

FACT SHEET



Australian Government
Department of Resources,
Energy and Tourism



LADY ELLIOT ISLAND

Turtles

Sea turtles are one of the earth's most ancient creatures, dating from the time of dinosaurs, over 100 million years ago. Turtles can be seen in the waters around Lady Elliot all year round and are a popular sighting with our guests. Turtles nest on Lady Elliot Island (LEI) generally from November to March.

Turtles are reptiles and are characterised by a large shell called a carapace, 'paddle-like' flippers and a 'beak-like' mouth structure used to shear or crush food. Like other reptiles, turtles have lungs and can be seen poking their heads above the surface of the water to take a breath of air. They can spend up to an hour underwater, depending on the species and their activity. Turtles drink salt water and expel excess salt from their bodies through glands located near their eyes. Their diet varies depending on the species, with some species being herbivores, some carnivores and others omnivores. Adult males have a long tail, while adult females and immature males have short tails.

TURTLES SPECIES AT LEI

Of the six species of sea turtles found in Australian waters, three species are commonly seen in the waters around Lady Elliot Island:

Green Turtle (*Chelonia mydas*)

- Listed as an endangered species (IUCN 2004)
- Seen throughout the Great Barrier Reef (most abundant turtle species)
- Has a smooth, high-domed carapace (shell), brown in colour but known for green fat and muscles
- Considered an ideal food source for centuries
- A herbivore; eating seagrass, algae, and jellyfish during juvenile years
- In eastern Australia, nests in southern and northern Great Barrier Reef, including Lady Elliot Island, and also on some areas of the Queensland coast

Hawksbill Turtle (*Eretmochelys imbricata*)

- Listed as a critically endangered species (IUCN 2008)
- Seen throughout the Great Barrier Reef
- Beak-like mouth and narrow head for prising food from crevices
- Carapace has overlapping scutes
- Patterns of brown and black on their carapace. The underside of the shell is cream with occasional black spots



Green Turtle



Green Turtle Hatchling



Loggerhead Turtle



Hawksbill Turtle

- An omnivore, feeds mostly on sponges, tunicates, shrimp, squids, sea cucumbers and soft corals
- In eastern Australia, nests on islands in far north Queensland and Torres Strait. No nesting on LEI

Loggerhead Turtle (*Caretta caretta*)

- Listed as an endangered species (IUCN 1996)
- Seen throughout the Great Barrier Reef
- Large head and thick jaws for crushing shells, crabs, sea urchins and jellyfish
- Brown in colour with light brown, reddish-brown and black on their carapace (shell)
- The underside of the shell is yellow
- A carnivore, feeds on animals such as crabs, sea urchins, and jellyfish
- Nests predominantly in the southern Great Barrier Reef, including Lady Elliot Island, and some parts of the southern Queensland coast

TURTLE LIFE CYCLES

All species of turtles have the same general life cycle. Loggerhead and Green turtles are thought to become sexually mature at 30-40 years of age. Whilst turtles migrate on average about 400km between their feeding grounds and their selected nesting sites, some animals have been recorded traveling up to 2,500 km. Turtles are thought to return to the region where they were born to lay their eggs. Mating takes place about 4 weeks prior to their first nesting for the season. The females mate with several partners at the beginning of the season and stores sufficient sperm in their bodies to fertilise all the eggs laid throughout the nesting season.

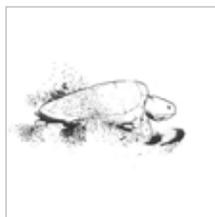
TURTLE NESTING

Green and Loggerhead turtles nest on LEI between November and March. Nesting normally occurs after dark, at a time when there is sufficient water for them to swim ashore, usually in association with the high tide. Nesting can occur anywhere around the island but the majority of nests have been recorded in the sand dunes in front of the resort and either end of the airstrip. The nesting process can take between 2 - 8 hours depending on the turtle species, and how quickly a suitable nesting site is located. If the female turtle considers the nesting site unsuitable, it will move to another location.

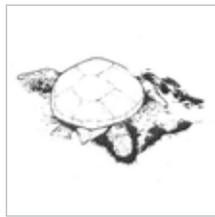
Females lay a number of clutches of eggs during the season, at intervals of approximately two weeks. The number of clutches in a season varies dependant on the species, with Loggerheads generally laying 3 - 5 clutches and Greens laying 5 - 7 clutches. Turtles do not breed every season. On average, Loggerheads nest at 3 - 5 year intervals and Greens nest at 5 - 7 year intervals.



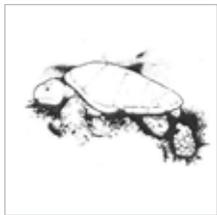
Journey up the beach



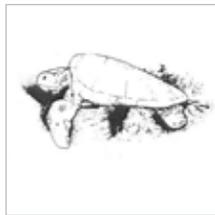
Digging the body pit



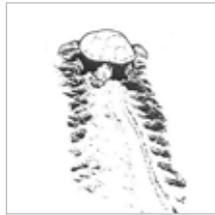
Excavating the egg chamber



Laying the eggs



Covering the nest



Back to the ocean

TURTLE HATCHING

Sea turtle eggs can take between 6 - 12 weeks to incubate. On Lady Elliot Island 8 - 9 weeks is considered normal, with hatchlings emerging between January and May. Normally, the hatchlings emerge from the sand after dark as the sand temperature cools. In periods of cooler or overcast weather, hatchlings can sometimes emerge late in the afternoon. The temperature in the nest determines not only the gender of hatchlings, but also influences the period of incubation. Many factors can influence nest temperatures including weather patterns, colour of the sand, and the presence of shade. Warmer nests tend to produce more females and incubate faster, and cooler nests tend to produce more males and incubate slower. The white coloured coral sand at Lady Elliot Island, like other coral cays in the southern Great Barrier Reef, tends to be a little cooler. When hatchlings emerge from their nest they find their way to the water by heading downhill towards the lowest and brightest horizon. In the natural environment this is out to sea.

This is an Australian Government co-funded initiative under T-QUAL Grants



Once in the water, they use additional cues such as wave direction to move away from the coast and locate deeper offshore water and oceanic currents. It is understood that some species travel long distances around the Pacific Ocean using the oceanic currents as they mature, returning to Australian waters at around 10 - 15 years of age. Current estimates of survivorship of hatchlings maturing to adulthood are about 1 in 1,000.

THREATS TO TURTLES

Around the world, sea turtles face many threats from human-related activities including litter such as plastic bags, entanglement in fishing equipment, boat strikes, hunting and disturbance at nesting beaches. In Australia, turtles are protected by the enforcement of both Federal and State laws. Lady Elliot Island is located in a 'Green Zone' within the Great Barrier Reef Marine Park, which has World Heritage Area status. In Queensland waters, some laws have been introduced specifically to protect turtles, such as the mandated use of Turtle Excluder Devices on fishing trawl nets. Based on the reproductive rates of marine turtles, any population recovery takes many decades.

WHAT YOU CAN DO TO HELP TURTLES

Globally, turtle populations are declining. Here are some ways that you can help if you visit LEI during turtle nesting or hatching season (November - May):

- Torches and lights are to be used with extreme care after dark. Nesting turtles are easily disturbed by artificial light, movement and noise. Torch lights will also disorientate turtle hatchlings.
- Minimise the amount of artificial light in the resort by turning off room lights (inside and out) and by keeping your curtains drawn. This will prevent turtle hatchlings becoming lost in the resort.
- Never interfere or handle turtle hatchlings and most importantly never place a turtle hatchling directly into the water. Inform a staff member if you are concerned about their wellbeing, but otherwise stand back and enjoy the spectacle.
- Don't litter on land or in the ocean.
- Participate in the turtle education activities during your visit.
- Support a turtle conservation organisation.