

Fly River Turtles

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Carettochelys insculpta



A monotypic species of the genus *Carettochelydidae*. The turtle was first described following collection in the 1880's by Australian explorers Froggett and Shaw, during their expedition to the Fly River in New Guinea.

The genus dates back over 40 million years with tertiary period fossils found in what is now North America, Europe, and Central Asia. It is from here that the only surviving species *Carettochelys insculpta* evolved.

Unique amongst fresh water turtles, the Fly River turtle has four paddle shaped flippers, each equipped with two claws. These are similar to those of marine turtles. Their locomotion is identical to that of the marine turtle. The dorsal surface of the turtle is olive green with creamy white spots around the eye and running down either side of the carapace. The ventral surface is uniformly creamy white, with the soft leathery surface to both carapace and plastron. The turtle lacks the usual horny laminae typical of most chelonia.

Originally, it was believed the species was restricted to rivers in the southern coast of New Guinea, and Irian Jaya, principally the drainage of the great Fly River. However, it is now recognised that the species also occurs in Northern Australia, in some of the rivers running into the Bay of Carpentaria, and the Northern territories. Whilst predominantly a fresh water species, a brackish and even salt-water existence is evident in some of the population.

Breeding biology has only very recently been described and at this time, is by no means fully understood. However, it appears that in nature, during the dry season, between July and October, female Fly River turtles "shell up" their eggs and move up and down the rivers in search of suitable sites to nest. Typical of their marine cousins, they usually nest under cover of darkness. Exposed sandbars are the favoured nest sites. Gravid females jostle nervously for position on the nesting beaches and very often return to the river having unsuccessfully carried out their nesting activity. It appears that the adult females nest twice during a season, but only nest every other year! A large adult female can weigh up to 20kg. Unlike their marine cousins the Fly River turtle does not use its front flippers in excavating the nest cavity. Instead, they use just their hind flippers to construct the circular nest chamber. Between 6-20 eggs are usually deposited, and incubation takes 70

days. The spherical hard-shelled eggs are pure white. They have the thickest shell of any known turtle species, which may answer the fact that they seem to only nest every other year. Such a commitment to egg production will make huge demands on the animal and to lay down sufficient calcium may well take 24 months. In nature, predation of eggs in nest sites occurs, with large Monitor lizards, Pigs, and of course human collection. Native peoples have harvested the turtle and its eggs for centuries.

As with all Tortoise and Turtle species sex of the offspring is temperature dependent. Eggs incubated at 32 degree centigrade produce both male and female hatchlings .5 degree cooler will produce 100% males and .5 degree warmer will produce 100% females.

My own experience with the species in captivity dates back over Fourteen years. I had first seen the animal in a private collection in the USA. Subsequently, I saw a superb captive exhibit in the Rotterdam Zoo; Eight adult turtles swam in a huge flooded forest tank with Fish from the same region.

When, an importer in the UK offered a pair of hatchlings. I acquired them and along with a number of other Asian species, these came into my captive collection. The young turtles were kept separately in 46cmx31cm aquarium maintained at 26 degree centigrade. The turtles at that time weighed 14 grams. An external canister power filter with zeolite, Charcoal, and biological media filtered water. Initially, the diet was carnivorous sinking pellet, as the hatchlings appeared to prefer foraging on the bottom of the tank. However, this was subsequently changed to a floating form, (Hikari- Cichlid gold). This diet was supplemented with shellfish, fruit and vegetable, as the turtles grew the diet became much more herbivorous. The hatchlings thrived on this regime and have grown on very well.

I had discovered quite quickly that despite their relatively quiet disposition, they interact well with other turtle species, such as snake necked turtles (*Chelodina* spp), Short necked turtles (*Emydura* spp), and even New Guinea Snapping turtles (*Elseya* spp). With their own kind aggression is almost inevitable. As the turtles grew larger, new quarters were required. I now keep my ten year old female in a 122cmx122cmx46cm aquarium. It must be understood that these animals grow very large and a potential 20kg adult will take considerable and very expensive accommodation. Having said that, they are very impressive creatures and given the right facilities, they make very rewarding captive Turtles.

Since first writing this article, I am pleased to say the a few institutions have successfully bred them, including the group at Rotterdam Zoo.

- References; 1. H.G Cogger Reptiles and Amphibians of Australia.
2. John Cann (a) Tortoises of Australia
(b) Australian freshwater Turtles
3. Arthur Georges, Jeanne Young & John Cann
The Australian Pig Nosed Turtle