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BANGLADESH - MONITORS AND TURTLES

Visiting Bangladesh at the height of monsoon may appear to be the height of folly but from a herpetological standpoint it was highly interesting. Every year during July and August one third of Bangladesh will predictably be underwater. During this period transport for the people of at least half the country is by boat. The only land out of water in these areas of the country are major roads and small islands on which individual houses and small villages are located. As an island situation one can visualize all the wildlife of the area congregating on these remaining patches of high ground. Rats, civets, mongoose, ground dwelling birds, beetles that shun water and of course, lizards and snakes.

FAO recently offered me the opportunity of investigating the role of monitor lizards in controlling crop pests. As in India, Bangladesh loses a significant proportion of its food grain (and other crops) to destructive insects, rats and mice. During the November harvest of the aman rice crop in particular, destruction is very high.

In a three week runaround tour, arranged with the help of the Forest Department I made it through the districts of Chittagong, Barisal, Mymensingh and of course Dacca. I was accompanied by Tsutomu Hikida of Kyoto University, M.A. Reza Khan of Dacca University and Wahab Akonda of the Bangladesh Wildlife Circle of the Forest Department, all four of us keen on reptiles.

During 1978/79 nearly 2,000,000 monitor lizard skins were exported from Bangladesh, almost all to Japan for handbags, wallets, shoes, and watch-straps. About 70% were yellow monitors (Varanus flavescens) 25% Bengal monitors (V. bengalensis) and 5% water monitors (V. salvator). Accordingly, to look at a lot of lizards in a short time we contacted the lizard catchers at Salna, just outside Dacca. The ten catchers we met are farmers for part of the year but when the monsoon waters start rising lizard hunting is their lucrative pursuit. In three days they had 36 lizards for us, sixteen yellow monitors and twenty common or Bengal monitors. All were alive and besides counting scales and measuring them we wanted to look at their stomach contents. A trip to New Market in Dacca got us the necessary equipment: a foot length of hard rubber tube, a tea strainer and a "lota", a water container with a spout. Inserting the tube as gently as possible (considering the tightly clamped jaws) to the top of the stomach we then poured in enough water to dilute the contents and then tipped the lizard over and strained the decanted liquid. After a few repetitions we found that we were also getting the intestinal contents, from the other end. We eventually looked at 46 monitors, only one a water monitor. The water monitor is one of the world's largest lizards but its size and skin value has made it a number one target for the skin industry and in Bangladesh it is rarely seen outside the Sunderbans Reserve Forest in Khulna District. The two smaller monitors are found throughout the country, though the yellow monitor seems to prefer the low ground and the rice fields while the Bengal monitor is more commonly found on the high ground often around human dwellings.

In the stomachs and intestines of the monitors we found remains of a wide variety of insects, crabs, snails, frogs, bird feathers and even a goat horn! We observed that for these as with other predators the seasonal availability of prey is a vital factor. In a study in Madras, J Vijaya and myself found rodent remains in 60% of monitor scats examined during the dry period. We proposed that an examination of monitor diet during the dry winter and spring months is essential. We learned very little more about the life history of the monitors of Bangladesh. Where they lay their eggs for the 8 or 9 month incubation is a big question and even the timing of laying is guess work. Based on data from other parts of India, the Bengal monitor may lay its eggs in September or October and the water monitor in June/July. The presence of yolked oviducal eggs in two yellow monitors in this study leads us to believe that August is their month for laying.

Turtles

As members of the IUCN/SSC Freshwater Chelonian Group, Reza Khan and I couldn't resist dropping in at fish markets to check out the turtles. This was not turtle "season", the winter months are when we could see a maximum number of all varieties and sizes we were told. We did see three species in the markets, altogether about a dozen spotted flap-shell turtles (Lissemys punctata punctata), several peacock softshell turtles (Trionyx hurum) and a single Ganges softshell turtle (Trionyx gangeticus) being carved up at Barisal market. Turtles aren't vocal and perhaps this is why there are no qualms about butchering them alive. We stood with a small appreciative crowd at the turtle stall and watched the big male have its shell sliced away and pieces removed till it was several moving piles of meat, eyes blinking and neck muscles retracting into a shell no longer there.

Turtles are not eaten by orthodox Muslims, the religion of most Bangladeshis. There are enough Hindus and Christians to sustain a heavy demand for turtle meat and exports (mainly to Thailand and Singapore) were as high as US\$500,000 worth in 1978/79. One turtle which was reportedly common in Bangladesh at one time was Batagur baska. While there is a large adult in the Mirpur Zoo in Dacca, it hasn't been seen in the wild here for many years. While Bangladesh is indeed a unique country with thousands of kilometers of waterways, the status of its turtles is unknown and exploitation could be threatening some of the other species which are found there. While driving along a stretch of the Arakan Road near Cox's Bazar we saw a turtle crossing ahead of us. We screeched to a halt and pounced on it, a beautiful specimen of the Malayan box turtle, Cuora amboinensis, a find which may be a considerable range extension for the species. At the beach at Cox's Bazar we found some sea turtle bones which have yet to be identified but are likely to be Pacific Ridley (Lepidochelys olivacea) a winter nester on the eastern coast of the Indian subcontinent.

We saw surprisingly few snakes, probably explainable by the fact that every thing was covered in dense grass and bushes. Besides the amphibian calls we knew, like the toad (Bufo melanostictus) bull frog (Rana tigrina), skittering frog (R. cyanophlictus) paddy frog (R. limnocharis), narrow-mouthed frog (Microhyla ornata), painted frog (Kaloula pulchra) and common tree frog (Rhacophorus maculatus) we learned some new ones, a loud chatter from Rana temporalis and the musical tittering of Tytler's frog (Rana tytleri) plus other tantalizing, yet to be tracked down calls from forest ponds and epiphyte draped trees.