

Protected Marine Species



Identification Guide



Natural Heritage Trust

Helping Communities Help Australia

An Australian Government Initiative

Introduction

Commonwealth Protected Marine Species Identification Guide

Australia is fortunate in having a variety of amazing marine life. Some species are unique to Australia, but all contribute to Australia's rich marine biodiversity. Unfortunately, many species face a range of threats from human activity, and so are in need of protection.

The Australian Government's main piece of conservation legislation is the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). All the species shown in this guide are listed under the EPBC Act and are therefore protected in Commonwealth areas.

Under the EPBC Act, it is an offence to kill, take, trade, keep, or move a listed species in a Commonwealth area, unless you have a permit. Additional offences relate to cetaceans (whales and dolphins), such as deliberately causing interference. Under the *Native Title Act 1993*, Indigenous Australians exercising a legitimate native title right, do not require a Commonwealth permit to interact with listed species.

For more information on the EPBC Act visit:
www.deh.gov.au/epbc/index.html

The Commonwealth area includes marine areas beyond the coastal waters of each State and the Northern Territory, and includes all of Australia's Exclusive Economic Zone (EEZ). The EEZ extends to 200 nautical miles (approximately 350 kilometres) from the coast. In some areas, the Commonwealth area also covers the continental shelf and slope, beyond 200 nautical miles. It also includes the waters in the EEZ around the Australian Antarctic Territory and Australia's External Territories, such as Norfolk, Christmas, Heard and Macdonald Islands.

On occasions, interactions with protected species occur as a result of an unavoidable accident or incident. Under the EPBC Act you are legally required to report such interactions to the Australian Government Department of the Environment and Heritage (DEH) within seven days of the incident occurring, or you could face a fine. By promptly reporting interactions you are meeting your legal obligations, and will assist the Australian Government in its efforts to protect marine species.

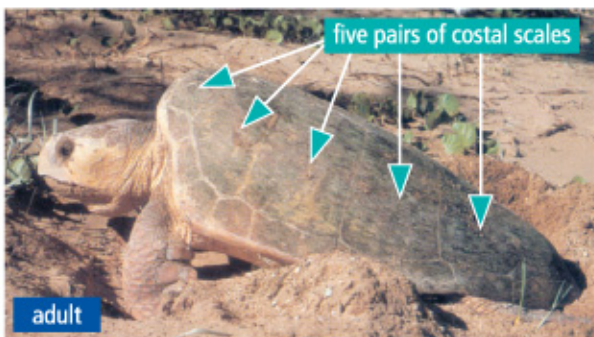
When reporting interactions, please include: • time and date • species name • number of animals • location (latitude and longitude if possible) • incident type (eg. by-catch, collision) • gear or bait type used (if fishing).

For incidents that occur as part of commercial fishing you are also requested to report interactions to the regulating Fisheries Agency, such as the Australian Fisheries Management Authority, or your State Fisheries Agency. In most instances this should be done through normal reporting mechanisms such as logbooks or catch documentation schemes.

Please see back page for more information on reporting interactions.

Loggerhead Turtle

Scientific Name: *Caretta caretta*



Distribution: QLD, NT, WA, NSW

EPBC Act Status: Endangered, Migratory and Marine

Length: Up to 1m

Colour: Dark brown, often with reddish-brown and black on their shell. Yellow underside.

Key Features: Five pairs of costal scales on shell. Parrot-like beak. Juveniles have distinct peaks along the shell midline.

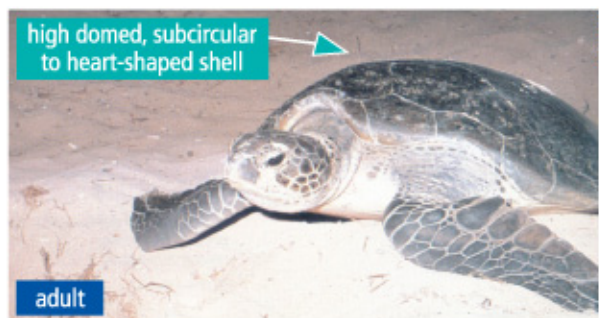
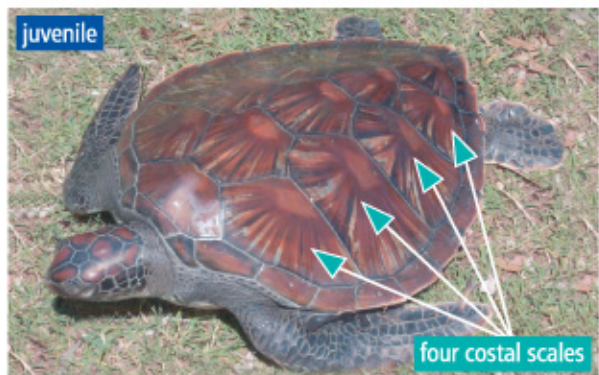
Preferred Habitat: Coral and rocky reefs, seagrass meadows, muddy bays, sandflats and estuaries.



Distribution

Green Turtle

Scientific Name: *Chelonia mydas*



Distribution: QLD, NT, WA, NSW

EPBC Act Status: Vulnerable, Migratory and Marine

Length: Up to 1m

Colour: Light to dark green shell, usually variegated with brown, reddish-brown and black; whitish or cream underneath.

Key Features:

Four costal scales on shell.

High domed, subcircular to heart-shaped shell.

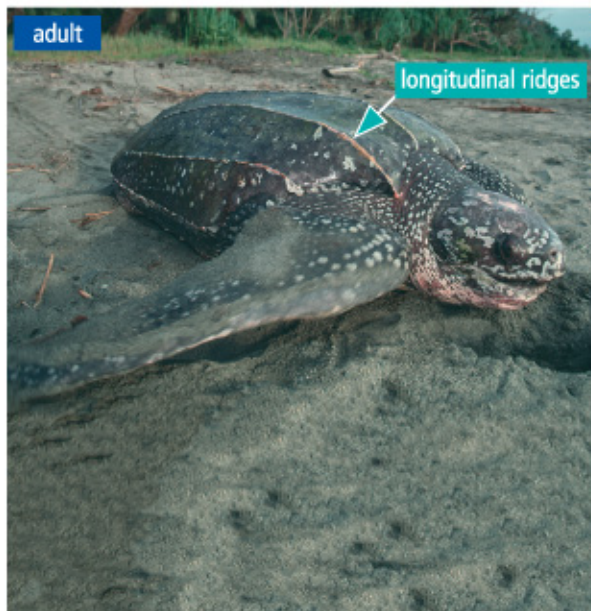
Preferred Habitat:

Coral and rocky reefs and inshore seagrass beds.



Leatherback Turtle

Scientific Name: *Dermochelys coriacea*



Distribution: QLD, NT, WA, NSW

EPBC Act Status: Vulnerable, Migratory and Marine

Length: Up to 1.6m

Colour: Adults have a blackish shell, with pale spots on the skin that turn pinkish when out of the water, as blood flows to the surface of the skin to cool the body.

Key Features:

The largest of all sea turtles.

Five distinct longitudinal ridges and no large scales on shell.

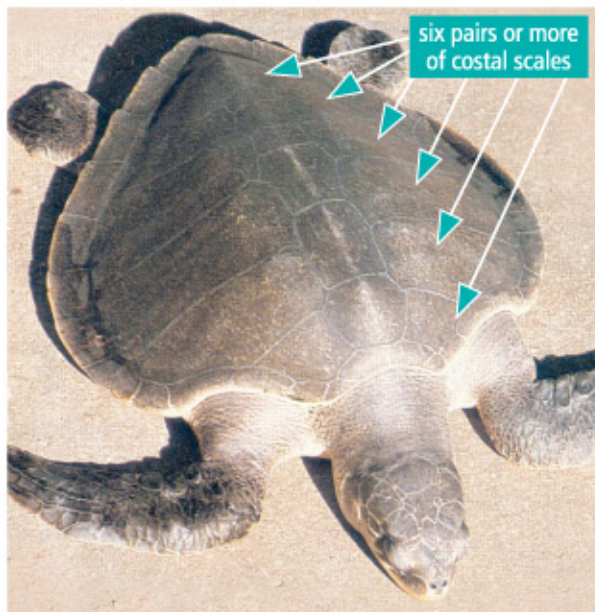
Preferred Habitat:

Temperate waters, rarely close to shore, often migrates to breed in tropical areas.



Olive Ridley Turtle

Scientific Name: Lepidochelys olivacea



Distribution: QLD, NT, WA

EPBC Act Status: Endangered, Migratory and Marine

Length: Up to 70cm

Colour: Grey to olive grey, whitish underneath.

Juveniles charcoal grey.

Key Features: Six pairs or more of costal scales on shell. Almost circular shell. Front and rear flippers have two visible claws.

Male's tail extends beyond the shell. The smallest of the Australian sea turtles.

Preferred Habitat:

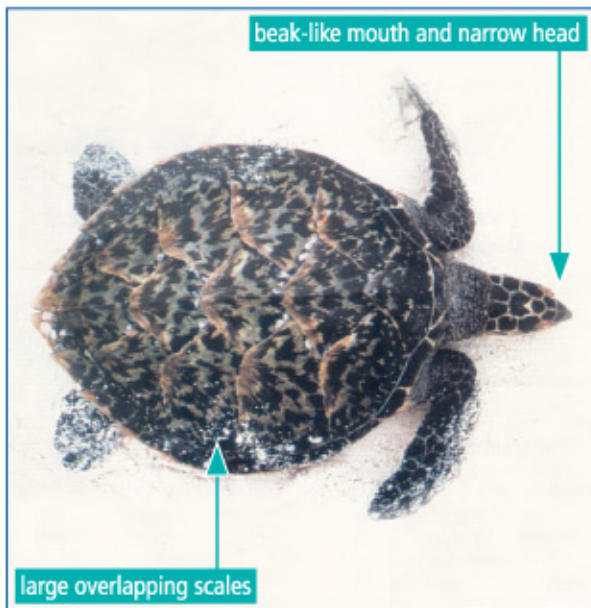
Soft-bottomed waters of 10-60m depth. Australian nesting populations rarely leave continental waters.



Distribution

Hawksbill Turtle

Scientific Name: Eretmochelys imbricata



Distribution: QLD, NT, WA

EPBC Act Status: Vulnerable, Migratory and Marine

Length: Up to 80cm

Colour: Olive green or brown shell, extensively variegated with brown and black markings. Underside yellow or white.

Key Features: Beak-like mouth and narrow head. Thick overlapping scales on shell.

Four or more pairs of large costal scales. Males have a longer, thicker tail that extends beyond the shell.

Preferred Habitat:

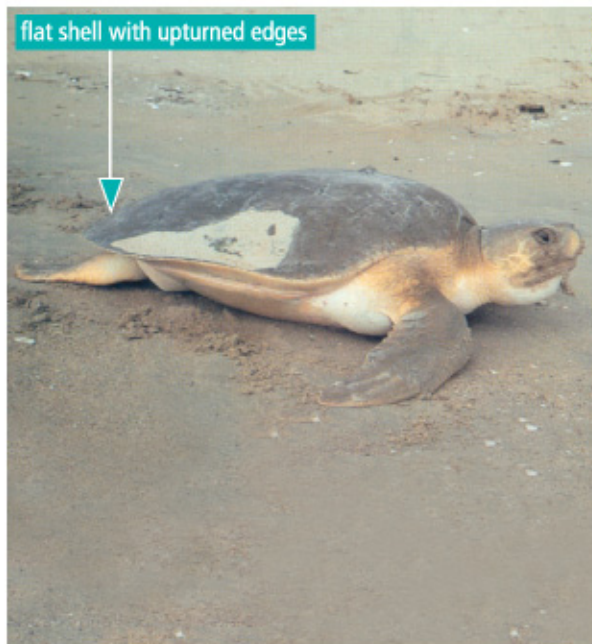
Tidal and subtidal coral and rocky reefs in tropical and subtropical areas.



Distribution

Flatback Turtle

Scientific Name: Natator depressus



Distribution: QLD, NT, WA

EPBC Act Status: Vulnerable, Migratory and Marine

Length: Up to 92cm

Colour: Olive grey shell; underside is off-white to pale yellow.

Key Features: Low-domed, smooth, flat shell with upturned edges covered by a thin skin. Shell is fragile.

Preferred Habitat:

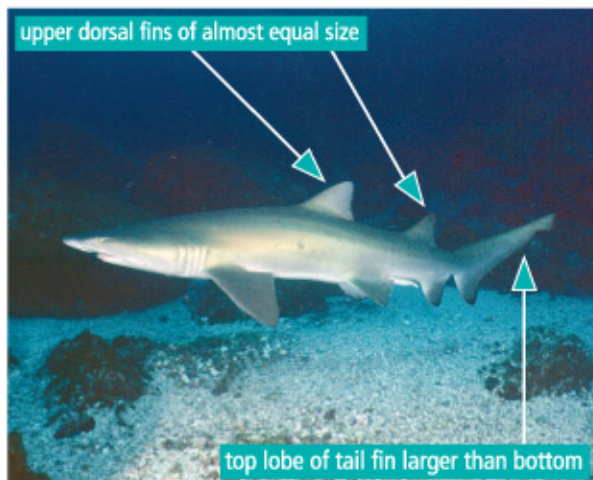
Inshore areas of clear reef waters; subtidal, soft-bottomed habitats of the continental shelf.

Rarely leaves the waters of the continental shelf.



Grey Nurse Shark

Scientific Name: *Carcharias taurus*



Distribution: NSW, QLD, WA

EPBC Act Status:

East Coast Population: Critically Endangered

West Coast Population: Vulnerable

Length: To 4m

Colour: Grey to grey-brown, pale underbelly and brownish spots on upper body and tail fin.

Juveniles have red to brown spots on the back half of the body and tail.

Key Features: Two large upper dorsal fins of almost equal size. Top lobe of tail fin larger than bottom.

Teeth are fang-like, visible when mouth is closed.

Preferred Habitat:

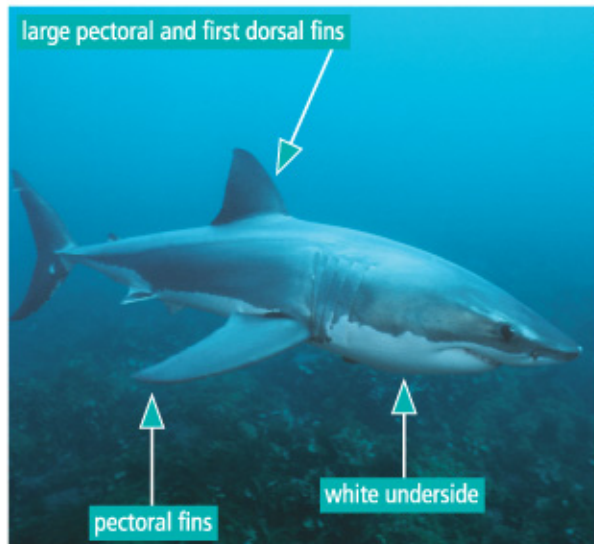
Shallow inshore waters, sandy-bottomed gutters or rocky caves, close to inshore rocky reefs or islands, usually to 15-40m, but has been recorded as deep as 190m.



Distribution

Great White Shark

Scientific Name: Carcharodon carcharias



Distribution: All States, but predominantly southern

EPBC Act Status: Vulnerable and Migratory

Length: Average 3-5m but may reach 7m

Colour: Grey or bronze-coloured on top and white below.

Key Features: Torpedo-shaped with a pointed snout; large pectoral and first dorsal fins; crescent-shaped tail; large black eyes; several rows of serrated teeth.

Preferred Habitat: Coastal and offshore areas of the continental and insular shelves and offshore continental islands, may frequent sites where seals and sea lions breed.

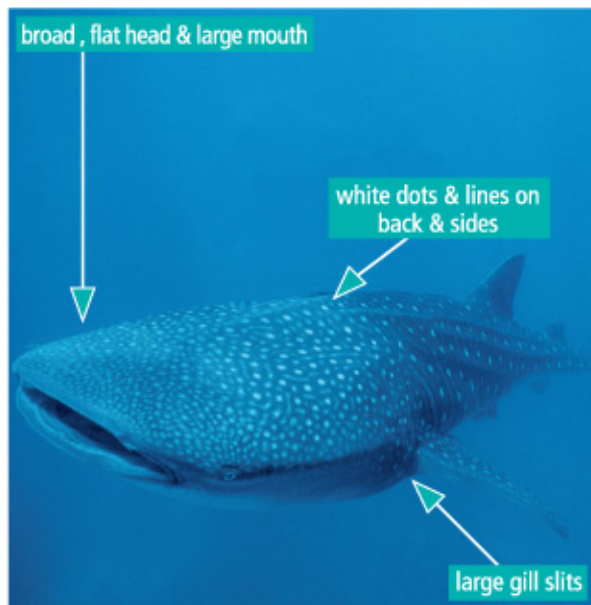
They can enter very shallow water in search of prey, but can also be found at depths to 1200 metres.



Distribution

Whale Shark

Scientific Name: Rhincodon typus



Distribution: WA, QLD, NT, NSW, VIC

EPBC Act Status: Vulnerable and Migratory

Length: Up to 20m

Colour: Bronze, dark-grey or green-grey on their upper bodies, cream on the underbelly, with random white dots and lines on their back and sides.

Key Features: Broad, flat head, huge mouth with 300 rows of teeth, large gill slits, small eyes, first dorsal fin much larger than second.

Three prominent ridges running along each side of its body.

Preferred Habitat:

Deep and shallow coastal waters and the lagoons of coral atolls and reefs.



Speartooth Shark

Scientific Name: Glyphis sp. A



© CSIRO Marine Research

Distribution: QLD, NT, possibly WA

EPBC Act Status: Critically Endangered **Length:** 2-3m

Colour: Greyish, no distinctive colour pattern.

Has more black on the underside of the pectoral and anal fins than *Glyphis sp. C*.

Key Features: Small eyes, with short and broadly rounded snout, and erect, broadly triangular, serrated upper teeth.

Preferred Habitat: Riverine or low-salinity waters.

There are no validated records from the sea yet, although the species almost certainly occurs there.

Northern River Shark

Scientific Name: Glyphis sp. C



© CSIRO Marine Research

Distribution: NT, WA

EPBC Act Status: Endangered **Length:** 2-3m

Colour: Greyish, no distinctive colour pattern.

Key Features: Small eyes, with short but slightly longer snout than *Glyphis sp. A*. Erect, broadly triangular, serrated upper teeth.

Preferred Habitat: Riverine or marine waters.

There are several records from the sea, and these are all larger specimens.

Freshwater Sawfish

Scientific Name: Pristis microdon



Distribution: QLD, NT, WA

EPBC Act Status: Vulnerable

Length: Up to 5m

Colour: Sandy brown

Key Features: Flattened, extended snout with 18-23 teeth. Five pairs of gill openings on the underside of the head. First dorsal fin forward of pelvic fin, lobe on tail fin.

Preferred Habitat: Fresh or brackish rivers and estuaries in northern Australia, sometimes more than 100km inland. Is not normally found in the sea.

Handfish

Red Handfish

Scientific Name: Brachionichthys pollus

Distribution: South Eastern Tasmanian waters

EPBC Act Status: Vulnerable

Length: Up to 80mm

Colour: Red, with areas

of pink. Upper surfaces of the ventral and pectoral fins have alternating pink, red and bright blue markings. **Key Features:** Pectoral fins are hand-like. Short and slightly compressed body that tapers towards the tail. Covered in fleshy, wart-like papillae (bumps).

Preferred Habitat: Mixed sand and rocky reef habitats at depths of between 2 and 20m.



© CSIRO Marine Research

Handfish

Spotted Handfish

Scientific Name: *Brachionichthys hirsutus*

Distribution: South Eastern
Tasmanian waters

EPBC Act Status: Endangered

Length: Up to 120mm

Colour: Upper surface and
sides of body white or pale pink, numerous orange,
brown or black spots with orange borders.

Key Features: Pectoral fins hand-like. Short, rounded
body covered with tiny spines. Body tapers towards tail.

Preferred Habitat: Silt and sand at depths of 2-30m.
Shallow, shell-filled hollows near rocks.



© J. Carter

Ziebell's Handfish

Scientific Name: *Sympterichthys* sp.

Distribution: South Eastern
Tasmanian waters

EPBC Act Status: Vulnerable

Length: 56-150mm

Colour: Pinkish white, with
purple to brown randomly-placed blotches on upper
surface and sides. Fins generally bright yellow.

Key Features: Pectoral fins hand-like. Rounded body
that tapers towards tail. Loose, smooth skin.

Preferred Habitat: Soft-bottomed habitats, with
patches of rock that support sponge and algae at
depths of between 3-20m.



© marinespecies.com/Kelvin Altman

Waterfall Bay Handfish

Scientific Name: *Sympterichthys* sp.

Distribution: South Eastern Tasmanian waters.

EPBC Act Status: Vulnerable.

The taxonomy of this species has not been resolved.
This species and the Ziebell's Handfish could represent
colour morphs within the one species.

Sub-Antarctic Fur Seal

Scientific Name: *Arctocephalus tropicalis*



© Australian Antarctic Division, Commonwealth of Australia. Photo: Ocean Ertok

Distribution: Macquarie and Heard Islands, occasionally TAS

EPBC Act Status: Vulnerable and Marine

Size: Males: 2.0m, 95-165kg

Females: 1.5m, 30-55kg

Colour: Contrasting yellow chest; long white whiskers. Pups glossy-black with dark chocolate brown belly.

Key Features:

Large neck, small external ears, 'mohawk' crest on adult males.

Preferred Habitat:

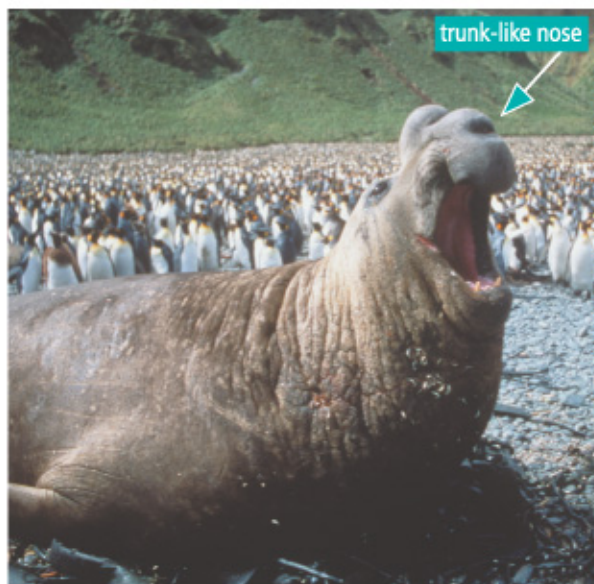
Rocky coastal shores.

Males spend most of their time in the ocean apart from mating season.



Southern Elephant Seal

Scientific Name: *Mirounga leonina*



© Australian Antarctic Division, Commonwealth of Australia. Photo: Christo Baars

Distribution: Macquarie and Heard Islands, TAS

EPBC Act Status: Vulnerable and Marine

Size: Males: 4.2m-6.2m; 4,000kgs

Females: 2.7m-3.7m; 250-350kgs

Colour: Dark grey to brown with lighter-coloured chests. Dark grey when wet.

Key Features: Square heads and strong front flippers. Males are massive with a trunk-like nose and scarring on neck. Females have large eyes and bulbous nostrils.

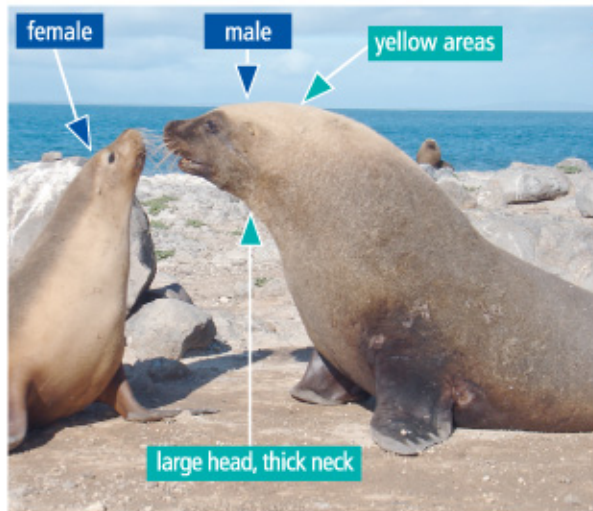
Preferred Habitat:

Rocky shores of the Antarctic and Sub-Antarctic islands. Their foraging areas can be several thousands of kilometres away from their breeding islands.



Australian Sea Lion

Scientific Name: Neophoca cinerea



© Brad Page

Distribution: WA, SA, occasionally NSW, VIC, TAS

EPBC Act Status: Vulnerable and Marine

Size: Males: 2-2.5m; 250-300kg

Females: 1.3-1.8m; 61-104kg

Colour: Male dark brown with mane-like yellow areas on neck and top of head. Female silver grey to fawn on back and creamy-coloured underneath. Juveniles chocolate brown with a pale fawn crown until moulting at two months to resemble colours of an adult female.

Key Features: Stocky body, a large head, thick neck and short, narrow flippers. Small, external ears and one layer of fur. Blunter, more rounded snout than fur seals.

Preferred Habitat:

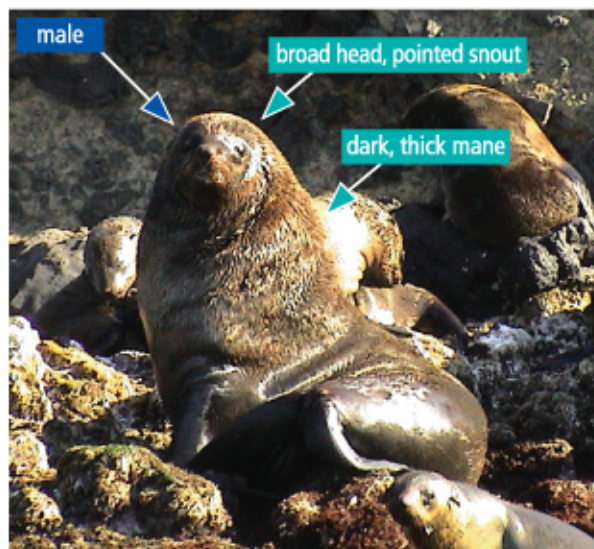
Sandy beaches and rocky coastline, often in sheltered areas and isolated bays, on offshore islands and the Australian mainland.



Distribution

Australian Fur Seal

Scientific Name: Arctocephalus pusillus



Distribution: SA, NSW, VIC, TAS

EPBC Act Status: Marine

Size: Males: up to 2.3m and 220-360kg

Females: up to 1.7m and 50-120kg

Colour: Males, dark grey-brown; females, silver-grey to brown with a creamy yellow throat and chest.

Key Features: Broad head, pointed snout, large eyes and long whiskers. The body is covered in two layers of thick, brown hair except on the front and back flippers. Males have a dark mane of coarse hair. Small, external ears.

Preferred Habitat:

Coastal waters, oceans and offshore islands. Rocky coastlines, reefs and pebbly beaches; also man-made structures like oil platforms.



Distribution

New Zealand Fur Seal

Scientific Name: Arctocephalus forsteri



© Brad Page

Distribution: WA, SA, TAS, NSW

EPBC Act Status: Marine

Size: Males: up to 2.5m; 120-180kg

Females: up to 1.5m; 30-50kg

Colour: Males uniformly dark brownish-grey. Females paler on the chest. Fur can appear black when wet.

Key Features: Pointy nose with long whiskers.

Slightly smaller and darker in colour than the Australian fur seal. Small external ears and two layers of fur.

Preferred Habitat:

Coastal waters, off-shore islands and oceans.

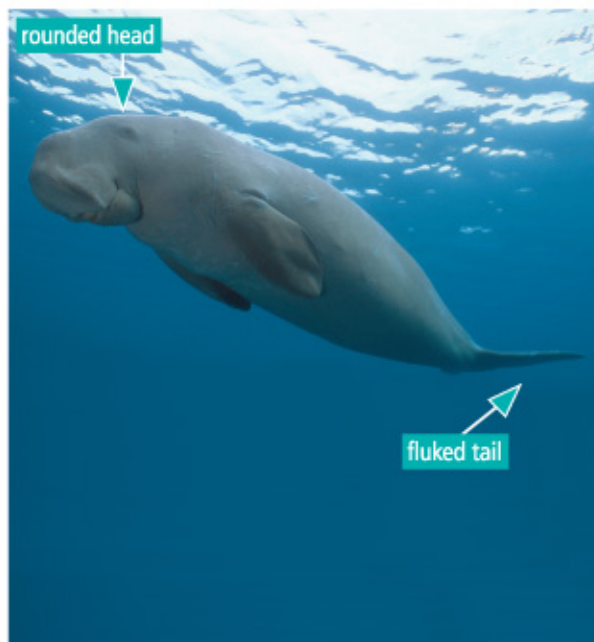
Rocky shores with shelter such as boulders or caves; intertidal pools.



Distribution

Dugong

Scientific Name: Dugong dugon



Distribution: NT, WA, QLD, occasionally NSW

EPBC Act Status: Migratory and Marine

Length: Up to 3m

Colour: Grey

Key Features: Rounded head, small eyes and a large snout. Sensitive bristles cover the upper lip of their large and fleshy snout.

Small tusks can be seen in adult males and some older females. Fluked tail.

Poor eyesight and sensitive hearing.

Habitat:

Seagrass meadows in shallow tropical waters.



Whales & Dolphins

whales



© Bill Bayliss/ocanwideimages.com.au

dolphins



© Gary Bell/ocanwideimages.com.au

Distribution: All States

EPBC Act Status: All species of whales and dolphins are protected.

Preferred Habitat: Whales and dolphins are found widely in all Australian coastal waters, from open oceans to inshore areas. These species can migrate seasonally, according to breeding and feeding patterns.

All Seasnakes



© martinehemmes.com/Kevin Altman

Distribution: All States

EPBC Act Status: Marine

Key Features: Similar to land snakes, with forked tongues and scales, but flattened tails for swimming.

Preferred Habitat: Shallow or deep, warm and turbid waters and inshore coral reefs.

All Seabirds



© martinehemmes.com/Kevin Altman

Distribution: All States and territorial waters

EPBC Act Status: All seabirds are listed Marine.

Some species are also listed Migratory and Threatened. Seabirds include gulls, terns, albatrosses, petrels, shearwaters (muttonbirds), cormorants, gannets and boobies.

Preferred Habitat: Seabirds are found widely around all Australian waters. Many breed at coastal mainland sites or on offshore islands, however, may forage widely over both Australian and international waters.

All Pipefish, Seahorses & Seadragons



pipefish

© marlintheries.com/Kelvin Afton



seahorse

© Gary Bell/istockphoto.com.au



seadragon

© Gary Bell/istockphoto.com.au

Distribution: All States

EPBC Act Status: Marine.

Key features: All pipefish have elongated bodies encased in bony rings. Seahorses have elongated bodies encased in bony rings; small pectoral fins and a single dorsal fin; a tube-like snout with no teeth.

Seadragons have many leaf-like appendages on their heads and bodies.

Preferred Habitat:

Pipefishes inhabit sheltered areas in coral reefs, seagrass beds and sandy lagoons. Seadragons are found among macroalgae on rocky reefs. Seahorses are found in temperate and tropical coastal waters; coral reefs and seagrass beds.

Reporting Interactions with Protected Species

Our marine life can die from getting tangled in, or consuming discarded fishing gear and bait straps. Please don't throw fishing gear and bait straps overboard.



The Australian Government values your assistance in promptly reporting interactions with a protected species. To report an interaction in a Commonwealth area, which you were involved in or that you witnessed:

Call 1800 641 806

Email Protected.Species@deh.gov.au

Write to The Secretary

Department of the Environment and Heritage
GPO Box 787 Canberra ACT 2601

If you are in any doubt – report it!

For more information visit:

www.deh.gov.au/epbc/permits/species/notifications/index.html



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