HAMADRYAD

Mugger Pir, Karachi, 1947 Photo : Harry Miller

HAMADRYAD: NEWSLETTER OF THE MADRAS SNAKE PARK TRUST

3: No.2; May 1978

NEWS FROM THE MADRAS SNAKE PARK AND MADRAS CROCODILE BANK

In January the Director visited the Uttar Pradesh gharial rehabilitation project where eight hundred gharial are being reared for release in sanctuaries.

The snake park and crocodile bank participated in the Tourist Fair again this year and the public response was encouraging.

After his survey in the Lakshadweep group of islands, Satish Bhaskar has produced a detailed report about the marine fauna in the Islands and identified specific areas where studies on the ridleys, hawksbill and green sea turtles could be undertaken. Suheli, an uninhabited island where the three species nest, will be re-visited this year.

Since sea turtles are now on Schedule 1 of the Wildlife Act, the snake park did not renew its egg collection and hatching programme this season. However Satish Bhaskar spent the season observing nesting Ridleys. It was found that the majority of nests were taken by jackals, and a few were removed to a temporary hatchery later in the season.

E. Mahadev took a trip to the Kilikudi Crocodile Pond near Trichy to see how the crocodiles fared in the November cyclone. According to local villagers, the entire population dispersed with the flood waters but is now gradually returning to the tank.

The snake park participated in the wildlife biology course at the Bandipur National Park in February. A Irula tribal demonstrated catching and handling techniques.

Pervez Merwanji, representing Television News Features, is making an educational film on Indian reptiles at the snake park and crocodile bank.

The Director visited the Papanasam Dam project to discuss with wildlife officials whether mugger can be released into the sanctuary.

A representative from the muncipal Corporation of Bombay made a visit to the Snake Park in order to learn about live snake maintenance, as the Corporation wishes to renew the snake pit in Victoria Gardens.

Mark Craig a student volunteer from England who has generously offered to work for the Snake Park for several months, arrived in March. We have the greatest pleasure in having Mark with us.

HERP NEWS

Tortoise Weighing 4 Maunds Caught

Shillong, December 29: A tortoise weighing about four maunds, believed to be the oldest of its kind in the world, was caught recently from a marshy land near a hillock in Mizoram, according to a report received here. According to older people of the area, judging from its appearance, size and marks, it may be about 1,000 years old (Times of India, 30 December 1977).

A Sanctuary for Crocodiles at Kota

Kota, December 24: A crocodile sanctuary is taking shape in Chambal river between Rawatbhata and Jawahar Sagar dam... Forty-five six month old crocodiles are being reared. The nursery also has nine grown gharials. Three crocodiles between the age of three and four years, have been (released) in Basni river, a tributory of Chambal, their natural habitat (Indian Express, 26 December 1977)

W B Crocodile Breeding Scheme Approved

New Delhi, Feb 22 - The Union Government has approved a scheme for breeding and conservation of crocodiles in West Bengal (Business Standard, 23 February 1978).

Hazardous But Profitable

The State Seed Farm at Kiranthi village, about 10 kms from Tiruthuraipoondi in Thanjavur district, serves as a good example of earning foreign exchange through the sale of the skins of cobra and other reptiles. The snake catchers in Kiranthi village say that in and around the village, as many as 40 to 50 snakes... are acught every day during the months of October, November, and December... The snake catchers who are employed as farm workers or even small farmers owning between two and 2.5 acres (remove) the skins of the reptiles after keeping them in salt pots for some days... Snake skins with six inches width are purchased for Rs.10-80. (The Hindu 22 Jan. 1978).

11 Killed by Snakes in Myothit in 1977

Myothit, 11 Feb. Out of 364 persons bitten by snakes in Myothit Township during a five-year period from 1973 to 1977, 38 died. In 1973 (from January to December), 110 farmers bitten by snakes were given treatment at the Township Hispital and of the snake bite victims, 12 persons who arrived at the hospital after taking treatment with quacks died. In 1974, seven out of 57 persons bitten by vipers died while only three died on their way to hospital. In 1976, of 69 persons bitten by snakes, five died; in 1977, of 82 persons bitten by snakes, 11 died (The Working People's Daily, Burma, 16 February 1978).

IUCN/SSC CROCODILE SPECIALIST GROUP MEETING

The Crocodile Specialist Group of the International Union for the Conservation of Nature's Survival Service Commission met for its 4th working meeting at the Madras Crocodile Bank from 6 to 10 February, 1978. The participants were: F Achaval (Uruguay), P Aia (Papua New Guinea), R Chabreck (USA), J C Daniel (India), K Fuchs (West Germany), Ted Joanen (USA), W King (USA), M Laufa (Papua New Guinea), J Lever (Papua New Guinea), F Medem (Colombia), H Messel (Australia) and R. Whitaker (India).

Comprehensive status reports based on survey work in the field were presented by members for the West Indies, South and Central America, Asia, Australia, Papua New Guinea. The group is concerned about the continuing world trade in crocodile hides, which uses 2,000,000 skins each year. In productive crocodile habitats, local tanneries are being established for a greater turnover of skins. In the Sudan 40-50,000 Crocodylus niloticus are hunted every month, producing 300,000 skins each year. The industry has developed techniques for deoifying skins, making usable previsouly undesirable skins such as that of Paleosuchus. Skins that are currently not on the market are: Crocodylus palustris, Gavialis gangeticus, Crocodylus acutus, Crocodylus intermedius and C.moreleti.

The problems of achieving accurate population surveys were discussed. Often, the "success" of a census depends on the type of habitat being surveyed. Most C.palustris habitats in South India for instance can be definitively surveyed in two or three visits at different times of the year, as there are no alternate habitats, few hatchlings and no killing. Similarly Alligator mississippiensis lends itself well to survey work, as nests (conspicuous by surrounding dead vegetation) can be seen from the air, and nesting usually occurs within a two week period. On the other hand, vast swamplands of the type were Crocodylus porosus live in Australia and Papua New Guinea create difficulties and an accurate census can be obtained only through repeated boat and spotlight counts.

Crocodile farms, restocking stations and conservation efforts being made to rehabilitate rare crocodilians were reviewed. The Group commended the Government of India and the FAO/UNDP project for rescuing the critically endangered and unique Gavialis gangeticus from the imminent threat of extinction. In discussing the rear-and-release programmes for the three Indian species being undertaken by many states, it was noted that C.porosus habitat has been very much reduced.

The Convention on International Trade in Endangered Species (CITES) lists the 25 species of crocodilians. The Group reviewed the placing of these and recommended changes in the light of the status of some having altered in recent years. It was suggested that the American alligator be moved from Appendix 1 to Appendix 2, and Caiman jacare to 1. It was also suggested that C.porosus (except the Papua New Guinea population) and C.acutus be moved to Appendix 1.

During the meeting several hours were spent in demonstrating live crocodile handling and care techniques. Pat Aia from Papua New Guinea carried a permanent souvenir home after a bite from one of our plucky two year old mugger.

PARENTAL CARE IN OSTEOLAEMUS

Charles Beck, Curator of Reptiles at the Memphis Zoo and Aquarium writes that a behavioural project was carried out on the breeding group of Osteolaemus this year. "We incubate artificially. The morning pipping started, we re-introduced three eggs into the nest. When the first young emerged, it was promptly picked up by the mother and held in the rear portion of her mouth, cross-wise, for almost a minute. Then it was gently laid down onto the nest. The other two hatched with no incident. The three shared the quarters, with both parents, for two months. They were removed to facilitate feeding".

VARANUS SALVATOR BREEDING AT MADRAS SNAKE PARK

Around middle May '77 mating was observed between a large male and female V. salvator at the snake park on several occasions. On June 19 the female laid 14 eggs which were left in the ground and covered with strong wire mesh. For a few days she showed protective behaviour toward the nest by chasing the other monitors and members of the staff who approached too close. On September 17,2 eggs were removed for separate incubation. The average size of the eggs was 7cm x 4cm and the weight 30 gms. On November 17 the pit was flooded and the remaining 12 eggs drowned. In January '78 one of the two eggs was opened, revealing a fully formed embryo. On March 7 the other egg hatched for a total incubation period of 260 days. The hatchling is 25cm. long.

BITE OF CALLOPHIS MELANURUS

A 27cm specimen of the Slender Coral Snake (Callophis melanurus) was brought to the snake park from the adjoining Deer Sanctuary on 11 November '77. M Mani, our snake keeper untied the string around its neck (with which it was caught) and was bitten on his right hand. Intense local pain developed minutes after the bite and by evening the hand was considerably swollen. The swelling subsided the next morning.

CHELONIA MYDAS IN MADRAS WATERS

On March 4 a green sea turtle (Chelonia mydas) was captured in a fishing net near the Madras Crocodile Bank in Vadannemeli. This is the first record that we know of green turtles in coastal waters off Madras. A few days later while snorkelling off the rocks at Kovalam (6 kms north) Allen Vaughan saw another green underwater. These rocks support several species of sea grasses.

CORAL REEFS

The 5700km long coastline of India's mainland includes all the four types of sea shore in existence - sandy beach, rocky coast, mangrove swamp and coral reef. Of the four, mangrove swamps and coral reefs occur over stretches very limited in expanse.

Coastal mangroves have been destroyed over much of their original range in India. We could take our cue from Hawaii and reintroduce them into areas where they once flourished.

With coral reefs the situation seems even more critical. Only two localities off the Indian mainland - one in the Gulf of Mannar and Palk Bay, the other in the Gulf of Kutch - support coral and its associated marine life. Both these areas are small and fragile- yet their coral is being harvested for commercial purposes.

In life, coral is beautiful. The hard skeletons of the reef building coral polyps, composed of calcium carbonate, occur in a variety of intricate shapes. The minutely tentacled soft parts of the colonial animals may display any colour in the spectrum. Luminescent bacteria live symbiotically with the coral polyps.

Coral reefs, whether dead or actively growing, offer a home to a multitude of marine animals. These include fishes, molluscs, echinoderms, crabs, sponges, sea snakes, marine worms and algae. Offshore coral reefs, such as those off the string of islands in the Gulf of Mannar, absorb and lessen the destructive power of storm waves. At least two major gains result from this. The longshore transport of particles of beach sand having been checked, erosion of land by the sea is drastically reduced. The economic gain this achieves in terms of utilizable land need hardly be emphasized. Secondly, the relatively calm, silt free waters between the coastline and the offshore coral reef offer conditions suitable for the growth of luxuriant meadows of sea grasses, with all their attendant marine life. In Indian waters these include the dwindling numbers of sea turtles and the rare dugong, both of which subsist on sea grasses. Given a chance to proliferate, these could become important sources of much needed edible protein. A vital factor in the protection of the dugong is the conservation of its sea grass habitat by ensuring the inviolability of sheltering coral reefs.

With the legions of scuba and skin divers in countries abroad increasing phenomenally, it is merely a matter of time before we can expect an "invasion" of Indian waters provided, of course, our coral gardens still exist then. With proper organization and controls, tourist complexes centered around coral rich areas could be established.

Edible species obtainable from Indian coasts sheltered by coral reefs include mussels, oysters and cephalopods for their meat, sea cucumbers for export and algae for making sweets, besides many more.

Corals are useful to science in many ways. To cite a few

examples: biologists use agar-agar, obtained from sea-weed growing among coral reefs, as a medium for bacteria culture. By counting the daily and annual growth rings on fossil Devonian coral, paleontologists confirm the contention of physicists that the length of the year during Devonian times was 400 "days"-- tidal friction having slowed down the earth's rotation to the current 365 times a year. Fisheries scientists study and grow fish, mussels, pearl and edible oysters cultured in sea water hatcheries protected from heavy surf by coral reefs.

The importance- economic, scientific, aesthetic and recreational of coral reefs cannot be doubted. In order to fully utilize this natural resource, we must keep in mind the extreme susceptibility of coral communities to a variety of deleterious stimuli, many of which are man made and therefore controllable. Once killed off or mined from an area, coral may take decades to recover, if recover it does. The slow growth rate of a coral reef (1 to 2.5cms a year) makes it possible for a crowbar wielding coral miner to destroy the work of centuries in a few hours. Water borne silt can choke and destroy a coral reef. Large tracts of the Great Barrier Reef off Australia were laid waste by the coral eating Crown-of-Thorns starfish. This starfish had multiplied out of control, when its main predator, the Triton shell, was depleted by enthusiastic skin diving shell collectors. The coral destroying potential of oil spills and industrial pollution is alarming.

It is conceivable that, in the future, carefully controlled mining of coral for construction purposes and for the manufacture of calcium carbide could be undertaken on a permanent basis. With the example however of the desolation of parts of an immense structure like the Great Barrier Reef before us, the wisdom of allowing the exploitation of our vulnerable little pockets of coral reef is to be seriously questioned. By mining coral at the present rate, whether live or dead, we have too much to lose and too little to gain.

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Vadannemeli Village, Perur P.O.
Chinglepet District
Tamil Nadu

CHECKLIST OF HERPETILES OF JAMMU AND KASHMIR

Volume VI Number 10 of University Review (University of Jammu) includes a complete, up to date checklist of the herpetiles of Jammu and Kashmir by P L Duda and Deep N Sahi, Department of Bio Sciences, Jammu University. The list includes 35 species of snakes, 19 species of lizards, 6 chelonians and 10 amphibians.

THE HERPETOFAUNA OF MADRAS AND ITS VICINITY

T S N Murthy, Zoological Survey of India, Madras

Besides marine, riverine, estuarine and pond habitats, the hilly scrub forest areas such as St Thomas Mount, Velacheri, Chelayur, Tambaram and Kunrathur within a 40 km radius of Madras, the unique Guindy Deer Sanctuary and the surrounding farmland provide ideal habitat for several herpetiles including some rare and interesting forms.

An up to date list of the amphibians and reptiles of Madras city and its neighbourhood is presented below. The work is based on a ten year collecting programme by the author and data from the collections in the Government Museum, Madras, and Madras Snake Park. Common names and local (Tamil) names are given wherever possible.

AMPHIBIANS

Family Ranidae

1. Rana (Tomopterna) breviceps (Schneider)
   (Indian Burrowing Frog)

2. Rana crassa (Jerdon)
   (Jerdon's Bullfrog)

3. Rana cyanophlyctis Schneider
   (Skipper Frog)

4. Rana hexadactyla Lesson
   (Green Frog)
   Tamil: Pachai thavalai

5. Rana limnocharis Boie in Wiegmann
   (Paddy-field Frog)
   Tamil: Keiny thavalai

6. Rana tigrina (Daudin)
   (Indian Bullfrog)
   Tamil: Peria thavalai

Family RHACOPHORIDAE

7. Rhacophorus maculatus (Gray)
   (Common Tree Frog)
   Tamil: Terai

Family BUFONIDAE

8. Bufo fergusonii Boulenger
   (Ferguson's Dwarf Toad)

9. Bufo melanostictus Schneider
   (Common Indian Toad)

Family MICROHYLIDAE

10. Kaloula pulchra taprobanica Parker
(Ceylon Kaloula; painted Frog)
Tamil: Peria kattrai

11. Microhyla ornata Dumeril and Bibron
(Ornate Microhylid)

12. Microhyla rubra (Jerdon)
(Red Microhylid)
Tamil: Siri kattarai

13. Ramanella variegata (Stoliczka)
(Variable Ramanella)

14. Uperedon systoma (Schneider)
(Marbled Balloon Frog)

TURTLES

Family CHELONIIDAE

15. Lepidochelys olivacea (Eschscholtz)
(Olive Ridley)
Tamil: Kadal aamai

Family TRIONYCHIDAE

16. Lissemys punctata granosa (Schoepff)
(Indian Flapshell Turtle)
Tamil: Nada aamai

Family EMYDIDAE

17. Geomyda trijuga (Schweigger)
(Black Pond Turtle or Black Terrapin)
Tamil: Karuppu aamai

18. Geochelone elegans (Schoepff)
(Indian Star Tortoise)
Tamil: Kallu aamai

CROCODILES

Family CROCODILIDAE

19. Crocodylus palustris Lesson
(Marsh Crocodile or Mugger)
Tamil: Mothalai

LIZARDS

Family AGAMADAE

20. Calotes versicolor (Daudin)
(Indian Garden Lizard)
Tamil: Wona

21. Sitana ponticeriana Cuvier
Tamil: Sit wona

Family CHAMELEONIDAE

22. Chameleon zeylanicus laurenti
(Indian chameleon)
Tamil: Pachai wonan

Family GEKKONIDAE

23. Dravidogecko anamallensis (Gunther)

24. Hemidactylus brooki Gray
(Spotted Indian House Gecko)
Tamil: Veedu palli

25. Hemidactylus leschenaulti Dumeril and Bibron
(Tree Gecko)
Tamil: Maram Palli

26. Hemidactylus frenatus Schlegel

27. Hemidactylus triedrus (Daudin)
(Blotched Gecko)

28. Lopholopis scabriceps (Annandale)

Family SCINCIDAE

29. Mabuya bibroni Gray

30. Mabuya carinata (Schneider)
(Common Skink)
Tamil: Arrnay

31. Mabuya macularia (Blyth)

32. Mabuya trivittata (Hardwicke and Gray)

33. Ophisops jerdoni Blyth

34. Riopa punctata (Gmelin)

Family VARANIDAE

35. Varanus bengalensis (Daudin)
(Indian Monitor)
Tamil: Udumbu

SNAKES

Family TYPHLOPIDAE

36. Typhlops braminus (Daudin)
(Brahminy Blind Snake)
Tamil: Seer pambu

37. Typhlops psammeces Gunther

Family BOIDAE

38. Eryx conicus (Schooider)
(Indian Sand Boa)
Tamil: Munnveli pambu

39. Eryx johni johni (Russell)
(Russell's Sand Boa)
Tamil: Iruthalai pambu

40. Python molurus (Linn.)
(Indian Python)
Tamil: Malai pambu

Family COLUBRIDAE

41. Ahaetulla nasutus (Lacepede)
(Green Whip Snake)
Tamil: Pachai pambu; Kankuthi pambu

42. Amphiesma stolata (Linn.)
(Striped Keelback)

43. Atretium schistosum (Daudin)
(Olive Keelback Watersnake)
Tamil: Thanni pambu

44. Elaphe helena (Daudin)
(Trinket snake)

45. Boiga trigonata trigonata (Schneider)
(Cat snake)

46. Cerberus rhychops (Schneider)
(Dog-faced watersnake)

47. Dendrelaphis tristis (Daudin)
(Bronze-back Tree Snake)
Tamil: Maram eri pambu

48. Dryocalamus nympha (Daudin)
(Bridal Snake)

49. Lycodon aulicus aulicus (Linn.)
(Common Wolf Snake)
Tamil: Nai pambu

50. Lycodon striatus (Shaw)
(Striated Wolf Snake)

51. Oligodon arnensis (Shaw)
(Banded Kukri Snake)
Tamil: Yena panian

52. Oligodon taeniolatus (Jerdon)
(Lined Kukri Snake)

53. Ptyas mucosus (Linn).
(Indian Rat Snake)
Tamil: Sarai pambu

54. Xenochropis piscator (Schneider)
(Checkered Keelback Watersnake)
Tamil; Thanni pambu

Family ELAPIDAE

55. Bungarus caeruleus (Schneider)
(Common Krait)
Tamil: Ennai Viriyan; kattu viriyan

56. Callophis melanurus (Shaw)
(Slender Coral Snake)

57. Naja naja naja (Linn.)
(Indian Cobra)
Tamil: Nalla pambu, Naga pambu

Family HYDROPHIIDAE

58. Enhydris schistosa (Daudin)
(Hook-nosed Sea Snake)
Tamil: Valakadien

59. Hydrophis caerulescens (Shaw)
(Malacca Sea Snake)

60. Hydrophis cyanocinctus Daudin
(Annulated Sea Snake)
Tamil: Kadal sarai

61. Hydrophis spiralis (Shaw)
(Yellow Sea Snake)

62. Hydrophis fasciatus (Schneider)
(Banded Sea Snake)

63. Kerilia jerdoni Gray
Jerdon's Sea Snake)

64. Microcephalophis gracilis (Shaw)
(Common Small-headed Sea Snake)
Tamil: Miriamthalai pambu

65. Pelamis platurus (Linn.) (Long-nosed Sea Snake)

65a. Lapemis curtus (Malabar Sea Snake)

Family VIPERIDAE

66. Echis carinatus Schneider
(Saw-scaled Viper)
Tamil: Surattai viriyan

67. Vipera russelli (Shaw)
(Russell's Viper)
Tamil: Kannadi viriyan

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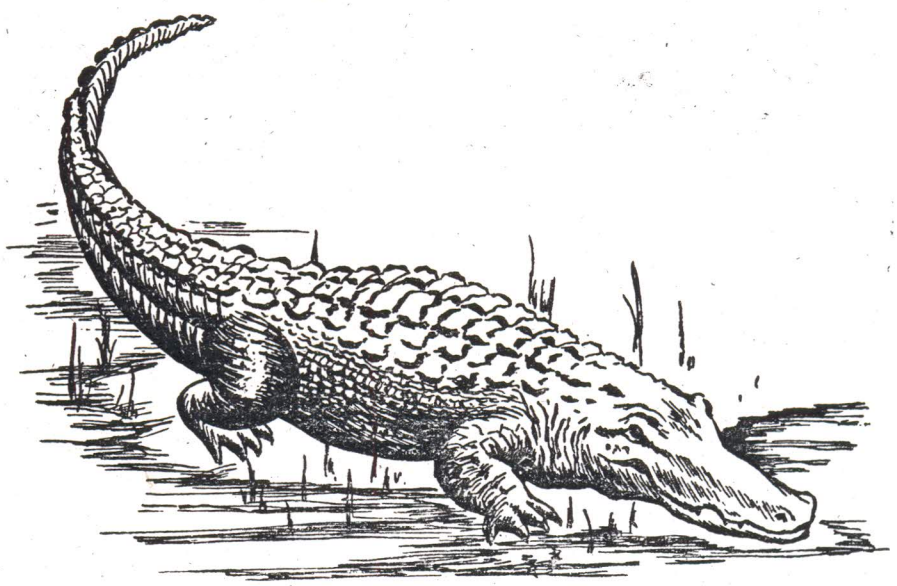

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