

# MUGGER NEWS

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**WHAT IS THIS?**

Why am I having to read this? you ask yourself. Because you are a subscriber to Hamadryad, the Journal of the Centre for Herpetology based at the Madras Crocodile Bank. Due to several factors such as - well, this and that, Hamadryad has had a sort of bradycardial submergence for a year and has recently re-surfaced. In the meantime, this occasional newsletter will keep you posted on what's happening at the Crocodile Bank.

**SPACE WARS**

When the Bank was started in 1975, seven and a half acres of land seemed horribly excessive. What'll we DO with all this space we wondered. There were large tracts of land dotted with a few lonely crocs. Today the scene is reversed: large tracts of crocs with a few spots of land visible here and there. Ten thousand, in short, and still breeding madly. This double-clutching syndrome may be a biologist's and a farmer's delight but it's a financial nightmare, with too many jaws to feed. One of the objectives of the Bank was to re-stock wild habitats, but state wildlife departments have not been able to offer any more release sites. Additionally, they themselves are facing a population explosion at their own croc projects. Legislation under the Wildlife Act of 1972 disallowing the commercial sale of crocs and their products includes captive-bred animals. We are now trying to buy land some forty kilometres from the Bank, to use as a warehouse for surplus crocs.

**INTREPRETATION CENTRE**

On Christmas Day some ten thousand people visited the Croc Bank. Although we constantly upgrade the information boards and add new material, it is an expensive business and we felt the time has come for a total "revamping" of the public education angle. To this end, the World Wide Fund for Nature-India sponsored a consultancy by the Centre for Environmental Education, Ahmedabad. Specialists in interpretive programmes used in zoos, the team has made a plan for the Croc Bank which includes hands-on doing and learning, imaginative presentation of information. The project will be sent to funding agencies later this year.

**GOOD FENCES MAKE GOOD (AND WHOLE) TOURISTS**

The original idea of having open enclosures with low walls has turned out to be unpractical. One tourist jumped into the gharial pond for a wash, another lost his camera trying to hit a croc with it. The large "Keep Hands Out" signs seem to have the opposite effect. Many of the pits now have wire mesh all round, and the walls go up higher every year.

### **PEOPLE (REPTILE PEOPLE)**

In early December 1994, Dr. Indraneil Das returned to the Croc Bank after an absence of three years. The first was spent in Oxford finishing his D. Phil under Malcolm Coe. He had to trot to the lab at 4 A.M. in winter to catch some computer time and has lost some weight. On finishing his doctorate he moved to Brunei to start a study on reptiles and amphibians in association with the University. His two years there have been fascinating but he's happy to be back here (he says).

Dr. Harvey B. Lillywhite of the University of Florida was at the Croc Bank during November and December 1993. He is conducting research on the physiological ecology of the Indian tree frog (Polypedates maculatus). His work is in collaboration with Prof. A. K. Mittal of Banaras Hindu University and is supported by an Indo-American Fellowship. The studies include investigations of skin structure, mucous and lipid secretions and behavioral adaptations related to heat and water balance. At the Croc Bank he was filming behaviour of the frogs, investigating field sites and carrying out biophysical experiments related to heat and water exchange. He returned to Varanasi to complete some laboratory investigations at B. H. U. during January before he left India in early February. The project on Polypedates will become part of a broader comparative investigation of the water relations, distribution and ecology of tree frogs.

Harvey's wife Jamie, daughter Shauna and son Steve were with him and we enjoyed getting to know the Lillywhites.

Dr. Jeff Lang of the University of North Dakota was at the Croc Bank between January and June. Jeff is of course very much a part of the Croc Bank as a Principal Investigator on a Smithsonian-funded project since 1984. Jeff has brought High Tech to the Croc Bank; in fact this is being typed, thanks to the project's generator (the electricity has been off all morning). The program is continually expanding and now includes croc research in the wild and studies on freshwater turtles.

Jeff came with wife Gretchen who is an anthropologist and daughter Ursula. Gretch was on sabbatical from the University of North Dakota and is studying food habits of the local populace.

### **OTHER RESEARCH AT MADRAS CROCODILE BANK**

The Croc Bank has a "Centre for Herpetology", a description to assure colleagues and visitors that our research and conservation activities cover the whole range of amphibian and reptiles.

Farida Tampal, a graduate of the Salim Ali School of Ecology in Pondicherry, has been at the Croc Bank for over a year. She is studying the feasibility of captive breeding of venomous and

endangered snakes. Apart from the Big Four (cobra, krait, Russell's viper and saw-scaled viper), we now have rock and reticulated pythons and king cobras. Farida spends a lot of time on innovative feeding ideas for the baby vipers and cobras, when mice are in short supply. Strips of fish is the latest offering, and the Russell's are eating them! The small project was partly funded this year by a grant from the Serum Institute of India, Pune.

V. Karthikeyan has been studying the Indian softshell turtle (Aspideretes gangeticus) for the past 18 months along the Chambal, one of India's last wild rivers. A lot of the nests he found were preyed on by jackals and monitor lizards. High temperatures resulted in no hatching in some nests. The eggs incubate for over 270 days and hatching is triggered by the first monsoonal rains. Karthik's study was supported by WWF-India, Smithsonian Institution and the National Science Foundation (U.S.A.).

N. M. Ishwar carried out a herpetological survey of some parts of the Eastern Ghats (the chain of low hills that runs roughly parallel to the East Coast of southern India) with support from the Asian Wetland Bureau. Very little work has been done on the herpetofauna of these hills and this was an excellent start to what should develop into long-term studies. After all, this is our 'backyard'.

MCB Director, Romulus Whitaker, was in Buenos Aires in January to attend the conference on sustainable use of wildlife at the World Conservation Union's General Assembly. He is now preparing to do a film on the Andamans for National Geographic and the Royal Geographic Society. Contrary to popular rumours, he still 'does' herpetology.

#### **ESCAPADES AND ESCAPES IN THE FIELD**

R. Arumugam and M. Anand are studying wild mugger on the Moyar River where the Croc Bank has a field station. River transport is the round buffalo-hide boat called 'Coracle' which needs very skilled steering (unless you want to keep going round and round). Master boatman Kalliappan steers it skilfully through narrow rock chasms and waterfalls. But the greater danger are the feral buffaloes which, like muscle-bound gangsters, lie in wait for unwary biologists. Arumugam has become an ace sprinter and tree climber and poor Kalliappan just recovered from a serious misadventure with a big bull. And then there are the human gangsters, the sandalwood smugglers who hide out in these forests. Add to this irascible elephants, which are prevalent, and you get the total picture.

Sea turtle biologist Satish Bhaskar is in the Andaman Islands re-surveying the green and ridley nesting beaches on South Reef after a gap of several years. Within swimming distance (only for Satish, that is) of South Reef is Interview Island, where fifty or so feral elephants live. The original group was abandoned in the 1950s by a timber company that went broke and moved out minus the elephants. Last month, Satish decided to visit Interview and had a run-in with a tusker. He sent his wife Brenda an unusual gift: a garment, once a shirt, which was shredded by the charging jumbo. The shirt saved Satish's life because it fell off his shoulder in his flight and the elephant went for it, momentarily forgetting about Satish. This is an addition to his already rich repertoire of Andaman adventures which include waking up surrounded by sea snakes, finding a crocodile in his tent and being stranded on an island with a dead (and stinking) whale shark.

Also in the Andamans is Harry Andrews, Deputy Director of the Croc Bank. Harry has been in a boat for two months with a Karen (Burmese) ex-hunter, determining the status of the saltwater crocodile. The survey is funded by the Asian Wetland Bureau. (Just before the Andamans stint, Harry was up in Nepal as a consultant to their proposed crocodile project).

Thanks to a grant from the Dutch Government, the Swedish Nature Society and donations from members of the Harvard Museum of Comparative Zoology tour last year, the Croc Bank has brought 5 acres of land near Port Blair for its Andamans and Nicobars field station. Apart from being an important 'scientific presence', the station will invite field biologists to work on the Islands and cooperate with local authorities in conservation activities. There will also be an education and demonstration centre for local people.

The land, which is bordered by a huge stand of mangroves and a rainforest crested hilltop, is a fine example of the rich biotope of these islands. Day geckos, king cobras, saltwater crocodiles, reticulated pythons, Malayan box turtles, all these plus many endemic herps await the herpetologist. Hopefully development plans will take the fragile nature of this environment into account but so far there is little to cheer the naturalist's heart and much to weigh it down. We hope the Croc Bank station will make at least a small difference.

#### **RAT-EATING KING COBRA**

We are happy to report that herps are now learning to circumvent and survive wildlife legislation. Our king cobras, knowing the difficulties in getting permits to catch rat snakes to feed it are very graciously eating rats. Last week they took fourteen, and its health is assured...until rats are included the Wildlife Act. Who knows?

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