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SEA TURTLES

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CONSERVATION OF FRESH WATER TURTLES OF INDIA*

The focus in the recent past has been on sea turtles. The hardshell and softshell freshwater turtles from Indian Coast is a very neglected group. Except for taxonomic studies and a few stray observations on their life history practically nothing is known of our freshwater turtles. In Table 1, a list of the freshwater species of turtles and tortoises occurring in India is given and of these Indian softshelled turtle *Lissemys punctata punctata*, Indian tent turtle *Kachuga tecta tecta*, Peacock marked soft-shelled turtle *Trionyx hurnum* and three Keeled turtle *Geoemyda tricarinata* find a place in Schedule I of the Wildlife (Protection) Act 1972. While the Act in Schedule I mentions, Tortoise (Testudinidae, Trionychidae) it will be desirable to

Table 1. List of fresh water species of turtles occurring in India

Family: Emydidae (Hard-shelled Freshwater turtles)	
Scientific name	Common name
<i>Batagur baska</i>	The common Batagur or Tuntong
<i>Cuora amboinensis</i>	Amboina or Malayan box turtle
<i>Hardella thurji</i>	Brahminy river turtle
<i>Morenia petersi</i>	
<i>Geoclemys hamiltoni</i>	Black pond turtle
<i>Kachuga tecta tecta</i>	Indian tent turtle
<i>Kachuga tentoria</i>	
<i>Kachuga tentoria circumdata</i>	
<i>Kachuga smithi</i>	
<i>Kachuga dhongoka</i>	
<i>Kachuga kachuga</i>	
<i>Kachuga sylhetensis</i>	
<i>Heosemys silvatica</i>	
<i>Melanochelys tricarinata</i>	Tricarinate turtle
<i>Melanochelys trijuga</i>	Common pond terrapin
<i>Melanochelys t.indopenisularis</i>	
<i>Melanochelys t. thermalis</i>	Common hard shelled terrapin or Ramnad pond turtle
<i>Melanochelys t. coronata</i>	Malabar pond terrapin
<i>Cyclemys mouhoti</i>	
<i>Cyclemys dentata</i>	
Family: Testudinidae (Tortoises)	
<i>Geochelone elegans</i>	Indian star tortoise
<i>Geochelone (Manouria) emys</i>	Burmese brown tortoise
<i>Geochelone elongata</i>	Red nosed tortoise
<i>Geochelone travancorica</i>	The Travancore tortoise
Family: Trionychidae (Soft shelled turtles)	
<i>Lissemys punctata punctata</i>	Indian spotted flat shelled turtle
<i>Lissemys punctata granosa</i>	Southern soft shell turtle
<i>Chitra indica</i>	Narrow headed soft shelled turtle
<i>Trionyx gangeticus</i>	Ganges soft-shell turtle
<i>Trionyx leithi</i>	Nagpur soft-shell turtle
<i>Trionyx humum</i>	Peacock soft-shell turtle

specify the species, once more information becomes available. There is an urgent need for a critical appraisal of the population structure and habitat of the species of freshwater turtles to see whether any species needing protection have been left out. The status survey currently being conducted by Professor E.O.Moll, Vijaya and Satish Bhaskar in India should bring to light very useful information. While we eagerly look forward to their report, we take an opportunity to record some observation made in West Bengal on freshwater turtle trade. The people of West Bengal, while they shun marine fish do not mind consuming sea turtles as well as freshwater turtles. The trade in freshwater turtle in the West Bengal market is one of long standing and as late as 1983 season there was no indication of any diminution in the trade.

Observations in West Bengal

During November and December 1982, when the CMFRI team visited Calcutta and adjacent places, the sale of freshwater turtles was noticed at the Howrah whole sale fish market and Shealdah fish market. At Shealdah the freshwater turtle *Lissemys punctata punctata* was mainly sold in large numbers. They were stored alive and sold in stalls in the fish market and were also sold openly on the footpath on Mahatma Gandhi Road every afternoon. During the visit on 17th December '82 it was noticed that more than 100 turtles were kept for sale inside the market and these were sold by weight and some were slaughtered and the meat sold by weight. Outside the market the turtles were sold alive at the rate of Rs.9 per kg. About 500 turtles were kept for sale on 17th December '82 and of these about 300 turtles were in the weight range of 2 to 3 kg (plastron length 19-21 cm; plastron width 12-14 cm) about 200 turtles in the range 1 to 2 kg (plastron length 13-15 cm and plastron width 8-9.5 cm). Customers who purchased more than one kg of turtle were given a few fresh water turtle eggs free of cost. It is understood that fresh water turtle trade activity at Shealdah market happens only in the afternoon hours.

The team again visited Calcutta and Contai in February and March 1983 and gathered additional information on freshwater turtle trade. Contai fish market was visited on Sunday 20th February '83 and sale

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Freshwater turtles for sale at Shealdah market, Calcutta.



A buyer of freshwater turtle at Shealdah market.



Turtle seller displaying his wares at Contai fish market



A close-up view of *L. punctata punctata*, Indian soft shell turtle.

of the fresh water turtle *L. punctata punctata* was noticed. From the enquiry it was found that the turtles were brought from Howrah whole sale fish market every Sunday and resold at Contai. The details of measurements of *L. punctata punctata* in cm taken from the specimens kept for sale are as follows:

Carapace length 18-28 (24.7)	Carapace width 15-23 (18.4)
Plastron length 13-31 (20.2)	Plastron width 12-24 (16.1)

During February and March 1983 also freshwater turtle trade was noticed at Howrah wholesale fish market and Shealdah fish market. At the Howrah market on 22nd February '83 more than 50 turtles of two species *Chitra indica* and *L. punctata punctata* were noticed. They were sold at the rate of Rs. 8 to 9 per kg. Details of measurements of turtles in cm are given below:

<i>Chitra indica</i>	Plastron length 41-50	Plastron width 36-49
<i>L. punctata</i>	Carapace length 18-26	Carapace width 16-23
<i>punctata</i>	Plastron length 13.5-24	Plastron width 12-20

On 22nd February '83 when the team visited Shealdah market, the sale of fresh water turtles were again in evidence and the species mainly *L. punctata punctata*. Details of measurements in cm of six specimens are as follows:

Carapace length 19-27 (23.6)	Carapace width 16-23.5 (19.9)
Plastron length 13-30 (21.2)	Plastron width 11-20 (15.5)

From the enquiry it was found out that the trade in freshwater turtles goes on throughout the year despite

the protected status of the species. The freshwater turtles are collected from Naraj, Golari, Paguda and Tickkerpara in Orissa and transported to Calcutta. The important centres in Uttar Pradesh from where turtles are booked by rail to Calcutta are Sikendara Road, Izatnagar, Bednam, Bhogipura and Collegeganj. From our observations it is evident that freshwater turtles are received at Calcutta markets regularly from one source or another despite the protection afforded under the Wildlife (Protection) Act. The sign boards displayed by the West Bengal Forest Department prohibiting sale of turtles and turtle products mentions the protection of marine species only.

General remarks

The study of freshwater turtles and their life history, ecology and behaviour need to be intensified in order to understand

- their population structure and behaviour,
- reproductive potential,
- habitat limitations; and
- effect of pollutants on turtles and so on.

There is also a need for an active extension programme to make available information on turtles and tortoises to the public particularly educational organisations, if any effective management measures are to be developed.

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