NOTES ON THE STUDY OF THREE SPECIES OF RIVER TURTLES IN ORISSA

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ABSTRACT

The authors have discussed the distribution of three species of freshwater chelonians from rivers of Orissa, Trionyx gangeticus Cuvier and Kachuga tectum tentoria (Gray) from river Mahanadi and T. leithi Gray from Silera river. They have also made observations on the egg laying of one species and about growth of another in captivity.

INTRODUCTION

In connection with the study of ecology and biology of freshwater turtles in Orissa, three species were collected from rivers of Orissa and some live specimens of those species have been studied in the Nandankanan Biological Park under captive condition.

The work of Annandale (1912) on the aquatic Chelonia of river Mahanadi and its tributaries is so far the only important work on freshwater turtles in Orissa. He described one new subspecies, Trionyx gangeticus mahanaddicus Annandale and recorded T. leithi Gray, Emyda punctata granosa (Schoeff) and Kachuga tectum intermedia Blanford from Mahanadi. Smith (1931) synonymised the new subspecies under Trionyx gangeticus Cuvier and other two subspecies in Lissemys punctata granosa (Schoeff) and Kachuga tectum tentoria (Gray).

The subspecies L. p. granosa after Annandale was not again collected from Mahanadi but authors (Biswas & Acharjyo, 1977) found them occurring in lakes and ponds of Orissa. This species is an important item of supply from Orissa for the consumption of Calcutta market. Lastly the authors feel that a thorough turtle survey in the rivers of Orissa is needed to fill up the gap of our knowledge of distribution and status of freshwater Chelonians.

Order : Testudines
Family : Trionychidae

Trionyx gangeticus Cuvier
(Oriya name : Bada Pani Kaincha)


Material: One female collected from Mahanadi river near the Village Banragoda, Cuttack Dist., on 8.10.1981.

Measurement and weight: Carapace : 51×40 cm; Plastron—41×36 cm; Weight—14.600 kg.
Trionyx leithi Gray, Photo No. A. Dorsal view of one of the female specimen. B. Ventral view of the same specimen.
**Distribution**: The range of distribution for this species is the Indus, Ganges, and Mahanadi. Recently Zoological Survey of India received a specimen from Bhopal, Madhya Pradesh but the distribution of the species from M. P. and Western part of Orissa is poorly known.

**Observation**: The colour pattern of the specimen closely conforms to the description given by Smith (loc. cit). The carapace is deep olive with faintly spotted yellow marks. There are three pairs of oblique longitudinal markings on the head.

The specimen was collected by a local fisherman on 8.1.82 and received in Biological Park on the next day. On the same day night 5 white, round eggs like Ping Pong balls were laid inside the water. The diameter of five eggs are 3.0 to 3.3 cm. and weight 22,100 to 23,800 gms. It again laid 3 eggs each time on 17.1.82 & 18.1.82 and died on 31.1.82. On post mortem examination more fully developed eggs were recovered from the oviduct.

**Remarks**: It is presumed that the specimen was collected by the fisherman when it came out of water of laying eggs but did not lay due to disturbance. Sometimes the turtles are caught in fishing nets. It could only lay eggs when it was released in the water of the turtle enclosure. Thus this egg laying incidents in, January is only a month or broadly winter is the laying season of this species. There are many records of death in turtle and tortoises due to disturbances in their laying activity (Ewert 1979). Minton (1966) mentioned about a female weighing 13.2 kgs. collected from Indus river in October which contained in its oviduct three full grown eggs (diameter 33 mm.) and many immature eggs.

**Trionyx leithi** Gray

(Pl. VIII, fig. A & B)

**Material**: Two female specimens where collected from Balimela reservoir, Koraput Dist. and received on 3.9.78 and 30.1.78 respectively at the Nandankanan Biological Park from Shri P. C. Sarangi, D. F. O., Afforestation Division.

**Distribution**: The range of distribution is the Ganges and rivers of peninsular India as far south as Madras. Balimela reservoirs are on the Sileru river at Chitrakonda in Koraput Dist. of Orissa adjoining Madhya Pradesh. The river originates in the hilly plateau of south eastern M. P.

**Observation**: The identification of the specimens belonging to the species appeared confusing as the usual colour pattern is usually lacking in grown up specimens. The heads and carapaces are uniformly dark olive and their probosises are less pointed comparatively to specimens belonging to T. gangeticus. We are referring the two specimens in the above mentioned species based on the patch of warty skin on the anterior flap of the disc and the prominent anterior boss on the carapace.

**Observation in captivity**: One of the two turtles of Balimela is being maintained successfully for more than two years in a small cemented pool of approximately 5X5 mts. in size with a depth of .45 cm. They thrived well on the fishes that were regularly supplied to the aquatic birds.

Measurements and weight during their captivity period are mentioned below:

**Remarks**: The weight gained by the first turtle in captivity in 2 years and 10 months on the fish diet is an encouraging point to undertake further investigation on its develop-
Measurements and weight during their captivity period are mentioned below:

<table>
<thead>
<tr>
<th>Date of Measurement</th>
<th>Wt. Kgs.</th>
<th>Carapace length (cm)</th>
<th>Carapace width (cm)</th>
<th>Plastron length</th>
<th>Turtle No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>30.1.78</td>
<td>11.200</td>
<td>49</td>
<td>40</td>
<td>37</td>
<td>I</td>
</tr>
<tr>
<td>3.7.78</td>
<td>11.800</td>
<td>49</td>
<td>40</td>
<td>38</td>
<td>Presently alive</td>
</tr>
<tr>
<td>30.1.80</td>
<td>12.000</td>
<td>51.5</td>
<td>40.5</td>
<td>39</td>
<td>II</td>
</tr>
<tr>
<td>24.11.80</td>
<td>12.800</td>
<td>52</td>
<td>42</td>
<td>40</td>
<td>Died on 8.2.80</td>
</tr>
<tr>
<td>30.9.78</td>
<td>12.000</td>
<td>46.5</td>
<td>39</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>30.1.80</td>
<td>12.000</td>
<td>48</td>
<td>39</td>
<td>39.5</td>
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</tr>
</tbody>
</table>

**Observation:** This subspecies differs from the typical *K. t. tectum* in having a second vertebral shield shorter than third and the colouration of their head being dull olive with a conspicuous red patch behind the tympanum. This olivaceous and the yellow streaks, if present, are fewer and less distinct than the typical one.

**Remarks:** It is the common turtle of Mahanadi. They are often found basking in the winter season on stones and floating logs of the rivers. The habitat of this species is rocky or stony sides of the river.

**Acknowledgements**

The authors are thankful to Dr. B.K. Tikader, Director, Zoological Survey of India and the Chief Conservator of forest, Orissa for allowing them facilities to work on the problem. They are also thankful to Dr. E.O. Moll, Chairman, FCSG, IUCN/SSC for his helpful suggestions and scientific advice.

**References**


