Marine wildlife of WA's north-west

IDENTIFICATION GUIDE

Department of Parks and Wildlife

ExxonMobil

Protecting Western Australia's marine wonders

The marine waters between Ningaloo Marine Park and the Northern Territory border are of great significance. The Ningaloo Coast was World Heritage listed in 2011 for the area's outstanding natural beauty and exceptional biological richness. The Kimberley region is one of the last great wilderness areas remaining in the world. This guide has been produced by the Department of Parks and Wildlife (DPaW), with financial support from ExxonMobil Australia, to provide information about marine parks in WA's north-west and significant or threatened fauna in this region, including how to report marine animals in distress and how to assist DPaW by reporting sightings of these significant or threatened marine animals.

Top tips for conserving marine life

- When boating, 'go slow for those below', especially over seagrass beds, shallow and muddy areas and in channels where dugongs, turtles and other marine wildlife feed.
- Anchor in sand to protect fragile reef and seagrass communities.
- Support a 'Clean Marine' environment and save marine animals from a slow death. Take your rubbish (such as discarded fishing gear, bait straps and plastic bags) home, and if you find any floating at sea or on the coast, please pick it up.
- When in a marine park 'know your zones'. Some zones are set aside as sanctuaries where you can look but not take (these areas are fantastic spots to go snorkelling as they have especially abundant marine life).
- If you find a stranded, sick or injured dolphin, dugong, turtle, whale or seabird, please call DPaW's 24 hour Wildcare Helpline on 9474 9055.
- If you find a tagged turtle or other animal, please note the number and contact DPaW. The information collected is used to better manage and protect WA's marine wildlife populations. If you should find a dead marine mammal or turtle you should also advise DPaW.
- Fish for the future! Abide by fish size, bag and possession limits set by the Department of Fisheries and help protect our fish, some of which are unique to WA.
- Stay at least 100 metres from whales. Approach whales parallel to their direction of travel.

Cover: Humpback whale (Photo – Leighton De Barros), Green turtle in mangroves (Photo – Suzanne Long/DPaW).

Marine parks – protecting oceans of life

Western Australia's coastline spans more than 13,500 kilometres and is home to some of the world's most remarkable ecosystems and marine wildlife, including massive whale sharks, humpback whales and several threatened species of sea turtles. Many of the state's marine plants and animals are found nowhere else in the world.

Our marine areas are unique and rival their terrestrial counterparts in scenic grandeur. They include Australia's largest fringing reef at Ningaloo Marine Park and the spectacular coral atolls of the Rowley Shoals Marine Park, which rise almost vertically from the seafloor hundreds of metres below. The Montebello Islands Marine Park and nearby Barrow Island Marine Park protect more than 62,500 hectares of ocean surrounding hundreds of low-lying offshore islands and islets fringed with coral reefs populated with colourful tropical fish and other marine animals. The State Government has established new marine parks in the Kimberley at Lalang-Garram / Camden Sound and Eighty Mile Beach, with commitments to establish three more marine parks at Horizontal Falls, North Kimberley and Roebuck Bay.

These parks will treble the area of marine parks and reserves in Western Australia, from about 1.5 million hectares to 4.5 million hectares.

Marine parks protect natural features and aesthetic values while enabling recreational and commercial uses that do not compromise conservation values. Within marine parks there may be four types of management zones:

- **Recreation zones** provide for conservation and recreation, including recreational fishing.
- **General use zones** managed to conserve natural resources while allowing sustainable commercial fishing as well as petroleum exploration and production where they will not affect sensitive marine habitats. Most recreational activities can be undertaken in such zones, which form the bulk of most marine parks.
- **Sanctuary zones** ('no take' areas) provide the strongest form of protection for the marine environment. The public is encouraged to visit and enjoy sanctuary zones, whether by diving, boating or simply exploring rock pools.
- **Special purpose zones** managed for a particular use or issue, such as protection of habitat or nursery grounds, seasonal events such as whale watching or a particular type of commercial fishing. Commercial and recreational activities may be allowed if compatible with the primary purpose of a special purpose zone.

Downloadable brochures (including detailed zoning maps) on all of WA's marine parks are available at parks.dpaw.wa.gov.au.

Montgomery Reef in the Lalang-garram / Camden Sound Marine Park (Photo – Fran Stanley).

WA marine parks and reserves

Management of our unique marine animals

WA's *Wildlife Conservation Act 1950* provides for species, subspecies and varieties of native wildlife to be listed as threatened or specially protected if they are under identifiable threat of extinction, are rare, or otherwise in need of special protection. The Minister for Environment may also list ecological communities that are at risk of becoming destroyed.

In WA, threatened species or subspecies are ranked as critically endangered (**CR**), endangered (**EN**) or vulnerable (**VU**). Those that are not ranked as threatened across their whole range but which may be under threat in WA, or believed to require special attention for any other reason, are termed 'priority fauna' (**P1** to **P4**). Other fauna is given special protection (**SP**) under WA legislation. In this guide the current 'listing' of each species, if applicable, is given in brackets after the common name.

DPaW recovery plans for threatened marine animals actively plan and manage for the conservation of marine wildlife in marine parks and reserves and more generally in the coastal waters across WA.

Long-term systematic marine monitoring, together with evaluation and reporting of change, is a key management strategy for measuring the success of marine fauna management plans, as early detection of problems facilitates adaptive management for the conservation of these species.

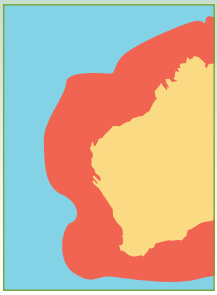
DPaW's Marine Monitoring Program is working to inform managers, by recording the status of marine fauna, the threats they face and our management responses. You can help in this task (see the back page of this guide).

Humpback whale. (Photo – Holly Raudino)

Humpback whale (VU)

(Megaptera novaeangliae)

Description Humpback whales have distinctive throat grooves and knobs on their heads (tubercles). They have very long pectoral flippers with knobs on the front edge, and a humped dorsal fin that shows as the whale arches its back when it dives. They are blackish, with white undersides and sides. The underside of the tail fluke is usually white with black patterning (see photo opposite). Adults are approximately 15 metres long. The maximum length is 18 metres and a mature adult may weigh up to 45 tonnes.



Habitat and behaviour From June to July, humpback whales migrate north to their calving grounds in the Kimberley and between August and November they travel south to their feeding grounds in the Antarctic. As they are often accompanied by calves on the southern migration, they tend to stay much closer to shore than they do when heading north. Whales are sensitive to disturbance so boats should not approach closer than 100 metres to a whale and a vessel should not separate a group or mother and calf.

Photo – Holly Raudino

Other large whales

Bryde's whale (*Balaenoptera edeni*)

This species is distinguished from the sei whale by the three ridges which run from the front of the head to the blowhole. Adults may reach up to 14 metres long. They have broad, notched tail flukes, pointed flippers and a dorsal fin set well back along the slender body. They are dark grey, with white patches on the chin and throat. The blow rises in a cloud three to four metres high.

Sei whale (VU) (*Balaenoptera borealis*)

These threatened whales are rarely seen. They are long and streamlined, between 17 and 21 metres long and have a single central ridge on the top of the body and a bi-coloured head.

Dwarf minke whale (*Balaenoptera acutorostrata*)

The smallest of the seven great whales at about eight metres long, minke whales are occasionally seen off WA's coast. The most distinctive feature is the narrow sharply triangular head on which there is a single raised ridge. Minke whales arch their backs while diving but do not raise their tail flukes. Their blows are about two to three metres high.

Blue whale (EN) (*Balaenoptera musculus*)

The largest living animal on Earth, blue whales average 25 to 26 metres long, but females can reach more than 30 metres and weigh more than 160 tonnes. The huge size, mottled bluish-grey colour and small stubby dorsal fin positioned well back on the body distinguish blue whales from other species.

Fin whale (VU) (*Balaenoptera physalus*)

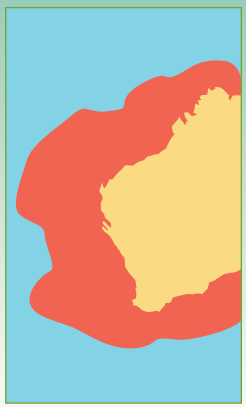
Fin whales reach 25 to 27 metres in length and weigh up to 90 tonnes. This species has a taller dorsal fin than other baleen whales. The head is bi-coloured, with a white lower jaw and white baleen plates.

Report any sightings of these species to marineparks.dpaw.wa.gov.au/contact-us

From top: Bryde's whale, sei whale (photos – Oceanwide Images), dwarf minke whale (photo – Holly Raudino), blue whale, fin whale (photos – D K Coughran).

Bottlenose dolphins

Description The common bottlenose dolphin (*Tursiops truncatus*), largely found in offshore waters, and the coastal Indo-Pacific bottlenose dolphin (*Tursiops aduncus*) are so named because they have a short rounded snout or 'beak' that resembles a bottle. Bottlenose dolphins are sleek and streamlined, have a prominent dorsal fin, and can vary in size, shape and colour depending on where they are found. In general they have a dark grey back and a light grey belly. Adults are two to four metres in length and weigh between 150 and 650 kilograms. Indo-Pacific bottlenose dolphins develop black speckles on the belly as they get older, where as common bottlenose dolphins do not.



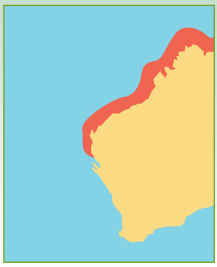
Habitat and behaviour Bottlenose dolphins may be seen along the coast, in estuaries and even in rivers, or well offshore in the open ocean. They can be found in all of WA's marine parks but Shark Bay Marine Park is particularly renowned for its friendly dolphins at Monkey Mia. Dolphins eat fish, and their predators include killer whales, tiger sharks and great whites. Other risks include entanglement in fishing equipment, boat strikes, habitat destruction and degradation, pollution, disease and illegal killing of dolphins. It is also possible that the dolphins' key prey species are in decline, thus reducing the amount of food available to them.

Bottlenose dolphin. Photo – Tourism WA

Indo-Pacific humpback dolphin (P4)

(Sousa chinensis)

Description The most obvious feature of these dolphins is their long thin beak, small triangular dorsal fin and distinctive hump under the dorsal fin. The maximum length is less than three metres. The colour of these animals varies by age and area, but those in Australia darken to a lead grey colour as they age. The undersides are, however, pale and the dorsal fin may be white in older animals. The tail is relatively large and the beak is long and slender.



Habitat and behaviour Though largely tropical, the Indo-Pacific humpback dolphin is found in some subtropical areas in association with warm currents. Indo-Pacific humpback dolphins hug the shorelines in the tropical waters where they are found. They are rarely seen beyond the surf zone, favouring shallow waters no deeper than 20 metres. They also live in mangrove channels, bays and estuaries. Humpback dolphins may form loose associations of two or more. They are slow swimmers and are generally boat shy. They are frequently seen in the Ningaloo Marine Park off the North West Cape.

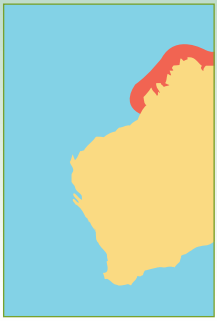
INDO-PACIFIC HUMPBACK DOLPHIN (P4)

Photo – Simon Allen

Australian snubfin dolphin (P4)

(Orcaella heinsohnii)

Description The Australian snubfin dolphin was only recognised as being a distinct species in 2005. It is dark on top, a lighter shade of brown around the middle and the belly is white. Depending upon the light and water colour this species can look as though it is white to dark brown. It has a rounded forehead with no beak, unlike most other dolphin species in Australia. It has a particularly small rounded (snubbed), dorsal fin, and a distinct crease around the neck, which is quite flexible. The blowhole is a little to the left of the head. The average length of this animal is about two metres.



Habitat and behaviour The Australian snubfin dolphin inhabits rivers, estuaries and coastal waters of northern Australia, from WA to Queensland. This species is found in groups of up to six and sometimes up to 20. Australian snubfins are not known to bowride, but have been observed leaping from the water. Snubfins are sometimes seen spitting water when herding their prey. Determining the status of the Australian snubfin dolphin along the Kimberley coast is critical to developing effective conservation efforts.

AUSTRALIAN SNUBFIN DOLPHIN (P4)

Photo – Marguerite Tarzia

Other species of whales and dolphins

Killer whale (*Orcinus orca*)

These stocky, black and white whales have broad flippers and rounded heads. The dorsal fins are extremely high and the straight fins of males may reach 1.8 metres. Females have shorter, more dolphin-like fins. Males may reach more than nine metres in length though females are smaller. They live in pods of up to 40. Killer whales occasionally visit WA waters and often follow migrating humpback whales to feed on the calves and old, sick or injured animals.

False killer whale (*Pseudorca crassidens*)

This medium-sized whale has a long, slender body and narrow, tapered head with a rounded snout. Its dorsal fin is high and curved and the narrow, tapered flippers have a distinct hump or elbow on the front edge. The body is black with a grey chest, although the sides of the head are sometimes light grey. Average length is 4.5 to 5.5 metres. Large herds occasionally visit inshore areas to feed. Sometimes strand *en masse*.

Short-finned pilot whale (*Globicephala macrorhynchus*)

These whales are brownish-grey to black, with a pinkish-grey anchor shape on the undersides, but have shorter flippers (less than 18 per cent of the body length) with less of an elbow than long-finned pilot whales. They grow to 5.5 metres long. They live in large groups in tropical and subtropical waters and often strand *en masse*, such as in April 1991 when 38 short-finned pilot whales stranded north of Broome.

Spotted dolphin (*Stenella attenuata*)

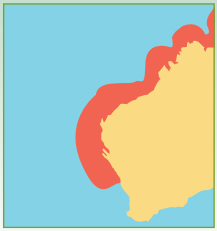
Spotted dolphins are light grey, with white spots and a dark grey cape. Up to 2.5 metres long, this species has a relatively tall fin and long beak, and older animals may develop white lips. The species is more likely to inhabit the open ocean and seems to favour low salinity waters with surface temperatures greater than 25ºC. It often associates with spinner dolphins, flocks of feeding seabirds and yellowfin tuna.

Clockwise from top left: Killer whale (photo – Holly Raudino), false killer whale, short-finned pilot whales, spotted dolphins (photos – Oceanwide Images).

Dugong (SP)

(Dugong dugon)

Description Dugongs are light brown, with a rotund body. Young calves are pale brown. Adults can grow up to three metres long and weigh over 400 kilograms. They have a flattened fluked tail (like a dolphin) but (unlike dolphins) have no fin on the upper back. They also have paddle-like flippers and a distinctive head shape. Their nostrils are near the front of the head.



Habitat and behaviour Australian dugongs live in the shallow warm waters of northern Australia from Shark Bay Marine Park in WA around the north to Moreton Bay in Queensland. Often referred to as 'sea cows', dugongs feed on seagrass, usually in quite shallow water one to five metres deep, but are known to feed on seagrass at depths of over 20 metres. They are the only herbivorous marine mammals. Their movement over an area can be followed by the sand cloud made as they move along the seafloor. Their movements are usually slow and graceful. The dugong is the most abundant marine mammal in the waters of northern Australia.

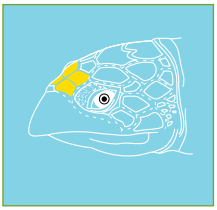
Photo – Kevin Crane

Hawksbill turtle (VU)

(Eretmochelys imbricata)

Description This turtle species is best recognised by the prominent beak and thick overlapping scales on the shells of juveniles and younger adults. In older and larger hawksbills the overlapping scales are much less obvious. The shell is variable in colour and ranges from a light honey colour through reddish-brown to almost black. This turtle species can attain lengths of up to a metre and adult females weigh about 50 or 60 kilograms.

Habitat and behaviour WA has the only large population of the hawksbill turtle remaining in the Indian Ocean. These turtles live near coral and rocky reefs in warm tropical waters. In WA they nest from the Ningaloo Marine Park northwards, and there is a major colony on Rosemary Island in the Dampier Archipelago. Nesting may occur all year round but in WA peaks between October and January. Females only breed once every two to four years or more but may nest up to six times during the breeding season.



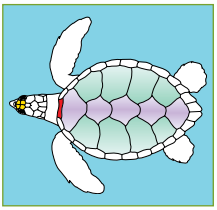
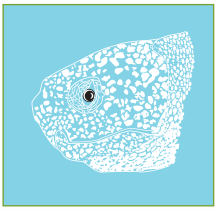


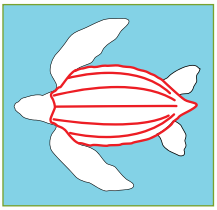
Photo – Marissa Speirs
Top illustration – Unlike green and flatback turtles, hawksbills have two pairs of prefrontal scales (the scales between the eyes highlighted in yellow).

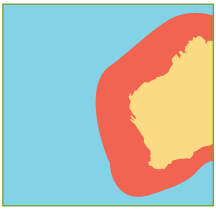
Leatherback turtle (VU)
(Dermochelys coriacea)

Description The leatherback turtle is the largest of all sea turtles. Its shell alone can reach 1.6 metres long and the turtle can weigh a massive 500 kilograms. This sea turtle also has relatively large shoulders and huge front flippers. The shell is leathery and largely blackish in colour with a smattering of light spots and five distinctive ridges that run along its full length.

Habitat and behaviour While leatherback turtles have the widest distribution of any turtle, they do not nest in WA. They forage widely through both coastal and open ocean waters, taking food from the surface through to great depths. The leatherback turtle is a threatened species that is very poorly known in north-western waters. DPaW would be keen to know of any sightings or receive any photos (email turtles@dpaw.wa.gov.au).







LEATHERBACK TURTLE (VU)

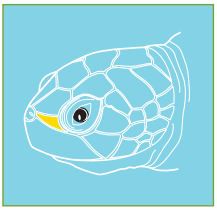
Report any sightings of leatherback turtles to marineparks.dpaw.wa.gov.au/contact-us
Photo – Linda Reinhold

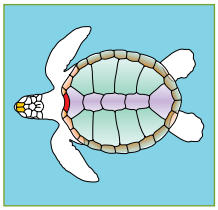
Flatback turtle (VU)

(Natator depressus)

Description The flatback turtle has an olive-grey shell. The shell is flattened on top, has four pairs of costal scales (shown in green in the illustration below) and upturned edges. This large marine turtle reaches up to a metre long and weighs up to 90 kilograms.

Habitat and behaviour Flatback turtles inhabit coastal waters, rather than deep oceans. This species nests only in northern Australian waters, although it also forages in nearby waters in Indonesia and Papua New Guinea. Flatbacks nest on most islands with beaches in the Dampier Archipelago, and on Barrow and Thevenard islands. From Onslow northwards, most turtle nesting beaches on the mainland are flatback rookeries, with significant rookeries at Mundabullungana, Port Hedland, Eighty Mile Beach and Cape Domett.





FLATBACK TURTLE (VU)

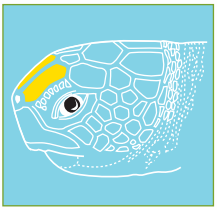
Photo – Andrea Whiting. Far left illustration – The flatback is the only turtle to have a pair of preocular scales (the triangular scales between the eyes and the nostrils).

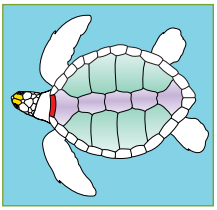
Green turtle (VU)

(Chelonia mydas)

Description The high-domed shell of the green turtle is light to dark green with grey mottling, with four pairs of costal scales (the large scales on either side of the shell). They are cream coloured beneath. Adults reach about a metre long and weigh from 100 to 125 kilograms.

Habitat and behaviour The green turtle is found in all of the world's tropical and temperate oceans and is listed as threatened under WA legislation. Like other sea turtles, the species spends almost its entire life at sea. However, during the summer months, the females come ashore to nest on some mainland beaches and many offshore islands of northern Australia. The hatchlings dig their way out of the nests and journey to the sea from January to April. Individual female turtles breed once every three to six years.





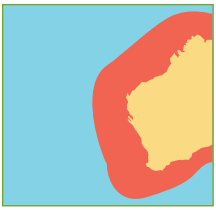


Photo – Simon Allen. Far left illustration – Unlike the flatback turtle, the green turtle has no preocular scale.

Loggerhead turtle (EN)

(Caretta caretta)

Description Most loggerhead turtles are less than a metre long and weigh up to 150 kilograms. The huge head is characteristic – the loggerhead is the only turtle where the head comprises at least a fifth of the body length. The shell is more or less heart-shaped, quite elongated and has five pairs of costal scales (shown in green in the illustration). It is usually tan to dark brown above and much lighter below.

Habitat and behaviour The loggerhead turtle is the most threatened turtle that nests in Australia. It mostly inhabits warm shallow seas and estuaries but also occurs in the deep ocean where people fish with long lines. Some loggerhead turtles that nest in WA waters migrate to feeding grounds in the Northern Territory and Indonesia. They mate and nest in tropical and subtropical areas including those in WA, predominantly in Shark Bay Marine Park, Ningaloo Marine Park and Muiron Islands Marine Management Area. They begin to breed in about October. Individual females only nest every two to five years. The young hatch from late December to early April.

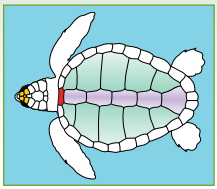


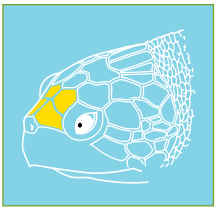
Photo – Linda Reinhold

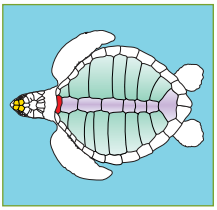
Olive ridley turtle (EN)

(Lepidochelys olivacea)

Description The olive ridley turtle is the smallest of Australia's sea turtles and only grows to about 70 centimetres long. The almost circular, greyish-green shell has six or more pairs of costal scales (shown in green in the illustration below). There are two claws on the front and rear flippers.

Habitat and behaviour It has recently been discovered that olive ridley turtles nest in WA, at Cape Leveque and elsewhere in the Kimberley, but they are very scarce. They live in shallow, protected tropical and subtropical seas, particularly in soft bottomed areas, where they forage for jellyfish, gastropods, sea stars and small crabs. Turtles found off WA rarely leave Australian continental waters.





OLIVE RIDLEY TURTLE (EN)

Report any sightings of olive ridley turtles to marineparks.dpaw.wa.gov.au/contact-us.
Photo – Colin Limpus

Nesting turtles

Turtle watching is becoming increasingly popular. To avoid disturbing turtles, increase their nesting success and support long-term survival of the species, it is important to follow the Turtle Watchers' Code of Conduct:

- No glow – refrain from using torches to search for turtles. This discourages turtles from emerging and may make nesting turtles return to the water.
- Move slow – turtles can detect sudden movements so move slowly at all times.
- Stay low – walk close to the water's edge, out of sight of nesting turtles.
- If you see a marine turtle nearby, **STOP** where you are, **DROP** slowly to a sitting position and stay very still like a **ROCK**. Wait here until she has moved up the beach to begin digging.
- Walk or sit on the beach in a tight group. The recommended group size for self-guided visitors is five people.
- Avoid excess noise.
- Do not shine lights on turtles and avoid flash photography at all times.
- When you can see sand being flicked into the air, stay at least 15 metres away.
- When sand flicking has stopped you may approach a nesting turtle. Wait until she is laying before crawling up behind her on your stomach ('commando crawl').
- Do not move closer than 1 metre behind her. She will be quite still when laying her eggs – if sand is spraying or she is using her flippers, she is not laying.
- Always position yourself behind the turtle and stay low (sit, crouch or lie on the sand). If you are getting covered in sand as she digs you are too close!
- Be patient. She may take time to rest or abandon the nest for a variety of reasons, including hitting an obstacle or the sand being too dry.
- Let her return to the ocean unimpeded. Stand behind her at all times, no closer than 2 metres. Do not attempt to touch the turtle.
- Campfires are banned on nesting beaches – light can deter nesting turtles and disorientate hatchlings.
- Do not leave litter on nesting beaches.
- Please leave all beaches by 11pm to allow a period of undisturbed nesting to occur.

Photo – Marissa Speirs

Photo – Andy Williams

Six stages of turtle nesting

Times taken vary for each species – green turtles take the longest, and hawksbills are the quickest.

Stage of nesting	Identification of stage	Time taken	Vulnerability to disturbance	Torch use	Distance from turtle
1. Emerging	Crawls from the ocean towards the dunes	5–20 mins	HIGH	No	Stay still – at least 15m away
2. Digging the body pit	Uses her front flippers to throw large quantities of sand behind her	20–40 mins	HIGH	No	Stay still – at least 15m away
3. Excavating the egg chamber	Uses her rear flippers only, creating a rocking motion as she digs	10–20 mins	MEDIUM	No	3 people at a time only. At least 1m behind turtle
4. Laying eggs	Remains very still with a gentle heaving motion	3-10 mins	LOW	OK from behind if kept low & partially covered 1m from rear of turtle	Stay at least 1m away behind turtle
5. Covering & camouflaging the nest	Covers nest and compacts the sand with rear flippers, then gradually moves forward throwing large quantities of sand behind her	20–40 mins	LOW	No	Stay still - at least 2m behind turtle
6. Returning to the ocean	Crawls from the dunes to the ocean	5–10 mins	LOW	No	Remain 2m behind turtle

Flatback turtle hatchlings. Photo – Andrea Whiting

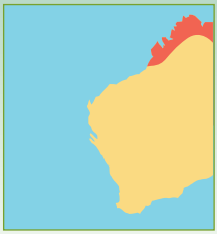
Hatching turtles

In natural conditions very few marine turtle hatchlings survive to adulthood. Additional human induced pressures have further decreased their likelihood of survival. To minimise human impact on hatchlings:

- Do not touch or handle hatchlings.
- Do not use any form of light or flash photography – this will disturb and disorientate hatchlings. Disorientated hatchlings are exposed to greater predation and risk of being stranded on the beach, where they will dehydrate and die.
- Do not disturb the nest.
- Stand at least one metre away from the nest.
- Do not compact the sand – other hatchlings may still be in the nest waiting to emerge.
- Stand still when hatchlings are moving down the beach to avoid stepping on them.
- Allow hatchlings to move to the sea without disturbance or assistance. It is important that hatchlings make their own way to the ocean by using their flippers. This helps to exercise their lungs, allowing them to swim and dive when they reach the water. As a result hatchlings are able to relocate their nesting beach when they are mature enough to breed.
- Remain behind hatchlings at all times.
- Do not illuminate hatchlings in the water.
- Please do not drive your vehicle on turtle nesting beaches. Hatchlings become trapped in wheel ruts, greatly decreasing their chance of survival.

Estuarine crocodile (SP)

(Crocodylus porosus)



Description The upper bodies of estuarine or saltwater crocodiles are a mottled grey, brown or blackish colour. The snout is broader than that of the freshwater crocodile. They can reach up to seven metres, but individuals more than five metres long are rarely seen.

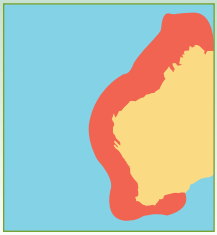
Habitat and behaviour Estuarine crocodiles inhabit the open ocean, seashores, mudflats, estuaries and rivers along the Kimberley coast and northern Pilbara. Their range once extended further south than this, but contracted significantly after extensive hunting earlier last century. Adult crocodiles usually feed at night on fish, crustaceans, birds, mammals and reptiles such as turtles. During the wet season, females lay about 60 eggs in nests on riverbanks. They become especially aggressive while breeding. Crocodiles are superb hunters and are exceptionally fast on both land and in the water. Ambush is a common tactic. Visitors to the Kimberley should not paddle, clean fish, prepare food or camp at the water's edge. Returning regularly to the same spot at the water's edge is dangerous. Never lean over the edge of a boat, stand on logs overhanging water or hang articles over the boat's edge.

Photo – Tim Willing

Whale shark (SP)

(Rhincodon typus)

Description The whale shark is the world's largest fish, growing to lengths of 14 metres and above. It has a mouth up to 1.5 metres wide, a broad flat head and two small eyes near the front of the head. The body is mostly grey, marked with lots of white spots and stripes (in a pattern unique to each individual whale shark), with a white belly. Three ridges run along each side of the shark and there are five large pairs of gills.



Habitat and behaviour Whale sharks are known to inhabit both deep and shallow coastal waters and the lagoons of coral atolls and reefs. From around mid-March to early August each year they are common in Ningaloo Marine Park. They tend to be solitary and are rarely seen in groups unless feeding at locations with abundant food. Despite its enormous size, snorkellers can safely swim with this giant fish, as long as they keep clear of the shark's large tail fin. It is illegal to disturb, harm or fish for whale sharks in Australian waters. Due to their habit of swimming at surface, whale sharks are vulnerable to boat strikes, so you should carefully monitor boat speed during the whale shark season.

Photo – Tourism WA

Green sawfish (VU)

(Pristis zijsron)

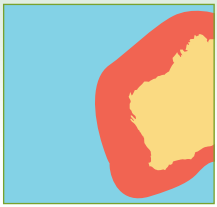
Description One of only a handful of fish listed as threatened in WA, the green sawfish is a ray that grows to five metres long. It has a shark-like body, a flattened head and an exceptionally long snout, studded with between 24 and 28 pairs of unevenly-spaced teeth, that resembles a saw. The upper body is greenish-brown or olive with whitish undersides.

Habitat and behaviour This species was once widely distributed in the northern Indian Ocean, to South Africa, around south-east Asia and around northern Australia. It may now be extinct in south-east Asia and has long since disappeared from New South Wales and southern Queensland, so northern Australia may be the last region with significant populations. Green sawfish occur in inshore marine waters, estuaries, river mouths, embankments and along sandy and muddy beaches, from one metre to more than 70 metres in depth. They are fully protected and may not be taken.

Report any sightings of green sawfish to marineparks.dpaw.wa.gov.au/contact-us.
Photo – Stirling Peverell

Grey nurse shark (VU)

(Carcharias taurus)



Description The grey nurse shark has a large stout body, grey to greyish-brown above and off-white below. Reddish or brownish spots may occur in the tail fin and the rear of the body. They grow to at least 3.6 metres. They are slow but strong swimmers and are thought to be more active at night.

Habitat and behaviour A cosmopolitan species, the grey nurse shark is found in inshore subtropical and temperate waters around continental landmasses. It has occasionally been recorded off the continental shelf. Grey nurse sharks are often seen hovering in or near deep sandy gutters or rocky caves, and in the vicinity of inshore rocky reefs and islands, usually at depths of between 15 and 40 metres. These sharks are generally harmless to people but have been greatly depleted through fishing.

Photo – AQWA

Albatrosses

(*Diomedea*, *Thalassarche* and *Phoebetria* species)

Fourteen species of albatross are listed as threatened in WA

Common name	Scientific name	Listing
Amsterdam	*Diomedea amsterdamensis*	CR
Tristan	*D. dabbenena*	EN
southern royal	*D. epomophora*	VU
wandering	*D. exulans*	VU
Gibson's	*D. gibsoni*	VU
northern royal	*D. sanfordi*	EN
sooty	*Phoebetria fusca*	VU
light-mantled	*P. palpebrata*	VU
Indian yellow-nosed	*Thalassarche carteri*	VU
shy	*T. cauta*	VU
Atlantic yellow-nosed	*T. chlororhynchos*	VU
grey-headed	*T. chrysostoma*	VU
black-browed	*T. melanophrys*	VU
Salvin's	*T. salvini*	VU

Description Albatrosses are best recognised by their enormous size and huge bills. With lengths from 1.1 to 1.35 metres and a wingspan up to 3.5 metres, the wandering albatross is the largest of all seabirds and has the widest wingspan of any bird.

Habitat and behaviour While they breed on subantarctic and other Southern Ocean islands, individuals travel vast distances, up to 15,000 kilometres, around the world's oceans during each non-breeding period. They feed mainly from cool, oceanic waters, especially those enriched by up-welling nutrients, and along the edge of continental shelves.

Yellow-nosed albatross. Photo – Simon Allen

Eastern Indian Ocean masked booby (VU)

(Sula dactylatra bedouti)

Description The largest of the boobies, this striking white seabird is 80 to 85 centimetres long, has a black mask on its face with piercing yellow eyes, brownish-black flight feathers and a black tail. The bill is yellow. The large webbed feet are grey.

Habitat and behaviour The masked booby spends most of its time on the open ocean where it can dive from great heights to plunge head-first into the water to capture fish and squid. It nests in small colonies – the only time it will come onto land. The nest, in which two eggs are laid, is a scrape on the ground. In WA, the masked booby nests on Adele and Bedout islands and West Island in the Lacepede group. It also nests on North Keeling and West and Middle islands on Ashmore Reef. The species is thought to be naturally rare, and that illegal hunting of the birds on offshore nesting islands by Indonesian fishers is impacting on their numbers.

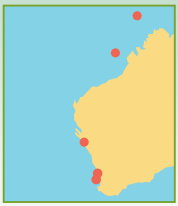
EASTERN INDIAN OCEAN MASKED BOOBY (VU)

Photo – Andrew Burbidge

Photo – Suzanne Long/DPaW

Red-tailed tropicbird

(Phaethon rubricauda)



Description The large, gull-shaped body of the red-tailed tropicbird has a delicate pink hue. A bright coral-red bill, and two streamer-like red tail feathers, give it a look of distinction.

Habitat and behaviour This bird is normally found in tropical and subtropical seas around northern Australia, Hawaii and other places.

These attractive birds nest on a small sand cay, Bedwell Island, within Clerke Reef at Rowley Shoals Marine Park. Nests are usually little more than a scrape on the ground, sometimes ornamented with a broken shell or two. Adapted to spending most of their lives at sea, red-tailed tropicbirds struggle to walk or stand on land. Returning to their nest after searching for food is often a hit-or-miss exercise, as they must land very close by. Several landing attempts are sometimes needed when the wind is unfavourable, an entertaining spectacle. The red-tailed tropicbird indulges in an aerial courtship ritual before nesting. Such displays are performed by one to six birds, but usually in pairs. The birds remain almost stationary and swing their tail streamers from side to side as they cackle to one another.

Keeping our islands pest free

Thousands of islands lie off the Pilbara and Kimberley coasts. These incredibly special places can act as arks preserving wildlife, wildflowers and ecological communities that are threatened or no longer found on mainland Australia. It is therefore critical that non-native animals and plants, even small insects and seeds, are not carried to the islands. When boating, please follow these important quarantine procedures:

- Ensure your boat is clean and baited with rodenticide baits.
- Check that your clothing and footwear are not carrying soil or seeds.
- Check your food to ensure it is free of pests and insects.
- Don't take pets.
- Take all rubbish with you on departure and dispose of it on the mainland.

Cane toads Cane toads (*Rhinella marina*) were deliberately introduced into Australia in 1935 in an attempt to control sugar cane pests in Queensland. They have now spread, both naturally and with human assistance, throughout much of Queensland, northern New South Wales and northern parts of the Northern Territory, impacting on native fauna, and on agricultural, social and cultural values. The first cane toads crossed the Northern Territory-WA border in February 2009.

Cane toads can swim reasonable distances and have colonised some offshore islands in Queensland and the Northern Territory, where the poisonous pests caused a major decline in wildlife numbers. Please carefully check your boat before leaving to ensure you don't have any toad hitchhikers. If you should find a cane toad stowaway, carefully capture the animal using gloves and bring it back to shore to be euthanased.

All cane toad sightings should be reported to the Cane Toad Hotline on 1800 084 881 (freecall).

Cane toads.

Reporting interactions with protected species

If you find a dead, injured or entangled animal (of a species featured in this guide), or are involved in a protected species interaction, please note down as many details as you can from the list below:

- Time and date of the sighting or event.
- Species name and description (take pictures if possible).
- Number of animals.
- Size or special markings on the animals (note if there are juveniles or adults present, or both).
- Location (use a GPS if available, recording the latitude and longitude in decimal degrees ddd.ddddd). Please also note the datum your GPS has been set to (preferably WGS84 or GDA94).
- Incident type e.g. sighting, by-catch, collision, entanglement.
- Any comments that could help explain the event.
- Your contact details to assist us if we need to do any follow-up.

Pass this information to the nearest DPaW office or to DPaW's Marine Science Program in Perth. If you plan regular visits to an area where you note protected species, and are willing to help marine managers and scientists from DPaW learn more about threatened and other little known marine wildlife species in the waters of north-western Australia by developing a time-series of recordings, please contact us.

To find out more about community monitoring initiatives that DPaW is developing under the WA Marine Monitoring Program, please see contacts below.

DPaW Kununurra Regional Office Phone (08) 9168 4200
DPaW Broome District Office Phone (08) 9195 5500
DPaW Karratha Regional Office Phone (08) 9143 1488
DPaW Exmouth District Office Phone (08) 9947 8000
Marine Science Program and Western Australian Marine Monitoring Program Phone (08) 9219 8000
dpaw.wa.gov.au, turtles@dpaw.wa.gov.au, whaleshark@dpaw.wa.gov.au

Australian snubfin dolphin with boat propeller injury. Photo – Marguerite Tarzia

Download this guide from marineparks.dpaw.wa.gov.au

Information current at February 2014

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