

MARINE TURTLE NESTING IN THE NT AND THE CASUARINA COASTAL RESERVE FLATBACK TURTLE NESTING MANAGEMENT AND EDUCATION PROGRAM.

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This talk is in two parts. The first part will go into the general nesting biology of marine turtles and their nesting distribution around the NT coast and islands, and the second part will briefly cover a local program involving the management and education program on Casuarina Beach, Darwin.

The general biology of marine turtle nesting has been fairly well studied in Queensland and WA mainly for many years, so much of the information about nesting biology I am given here is not new. However, our knowledge of where and how many marine turtles nested around the NT coast was basically unknown until I incorporated them into a survey program I started in 1990 to cover important fauna sites around the NT coast and coastal wetlands. These surveys mainly involved finding and documenting important sites for aquatic birds (ie shorebirds, seabirds and waterbirds), coastal raptors, cetaceans and marine turtles around the Top End.

Four species of marine turtle (green, flatback, hawksbill and olive ridley) were found in these surveys to regularly nest around the NT coast. A fifth, the leatherback, occasionally nests on NT beaches and a sixth species, the loggerhead, is found in NT waters but does not breed here. Marine turtle nesting occurs on all beaches around the NT, some in small densities and others that are of national or even international importance.

Nesting seasons vary slightly for the different species but between them all nesting can occur in any month of the year, although the wetter months of January and February rarely have much nesting.

One of many interesting and unique activities happening in Darwin during the dry season is the nesting of marine turtles on our beaches. The species that is most commonly involved is the Flatback Turtle. Much of this nesting occurs within the Casuarina Coastal Reserve and the Parks and Wildlife Service has an ongoing program to assist with the success of this nesting. This program has two main aims. Firstly to improve the nesting success by actively monitoring each nest, and secondly to allow the public to observe the fascinating event of baby marine turtles emerging from their nest and charging across the beach into the sea.

The first part of this turtle nesting program I commenced over 10 years ago. This was to ensure greater numbers of turtle eggs survived their incubation period and then the young hatchlings made it safely into the sea.

Although Darwin's beaches do not constitute the most important beaches around the NT coast in terms of the number of nests, they are very significant in another respect. They make Darwin one of the few capital cities in the world that still have marine turtle nesting on their city beaches, and the only capital city in the world that has Flatback Turtles nesting.

Prior to actively managing the nests, predation of eggs by dogs, goannas and people, flooding by high tides and crushing by vehicles meant that few young turtles successfully made it off these beaches. With the management of these nests and a success rate of over 80% we are now seeing over 500 hatchlings successfully making it into the ocean each season. As baby marine turtles return to breed as adults at beaches at or near where they were hatched, it is important to continue to keep hatchlings successfully getting off our beaches so that future 'Darwinians' can continue to observe this unique event.

Although this can be possibly be seen as un-naturally interfering with nature it is necessary because on the other side of the scale human effects such as boat strike, lost or discarded pieces of fishing net and pollution take a toll on turtles throughout their lives. This can be seen as balancing the scales.

I also introduced a public viewing and education aspect into the program around 7 years ago. Commencing with small groups of invited people to observe the young turtles emerging from their nests once or twice a year, this aspect of the program has grown immensely. Each year now we do around 10 of these public release viewings and accompanying talks during the dry season for between 150 and 300 people each time. Last year we had over 3000 people book in for the event, so many that we had to put a stop to booking for that season.

The activity is free and involves a short talk on marine turtles followed by watching around 40 or more hatchlings climb out of their nest and charge down the beach into the water. Each hatchling is allocated a small group of people whose job is to ensure that 'their' turtle makes it to the water safely among the hundreds of people watching. When all of the main group have made it to sea there are also a few hatchlings kept aside at the end to allow people to have a hold and be photographed with them, before they too are released.

Because the hatching of the eggs cannot be predicted exactly in advance there are no set dates for this activity. It is not advertised on the day because numbers attending need to be kept to a certain level. To be part of this activity people need to ring Parks and Wildlife and leave their daytime contact numbers. Whenever a nest hatches people will be rung during the morning and told where and when the release will be that night. If unable to attend that particular release they will be left on the list and contacted again when subsequent nests hatch.

This program is probably unique in Australia. The nesting process remains totally natural. The animals are not artificially fed as in many other programs, and the eggs are left to incubate naturally on the beach.