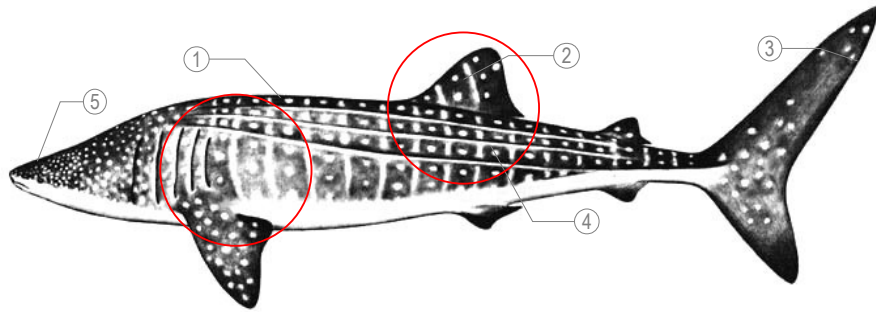
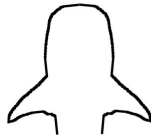


WHALE SHARK (*Rhincodon typus*)



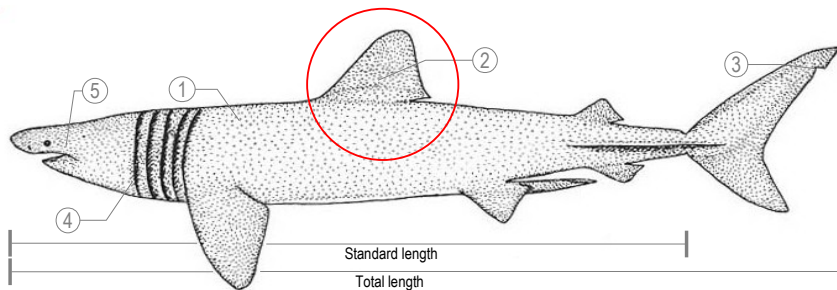
Source: Kato et al. 1967. Field guide to eastern Pacific & Hawaiian sharks. Fish. Wild. Ser., Bur. Comm. Fish. Circ. 271, Wash, DC.

1. Unique colour pattern of white spots and stripes on dark background.
2. Dorsal fin triangular, upright, to 1.2 m tall.
3. Vertical tail fin, up to 3 m tall, no tail notch.
4. 3 strong ridges along each side.
5. Broad, flattened head, wide slit-like mouth, to 1.5 m wide.
6. Usually 6–12 m long, though known to at least 18 m.



Head profile from above

BASKING SHARK (*Cetorhinus maximus*)



Source: Casey, 1964. Anglers Guide to Sharks of the Northeastern United States. Bur. Sport Fish. & Wild. Circ. 179.

1. Blue-grey to brown-grey above, paler below.
2. Large, rounded dorsal fin.
3. Vertical tail fin has notch on upper lobe.
4. Gill slits almost encircle the head.
5. Mouth extends under and behind the eyes.
6. Usually 7–9 m, though known to at least 10 m.



Head profile from above

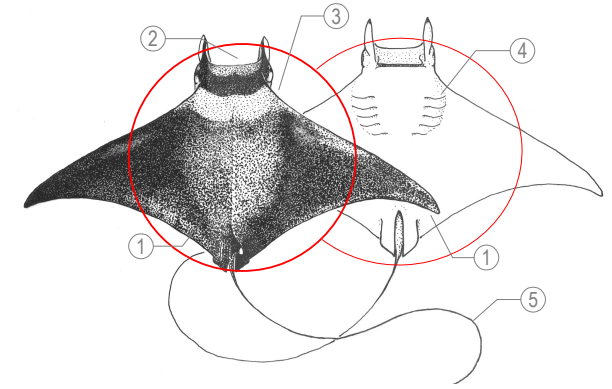
○ Areas to photograph for ID, left side best, then right side; also any distinctive marks or scars on the body.

NEW ZEALAND MOBULID RAYS

SPINE-TAILED DEVIL RAY (*Mobula japanica*)

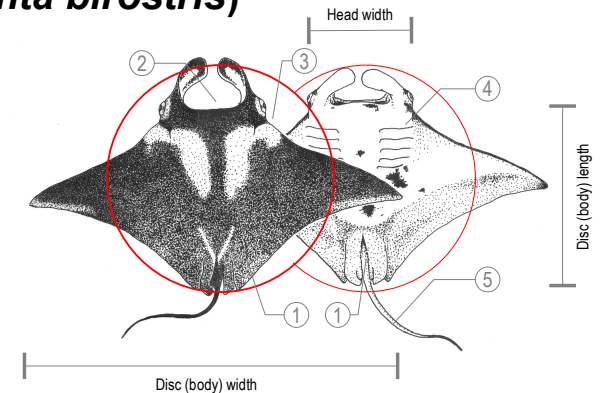
This is the most common species of mobulid in New Zealand.

1. Iridescent purple-black above, juveniles with pale shoulders fading in adults, white below; dorsal fin with conspicuous white tip.
2. Head narrow, $\leq 22\%$ body width; mouth underneath; short head fins, resembling horns when not feeding.
3. Spiracle on side of head, below level of wings.
4. First gill slit well behind leading edge of wing.
5. Whip-like tail long, longer than body when intact, with short functional spine.
6. To at least 3 m wide, usually smaller.



MANTA RAY (*Manta birostris*)

1. Dark above, pale shoulders and V-mark in front of dorsal fin, mostly white below; some individuals almost all black; dorsal fin without white tip.
2. Head broad $\geq 24\%$ of body width; mouth terminal; long head fins, resembling horns when not feeding.
3. Spiracle on top of head, visible from above.
4. First gill slit at or slightly behind leading edge of wing.
5. Whip-like tail short, similar length to body when undamaged, with prominent round knob containing vestigial spine just behind dorsal fin.
6. To at least 6.7 m wide, sightings to 8 m in New Zealand.



○ Areas to photograph for ID, underside (ventral) best, then top (dorsal); also any distinctive marks or scars on the body.

The bigfish project

Enlarge & copy form as required

Very little information exists on these species in New Zealand, and researchers need public support to learn more about them. These ocean-going plankton feeders can be individually identified from their unique colour patterns and scars. Data from sightings and photo ID's will enable us to build up a better picture of where they occur locally, and identify individuals that visit New Zealand regularly.

If you're lucky enough to see one of these amazing creatures, it would be great if you could record the information listed in the form on the right – you could enlarge and copy the form so you have it on hand, just in case. Alternatively, you can use the sighting form on the **bigfish** web site to send us your own observations. You can also find information about each species there, including previous sightings. Images can be mailed on suitable media, along with this form, or digital images can be emailed to us. Submitted images will be stored in the **bigfish** image bank. **bigfish** recognises the photographer's copyright, and no images will be reproduced without the photographer's prior consent.

The objectives of the **bigfish** project:

- To determine where whale sharks, basking sharks and mobulid rays found in New Zealand originate from,
- To record white pointer (great white shark) sightings in New Zealand,
- To determine their distribution and abundance in New Zealand,
- To investigate where they go when they leave New Zealand.

Code of Conduct:

- Restrict your boat speed to 6 knots (10 kph) when approaching or near individuals in the water.
- When your vessel is closer than 10 m, put your engine in neutral to avoid disturbance and injury to animals, e.g. prop contact.
- Avoid dividing groups of animals, i.e. driving through them.
- If diving, do not attempt to touch, ride or chase animals; avoid blocking their path, and maintain a distance of at least 5 m – they are big and powerful.

www.bigfish.net.nz

Date: Time: No. of indiv:

Type of sighting:	<input type="checkbox"/> fin	Sighting:	<input type="checkbox"/> underwater	Shark:	<input type="checkbox"/> whale shark	Ray:	<input type="checkbox"/> devil ray
	<input type="checkbox"/> partial animal		<input type="checkbox"/> from boat		<input type="checkbox"/> basking shark		<input type="checkbox"/> manta ray
	<input type="checkbox"/> whole animal		<input type="checkbox"/> from aircraft		<input type="checkbox"/> white pointer		<input type="checkbox"/> unsure
	<input type="checkbox"/> group		<input type="checkbox"/> from shore		<input type="checkbox"/> other		
	<input type="checkbox"/> remains						

Location:

Latitude: South Longitude: East

Observer name(s):

Email:

Phone: Mobile:

Contact address:

Sex (number): Male ☐ Female ☐ Unknown ☐

Size (m): Biggest Smallest Average

Distance offshore (km): Sea depth (m):

Direction of travel: Sea conditions:

Vessel name/number:

Any images or video taken: Yes ☐ No ☐ Digi ☐ Film ☐ Video ☐

Distance from observers: 0-20 m ☐ 20-50 m ☐ 50-100 m ☐ >100 m ☐

Associated species:

Location & description of any scars or markings:

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Comments or behavioural notes (e.g. jumping, feeding, etc.):

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