

MEET THE TURTLES



LOGGERHEAD TURTLE

Caretta caretta

Loggerhead Turtles are found throughout the world's tropical and subtropical waters.

Mon Repos, near Bundaberg, is the best-known and most widely visited turtle rookery in Queensland.

Loggerhead Turtles nest at Mon Repos from late October to March with hatchlings emerging from late December onwards.

Female Loggerheads can lay as many as six clutches of ping-pong ball sized eggs in a single breeding season. Each clutch contains around 128 eggs, and the turtles usually breed every three to four years.

They feed on shellfish, crabs, sea urchins and jellyfish and are equipped with powerful jaws that enable them to crush hard-shelled prey.

Where have the turtles come from?

The Loggerhead Turtle eggs used in The Hatchery were collected from Mon Repos Beach on the Bundaberg coast. Approximately 180,000 eggs were laid on this coast during the 2021-22 nesting season. With the help of volunteers, numerous nests were relocated to avoid flooding from high tides and heavy seas. This helped to increase hatchling production by tens of thousands of turtles.

Where will they go from here?

The Loggerhead hatchlings will spend several days in the incubator after they emerge from their eggs. At this stage of life, they would still be buried deep within the nest chamber, unable to crawl to the surface until their bodies have fully straightened. Once this happens, they are ready to begin their journey.

Our hatchlings will be taken to SEA LIFE (Sunshine Coast Aquarium) where they will be cared for until they are released, 20 kilometres off the coast into the Eastern Australian Current. The hatchlings will ride this current, taking them past the northern tip of New Zealand and on to the coasts of Chile and Peru. They will not return to Queensland waters for 16 years and will not breed for a further 13 years.

Threats to survival

Marine turtles are threatened on many fronts. Some of these threats include:

Fishing: Longline fisheries have been implicated in turtle deaths in the open ocean. Turtles also drown when they are entangled in the float lines of crab pots and in abandoned fishing nets (ghost nets). Between 1977 and 1992 there was a 50 to 80 per cent loss of nesting Loggerhead Turtles in Queensland, but changes in the fishing industry helped to reverse this trend.

Coastal development and habitat disturbance: Artificial lighting can deter nesting turtles and disorient hatchlings, causing them to move towards bright lights and away from the sea. Uncontrolled vehicle access to beaches causes erosion, damages nests and disturbs nesting turtles.

Threats to survival (continued)

Feral predators: Turtle eggs and hatchlings are eaten by introduced predators such as pigs, dogs and foxes.

Pollution: Agricultural and industrial pollutants impact important turtle habitats, especially coral reefs. Discarded rubbish is often consumed by turtles, clogging their digestive tracts and causing death from starvation. Young turtles feed near the surface and can swallow plastic rubbish. Small fragments of hard plastic are particularly hazardous to small turtles. A recent study found plastic in the digestive tracts of all turtles examined.

Boat strike: Turtles die from collisions with boats and are frequently found with propeller damage to their carapaces (shells).

Climate change: Rising sea levels and an increase in the frequency and intensity of cyclonic events will erode beach profiles, damaging nesting habitat.

Marine turtles require nest temperatures between 25 and 33 degrees Celsius for successful embryonic development. The lower temperatures in this range produce male hatchlings. A warmer world with hotter summers and higher nest temperatures is likely to skew the sex ratio, increasing the output of female hatchlings from many nesting beaches. This has already happened at nesting beaches in Queensland. Higher temperatures can also increase hatchling mortality within the nest.

How does the turtle population benefit from this project?

Loggerhead Turtles are ranked as a conservation priority. This project aims to:

1. Raise awareness of the threatening processes impacting the survival of this species.
2. Highlight ways that individuals can assist in the preservation of turtle habitats in South East Queensland.
3. Highlight Mon Repos as a 'must see' tourist destination.

Will The Hatchery event harm the young turtles?

The turtles hatching at the Queensland Museum are in no way compromised during World Science Festival event. The eggs were collected from Mon Repos, on the Bundaberg coast, and the hatchlings will be released into the Eastern Australian Current. This is where this age class of Loggerhead Turtles begin the open ocean phase of their life history. The Hatchery activities are within a region where the natural hatchling dispersal for this species occurs. If these turtles survive to maturity, they will be able to find their way back to suitable nesting beaches on the Queensland coast.

This project is overseen by Dr Colin Limpus and Patrick Couper. Dr Limpus coordinates the Queensland Turtle Research Program for the Department of Environment and Science. Patrick Couper is Queensland Museum's Senior Reptile Curator. This project is conducted with appropriate permits from the Department of Environment and Science and with approval from an Animal Ethics Committee.

How can you help?

- Reduce your energy use.
- Keep the environment clean by disposing of your waste thoughtfully and participating in organised clean-up events.
- Choose reusable bags, water bottles, straws and keep cups.
- Repair before buying new.
- Choose products with minimal packaging.
- Recycle and buy recycled products.
- Compost appropriate kitchen and garden waste and non-recyclable paper and cardboard.
- Join a local turtle-monitoring group. For more information contact turtle.volunteers@des.qld.gov.au
- Report sightings of all sick, injured or dead marine turtles to the RSPCA on 1300 ANIMAL (1300 264 625) at any time.

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