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A REPORT ON THE OLIVE RIDLEY, *LEPIDOCHELYS OLIVACEA*
(ESCHSCHOLTZ) [TESTUDINES : CHELONIIDAE]
OF BAY OF BENGAL

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(With 4 Text-figures, 4 Plates and 5 Tables)

INTRODUCTION

No definite data and information are available on the present status of marine turtles of Indian Coast. Hirth & Carr (1970) have expressed their disappointment on the inadequacy of knowledge on the ecological geography of marine turtles of the Western Indian Ocean which is also true for the entire Sea Coast of India. Smith (1931), while mentioning the distribution and range of sea turtles in the Indian Coast, gave some general information; Valliappan and Pushparaj (1973), Valliappan and Whitaker (1974) and Murthy and Menon (1976) gave some preliminary reports on sea turtles.

From Zoological Survey of India two turtles surveys were carried out by the author in 1975 and 1976 in the Orissa Coast and he visited some turtle breeding areas in that region. These surveys revealed that the most common and commercially important turtle occurring in the Bay of Bengal is the *Lepidochelys olivacea* (Eschscholtz) and it is the most exploited species of sea turtles in its breeding or nest laying season in the Bay of Bengal.

The work of Schulz (1975) on the ecology and biology of Olive Ridley in Surinam is very important and extensively deals with the nesting aggregation of *L. olivacea* along with some other sea turtles in the Atlantic coast of America. In this context the works of Pritchard (1969), Carr (1952) and Zwinenberg (1976) are also valuable and helpful for studying the Olive Ridleys.

So far no important earlier report on the nesting ground of Pacific Ridley in the coast of Bay of Bengal is available. In the present paper the author summarises results of his preliminary survey of such grounds and has also tried to ascertain the status of this turtle and their colonies

in some of the areas surveyed. The systematic account and general information on this species, with a key to other species of sea turtles will be helpful to the workers on the sea turtles of the Indian Coast.

SYSTEMATIC ACCOUNT

1843. *Lepidochelys* Fitzinger, *Syst. Rept.*, p. 30.
(Type : *Chelonea olivacea* Eschscholtz)

The family Cheloniidae, which includes the Pacific Ridley or the Olive Ridley, contains four genera, namely *Chelonia* Latreille, *Lepidochelys* Fitzinger, *Caretta* Rafinesque and *Eretmochelys* Fitzinger. The genus *Chelonia* can at once be separated from the rest of the genera in the family by the presence of one pair of prefrontal scales. The genera *Lepidochelys* and *Caretta*, likewise, can be distinguished from *Eretmochelys* in having five or more laterals and also in the precentrals being in contact with the laterals. The remaining two genera, however, continued to be confused with each other for a long time even after the publication by Deraniyagala (1933). This was caused by the broad similarity in characters, and the apparent similarity leading to the resultant taxonomic confusion and for a long time the two were identified as *Caretta*, commonly known as Loggerhead.

Generic characters : Laterals from five to nine ; four enlarged inframarginals, some of which perforated by a pore near the hind margin ; precentral and lateral laminae usually in contact ; pterygoid bones markedly broadened anteriorly, with strong ectopterygoid processes ; in the lower jaw a strong median elevation at the posterior edge of the bony alveolar surface ; nural bones eleven to fifteen in number.

A key to all the genera, species and subspecies of the family Cheloniidae is given below with the help of which *Lepidochelys* could be easily identified even to the subspecies level.

Key to the genera, species and subspecies of the family CHELONIDAE

- 1 (4) One pair of prefrontal scales. Lateral laminae 4. ... Genus *Chelonia* Latreille
- 2 (3) Colouration above predominantly brownish ; shell margin not markedly indented above hind limb ; shell less chunky and deep, especially from the middle of the laterals towards periphery ... *Chelonia mydas mydas* (Linné)

(Atlantic and Caribbean)

- 3 (2) Colouration above predominantly greenish or olive brown ; shell often markedly indented above hind limb ; chunky and often with the laterals completely straight from the margin of centrals ... *Chelonia mydas agassizii* Bolourt.
 (Pacific Coast of America, throughout Indian and Indo-chinese water including Andaman and Nicobar groups of Islands).
- 4 (1) Two pairs of prefrontals. Laterals 4-9.
- 5 (6) Laterals in 4 pairs ; precentral not in contact with the lateral ; laminae of the carapace usually conspicuously imbricated ... Genus *Eretmochelys* Fitzinger
Eretmochelys imbricata (Linné)
 (In all the tropical waters widely scattered along the Atlantic Ocean, Indian and Indo-chinese waters).
- 6 (5) Laterals in 5 or more pairs ; precentral in contact with 1st lateral ; snout relatively short and broad.
- 7 (10) Inframarginal bridge with 4 enlarged scales ; colour gray or olive green. ... Genus *Lepidochelys* Fitzinger
- 8 (9) Colour dorsally olive ; laterals usually in more than five pairs ; each inframarginal with a pore ; limbs with one or two claws. ... *Lepidochelys olivacea olivacea* (Eschscholtz)
 (Indian and Pacific Oceans ; West coast of Africa, West coast of America, Pacific coast or Mexico and Costa Rica).
- 9 (8) Colour dorsally dark grey ; laterals usually in five pairs ; inframarginal poreless ; limbs three clawed. ... *Lepidochelys olivacea kempii* (Garman)
 (Waters of Massachusetts, England, Ireland and Azores).
- 10 (9) Colour brown or reddish brown ; bridge with three enlarged inframarginals. Genus *Caretta* Rafinesque
- 11 (10) Marginal laminae averaging 12 on each side ; limbs two or one clawed ... *Caretta caretta caretta* (Linné)
 (Atlantic and Mediterranean).
- 12 (11) Marginal laminae averaging 13 on each side ; limbs two clawed ... *Caretta caretta gigas* Deraniyagala
 (Indian and Pacific Oceans).