorsal fin well behind pelvic fins
- ③ No distinct lower tail lobe
- ④ Long, flat, triangular, sharply-pointed (i.e. < 90 -degree angle) snout and head
- ④ At least 5 closely grouped small thorns in front of each eye and > 3 small thorns next to each spiracle
- Gills slits entirely on underside of head
- Closely spaced line of thorns or enlarged denticles along centre-line of head and pre-dorsal tail

Colouration

- Greyish-brown to olive upper body – distinctively paler and yellowish around head and fin margins; mostly pale underside
- Snout pale yellow with dark brown stripe along snout cartilage

Size & Distribution

- Max ~ 270 cm
- Rare and demersal in coastal and shelf waters (juveniles sometimes in estuaries) of northern NSW south to at least Forster; and to about 100 m depth

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