

ANCIENT MARINERS SEA TURTLES

Turtles are one of the most fascinating sea creatures that live in the tranquil waters around Varanus Island. The sheltered bays and secluded beaches provide important areas for the turtles to carry out breeding and feeding activities. There are four species which regularly visit the island to nest. All species occur worldwide, except the flatback, which is confined to Australian waters only.



FLATBACK

The flatback turtle is confined to Australia's northern waters and found nowhere else in the world. Although relatively abundant, the flatback has only a small number of nesting sites, of which Varanus Island is certainly significant. Flatbacks grow to an average of about 70-80 kg and can be distinguished from other turtles by small scales on their flippers and a smooth, flat shell.



GREEN TURTLE

These turtles are the most abundant species in the north-west but they nest very infrequently on Varanus Island. They may grow to 200-300 kg, although few turtles of this size are now found. They are predominantly vegetarian, feeding on algae, seagrass and some types of seaweed, except in their first year or so of life, when they are carnivorous (feeding on animal matter).



HAWKSBILL

This species is the most common visitor to the beaches of Varanus Island, which is one of the more important and well studied rookeries in Western Australia. Hawksbill turtles are one of the smaller marine turtles, most of them weighing around 50kg, having a characteristic pointed hawk-like beak for which they are named. They are carnivorous (eat other animals) in the first year or so of their life and later switch to being omnivorous (animal and vegetable), their diet including items such as jellyfish, crustaceans (prawns, shrimps), molluscs (clams, maine snails) and marine algae.



LOGGERHEAD

The loggerhead turtle has shown a worldwide decline in recent years due to disturbances to nesting beaches by coastal development and other beachfront activities. Much of their range is now affected by humans, emphasizing the importance of the relatively remote and undisturbed rookeries on Australia's northern coastline. The loggerhead is an infrequent nester on the beaches of Varanus Island, although it is fairly common in the surrounding water where they feed on crabs, crustaceans (prawns, shrimps), shellfish, sponges and fish.

* Nests are dug using the hind flippers and are approximately 30 cm -50 cm deep. The female then lays 50-200 leathery, ping-pong sized eggs.

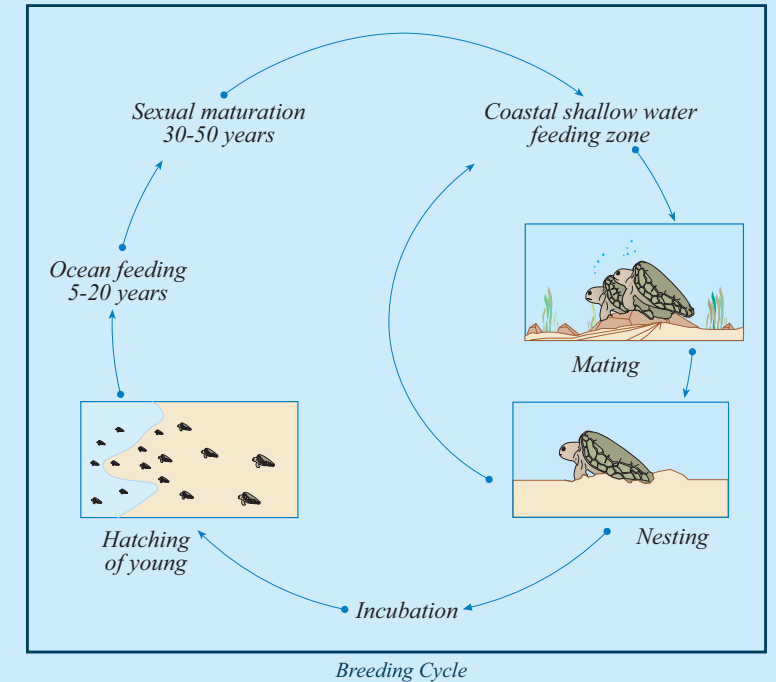
* Females return to nest every two weeks or so during the season and may do so up to eight times between August and February.

* The eggs are incubated in the warm sand for 8-9 weeks, the temperature of the nest determining the sex of the hatchlings.

* Females breed every year, more commonly every 2-8 years.

* Maturity is reached after about 20-50 years, when the turtles return to their place of birth to breed.

* Less than one percent of hatchling turtles survive to return and mate at the beach where they were



TURTLE TAGGING

A long term study of marine turtles nesting on the North-West coast and Varanus Island is being conducted mainly by volunteers and coordinated by CALM. Non-corrosive titanium metal tags are used and are attached to the front flipper. Valuable information is gathered from returning individuals, helping researchers to expand their understanding of the life-history and biology of these creatures. Any tagged turtles sighted should, if possible, have their numbers recorded, preferably with minimal disturbance to their nesting activities and the information passed on to CALM turtle research.



HATCHLINGS AND ARTIFICIAL LIGHT

The problem of artificial light sources disturbing the activities of turtles, particularly young hatchlings, has been a difficult one to solve. Lights are essential for the safety of personnel, but a compromise has to be made to ensure that all interests are met. Measures include:

- * Only turning the lights on when personnel are active.
- * Shielding light sources from the beaches.
- * Using lights that have lower attractant properties to turtles.

Turtles find their way to the water by light being emitted over the horizon at night and can be easily misguided or disoriented by artificial lights. Hatchlings appear to be particularly vulnerable and often have little chance of survival if they cannot make it to the water within a short period of time.

OBSERVATION OF TURTLES

Turtles can be observed without disturbance as long as a few simple guidelines are followed:

- * Turtles coming up to nest are easily discouraged from nesting by lights, noise and sudden movements, especially when they are not actually laying, so these should be kept to a minimum.
- * Wait until the turtle has started laying her eggs before shining lights on her or touching her.
- * A turtle can often be observed just as easily if you turn off your torch and allow your eyes to become accustomed to the dark.