

How, Where and When to see Marine Turtles

Marine Turtles can be viewed in their natural underwater habitat along the length of the Ningaloo Reef all year round. Check out popular snorkelling spots such as:

- ✓ Turquoise Bay.
- ✓ Lakeside.
- ✓ Oyster Stacks.
- When observing turtles in the water:
 - ✓ Do not attempt to touch or ride turtles.
 - ✓ Avoid chasing or surrounding turtles.
 - ✓ Avoid disturbing resting, sleeping or mating turtles.
 - ✓ Do not use underwater scooters.
 - ✓ Approach turtles slowly and calmly from side on.
 - ✓ Approach turtles no closer than one arms length.

From November to March each year, marine turtles nest on the beaches of the Ningaloo Marine Park.

VISIT JURABI TURTLE CENTRE

Located on Yardie Creek Road, 1.5 km south of Lighthouse Caravan Park, this unique interpretive centre is open to the public at all times. Visitors can follow self-guided displays and access information about marine turtles.

EXPERIENCE A TURTLE TALK AND TOUR

Contact Exmouth Visitors Centre on (08) 9949 1176 or 1800 287 328 for further details on turtle tours. Tours are subject to availability.

Jurabi Turtle Centre



The Jurabi Turtle Centre is a small scale interpretive facility located approximately 18km from Exmouth. The centre is a joint venture between the Shire of Exmouth and the Department of Environment and Conservation. It was constructed in recognition of the urgent need to manage turtle-visitor interactions and minimise the impact of human disturbance along the Ningaloo coast. The centre provides a focus for education about turtles and promotes sustainable ecotourism.



Ningaloo Community Turtle Monitoring Program

This program requires volunteers to spend approximately 3-4 hours every morning collecting data on turtle nesting beaches, starting at 5.30am. Successful nesting attempts, turtle species, evidence of disturbance and predation and evidence of hatching emergence are some examples of the data that is collected. Data is then pooled into a database from which an annual report is produced.

Data is analysed to identify trends in turtle populations over time, determine significant rookeries and identify specific levels of threats, such as fox predation and human disturbance. The information can be utilised to more effectively manage activities in significant nesting rookeries and to address major threats to local turtle populations.

Volunteers will be trained to become "Turtle Trackers" and may also get the opportunity to observe turtles returning to the sea, view hatchlings emerging from nests and assist in turtle rescues.

In addition to monitoring, volunteers are required to assist with data entry and the program provides a range of social and recreational activities to add to the overall Ningaloo experience.

There are some rookeries along isolated sections of the Ningaloo Coast. Remote camps may be held to monitor turtle activities at these sites.

NINGALOO MARINE PARK



Ningaloo Reef is one of the largest fringing reef systems in the world and is located 1200km north of Perth, Western Australia. Teeming with a diversity of corals, fish and invertebrates, the reef provides habitat for some of the world's threatened marine species, including dugongs, turtles, humpback whales and whale sharks.

Green turtles (*Chelonia mydas*), loggerhead turtles (*Caretta caretta*) and hawksbill turtles (*Eretmochelys imbricata*), three of the world's seven marine turtle species, nest on the mainland beaches adjacent to the Ningaloo Reef during the summer months from November to March.

NINGALOO MARINE TURTLES NEED YOUR HELP

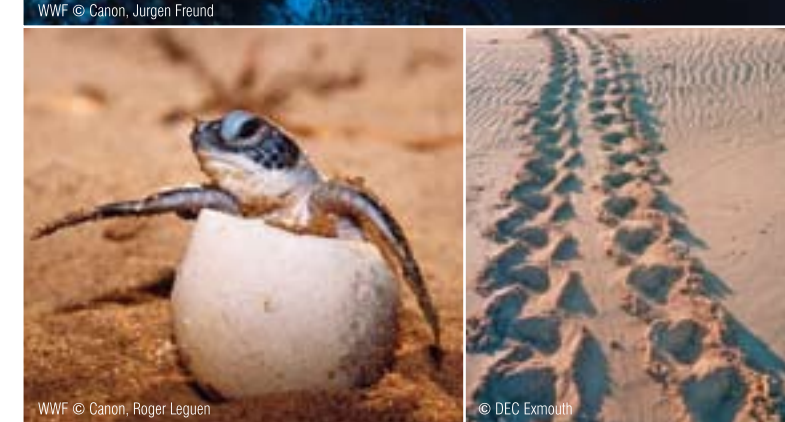
- The turtles are under threat from:
- Fox predation
 - Inappropriate tourism activities
 - Vehicle use on beaches
 - Boat strikes
 - Marine debris

Marine turtles are recognised internationally as species of conservation concern. Five of the seven species are listed as endangered according to the 1990 IUCN (International Union for Conservation and Nature) Red List of Threatened Animals.

HERE'S HOW YOU CAN HELP

- ✓ Volunteer with the Ningaloo Turtle Program.
- ✓ Visit the Jurabi Turtle Centre.
- ✓ Go on a Turtle Tour where you may encounter nesting turtles.
- ✓ Follow the Turtle Watchers Code of Conduct - not only does it minimise disturbance but increases your chance of seeing a nesting turtle.
- ✓ Avoid disturbing resting turtles on the shore line
- ✓ Avoid driving your vehicle on turtle nesting beaches. Compacting the sand near nests creates obstructions for emerging hatchlings.
- ✓ Avoid using campfires or any artificial lights on nesting beaches which can disorient and disturb nesting turtles and hatchlings.
- ✓ Use reusable bags instead of plastic bags – turtles mistake plastic bags for jellyfish and eat them, eventually starving to death.
- ✓ Throw all your rubbish into the bin – turtles can get caught up in discarded fishing lines, ropes and other debris at sea and on the beach.
- ✓ Do not buy or sell turtle products – this creates demand for products that require hunting and killing turtles.
- ✓ Drive your boat slowly to avoid injuring turtles.
- ✓ Do not participate in any water based activities such as motorised and wind driven vessels at turtle mating aggregations.

Marine Turtles In Ningaloo Marine Park



VOLUNTEER REQUIREMENTS

Conserving and managing marine turtles requires a concerted and coordinated effort. The Cape Conservation Group, Department of Environment and Conservation and WWF Australia have joined forces to establish a long term community turtle conservation program at Ningaloo. The Ningaloo Turtle Program needs your help. You must be at least 18 years old or will be supervised by an adult to participate. No previous experience is necessary, however volunteers are required to become certified a 'Turtle Tracker'. Volunteers must be able to walk up to 3km of beach every day sometimes over rocky terrain in hot weather.

The Ningaloo Turtle Program



Reviewed: November 2007



Marine turtles are ancient mariners who have survived in the world's oceans for over 100 million years.

They are well adapted reptiles which have a strong, protective shell known as a carapace and four paddle-like flippers that are used for swimming and crawling up the beach to lay eggs. Marine turtles breathe air, have a strong sense of smell and well developed eyes, allowing them to see different colours.

Marine Turtles are long lived animals and reach maturity at 20-50 years of age. Throughout their lives they occupy different habitats, from the open ocean to coral reefs.

Marine Turtles

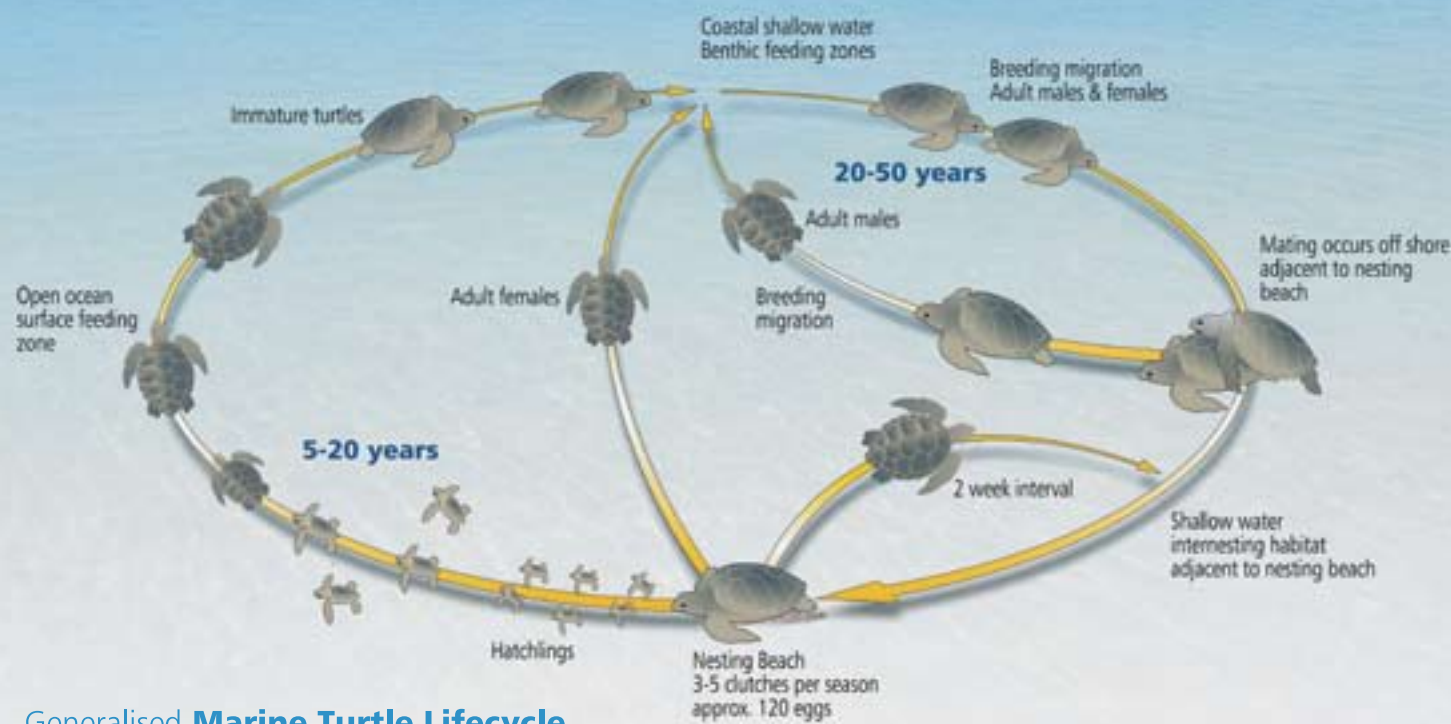
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Department of Environment and Conservation encourages you to participate in a guided experience. Should you encounter a turtle by chance, please follow the:

Turtle Watchers Code of Conduct

Stage of Nesting	Identification of stage	Time taken	Vulnerability to disturbance	Torch use	Distance from Turtle
1. Leaving the water and crossing the beach	crawls from the ocean toward the dunes/land	5-20 mins	HIGH	No	Stay still - at least 15m away
2. Digging the body pit	Large quantities of sand flying through the air. Uses front flippers only	20-40 mins	HIGH	No	Stay still - at least 15m away
3. Excavating the egg chamber	uses rear flippers only creating a rocking motion as it digs	10-20 mins	MEDIUM	No	3 people at a time only. At least 1m away behind turtle
4. Laying eggs	is very still with gentle heaving	3-10 mins	LOW	OK from behind	Stay at least 1m away behind turtle
5. Covering & camouflaging the nest	gradually moves forward with large quantities of sand flying through the air	20-40 mins	LOW	No	Stay still - at least 2m behind turtle
6. Returning to the ocean.	crawls from the dunes/land toward the ocean	5-15 mins	LOW	No	Remain 2m behind turtle



Generalised **Marine Turtle Lifecycle**

© Bob Sommerville Presentation Graphics



© Tony Howard

NESTING



- ✓ Walk along the beach at the waters edge looking for tracks in the wet sand or emerging or returning turtles. Do not approach or shine lights on turtles leaving the water or moving up the beach. If a turtle is encountered, calmly stop where you are, sit down, and wait for her to start digging.
- ✓ Avoid excess noise and sudden movement at all times.
- ✓ Always keep out of her line of sight or stay very still if you are within her sight.
- ✓ When approaching a nesting turtle crawl up behind her on your stomach ("commando crawl").
- ✓ 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 abandon the nest and dig another one for a variety of reasons including hitting an obstacle or the sand being too dry.
- ✓ Wait until she is laying before moving closer. She will be quite still when laying her eggs - if sand is spraying or she is using her flippers, she is not laying.
- ✓ Give her enough space to camouflage the nest.
- ✓ Let her return to the ocean without interruption or getting between her and the ocean.
- ✓ Avoid all flash photography.
- ✓ Depart all beaches by 11 pm.

HATCHING



Please observe the following during hatching:

- ✗ Do not touch or handle the hatchlings.
- ✗ Do not use lights or flash photography.
- ✗ Do not get between the hatchlings and the ocean.
- ✓ Stand back from the nest – do not compact the sand.
- ✓ Let the hatchlings make their own way down the beach.
- ✓ Hatchlings can get stuck in footprints so stand to the side rather than crossing their path.



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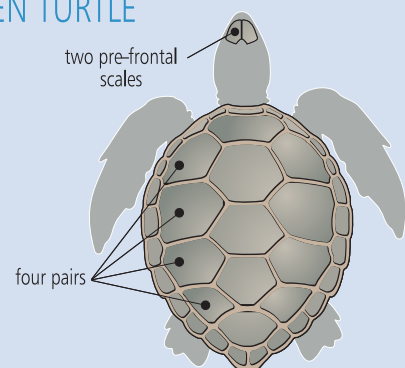


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Green Turtles

- Their carapace (or shell) is high domed, olive green in colour and measures approximately one metre in length at adulthood.
- There are 4 pairs of large scales on either side of the carapace.
- They live on coral reefs and in seagrass beds.
- They are herbivorous (plant eating) and eat algae, seagrasses and mangroves.
- Green turtles are one of the largest grazing herbivores in the ocean.
- Green turtles move with simultaneous flipper movement creating distinctive, parallel tracks.

GREEN TURTLE

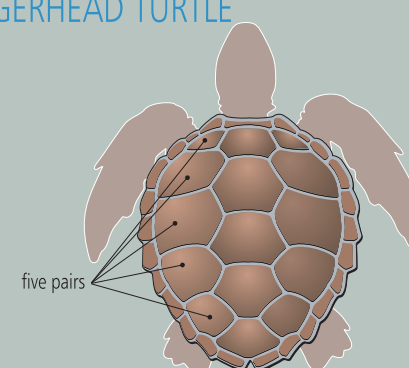


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Loggerhead Turtles

- Their carapace is dark brown and irregularly speckled with darker brown. It measures approximately one metre in length at adulthood. The head is large in relation to other marine turtle species.
- There are 5 pairs of large scales on either side of the carapace.
- They are carnivorous (meat eating) and feed on shellfish, sea urchins, crabs, anemones, molluscs and jellyfish.
- They live on coral reefs and in bays and estuaries in warm and temperate waters.
- Loggerhead turtles move diagonal flippers simultaneously creating an alternate track.

LOGGERHEAD TURTLE



WWF © Canon Guy Marcovaldi

Hawksbill Turtles

- Their carapace is particularly attractive and appears olive green or brown. It measures approximately 0.8 metres in length at adulthood.
- They have a distinctive beak-like nose with four pre-frontal scales on the beak.
- There are 4 pairs of scales on either side of the carapace.
- They are omnivorous (plant and meat eating) and eat mainly sponges. They also feed on seagrasses, algae, soft corals and shellfish.
- They live on coral reefs and rocky areas that harbour sponges.
- Hawksbill turtles move diagonal flippers simultaneously creating a narrow alternate track.

HAWKBILL TURTLE

