

## CAPTIVE RIVER TERRAPINS OF A SUNDERBANS VILLAGE

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Situated at the mouth of the great rivers, Ganga and Brahmaputra is the vast, unbroken tract of mangrove forest that stretches for over 250km along the coast of West Bengal, in India and western Bangladesh. Called the Sunderbans, the region is remarkably underpopulated because of the highly saline soil and water, impenetrable forests that harbour wild animals sometimes destructive to crops, livestock and human lives, and a large number of rivers and creeks, which criss-cross the area, before draining into the Bay of Bengal. The northern parts are continuously being reclaimed for agricultural purposes, while new islands appear in the south.

Communication for the locals living in a number of islands in the Sunderbans is by boat. In the Indian Sunderbans, a 2,585 sq. km. area has been set aside as a Tiger Reserve, where human settlements are absent. Bands of fishermen, woodcutters and honey collectors enter the 1,255 sq. km. buffer area of the Reserve, after obtaining permits from the Tiger Project range offices. Outside the Reserve, in places the salinity is low, some agricultural activities are practised and human settlements appear.

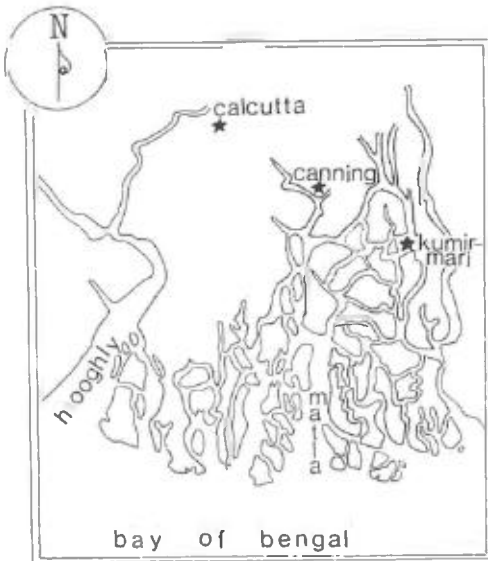


Figure 1.  
Map of the Sunderbans  
of India, showing loca-  
tion of Kumirmari  
village.

Found within this unique wetland is the river terrapin *Batagur baska*. This species attains a large (60 cm) size and has for long been an important source of protein for the local people. Over a hundred years ago, Edward Blyth, then Curator of the Museum of the Asiatic Society of Bengal at Calcutta, reported that the species was abundant at the mouth of the Hooghly and significant numbers were brought to Calcutta for food. However, as a consequence of overexploitation and excessive habitat alteration, the once large river terrapin population suffered a decline that was so drastic that the species was no longer reported from the Indian subcontinent in this century, and coupled with political upheaval in the region, this unusually important animal, long the source of soup and soap, was forgotten. Considered extinct in this part of its range, the river terrapin does not figure in the Indian Wildlife (Protection) Act of 1972, which covers threatened species. However, at the turn of this decade, several river terrapins were found in village ponds, in the Sunderbans of India and reports of the species being caught in adjacent Bangladesh began to appear. Recognising the potential of the river terrapin to provide a cheap, protein-rich food to the Southeast Asian people, the IUCN Red Data Book listed the species as endangered, while the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

classified it under Appendix I, indicating that the river terrapin is threatened with extinction and international trade is prohibited. Conservation action for the species was also given highest priority status by the IUCN/SSC Freshwater Chelonian Specialist Group.

Conclusions derived from a survey of turtle markets of the Sunderbans are that the turtle resource of the region is greatly depleted, as it is elsewhere in the state of West Bengal, primarily due to their use as food. Freshwater turtles arriving at the local markets of the Sunderbans, during winter and early summer, are largely from the neighbouring states. Entry is through Howrah, the country's largest turtle market, situated adjacent to the city of Calcutta. A large number are also smuggled across the border from Bangladesh as the principal religion in that country, Islam, prohibits the consumption of turtle meat.

The river terrapin is referred to as 'katha' in the Sunderbans of West Bengal. In a number of large, slightly brackish ponds, often choked with vegetation, pet terrapins are doing remarkably well. Keeping pet terrapins is clearly the hobby of the few who are comparatively affluent. Besides the aesthetic pleasure of watching these large, graceful animals swim, feed and bask, owners demand nothing else in return. Terrapins may live long in captivity. Particularly interesting is a large (approximately 50 cm) specimen, which was reported to have been kept for about 22 years. When it hatched out of an egg collected from a Sunderbans seabeach it was then the size of a 50-paise coin. Though illegal, egg-collection sometimes takes place from a number of seabeaches and sandpits bordering the Bay of Bengal, between November and March, for food or to be hatched artificially. Specimens may also be obtained by the villagers from fishermen, when caught in 'baghda-jal' a long funnel-shaped net used in catching the tiger prawn *Penaeus monodon*. The wide mouths of these nets are strung between two long poles anchored in the river bottom, so that terrapins entering the open end become entrapped.



**Plate 2.** A river terrapin pond in Kumirmari showing the dense aquatic vegetation near the banks.

Captive specimens are shy, non-aggressive and highly aquatic, rarely if ever wandering far from ponds where they are kept and never leaving for similar bodies of water or escaping into the nearby creeks and rivers. In winter, terrapins bask on the banks or on floating tree-trunks. During the dry months in April and May, when the water level decreases, captive terrapins evidently undergo brumation, burrowing into the mud at the pond's bottom and becoming inactive till water level rises at the advent of monsoons. Small specimens are sometimes maintained by the owners in large earthen jars during the summer months to prevent predation by mongooses and monitor lizards. River terrapins living in village ponds graze on the aquatic vegetation growing abundantly in their artificial home, including the water bindweed *Ipomoea reptans* and dog grass *Cynodon dactylon*. Also accepted in captivity are prawns and what appears to be a great favourite, the red flowers of hibiscus.



Plate 1. View of mangrove vegetation of the Sunderbans.

The wild population of the river terrapin in the Sunderbans of India, however, is small, possibly as a result of continued overexploitation and high salinity of water. Bangladesh Sunderbans appear to have a larger population of terrapins, perhaps because the area receives a greater inflow of fresh water, and is therefore less saline. Though some numbers are caught in this part of the Sunderbans, human pressures should not be as great as in Bengal where turtle meat is considered a delicacy and no religious beliefs are strong enough to save them.

Nesting takes place during the winter, on deserted beaches and sandspits of the Bay of Bengal, along with the olive ridley *Lepidochelys olivacea* which migrates to the Sunderbans for that purpose. Though most of the present day nesting areas of both these species fall within the core area of the Tiger Reserve where human interference is banned, nests continue to be robbed by man. Another significant number of nests are destroyed by natural predators, such as wild boars and water monitors. Although adult terrapins are still caught both in offshore and tiger prawn nets, fishermen report a decline in population in recent years.

To bring back what was once an important part of the diet of the local people requires concerted effort on the part of the forest department, research workers, wildlife managers and the local people. Measures in this direction include enforcing existing legislation by preventing the intentional capture of turtles and collection of turtle eggs. Hatcheries could be established, perhaps using the captive stock already available, as it creates no further drain on the wild population. The usual precautions should be taken, such as avoiding production of unnatural sex ratios of hatchling turtles by carefully controlling the incubation temperature, and resisting the often strong desire to keep hatchlings for 'head-starting' (as it is possible that with age the natural instincts which may help young turtles become imprinted on some of the beach characteristics, may disappear). Further research on the species is needed, which will throw light on many poorly understood aspects of the river terrapin's biology.

Education programmes are of especial importance. If locals can be convinced of the need for conserving an important protein source and enlisted in its protection, what could be better?

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