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# STATUS AND DISTRIBUTION OF ESTUARINE TURTLES IN INDIA\*

## Introduction

While knowledge of the status, distribution and reproductive biology of marine turtles of the Indian seas has increased considerably in recent years, the estuarine turtles have been very much neglected. Two species of turtles occur in the estuarine regions of the country, the River terrapin *Batagur baska* (Emydidae: Batagurinae) and the Asian giant softshell turtle *Pelochelys bibroni* (Trionychidae: Trionychinae), both species extending their distribution further east into south-east Asia. The present article reviews the status and distribution of these two estuarine turtles.

### *Batagur baska* (Gray) (River terrapin)

A large emydid turtle, with shell length exceeding 60 cm; snout-tip tilted, saw-jawed; carapace smooth and heavily buttressed; four claws on each forelimb. The species exhibits seasonal and sexual dichromatism. Breeding males from Burma have been described as having pale blue nostrils, intense black head and crimson neck and forelimbs. In Malaysia, the skin and shell of breeding males turn jet black, while at other times it is brown or grey. Females and juveniles paler in colour.

The species generally inhabits estuaries of large rivers and freshwater lakes, and canals in their vicinity and coasts near river mouths. In India, the River terrapin is confined to the Sunderabans of West Bengal, and has a small population which is endangered. Extralimital distribution and estimated population sizes are as follows: Bangladesh-indeterminate; Burma-minor; Thailand-minor; Malaysia-major; Indonesia-minor and Indochina-indeterminate.

Listed as 'endangered' by the IUCN Red Data Book, primarily because of overexploitation of eggs and adults for food and habitat destruction (Groombridge, *The IUCN Amphibia - Reptilia, Red Data Book, Part I, Testudines, Crocodylia and Rhynchocephalia*. IUCN, Gland, 1982), and under Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), indicating that international trade in the species is prohibited.

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## Distribution in India

In the tidal rivers, channels, creeks and sea coasts of the Sunderbans of West Bengal. Nesting takes place on deserted sandy beaches and sandspits at Mechua, Kedo and Nagbarachar. Reported also from Kanak, the 1.5 sq km sandspit (washed away by floods in 1984) situated at the mouth of the Matla River.

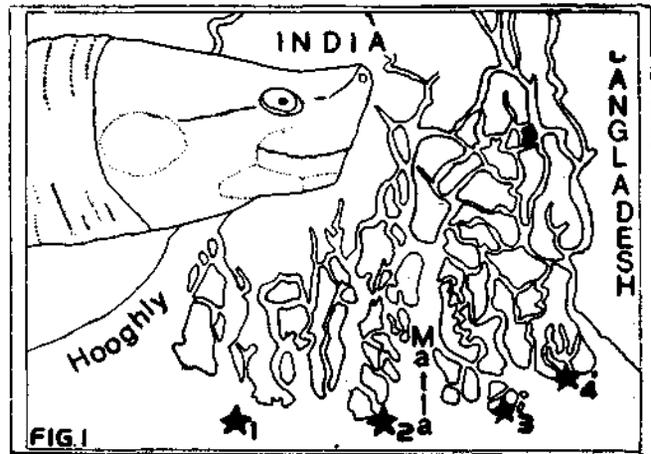


Fig. 1. Distribution of nesting beaches of the river Terrapin (*Batagur baska*) in the Sunderbans, West Bengal. References: 1. In Nagbarachar, 2. Kanak, 3. Kedo, 4. Mechua. Some sites determined from interviews with fishermen need to be confirmed. The small dot shows the locality of Kumirmari villages, where the species is kept as pets by villagers.

Several specimens, some trapped in nets, others hatched from eggs are being kept as pets in village ponds at Kumirmari and elsewhere north of the Sunderbans Tiger Reserve. The species is caught in offshore nets for sale along with Olive ridley *Lepidochelys olivacea*, during the winter months, from the vicinity of Sagar Island, in the western Indian Sunderabans.

## Conservation measures proposed

Inclusion of species in Schedule I of the Indian Wildlife (Protection) Act, as it is endangered; enforcing existing legislation and thereby preventing capture of adult terrapins and collection of egg from the Tiger Reserve area; identifying nesting grounds which may exist outside the Reserve and extending protection to these; public education; setting up a breeding programme, perhaps using only the captive stock available as it causes no further capture from the wild population and continued research on the status and ecology of the species.

## *Pelochelys bibroni* (Owen) (Asian giant softshell turtle)

The largest softshell turtle in the world, known to attain 168 cm in shell length and 250 kg weight. Head small and broad, snout short, rounded; eyes situated close to the nostrils; dorsally olive, dotted with yellow; ventrally whitish.

The species is known from estuaries and sea coasts in the country but the population seems to be small. Outside, it has also been documented from inland waters, like rivers and streams. Extralimitally in Burma, China (Foochow, Canton, Kwangtung and Hainan), Indonesia, Malaysia, New Guinea, Philippines, Thailand and Viet Nam. Precise information on status in much of its extensive range is unavailable, the species being caught for food in a number of countries. It has been reported from Bangladesh.

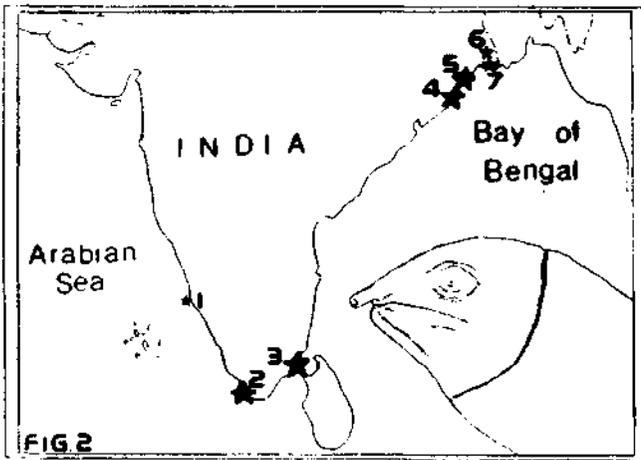


Fig. 2. Distribution of the Asian giant softshell turtle (*Pelochelys bibroni*) in India. Large stars refer to reliable records mentioned in the text; small stars refer to records of unknown reliability. References: 1. Mabe, Pondicherry, 2. Trivandrum, Kerala, 3. Vicinity of Mandapam, Palk Bay, Tamil Nadu, 4. Gahirmatha, Orissa, 5. Udaipur village, Subarnarekha river Orissa, 6. Calcutta, Hooghly river, West Bengal, 7. Sunderbans, West Bengal.

Unlisted by the IUCN Red Data Book or under the Appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

## Distribution in India

Known from a few localities both on the east and west coasts of India. The east coast sites include the Brahmini-Baitarini delta at Bhitarkanika Wildlife Sanctuary, Orissa, where the species is reported to nest, Subarnarekha River at Udaipur village, Orissa, near the West Bengal border and the vicinity of Mandapam, in the Palk Bay. Smith (*Fauna of British India including Ceylon and Burma. Reptilia and Amphibia. Vol. I. Lonicata, Testudines*. Taylor and Francis, London, 1931) questioned its occurrence in Bengal, but, the turtle is recorded from Bangladesh, once a part of Bengal. There is a single record from West Bengal (collection of the Zoological Survey of India, Calcutta, Reg. No. 1781), by the naturalist John Anderson in the nineteenth century, labelled 'Hughli R. Calcutta'.

The only confirmed record of the Asian giant softshell turtle from the west coast of India is from Trivandrum beach, Kerala. However, there is a view that this could be *Gymnopus indicus* (Syn. *Chitra indica*) whose estuarine habits are well documented.

## Conservation measures proposed

Inclusion of the species in Schedule I of the Indian Wildlife (Protection) Act, as it is rare and localised in the country (presently it is under Schedule IV); public education in localities where it is captured for food; survey of areas where the species is likely to occur and their subsequent protection and further research on the status and ecology of the turtle.

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