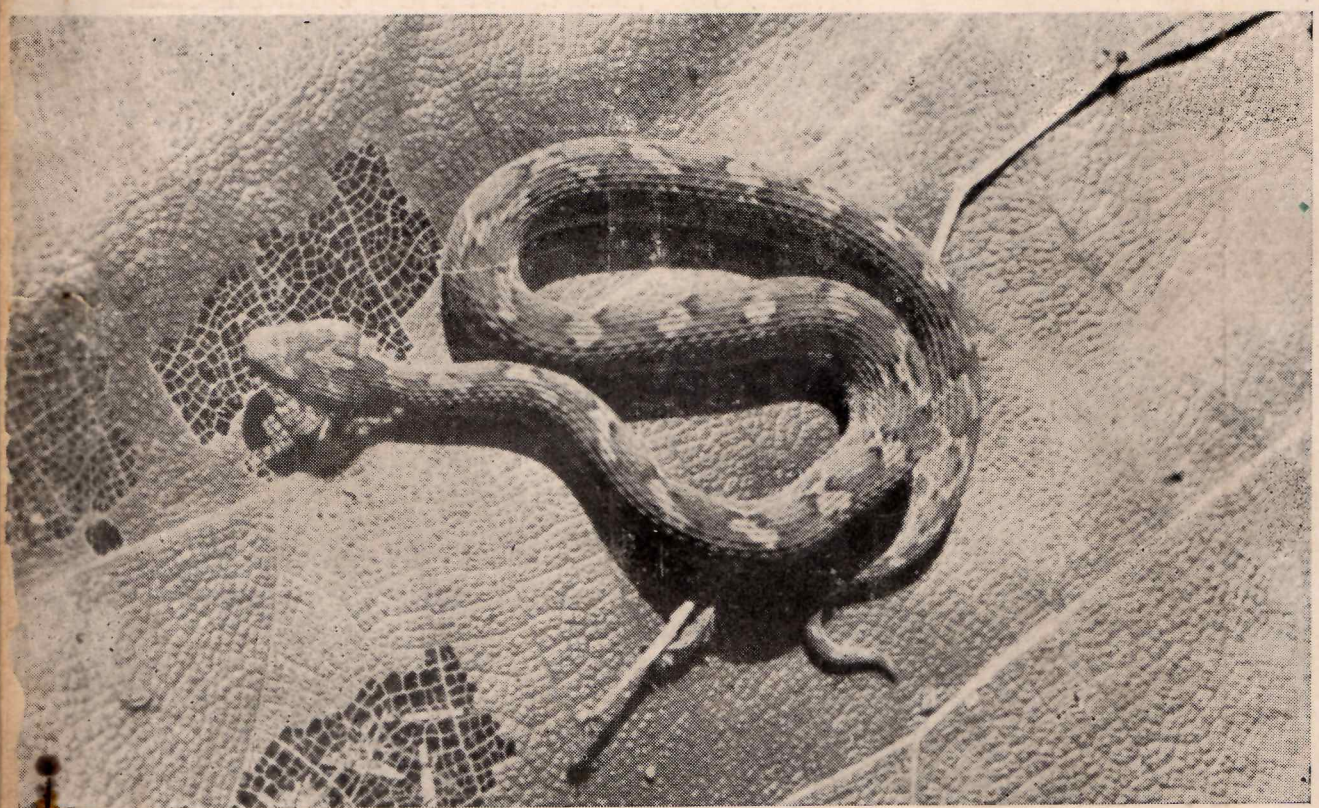
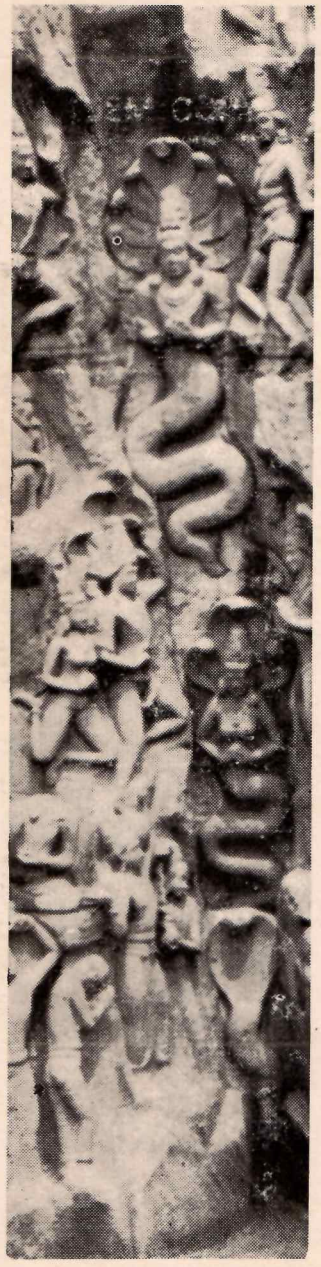
Cobra

Number 5 — Quarterly Newsletter — July-Sep. 91



Saw Scaled Viper
Echis carinatus, basking on teak leaf.
Photo by: A.J. Ganesh Prasanna

Madras Snake Park Trust
Guindy National Park - Guindy
Madras - 600 022. - India



WELCOME TO MADRAS SNAKE PARK TRUST

* The Madras Snake Park Trust was established in 1971 on a one-acre plot of forest land leased by the Govt. of Tamil Nadu at Guindy, Madras. Managed by a Trust, the MSPT is a centre for Education, Tourism, Conservation, Service and Research on Reptiles.

* A variety of live Reptiles, both Indigenous and Exotic are displayed which include Marsh Crocodile, Giant Tortoise, Reticulated Python. South American Iguana and other species of Snakes, Lizards and Turtles. Besides, a Snake Lore Centre and a Museum of Reptile specimens are maintained.

* The Park is open from 8.30 a.m. to 5.30 p.m. on all days of the year.

* **Entrance fee :** Adult Re. 1/- and Child Re. 0.50.

* Photography charges are—free for still cameras and Rs. 100/- for Video Cameras. For commercial Video contact office.

* Hourly Demonstration of a few kinds of live Reptiles with commentaries is conducted.

* Nearly 12 lakhs persons visit MSPT a year.

COBRA

Quarterly Newsletter of the Madras Snake Park Trust

CONTENTS

Annual Subscription for 4 issues of COBRA commencing from 1—1—91	Rs. 75/- Inland US $ 10/- Overseas (including postage)

MADRAS SNAKE PARK TRUST PROGRAMME FOR "INDIA TOURISM YEAR - 1991–1992"

1. Special pamphlets on common poisonous snakes and non-poisonous snakes with special legends about them to be issued at Rs. 3/- and Rs. 5/-.

2. The regular hourly reptiles demonstration now being conducted in Hindi / Tamil English will also be extended with special tapes in several Indian languages like Kannada Telugu, Malayalam, Bengali, Oriya, Marathi, Punjabi, Gujarati, Goanese, Urdu etc and Foreign languages like Russian, Japanese, Spanish, German, French, Chinese, Italian etc.

Tourist groups could avail of these special demonstration at Rs. 50/- Indian and Rs. 100 or US $ 5 for Foreign languages.

Opening of the Exhibition Building displaying—

—Reptile lore around the world.

—Myth, Mythology, Worship and other interesting facets of Reptile-lore in our Indian Culture to commemorate the India Tourism year 1991/ - 1992.

ECOLOGY AND STATUS OF A LITTLE KNOWN LIZARD

Otocryptis beddomi (Boulenger)

DR. R.J. RANJIT DANIELS

Centre for Ecological Sciences,
Indian Institute of Science, Bangalore - 560 012, *India*

Of the various agamid lizards found in India, those in the general *Calotes, Salea, Psammophilus* and *Otocryptis* are found in the evergreen forests and associated humid environs in the Western Ghats. While species of *Calotes* such as *versicolor, calotes* and *rouxi* are fairly common and widespread in the Western Ghats, the two species of *Salea* are restricted to the higher mountains such as that of the Nilgiris and Anaimalais. *Psammophilus blanfordianus,* a rock agama with brilliant red head, is more common in the Southern Western Ghats preferring the exposed rocks along streams and hill tops as its habitat. It is also interesting that very small juveniles of this species squeak when caught (Daniels, pers. observ.)

Amongst the forest lizards of the Western Ghats, *Otocryptis beddomi* is probably the least known. This small lizard of the forest floor is in size and overall appearance much like the commoner *Sitana ponticeriana* of the semi-arid habitats in India. Adults measure 45 mm snout-vent with a longer tail of 80 mm. Being terrestrial, the species may be considered as an ecological parellel of the *Sitana* in the humid forests of the Western Ghats. The only other species in the genus *Otocryptis* is restricted to Sri Lanka.

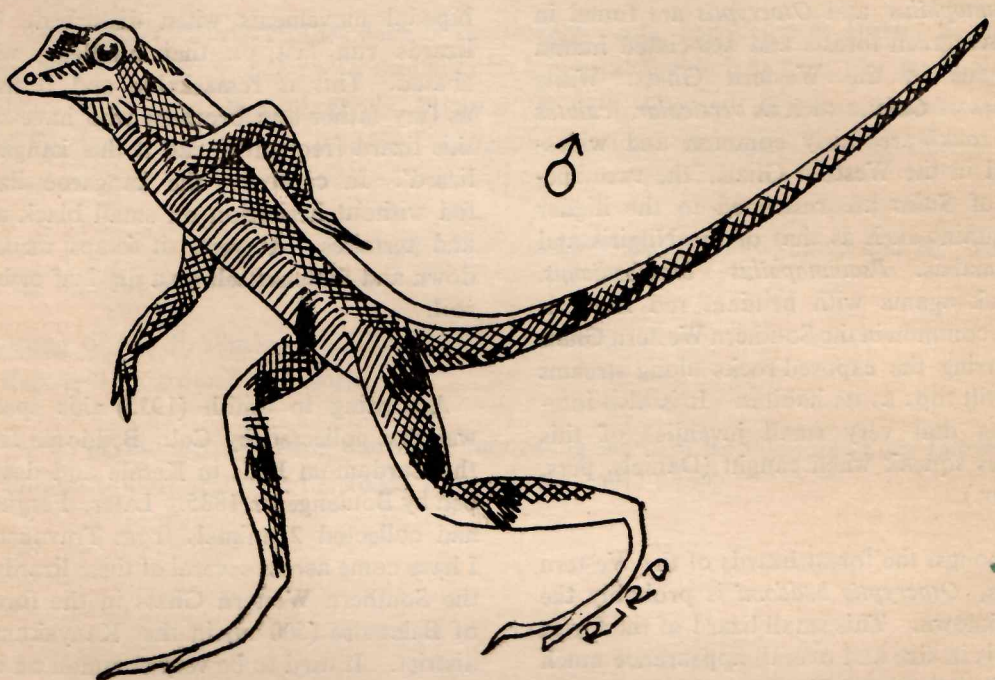
The males are larger than the females. The general colouration is dull brown closely blending with the dry leaves on which they rest and forage. A paler band from head to tail along the midback identifies the males. Males, unlike most other agamids, lack a gular flap. The most interesting feature about this lizard is its bipedal movements when disturbed. The lizards run fast on their hindlegs when chased. This is remarkable and it made us (my father and brothers who have seen this lizard frequently) call it the 'kangaroo lizard'. In captivity, the kangaroo lizard fed without hesitation on small black ants and termites. At rest, it keeps its chin down and flattens itself on a dry leaf or bare soil.

According to Smith (1935) this species was first collected by Col. Beddome from the Cardamom Hills in Kerala and described by Boulenger in 1885. Later, Ferguson had collected 2 animals from Travancore. I have come across several of these lizards in the Southern Western Ghats in the forests of Balamore (500 m) in the Kanyakumari district. It used to be very common on leaf litter in dense evergreen forests. Pairs were easily disturbed while walking on leaf strewn footpaths in these forests during the 1960s. My father used to bring home individuals as pets for us after a morning or evening walk in these hills. However, I have never seen the species elsewhere in the Western Ghats despite many years of my field work in pursuit of birds and amphibians. The last time that I saw the kangaroo lizard was in the early 1970s. It was a single female within an estate in the Maramalai Hills at an altitude of 400 m. These hills are slightly to the south of Balamore, but connected.

The species is possibly extinct over much of its small range. We know nothing about its ecology and life history. Opening the forest canopy seems to have affected the species in the areas where I have seen it twenty years ago. The present status of this little known and very interesting species of lizard must be looked at.

Reference

Smith, M.A. (1935) *The Fauna of British India : Reptilia and Amphibia* II, Taylor and Francis, London, pp 440.



Kangaroo lizard in bipedal movement.

COBRA VENOM—RICH SOURCE OF USEFUL CHEMICALS

M.W. PANDIT

Centre for Cellular and Molecular Biology, Hyderabad.

Cobra is common in all parts of India. Over 100 persons are reported to die from snake bite every year in different parts of the world. In India about 2 lakhs of persons are reported to be bitten by snakes of all kinds annually and the mortality rate is 8%. Normally the death occurs because cobra venom contains lot of toxic agents. When one thinks of the role of venom and its significance to animals, many questions come to our minds such as

1. Why do venomous animals exist (or evolve) ?
2. What is the primary function of the venom ?
3. Is the venom used for capturing food ?
4. Are venoms used principally for digestion ?
5. Is the venom useful for self-defence function as never-ending struggle for survival ?

Cobra venom is a transparent liquid when collected fresh, but turns translucent on exposure to light and air. Venom can be stored at -4°C. Studies on snake venoms have shown that the cobra venom contains proteins equivalent to 90—92% of its dry weight and it is a rich source of several proteins and enzymes such as nucleases, phospholipases, phosphodiesterases, proteases, blood clotting enzymes, neurotoxins, etc. Some of these constituents have been found to be useful in biological research; they have been shown to possess biologically important activities such as hemorrhagic/anti-hemorrhagic activities and neurotoxic and hemolytic activities, etc.

The RNA molecule is made up of four bases : C, G, U and A. Those enzymes, which cleave RNA molecules are called ribonucleases. Some of these ribonucleases show specificity towards a particular base in a given sequence of RNA, while some recognise specific structure of RNA. Such enzymes which show specificity of any of he types mentioned above are useful in biological research. It is known that the cobra venom contains many nucleases. The idea of isolating and characterising nucleases of specific type from cobra venom was initiated because of the need for such enzymes and the availability of substantial amount of venom in the laboratory. Already a ribonuclease, from bovine seminal plasma, which showed pyrimidine specificity has been isolated and characterised. On similar lines, studies on ribonucleases from cobra venom have been taken up.

During the search for enzymes with unusual properties, an enzyme which was found to cleave polycytidylic acid has been isolated from cobra venom. This enzyme showed specificity towards cytidylic acid when synthetic homopolymers of ribonucleotides were used as substrates. The activity of the enzyme is dependent on metal ions, like Mg^{2+}. The behaviour of the enzyme with respect to natural substrates is being studied in order to confirm whether it could be used as a tool in biological research. It is too early to comment on the utility of the enzyme

to common man; however, the following possibilities could be indicated :

1. Such enzymes could prove to be useful as a tool in studying the structure of biological macromolecules such as ribonucleic acids.
2. One can use such enzymes for manipulating the products of genetic material by cutting them at the desired place.
3. These enzymes, as they are used at present, could be used by research scientist for deciphering the order of building blocks and structure of RNA chains.

Some Interesting Facts about Cobra Snake and Its Venom

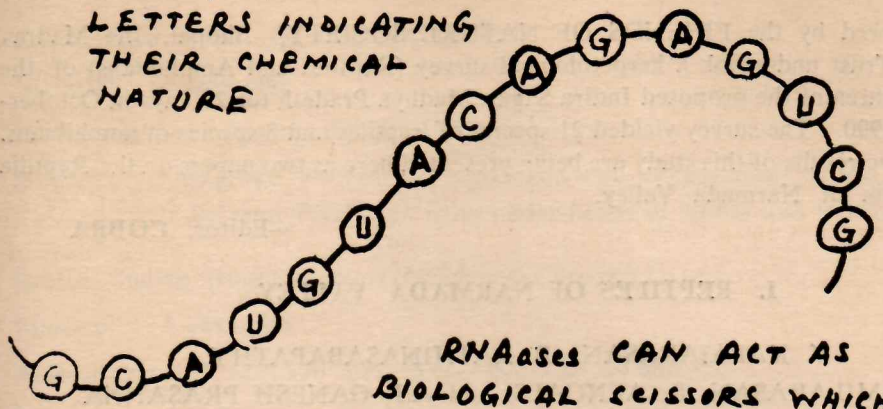
* Cobra — Scientific name — **Naja naja**
* In Portugese 'cobra' means snake
* In English the name is given to a snake having hood with marks on it.
* Cobra has acquired different names in different parts of India. For e.g.

a)	Nag or Naga	—	Uttar Pradesh, Madhya Pradesh, Bihar, Orissa, Maharashtra, Gujarat.
b)	Gokhura	—	West Bengal
c)	Nalla Pambu	—	Tamil Nadu and Andhra Pradesh
d)	Nāgarahāvu	—	Karnataka

* Maximum length of cobra recorded uptill now — 1.47 mtrs.
* About 2500 species of snakes are found in the warmer regions of the world. Nearly 216 species of snakes have been recorded from India of which only 52 are poisonous. Out of 2500 known types of snakes, less than 200 are dangerous to human beings.
* The average output of venom per snake at a time is about 200 mgs of dry weight.
* Male snake gives more yield of venom than female snake.
* Average cobra secretes enough venom to kill 15 persons.
* Cytidylic acid—specific ribonuclease constitutes 12-% of the dry weight of snake venom powder.

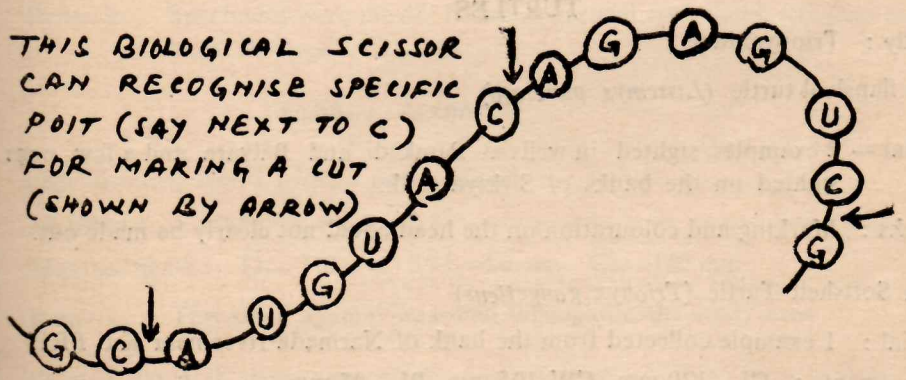
[For more information of the cytidylic acid specific enzyme, contact Dr. M.W. PANDIT, Centre for Cellular & Molecular Biology, Hyderabad 500 007, India]

RNA CHAIN CONSISTS OF FOUR TYPES OF BUILDING BLOCKS. THESE BLOCKS ARE DESIGNATED BY FOUR LETTERS INDICATING THEIR CHEMICAL NATURE



RNAases CAN ACT AS BIOLOGICAL SCISSORS WHICH CAN CUT RNA-CHAIN BETWEEN THE TWO BUILDING BLOCKS.

THIS BIOLOGICAL SCISSOR CAN RECOGNISE SPECIFIC POIT (SAY NEXT TO C) FOR MAKING A CUT (SHOWN BY ARROW)



ONE OF THE RNAases PURIFIED FROM COBRA SNAKE VENOM, IS IN FACT, SPECIFIC TO CYTIDYLIC ACID AND CUTS AT SPECIFIC POINTS AS INDICATED BY ARROWS IN THE FIGURE

FIGURE

HERPETOLOGICAL SURVEY OF NARMADA VALLEY— MADHYAPRADESH

Sponsored by the FRIENDS OF NATURE SOCIETY, Bhopal, the Madras Snake Park Trust undertook a herpetological survey (Reptiles and Amphibians) of the submergence area of the proposed Indira Sagar, Madhya Pradesh for 23 days in October-November, 1990. The survey yielded 21 species of reptiles and 8 species of amphibians. The taxonomic results of this study are being presented here as two papers on the Reptilia and Amphibia of Narmada Valley.

—Editor, **COBRA**

I. REPTILES OF NARMADA VALLEY

V. KALAIARASAN, B. RATHINASABAPATHY,
P. TAMILARASAN, R. AENGALS, and A.J. GANESH PRASANNA.

The present report is based on the study made by the Madras Snake Park Trust Research team during October-November 1990 at Narmada Valley in Madhya Pradesh. The study yielded 21 species of reptiles comprising 2 species of riverine turtles, 10 species of lizards and 9 species of snakes

TURTLES

Family : Trionychidae

1. Indian flapshell turtle (*Lissemys punctata*)

Material — 2 examples, sighted in wells at Pamkedi and Balvara and a few eggs sighted on the banks of Sirkiya tank.

Remarks : Marking and colouration on the head could not clearly be made out.

2. Indian Softshell Turtle (*Trionyx gangeticus*)

Material : 1 example collected from the bank of Narmada river near Kiti FRH

Measurements : CL—120 mm, CW 105 mm, PL—95 mm.

Remarks : The specimen was collected at night below a fluorescent lamp where it was feeding on insects.

LIZARDS

Family : Gekkonidae

3. *Cyrtodactylus collegalensis*

Material : 1 example

Measurements : TBL — 72 mm, SVL — 48 mm, CL—24 mm.

Remarks : This species is confined to Hills of Southern India and Srilanka at low elevations. The present specimen constitutes a new record from Madhya

Pradesh. Collected from under leaf litter in a moist spot, its photograph appeared on the cover page of COBRA, Number 4.

4. Termite Hill Gecko (*Hemidaciylus triedrus*)

Material : 2 examples

Measurements : Average length 140 mm.

Remarks : This gecko is commonly associated with termite hills. It was collected at Balwara FRH area from under heaps of stones and fallen leaves.

5. Spotted Indian House Gecko (*Hemidactylus brooki*)

Material : 5 examples

Measurements : TL—130 mm, SVL—80, CL—50 mm

Remarks : A common gecko found throughout the study area.

6. Tamarind tree Gecko (*Hemidactuyls leschenaulti*)

Material : 6 examples

Measurements : TL—120 mm SVL—70mm CL—50 mm.

Remarks . Specimens were mostly found in vertical rock faces, crevices and under bark of trees.

Family : Agamidae

7. Fan–throated lizard (*Sitana ponticeriana*)

Material : 5 examples

Measurements : TL—240 mm SVL—80 mm CL—160 mm.

Remarks : This small agamid was seen throughout the study area.

8. Garden lizard (*Calotes verstcolor*)

Material : 14 examples

Measurements : TL 147 mm SVL—102 mm CL—45 mm.

Remarks : This garden lizard inhabits all types of habitats and sighted throughout the study area.

9. Rock lizard (*Psammophilus blanfordanus*)

Material : 20 examples

Measurements : TL—300 mm SVL—100 mm CL—200 mm

Remarks : Collected mostly from rock crevices and under stones throughout the study area.

10. Short-tailed agama (*Agama minor*)

Material : 2 examples

Measurements : TL—135 mm SVL—90 mm CL—45 mm.

Remarks : It is a sluggish, crepuscular and nocturnal lizard seen at Kiti.

Family Scincidae

11. Common skink (*Mabuya carinata*)

Material : 16 examples

Measurements : TL—80 mm SVL—40 mm CL—40 mm.

Remarks : Found throughout the study area under logs, leaf litter etc.

Family : Varanidae

12. Common monitor (*Varanus bengalensis*)

Material : 10 examples

Measurements : TL—1140 mm SVL—500 mm CL—90 mm

Remarks : They were sighted in tree holes, under logs and at times in burrows.

Snakes

Family : Colubridae

13. Wolf snake (*Lycodon aulicus*)

Material : 1 example

Measurements : TL—150 mm SVL—60 mm CL—90 mm.

Remarks : It is a nocturnal snake, inhabiting caves, stone piles, tree hollows and under bark. This specimen was collected from Pamakedi FRH at night.

14. Striped keelback (*Amphiesma stolata*)

Material : 3 examples

Measurements : TL—250 mm SVL—180 mm CL—70 mm.

Remarks : A nonvenomous snake common in cultivated areas, ponds and nalas. They were collected at Pamakedi.

15. Checkered keelback (*Xenocrophis piscator*)

Material : 8 examples

Measurements : TL—1370 mm, SVL—1120 mm, CL—250 mm

Remarks : It is the commonest freshwater snake seen in water bodies. A few specimens were collected from small nalas also. A big specimen was captured in front of Kitti FRH which was swallowing a bull frog. (See photograph)

16. Rat snake (*Ptyas mucosus*)

Material : 6 examples

Measurements : 2460 mm SVL—1900 mm CL—560 mm

Remarks : Specimens were trapped from vertical rock crevices.

17. Bronzeback tree snake (*Dendrelaphis tristis*)

Material : 1 example

Measurements : TL—650 mm SVL—570 mm CL—80 mm

Remarks : This snake was collected from the bark of a dried teak tree near Sahasradhara Island.

18. Cat snake (*Boiga trigonata*)

Material : 1 example

Measurements : TL—540 mm CL—105 mm

Remarks : This snake was collected at Kiti on the bank of Narmada at night.

Family : **Elapidae**

19. Common krait (*Bungarus caeruleus*)

Material : 1 example

Measurements : TL—1200 mm, SVL—905 mm CL—295 mm.

Remarks : One specimen was collected from a burrow at a depth of a metre.

20. Black cobra (*Naja naja*)

Material : 4 examples

Measurements : TL—640 mm SVL—510 mm, CL—130 mm

Remarks : Specimens were seen mostly in crevices on vertical rock faces. (See photograph)

Family : **Viperidae**

21. Saw-scaled viper (*Echis carinatus*)

Material : 6 examples

Measurements : TL—432 mm, SVL—403 mm, CL—29 mm

Remarks : One specimen from Balwara forests was found basking on teak leaf a metre above the ground (see front cover page)

Acknowledgement

We are thankful to Hony. Secretary, Mr. A.N. Jagannatha Rao and Trustees of the Madras Snake Park Trust, for providing all facilities to undertake this survey. We are indebted to Dr R.S. Pillai and Dr. M.V. Rajendran for their encouragement.

II. AMPHIBIA OF NARMADA VALLEY

R.S. PILLAI, M.S. RAVICHANDRAN and P. TAMILARASAN.

Introduction

The amphibian fauna of Madhya Pradesh is poorly known. There are no taxonomic studies dealing with the amphibians of M.P., and what is known lies scattered in various journals and monographs. A compilation of these shows that one could expect eleven species for the entire State. As the largest State in India with an extensive drainage of Narmada and with a proportionately large forest cover, a record of eleven species of Amphibia is rather too modest and reflects the paucity of surveys and studies. More work shall certainly enhance the number of species of Amphibia.

The area involved in the present studies *viz.* the submersion area is about 91,000 ha. No taxonomic studies have ever been conducted in this region as far as the Amphibia are concerned. In as much as the study area constitutes only a very small percentage of the area of the State, one could expect only a poor tally of species. However, the present survey has yielded as many as eight species. More significant is the fact that the present study has yielded two new records for M.P.

Collections were made from a wide variety of habitats, both terrestrial and aquatic, and represent species which live in stagnant water, soil and litter, on the banks of streams, on the water's edge, in shallow water, on bushes and trees and those that are partial to marsh and wetlands.

List of Amphibia of the Narmada Valley

Class Amphibia

Order Anura

Family Bufonidae

Genus *Bufo laurenti*

1. *Bufo melanostictus* Schneider
2. *Bufo microtympanum* Boulenger

Family Microhylidae

Genus *Microhyla* Tschudi

3. *Microhyla ornata (Dumeril & Bibron)*

Family Ranidae

Genus *Rana* Linnaeus

4. *Rana cyanophlyctis* Schneider
5. *Rana limnocharis* Boie
6. *Rana tigerina* Daudin

Genus *Tomopterna* Dumeril and Bibron

7. *Tomopterna breviceps* (Schneder.)

Family Rhacophoridae

Genus *Polypedates* Tschudi

8. *Polypedates maculatus* (Gray)

Systematic Account

1. *Bufo melanostictus*, the common toad

Material :

3 examples collected near Bilwada and Piplaghat River.

Remarks :

This toad was seen at night in and around, the rest houses at Punasa and Pamakhedi

and also along the roads, particularly below street lights, feeding on insects attracted to light. During day they were encountered in the drier parts of the forest floor, hiding under bushes, barks of trees, stones and litter.

Distribution :

Throughout Southern Asia to Sri Lanka; Sumatra; Java Borneo; Bali; South Western and Southern China (including Taiwan)

2. *Bufo microtympanum*, the South Indian hill toad

Material :

1 example between Pipalni village and Sakarghata.

Remarks :

Habits are almost similar to the common toad but it is much rarer and was collected only at one locality. Known hitherto only from the Southern Peninsular India, this single specimen constitutes a new record of the species for Madhyapradesh.

Distribution :

Kerala and Sri Lanka, and now Madhyapradesh.

3. *Microhyla ornata*, the ornate narrow-mouthed frog

Material :

10 examples collected from Chayan nala, Pamakhedi and Sirkia.

Remarks :

This tiny frog was seen in many localities. They were more at home on moist earth with grass and creepers either in low lying plains or on sandy embankments where they hop about during day time.

Distribution :

All over India; Sri Lanka; Southeast Asia to Malay Peninsula; Southern China (including Taiwan and Haina): and Ryukyu Island (Japan).

4. *Rana cyanophlyctis*, the skipper frog

Material :

7 examples from Chayan nala and Kiti

Remarks :

They were seen in some of the stagnat water bodies.

Distribution :

All over India; Sri Lanka; Malaya; Afghanistan; Pakistan and Southern Iran.

5. *Rana limnocharis*, the cricket frog

Material :

105 examples were collected.

Remarks :

Specimens were collected from practically all the ponds,stagnant waters, marshes and other wetlands. Many of these were seen on the banks of streams sheltering in vegetation and among stones and rocks. Considerable colour variation was noticed in the specimens collected.

Distribution :

All over India; China (Taiwan); Sichuan and South of Chuanche River and North to Shandong to Nepal; Pakistan; Sri Lanka; Southern Japan; Philippines; Greater Sunda Is.; and the Lesser Sundas as far east as Flores.

6. *Rana tigerina*, the bull frog

Material :

3 examples collected at Piplani village and near the dam site.

Remarks :

This species was collected from large water bodies where they were seen hiding in grass or hollows. A very large specimen was collected from a sheltered part of the Narmada River at Kitti along with the water snake which held it by the hindleg. (See photograph)

Distribution :

All over India; Sri Lanka; Malaya; Southern China.

7. *Tomopterna breviceps*, the Indian burrowing frog

Material :

10 examples from Bilwada, Pipalni, Bhorla, Dariaghat, Tikari and Kitti.

Remarks :

These were collected from moist forest litter and river. They also exhibited a lot of variation in colour patterns. This species also is being reported for the first time from Madhyapradesh.

Distribution :

Bihar, Himachal Pradesh, Kerala, Orissa, Punjab; Rajasthan, Tamil Nadu; Uttar Pradesh, West Bengal and now Madhya Pradesh; Burma and Sri Lanka.

8. *Polypedatus maculatus*, the common tree frog

Material :

6 examples from Pamakhedi, Damsite, Pipalghat and Tikari.

Remarks :

These frogs were regular visitors in the bathrooms of both the rest houses at Punasa and Pamakhedi. Some were seen at night climbing the creepers and garden plants. A number of specimens were seen among dry leaf litter along the course of streams in moist deciduous forests. None were seen in water.

Distribution :

All over India (except Haryana, Punjab, Rajasthan); Sri Lanka

The authors are thankful to Shri A.N. Jagannatha Rao who led the tour efficiently. Dr. M.V. Rajendran was of immense help in the field.

CONTRIBUTIONS ON REPTILES INVITED

COBRA solicits papers on snakes, lizards, turtles and crocodiles for quick publication.

Papers may be on any aspect : Ecology, Biology, Natural History or Conservation.

Faunal and Behavioural aspects are also welcome.

Contributions not exceeding 8 typed pages may be sent to Dr R.S. Pillai, Editor, COBRA, Madras Snake Park Trust, Guindy National Park, Madras 600 022.

SNAKE LORE

THE SNAKE THAT REFORMED

A snake had bitten several people and the villagers were afraid to go near the field in which it resided.

One day a scholar was passing that way and the snake came slithering out of its hole, hissing loudly. The man however showed no fear and he had such a gentle look on his face that the snake felt uneasy and slightly ashamed of itself.

"Why do you behave so badly ?" asked the man and gently chided the snake for its wicked ways. The snake. abashed, writhed in embarrassment and promised not to bite anyone again.

The snake kept its word.

The villagers were at first surprised to see the snake behaving in such a docile manner but once they got used to the snake's new personality they lost all fear of it. They began to pelt it with stones and drag it around by its tail.

One evening the snake crawled to the scholar's house and complained bitterly about the way the people were treating it.

The scholar was moved to pity. "The people have lost their fear of you" said the man "you should not have stopped frightening them."

"But it was you who told me to practise non-violence," protested the snake.

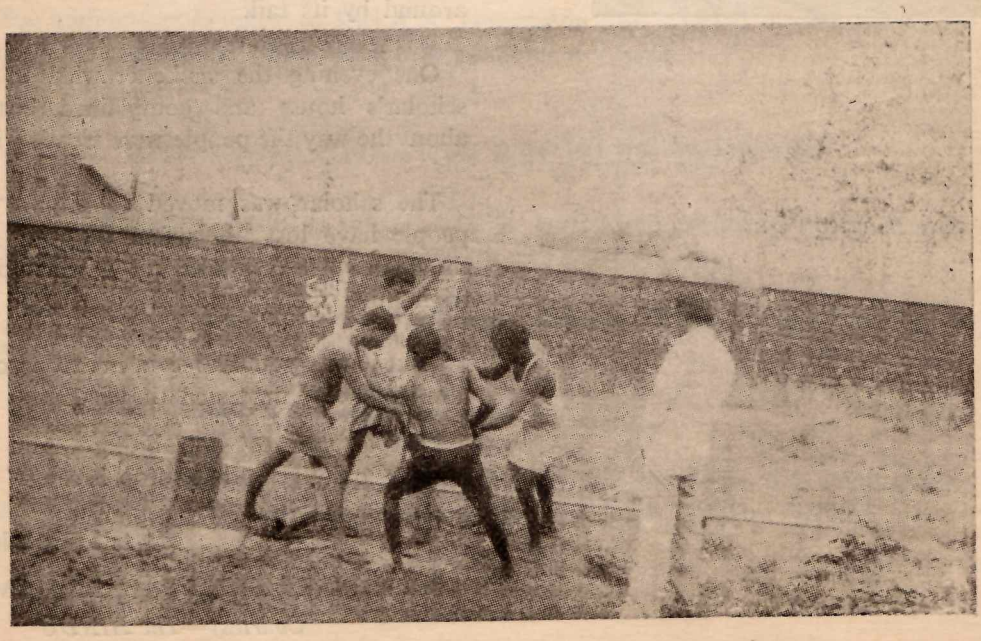
"I told you to stop biting" said the scholar quietly, "not to stop hissing."

A tale first told by

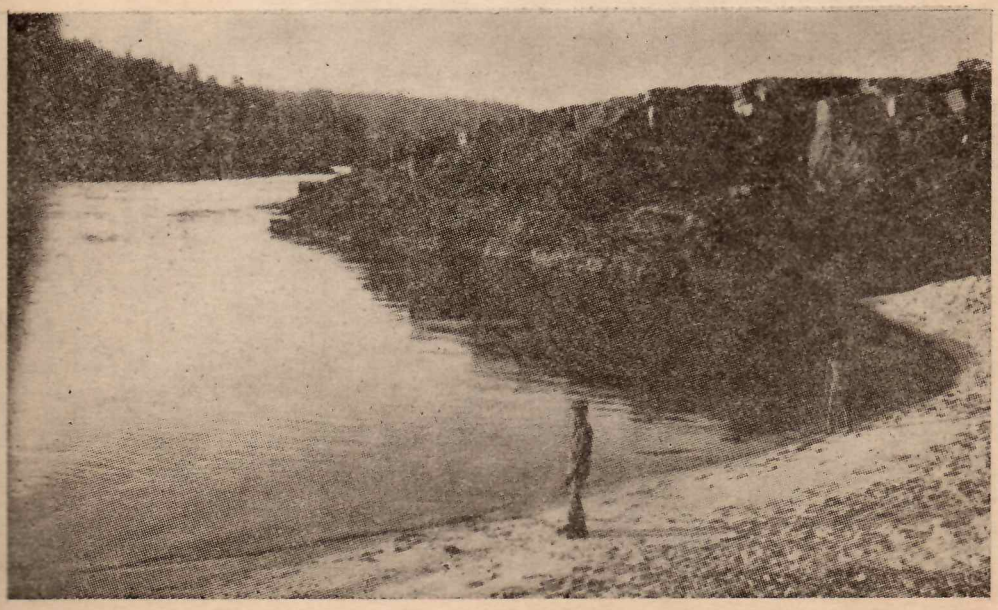
Sri. RAMAKRISHNA PARAMAHAMSA

Courtesy—The HINDU

Work in progress at the new premises of M.S.P.T.

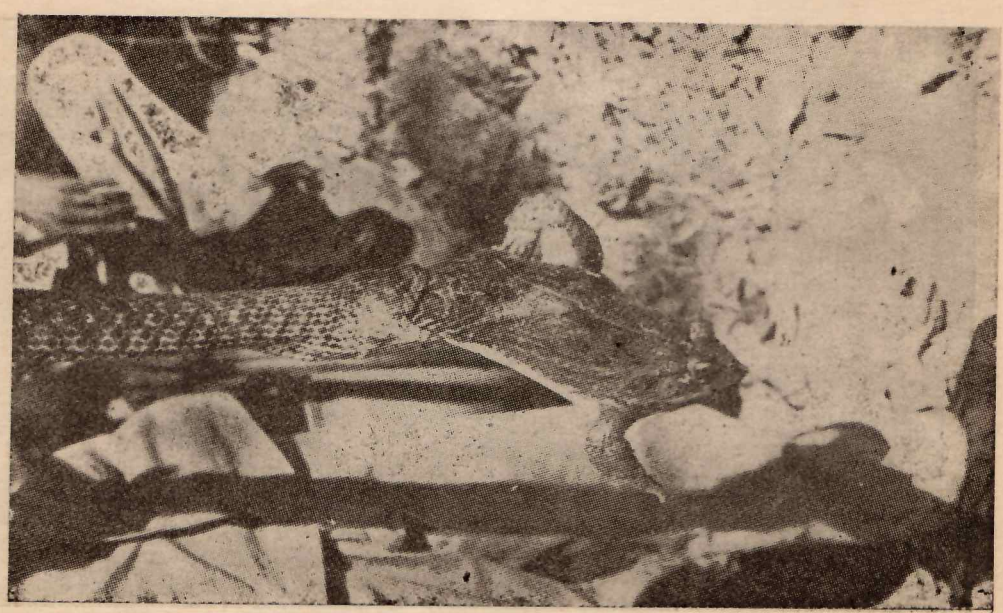


Snake catchers on vertical rock face catching a rat snake

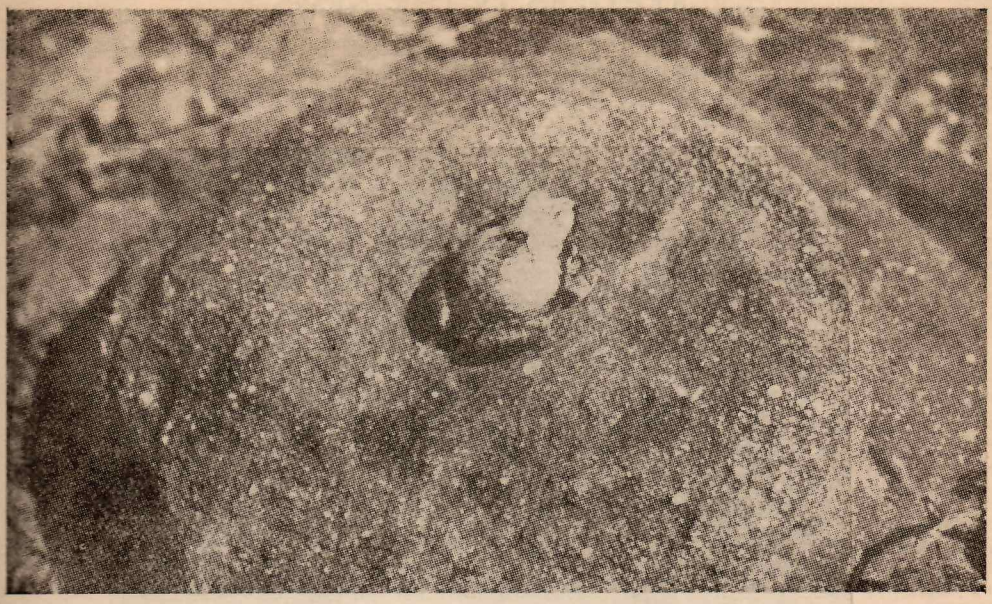


Sandy river bank—River turtles nest here.

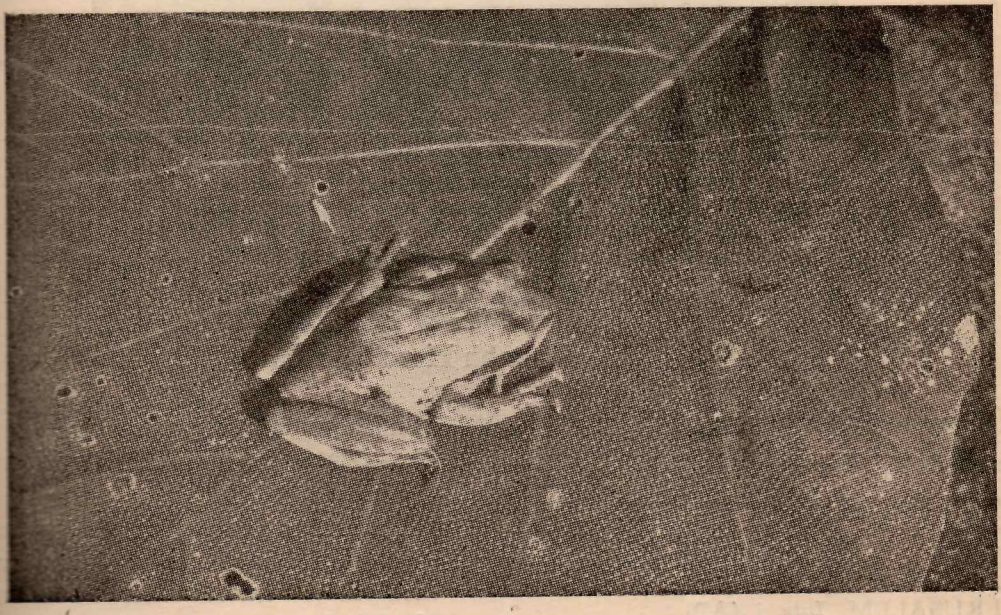
The black cobra of M.P.



Water snake swallowing bull frog.

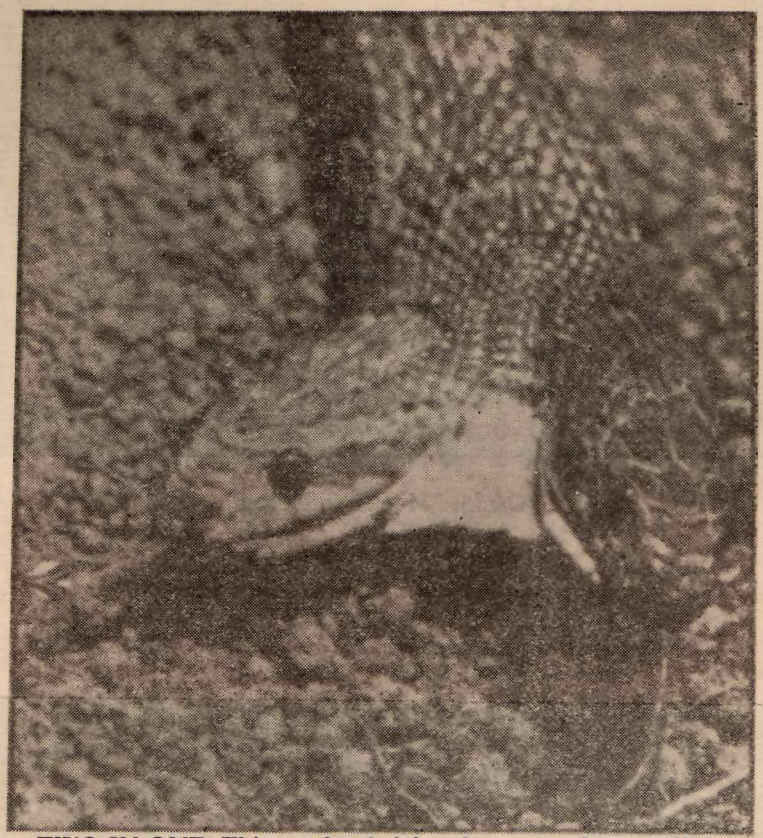


Ornate Microhylid frog



Common tree frog.

July, 20, 1991
The Times of India



TWO-IN-ONE: This two-headed female corn snake — called Thelma and Louise — is a popular attraction at the San Diego zoo in the US. The three-and-a-half foot long snake, which the zoo got from a private collector, is connected just behind the heads to one body, with a single spine and one set of internal organs — AP/PTI

Communicated by :

Dr. Amitabh Hore, Ranchi

SNAKE THROWN INTO ISRAELI MILITARY HQ

Indian Express
2.7.91

JERUSALEM July 1 (AP)

Palestinian demonstrators hurled bottles filled with live snakes into an Israeli military administration headquarters in an occupied West Bank village, Israeli Television reported.

The snakes scattered inside the building, forcing officials to stop work and evacuate their offices the television said on Sunday., No injuries were reported in the incident which took place in the village of Yabad in the northern part of the West Bank.

The Hindu, 1-9-91,

Dr. P.J. Deoras

BOMBAY, Aug. 31

Dr. P.J. Deoras, an environmentalist and an authority on snakes died at a city hospital on Friday. He was 82. He was suffering from brain tumor for the last six months, family sources said.

Dr. Deoras, author of the book titled "Snakes of India" retired as Director from the Haffkiene Institue, Parel in 1969, and he was Head of the Entomology Departmentt. He was a panel member of the World Healh Organisation (WHO) on the advisory committee for "epidemic plague".

He is survived by four daughters and two sons — PTI

PAPERS ON AMPHIBIA

In deference to the wishes of a number of herpetologists, it has been decided to enlarge the ambit of COBRA to incorporate articles and papers on Amphibia as well. Contributions on ecology, conservation, fauna, behaviour and other aspects on Amphibia may be sent to Dr. R.S. Pillai Editor, COBRA, Madras Snake Park Trust, Guindy, Madras-600 022.

MISCELLANEOUS NOTES

COBRA invites contributions under "Miscellaneous Notes". Short notes and interesting personal observations on Reptiles and Amphibians are invited for publication. Myths, lores and beliefs which highlight these animals from the cultural and traditional point of view are also welcome.

—Editor

NEWS FROM MADRAS SNAKE PARK TRUST

1. Snake Survey at Presidency College & Victoria Hostel, Triplicane, Madras.

As requested by the Principal. Dr. Rajaram and Professor Danushkodi, Madras Snake Park Trust made a one day Snake menace consultancy at their premises on 10.8.91. The Team comprised of Mr. R. Aengals and P. Tamilarasan and Snake catchers, Kollapuri and Selvaraj.

2. **Iguana Gifted to Bala Bhavan.**

Two pairs of Iguana have been gifted to Bala Bhavan, Rajkot, Gujarat for their amusement park on 25.8.91.

3. Progress of construction work at the proposed new premises of M.S.P.T. on the Old Mahabalipuram Road.

1) A well, 6' in diameter was dug

2) A 40' × 20' shed was constructedwhich could be used as temporary office cum store.

3) About 500 plants of different species were planted.

4) Applied for temporary electricity connection.

5) Building plans are being finalised for submission to M.M.D.A.

4. Chamaeleon exported to U.S.A.

A few Chamaeleons were sent to U.S.A. on 25.7.91 to A.J. Ganesh Prasanna for his Ph.D programme at Wayne State University, Detroit, Michigan, under the guidance of Prof. Dr. Curt Swanson.

———

COMMENTS BY SOME IMPORTANT VISITORS TO MADRAS SNAKE PARK TRUST

Mrs. M.T.B. Nier and Shri K.C. Dutta, P.S. to Governor of Nagaland are of the opinion that Children may visit this for their knowledge about Snakes.

Sd..... 5.8.91

K.C. Dutta
P.S. to Governor of Nagaland
Rajbhavan
KOHIMA

A very interesting and informative tour kindly conducted by Sri. Jagannatha Rao. Wishing all success and assuring all encouragement and help.

Sd..... 5.9.91

CW. L. W & C. C. F. (WL)
MADRAS

Very interesting and highly educative garden to evoke the love and affection of children towards the innocent and graceful reptiles,

Sd.....

Dr. B.Y.M. Gurdens
Karnatak University
DHARWAD—3

Well maintained highly educative Park

Sd.....

Dr. S.N. Holihosur
Dept of Entomology
U A S DHARWAD - 580 005

CURRENT AND PROPOSED RESEARCH PROJECTS AT MADRAS SNAKE PARK TRUST

1, Status, distribution and Ecology of Reptiles pertaining to Tamil Nadu by Mr. V. Kalaiarasan M.Sc., M. Phil. for his Ph.D. Programme under the guidance of Dr. R. Kanakasabai, M.Sc., M.Phil, Ph.D. Prof. and Head, Dept. of Zoology A.V.C. College Mayiladuthurai and field guidance of Dr. M.V. Rajendran M.A. Ph.D.

This project is being co-ordinated by Mr. A.N. Jagannatha Rao, Hony. Secretary of Madras Snake Park Trust, and Dr. R.S. Pillai, Research Officer, MSPT.

2. Studies on chamaeleon by Mr.R. Aengals M.Sc., Mr. B. Rathinasabapathy M.Sc., M.Phil and Mr. P. Tamilarasan, M.Sc., Under the guidance of Dr. R.S. Pillai M.Sc., Ph.D., Dr.M.V. Rajendran M.A.Ph.D. Dr. G. Durairaj, M.Sc., Ph.D., Dr. R. Kanakasabai M.Sc., Ph.D., Mr. M. Krishnan M.A.. B.L., and Jagannatha Rao who is the co-ordinator of the project.

3. A research project on "Rodent control using harmless Reptiles" is being undertaken by Mr. T. Raveendra Babu M.Sc., M.Phil. B.Ed. at MSPT under the guidance of Dr. P. Vivek Raja M.Sc. Ph.D., Senior lecturer of Zoology Govt. Arts College, Madras-35 coordinated by Shri. A.N. Jagannatha Rao Hony. Secretary and Dr. R.S. Pillai Research officer, MSPT.

4. Studies on Turtles and Tortoises by Mr. R. Aengals M.Sc., Mr. B. Rathinasabapathy M.Sc., M. Phil and Mr. P. Tamilarasan M.Sc., M. Phil., under the guidance of Dr. R.S. Pillai, M.Sc., Ph.D., and being co-ordinated by Mr. A.N. Jagannatha Rao

5. Relationship between Morphology and Habits of Reptiles to be proposed soon. by Mrs. R. Chitra B.Sc.

SURPLUS REPTILES AVAILABLE AT MADRAS SNAKE PARK TRUST IN EXCHANGE

(Subject to Approval by The Government)

Lizard

1. South American Iguana (*Iguana iguana*)

Snakes

2. Indian Python (*Python molurus*) (Babies and Sub-adults)
3. Reticulated Python (*Python reticulatus*) (Single specimen, not pair)

Turtles, tortoises and Crocodiles

4. Pond turtle (*Melanochelys trijuga*)
5. Star Tortoise (*Geochelone elegans*)
6. Marsh Crocodile (*Crocodylus palustris*) (4 year old)

WANTED IN EXCHANGE

Snakes

1. Black Cobra (*Naja naja oxiana*)
2. *King Cobra* (*Ophiophagus hannah*)
3. Banded Krait (*Bungarus fasciatus*)
4. The Indian Egg-Eating Snake (*Elachistodon westermanni*)
5. Flying Snake (*Chrysopelea ornata*)

Monitor Lizards

5. Desert Monitor (*Varanus griseus*)
6. Yellow Monitor (*Varanus flavescens*)
7. Water Monitor (*Varanus salvator*)
8. Common Indian Monitor (*Varanus bengalensis*)

Turtle

9. River turtle (*Hardella thurgi*) and

   Fresh water turtle—any species.

Crocodile

10. Estuarine Crocodile (*Crocodylus porosus* (Juveniles and sub adults)
11. Preserved specimens of 5 species of Sea turtees

    a) Leather back turtle (*Dermochelys coriacea*)

    b) Green turtle (*Chelonia mydas*).

    c) Logger Head turtle (*Caretta caretta*)

    d) Olive Ridley turtle (*Lepidochelys olivacea*)

    e) Hawksbill (*Eretmochelys imbricata*

———

An Appeal

The Madras Snake Park Trust has obtained, with the help of the Govt. of Tamil Nadu, 2.5 acres of land on the old Mahabalipuram Road on the outskirts of the city of Madras to establish an elaborate Reptilium on modern scientific lines to promote Tourism, Conservation, Education, Service and Research on Reptiles.

The proposed layout and estimates of the various units are shown on the next page. The total cost of the project is estimated around Rs. 125 lakhs or 60,000 $ (US).

The MSPT now seeks financial contributions from various organisations and individuals to fulfil this ambitious future programme unit/block-wise.

Grants and donations are exempted by the Income tax authorities under 80G vide Ref No. DITE/1146(34)/78 dated 1-4-89 to 31-3-92.

Generous contributions are solicited. Contributions may be sent to "The Madras Snake Park Trust" Guindy National Park—Guindy, Madras-600 022 India.

Trustees of the Madras Snake Park Trust, Madras-600 022.

DETAILS OF COST OF CONSTRUCTION AND DISPLAY

Building 1 and 2 (3 floor)

Each floor has 40' × 40' area and will house Rooms, Mess, Recreational area for Research students, each building 12 students.

Cost per floor Rs. 4 lakhs or $ 20000. Total cost of building 12 lakhs or $ 60000.

Building No. 3 and 4 (3 floor)

Each floor has 70' × 40' area and will house Research Division, i.e. Library, Laboratory etc.

Cost per floor Rs. 7 lakhs or $ 35000. Total cost of each building Rs. 21 lakhs or $ 105000.

Plt No. 5 and 6 (1000 sq.ft.)

Specially designed, natural setting with pond etc., to house 3 species of Indian Crocodiles.

Cost Rs. 1,00.000 or $ 5000.

Plt No. 7

This will house exotic reptiles like Iguanas, etc., in 500 sq. ft. area.

Cost Rs. 50 000 or $ 2,500.

Plt No. 8 and 9 (area 1000 sq. ft.)

Skunks, Chamaeleons, Monitors eic., will be exhibited in these enclosures in speeially designed habitats.

Cost Rs. 1,00,000 or $ 5000.

Plt No. 10 and 11 (area 1000 sq. ft.)

Specially landscaped to display land tortoises, marine turtles and fresh water terrapins.

Cost Rs. 1,00,000 or $ 5000.

Plt No. 12 (Area 500 sq.ft.)

Giant tortoise of Seychelles, Komodo dragon etc., will be procured and displayed.

Cost Rs. 50,000 or $ 2500.

Building No. 13 and 14 (area 1000 sq.ft.)

Different poisonous and non-poisonous snakes of India will be exhibited in specially designed habitats. King Cobra will find a special habitat cooled by air cooler.

Cost Rs. 1,00,000 or $ 5000

Building No. 15 and 16.

Indian snake lore and myths which are in plenty will be elegantly brought out and made interesting and attactive for tourists. Simple hall 40' × 40' with a sloping roof.

Cost Rs. 4 lakhs or $ 20,000 — each building.

Building No. 17 (Demonstration shed—3000 sq.ft.)

To educate the public on reptiles. Hourly display of live reptiles with commentaries in English, Tamil and Hindi. Tapes in 10 Indian languages and choice of 6 Foreign languages will be available for large groups for a special fee.

Cost Rs. 7,00,000 or $ 35,000.

Building No. 18 and 19.

40' × 40' to house preserved specimens of Indian and exotic reptiles for Research purposes. Sloping roof.

Cost Rs. 4 lakhs or $ 20,000 each building.

Building No. 20.

This is a -storyed building. The ground floorto be used by visitors as a Rest-shed. The second floor for the Administrative Office of the Madras Snake Park Trust. 3rd floor for Guest house.

Each floor is 70' × 40'. Cost Rs. 7 lakhs or $ 35000. Total cost of the building would be 21 lakhs or $ 105000.

Building No. 21.

3 floors each of 70' × 40'. To house an auditorium, a conference hall and a records room.

Each floor costs Rs. 7 lakhs or $35000 and the total cost of building Rs. 21 lakhs or $ 105000.

Building No. 22 and 23.

These are quarters for watchman, on either side with 300 sq. ft area.

Cost Rs. 75,000/- or $ 3500. The 2 units cost Rs. 1,50,000 or $ 7,000.

Building No. 24 and 26

Open wells of 6' diameter each costing Rs. 25,000/- or $ 1250. Together they cost Rs. 50,000/- or $ 2500.

Building No. 25

General store Room of 20' × 10'.
Costing Rs. 50,000 or $2500.

Building No. 27 and 31

Large underground storage tanks to hold water, each 15,000 litres capacity.

Cost Rs. 50,000/- or $2500/ each. 2 sumps together would be Rs. 1,00,000 or $5000.

Building No. 28 and 30

10' × 10' rooms for electric meters and water pumps, each room Rs. 25,000/- or $1250.

Cost of 2 rooms Rs. 50,000 or $2500.

Building No. 29

10' × 10' Security room. Cost Rs. 25,000/- or $1250.

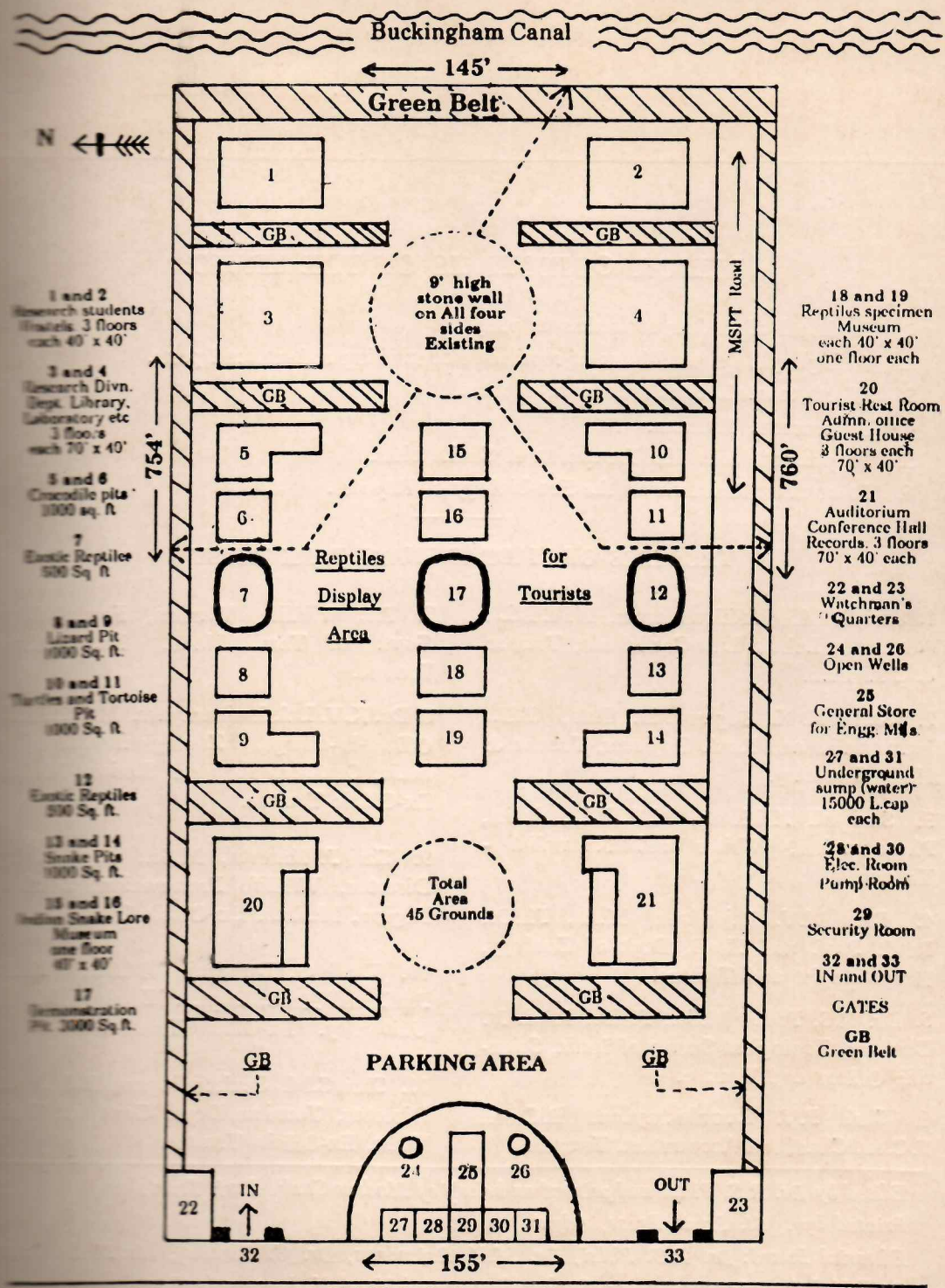
No. 32 and 33

IN and OUT gates Each cost Rs. 10,000/- or $500. Cost of 2 gates Rs. 20,000/- or $1,000.

All costs are worked out on present exchange rate of US $ = 18.50 as on date 1.9.1990.

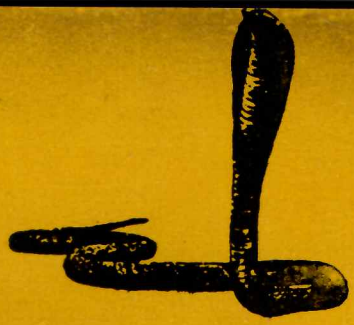
ALL GRANTS WILL BE DISPLAYED ON A MARBLE SLAB ON THE RESPECTIVE FLOOR/BUILDING.

Proposed Layout of Madras Snake Park Trust at Kottivakkam, Madras



To Adyar Madras ← Old Mahabalipuram Road → To Mahabalipuram

(NOT TO SCALE) SEP 1990



MAJOR OBJECTIVES OF THE TRUST

1. To dispel blind fear of snakes in people
2. To highlight the usefulness of reptiles in controlling rodents and pests.
3. Efforts towards conservation of reptiles.
4. To promote Tourism.
5. To promote scientific Treatment of Snake bites.
6. To conduct Research on the Eco-biology of Reptiles.

TRUSTEES OF MADRAS SNAKE PARK TRUST

1. Shri S. Meenakshisundaram, M.A.,B.L., Advocate, Labour Law Consultant, Trustee & Chairman.

2. Shri A. N. Jagannatha Rao, B.E., Industrialist and Retd. Engineer, Trustee & Hony Secretary.

3. Shri M. Krishnan, M.A.,B.L., Artist, Photographer, Writer and Naturalist - Trustee

4. Dr. M.V. Rajendran, M.A., Ph.D., Retd. Prof. and Head, Dept of Zoology, Herpetologist and Trustee.

5. Dr. R.S. Pillai, M.Sc., Ph.D., Retd. Jt. Director, Zoological Survey of India, Scientific Officer and Trustee.

6. Shri P.V. Laxminarayana, B.Com., F.C.A., Chartered Accountant, Trustee.

7. The Wildlife Warden, Forest Dept. Govt. of Tamil Nadu, Ex. Officio, Trustee.

8. Dr. K.V. Lakshminarayana, M.Sc., Ph.D., Officer-In-charge, Zoological Survey of India, Southern Regional Station, Madras. Ex-Officio Trustee.

9. Shri P. Kannan, M.Sc., Regional Dy. Director, Wildlife Preservation, Southern Region, Madras. Ex-Officio Trustee.

10. Dr. G. Durairaj, M.Sc., Ph.D., Prof. and Head, Dept. of Zoology, Madras University. Ex-Officio Trustee.

11. Shri S.M. Sankaralingam, B.Sc., B.L. Director, Tourism Dept. Govt, of Tamil Nadu, Ex-Officio Trustee.

Edited by Dr. R.S. Pillai and printed on behalf of Madras Snake Park Trust,
Printed by : St. Louis Press, Adyar.
Editorial Board: Dr. R.S. Pillai, Dr. M.V. Rajendran, Dr. G. Durairaj, Mr. M.Krishnan, Dr.K.V. Lakshminarayana, Mr. Sankaralingam and Mr. A.N. Jagannatha Rao