

Cobra

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Quarterly Newsletter of the Madras Snake Park Trust

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COVER

Common Krait (*Bungarus caeruleus*)

Common kraits are smooth, glossy bluish-black snakes with the rounded head slightly distinct from the neck. There are normally about 40 thin white cross bands. Kraits are found over most of India including the Andamans and Nicobars from sea level up to 1700 m. Krait venom is extremely toxic and induces nerve paralysis.

Photo: V.S. Raghavan

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Cobra invites articles and short notes on reptiles and amphibians, their ecology, biology, natural history, conservation or other aspects. These may be of scientific or popular interest. Black and white photographs are also welcome.

Please send your contributions to the Editor, COBRA, Madras Snake Part Trust, Raj Bhavan Post, Madras 600 022.

"The Huichol Indians (of Mexico) admire the beautiful markings on the back of serpents. Hence when a Huichol woman is about to weave or embroider, her husband catches a large serpent and holds it in a cleft stick, while the woman strokes the reptile with one hand down the length of its entire back; then she passes the same hand over her forehead and eyes, that she may be able to work as beautiful patterns in the web as the markings on the back of the serpent".

Quoting the above passage from *The Golden Bough* (1922), Sir James G. Fraser's classic study in magic and religion, Des Kennedy says in *Nature's Outcasts - A New Look at Living things We Love to Hate* (1992):

"That's the kind of reverence for the natural world we somehow lost... Snakes, I think, are a good starting point for rediscovering Eden".

DISTRIBUTION AND ECOLOGY OF THE LIZARDS OF
JAMMU AND KASHMIR STATE, PART : LACERTIDAE

Anil K. Verma and Deep N.Sahi
Department of Biosciences
University of Jammu
Jammu - 180 004

The present communication on the lacertilian reptiles (Lacertidae) of Jammu & Kashmir state is based on extensive surveys and collections of the reptilian fauna made for the last two decades. There seems to have been no previous faunistic surveys of the state, though the reptilian fauna of India as a whole is fairly well studied and Smith's (1935) "Fauna of British India" is no doubt a landmark in the study of Sauria. Earlier reports on the reptiles of this area are those of Gunther (1864), Stolickza (1872), Boulenger (1890), Fenton (1910), Anandale (1914), Smith (1935), Das Malhotra and Duda (1964), and Sahi & Duda (1983, 1986a & 1986b).

The lacertids under report viz., *Ophiosops jerdoni*, *Abelopharus poannonicus* and *Acanthodactylus cantoris cantoris* were collected from the various collection sites in the Jammu province of Jammu & Kashmir state.

All collected specimens have been deposited in the Museum of the Department of Biosciences, University of Jammu, Jammu. Incidentally these species have been recorded for the first time in the Jammu & Kashmir state and since the area of the state is still partially surveyed, one could therefore, expect only a poor tally of the species.

The following abbreviations have been used in the text: Snout Vent Length (SVL) and Tail Length (TL) each measured with the help of a flexible steel tape.

Ophisops Menetries

Punjab snake-eyed lizard *Opisops jerdoni* Blyth.

Materials examined: 10 (3 males; 5 females and 2 juveniles) recorded for the first time from Jammu & Kashmir State.

Measurements: SVL = 24-42mm; TL = 26-90mm; TL/SVL (%) 116-214.

Distribution: In Jammu & Kashmir State; Bahu Fort, Nagrota and Jhajjar Kotli and Jammu district of Jammu province.

Elsewhere: Kashmir, Punjab, Rajasthan, M.P., Karnataka, Gujarat and Pakistan.

Colouration in Life: Dorsum dark-brown, two lateral streaks dull yellow in colour on each side. The upper streak starts from behind the eye up to the base of tail, and the second starts from the upper lip up to the groin. The streaks are bordered by black spots.

Ecological Notes: *O. jerdoni* is a typical xeric lacertid species found in dry, rocky or alluvial plains along various tributaries of river Tawi. It is a very active lizard feeding mainly on insects and hiding in between the stones on the slightest alarm; therefore, causing great difficulty to collector/observer. During sunny days in winter, the lizards exhibited communal basking on boulders and stones.

Ablepharus (Stoliczka)

Mediterranean dwarf skink *Ablepharus pannonicus* Fitzinger.

Material examined: 1 sex-undetermined and recorded for the first time in India.

Measurements: SVL = 30 mm; TL = 62 mm; TL/SVL (%) = 206

Distribution: In Jammu & Kashmir state; Jammu city near river Tawi bed.

Elsewhere: Iraq, Iran, Russia, Pakistan and Afghanistan (Leviton and Anderson, 1970)

Colouration in Life: Dark, pale or brownish in colour dorsally but light yellow ventrally with a long, dotted tail.

Ecological Notes: The lizard is slender and a very active species highly adapted to life in sand-beaches or sandy-beds with loose sand. The lizard run rapidly over the soft sandy surface and therefore, difficult to capture. A single specimen of *Ablepharus pannonicus* was collected from the dry alluvial bed of river Tawi in Jammu district of Jammu province. The habit of this lizard resembled very much those of other lacertids. The lizard feeds mainly on insect larvae, ants and grasshoppers.

Acanthodactylus (Weigman)

Indian Fringe-Toed Sand Lizard *Acanthodactylus cantoris cantoris* Gunther.

Materials Examined: 1 Sex undetermined and recorded for the first time in Jammu & Kashmir State.

Measurements: SVL = 33 mm; TL = 129 mm ; TL/SVL (%) = 205.

Distribution in Jammu & Kashmir State: A single specimen was collected from Akhnoor, Tehsil, Jammu District of Jammu province.

Elsewhere: Punjab, Rajasthan, U.P. in India; and Iran, Pakistan and Afghanistan.

Colouration in Life: Uniform greyish dorsum, upper labials spotted brown, belly white.

Ecological notes: It seems to be a very rare species of lacertid in the state of Jammu and Kashmir. The lizard was collected from Akhnoor town situated along-side river Chenab. The lizard was found in the sandy bed surrounded by rocks. A very swift lizard and took refuge in the nearby holes, when alarmed. The lizard appears to be an inhabitant of dry, rocky, alluvial or sandy places and the beds of dry water courses. The lizard is very agile and feeds on grasshoppers, beetles, crickets and ants.

Acknowledgement

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ON THE DISTRIBUTION, ECOLOGY AND STATUS OF THE
INDIAN MONITOR LIZARD *VARANUS BENGALENSIS*
(DAUDIN) IN J & K STATE

Anil K. Verma and Deep N. Sahi
Department of Biosciences
University of Jammu, Jammu - 180 004

The genus *Varanus* Merrem has about 30 species distributed from Africa through Southern Asia to Australia, New-Guinea and associated islands. Four species inhabit India and only one, *V. bengalensis* has been recorded from the J & K state (Sahi & Duda, 1985). Previously, this species was one of the most widely distributed monitor lizards in India (Boulenger, 1890; Smith, 1935) but now, it has a restricted distribution in India (Biswas & Sanyal, 1977; Whitaker & Khan 1982; Das 1988). A number of publications on its distribution in India exists but no study on the distribution, status and ecology of this lizard in J & K state has been conducted so far in spite of the fact that the populations of this species are rapidly decreasing all over their natural range.

The objectives of the present study were (i) to assess the distribution and present status, (ii) to record the ecological behaviour of the Indian monitor lizard from this area of study. The survey was conducted for a period of six years extending from 1987 to 1992. Identification of the lizard was done after Smith (1935) and Minton (1966). The voucher specimens have been deposited in the Museum of the Department of Biosciences, University of Jammu, Jammu.

Material examined: 13; 8 adults and 5 juveniles.

Measurements: 90-505 mm snout-vent length; 118-930 mm tail length.

Distribution: In J & K state *V. bengalensis* was found in the three districts, viz., Jammu, Kathua and Udhampur of Jammu province. We found that the lizards show a clearly restricted distribution within the state in being restricted to the sub-tropical region with semi-arid area particularly near sandy bed and agricultural fields. This type of habitat preference and distribution has also been reported for *V. griseus* by Aufenberg *et al.* (1989). In the rest of India, *V. bengalensis* has been recorded from Rajasthan, Assam, West Bengal, Orissa, Uttar Pradesh, Tamil Nadu, Kerala, Andaman and Madhya Pradesh.

Elsewhere: Burma, Pakistan, Iran and Srilanka.

Ecology: It is a diurnal lizard which can be occasionally sighted in villages and scrub jungles, generally near water streams. The lizards live in burrows, clefts in rocks, hollows of tree trunks, bushy thicket and crevices around deserted buildings. On chasing, the lizards readily take to water, or get into the holes, under logs and crevices or climb up the trees. In water, it swims speedily with lashing movements of its tail. It is very difficult to withdraw these lizards once they get into the holes. When cornered, the lizard lashes its tail high in the air and even inflicts a serious bite.

The lizards were seen to feed on varied dietary items. In fields, these lizards were sighted to feed upon frogs, fish, lizards (*Calotes versicolor*), snake (*Amphiesma stolata*) and Turtle eggs. However, gut analysis of these lizards in laboratory revealed some plant material in addition to some animal dietary remains. Some villagers have interestingly reported the feeding of this lizard on the paddy saplings in the fields.

A nest with 8 eggs was sighted in the fields during July and the eggs (white in colour and elliptical in outline) were transported to the

laboratory and incubated therein. Unfortunately eggs did not hatch perhaps due to infertility. Newly hatched young have been sighted in the month of August and September.

Present Status

V. bengalensis populations are rapidly decreasing all over their natural range in the state owing to the large scale exploitation of the monitors for their skin and to a lesser extent killing for meat by the nomadic tribes. The habitat-destruction due to the continued salination of the habitat through hydro-agriculture, urbanization and highway construction also contribute to their depleting populations. These observations, therefore, suggest that *V. bengalensis* is the threatened lizard species of the state and a detailed knowledge of the reproductive biology of this species is urgently required to formulate effective protection and management requirements. Though the species has been listed in the Wildlife (Protection) Act 1972, there is need for implementation of this Wildlife Protection Act, in the state of Jammu & Kashmir where this lizard still forms the food of some nomadic tribes.

Acknowledgement

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AN ASSESSMENT OF THE HERPETOFAUNA IN A NEWLY
CREATED ECOSYSTEM OF THE NAGARJUNA FERTILIZERS
AND CHEMICALS LIMITED, KAKINADA - ANDHRA PRADESH

V.Kalaiarasan and R.Aengals
Madras Snake Park Trust
Raj Bhavan Post, Madras - 600 022

Nagarjuna Fertilisers & Chemicals Limited (NFCL) is located in the port city of Kakinada, East Godavari District, Andhra Pradesh. The NFCL spreads over an area of 1127 acres in this area; 380 acres of which is occupied by the factory. The NFCL authorities have prepared and implemented a master plan to develop a green belt surrounding the plant with the help of experts from various disciplines like forestry, horticulture, soil science, animal life, landscape and architecture.

The authorities have overcome various impediments in promoting the green belt. The surface soil of marine sands constituted by almost pure siliceous sands poor in assimilable elements, clayey soil and salt infested lowlands support only a few plants, of which palmyra (*Borassus flabellifer*) is dominant. It also supports a few mangrove succulents, herbs and *Spinifex* grass patches. The floristic composition of the area is very poor.

Over a period, the characteristics of the surface soil has changed due to frequent irrigation and addition of organic matter through dead leaves. In some parts, earth has been excavated, and filled in low lying areas which are reclaimed. Water bodies have been created. During the monsoon the low lying area and natural water bodies get inundated for a few days. The water table is less than 1 meter below ground level.

The natural water bodies are connected with stone pitched drains to drain out water in the monsoon. In addition there is a 23 km

long PVC pipe line to distribute treated effluent through hydrants positioned in every 100 M grid. This water is used for all forestry operations.

The NFCL attempted to create a green belt by planting 137 species of plants of which 25 species are salt tolerant. A new ecosystem was thus established around the NFCL. The water bodies support various aquatic organisms such as insects, fishes and amphibians. In addition, the green belt harbours a few small mammals like jackal, mongooses and palm squirrels. The presence of permanent water sources and thick vegetation has attracted many native and migratory birds.

Objective of the study

The NFCL authority invited the Madras Snake Park Trust (MSPT) to study the impact of the ecosystem on reptiles. However, the team extended its study to cover amphibians also.

The MSPT team consisting of the Principal Investigator, One Research Assistant and One Field Assistant, carried out the study from 5.3.95 to 13.3.95. The team made a rapid survey of the area on 5.3.95. Based on the survey the following areas were identified as potential for herpetofaunal survey.

- i)
 - a) Area next to Deer Park
 - b) High level area on Northern side of Fruit Orchard area.
 - c) Labour colony area
 - d) 100 m. stripe (Northern side of the plant)
 - e) Western part of green belt near Godarigunda Vill:ge.

- ii) a) Ammonia storage plant
 b) North of bagging plant
 c) Old pump house
 d) Steel yard
 e) 'H' building the material storage point.

The team made an intensive search for herpetofauna from 7.30 a.m. to 11.30 a.m. & 4.00 p.m. to 6.00 p.m. for six days. Niches of aquatic, terrestrial and fossorial animals were thoroughly searched. The names of the species and frequency of occurrence recorded. The team also visited adjacent areas like Coringa Wildlife Sanctuary towards South and Light House area towards North to have an idea about the original habitat of NFCL.

Results

The list of herpetofauna encountered during the survey is listed in Table 1. *Rana hexadactyla* was found common in all water bodies. Only one *Bufo melanostictus* occurred under stone piles in the abandoned paddy field. In the case of lizards *Calotes versicolor* was very common in all the area.

Sitana ponticeriana was located in labour colony area only. *Hemidactylus frenatus* and *Hemidactylus brooki* were found under the sheath of palmyra trees, old culverts and stone piles. *Hemidactylus leschenaulti* was recorded in the abandoned buildings of labour colony. Two species of skinks, *Mabuya carinata* and *Riopa punctata* were found under green grass patches. Green snake (*Ahaetulla nasutus*) was recorded in the experimental area and third block high level, where trees are more than 5 m height. Only one striped keelback (*Amphiesma stolata*) was collected near a water fountain in an abandoned paddy field. A checkered keelback (*Xenochropis piscator*) was noticed in the

drains near the old pump house. One specimen of rat snake (*Ptyas mucosus*) was collected nearby NFCL area, but moulted skins of rat snakes were collected from various places. Only one poisonous snake, cobra (*Naja naja*) was caught from the 100 m stripe. A few moulted skins of cobra were seen in the steel yard and Bagging Plant area.

During the study, we recorded two species of amphibians, seven species of lizards and six species of snakes. In Coringa Wildlife Sanctuary, a moulted skin of dog-faced water snake (*Cerberus rhynchops*) was noticed. The lizards *S. ponticeriana* and *C. versicolor* were recorded in the adjacent areas of NFCL both on the northern and southern sides.

The above study and discussion is not a comprehensive one covering the herpetofauna in this area. A study over an extended period will be necessary to make out an exhaustive list of species and their distribution.

Acknowledgement

Authors are grateful to Mr. B. Vijayaraghavan, Chairman and R.J. Ránjit Daniels, Honorary Secretary, MSPT for providing necessary facilities to take up this survey and Mr. V.V. Kumar and Mr. Raguverma NFCL, for extending their co-operation and help during the survey.

Table 1

List of Herpetofauna and their frequency in
the Nagarjuna Fertilizers & Chemicals Ltd., Kakinada

	Species	Frequency
I. Amphibians		
Family	: Bufonidae	
	1. <i>Bufo melanostictus</i>	... 1
Family	: Ranidae	
	2. <i>Rana hexadactyla</i>	many
II. Lizards		
Order	: Squamata	
Suborder	: Sauria	
Family	: Gekkonidae	
	3. <i>Hemidactylus brooki</i>	... 4
	4. <i>Hemidactylus frenatus</i>	... 5
	5. <i>Hemidactylus leschenaulti</i> ...	3
Family	: Agamidae	
	6. <i>Sitana ponticeriana</i>	... 2
	7. <i>Calotes versicolor</i>	... many
Family	: Scincidae	
	8. <i>Riopa punctata</i>	... 1
	9. <i>Mabuya carinata</i>	... 2
III. Snakes		
Suborder	: Serpentes	
Family	: Colubridae	
	10. <i>Amphiesma stolata</i>	... 1
	11. <i>Xenochropis piscator</i>	...1
	12. <i>Ptyas mucosus</i>	...1
	13. <i>Argyrogena fasciolatus</i>	... 1
	14. <i>Ahaetulla nasutus</i>	...5
Family	: Elapidae	
	15. <i>Naja naja</i>	... 1

Table 2

A list of possible herpetofauna in
the Nagarjuna Fertilizers & Chemicals Ltd., Kakinada

I. Amphibians	
Family	: Microrhylidae
	1. <i>Microchyla ornata</i>
Family	: Rana
	2. <i>Rana crassa</i>
	3. <i>R. cyanophlyctis</i>
	4. <i>R. limnocharis</i>
	5. <i>R. breviceps</i>
II. Turtles	
Order	: Testudines
Family	: Emydidae
	6. <i>Melanochelys trijuga</i>
Family	: Testudinidae
	7. <i>Geochelone elegans</i>
	Trionychidae
	8. <i>Lissemys punctata</i>
III. Lizards	
Order	: Squamata
Suborder	: Sauria
Family	: Gekkonidae
	9. <i>Hemidactylus triedrus</i>
Family	: Chamaelionidae
	10. <i>Chameleon zeylanicus</i>
Family	: Varanidae
	11. <i>Varanus bengalensis</i>
Family	: Scincidae
	12. <i>Mabuya macularia</i>
	13. <i>Mabuya trivittata</i>

IV. Snakes

- Suborder : Serpentes
 Family : Typhlopidae
 14. *Ramphotyphlops braminus*
 15. *Typhlops porrectus*
 16. *Typhlops acutus*
- Family : Boidae
 17. *Eryx conicus*
 18. *Eryx johni*
- Family : Colubridae
 19. *Lycodon striatus*
 20. *Lycodon aulicus*
 21. *Oligodon taeniolatus*
 22. *Oligodon arnensis*
 23. *Atretium schistosum*
 24. *Elaphe helena*
 25. *Dendrelaphis tristis*
 26. *Boiga trigonata*
 27. *Cerberus rhynchops*
- Family : Elapidae
 28. *Bungarus caeruleus*
- Family : Viperidae
 29. *Vipera russelli*
 30. *Echis carinatus*

AN ACCOUNT OF THE TREATMENT OF A REGAL PYTHON
 (*PYTHON RETICULATUS*) AT THE MADRAS SNAKE PARK

V. Krishnamurthy
 Madras Snake Park Trust
 Raj Bhavan Post, Madras - 600 022

Introduction

Gastro intestinal disorders are not uncommon in snakes of all species particularly among those managed under captive conditions. Occurrence of such disorders may be due to many reasons such as helminthiasis, bacterial or viral infections, trauma, or due to dietetic errors.

There is paucity of literature regarding the diseases of snakes, particularly in pythons.

During March/April 1995, an attempt was made to treat a reticulated python (*Python reticulatus*) kept in the Madras Snake Park, which showed symptoms of impacted bowels.

History of the case

A male reticulated python, about 20 years old measuring 372 cms (12' 2½") in length and weighing 12.5 kg was reported to be sick and off feed for over 45 days.

Clinical examination

The python was examined on 28.2.95. It was dull, and devoid of active movement even when disturbed. The skin showed that the snake was going to moult.

The snake had become thin and debilitated, with very little subcutaneous fat.

Multiple, lacerated wounds and small abscesses at the distal extremity, a prominent swelling extending about 30-35 cms anterior to the cloacal opening and on palpation several hard pellety masses were found in the abdominal cavity.

To facilitate identification of the nature of the pellety mass, the snake was taken to the Government Veterinary Hospital, Madras. The radiograph revealed the presence of table tennis ball sized pellets (6-8 in number) in the intestinal tract.

It was diagnosed as a case of intestinal impaction.

Treatment

- a) To control possible infection, Oxy-Tetracycline (50 mg/ml) was administered by 1/m injn. for 4 days. Dose: 2ml.
- b) Bacterisol suspension containing Sulpha Diazine and Trimethoprim was given by oral route - 5 days.
- c) To tone up the liver one teaspoon full of Liv.52 was administered orally daily.
- d) To lubricate the intestinal tract 10 ml of liquid paraffin was given for 3 days.

On 13.3.95, four pellets could be pushed down through the cloaca by gentle outward manipulation after lubricating the passage with liquid paraffin. The pellets were found to be compact mass of excreta which

contained quills of feathers and crop contents of a chicken containing ragi, grains and grit.

Two days later, one more pellet could be removed in the same manner.

The abscesses found on the posterior aspect of the body were drained of pus by surgery and dressed daily.

Other lacerated wounds were dressed daily with povidone cream.

After 3-4 days treatment, the snake showed improvement and was more active. As the python was moulting, it continued to be off feed.

To prevent dehydration it was given Electrol (Glucose and electrolytes) in water - ½ teaspoon-full in 10 ml water and was force fed by a tube.

Even after evacuating the bowels of hard impacted faecal mass: two hard masses were found in the intestinal tract about 25 cm anterior to the cloaca. Attempts to dislodge the masses by manipulation could not succeed.

Surgical intervention was not attempted in view of the poor condition of the python as well as the snake being in the process of moulting.

The python died on 14.4.95. Postmortem examination was conducted. Two hard encapsulated masses were found adherant to the mucous membrane. On exploration they were found to contain small bones, quills and feathers of chicken.

There was extensive ulceration of the posterior aspect of intestinal tract. No helminthic parasites or ectoparasites could be found.

The death of the snake was mainly due to impaction of bowels leading to ulceration.

Discussion

Gastro-intestinal disorders are not uncommon in many species of animals kept under captive conditions which ultimately leads to anorexia, debility and secondary complications.

In the present case the tumour like encapsulated mass which was adherent to the intestinal mucose membrane led to the occlusion of the lumen and preventing the free passage of excreta. Surgical intervention for the removal of the growths might have helped in its recovery.

It was not taken up in view of the poor condition of the snake.

Acknowledgement

The help of the Veterinary Assistant Surgeons of the Government Veterinary Hospital, Madras for providing facilities for radiography and also for their technical guidance is gratefully acknowledged.

REPTILIAN FAUNA IN THE PLANTATION OF VALPARAI, WESTERN GHATS, TAMIL NADU

R.Aengals
Madras Snake Park Trust
Raj Bhavan Post, Madras - 600 022

A herpetological investigation was carried out at Valparai Plantations while collecting snakes for the Madras Snake Park Trust.

I went to Valparai along with two field assistants and stayed over a period of one week during December, 1994. The following reptiles were observed.

Family : Agamidae

1. Species : *Calotes elliotti*
Material : 7 Nos.
Remarks : Spotted in resting position on the climber (*Jasminum sesseliflorum*) of the sholas.
2. Species : *Calotes nemoricola*
Material : 3 Nos.
Remarks : Basking during sunset at Varatuparai in small sholas.
3. Species : *Calotes grandisquamis*
Material : 1 No.
Remarks : Resting on *Bambusa arundinacea* at 3 m height, at the edge of the rocky perennial water nullahs of Puthuthottam.

Family: Scincidae

4. Species : *Mabuya carinata*
 Material : 14 Nos.
 Remarks : At the edge of the coffee plantations and near the road side chain link fence on both sides.

5. Species : *Mabuya macularia*
 Material : 5 Nos.
 Remarks : They are found under cervices of bridges and stone piles.

Family: Viperidae

6. Species : *Trimeresurus macrolepis*
 Material : 5 Nos.
 Remarks : Found in riparian system resting on ferns on rocky outcrops, the ferns always wet with splashing water. Within 5m another one was curled on the *Artocarpus heterophyllus* (wild jack fruit tree) at about 1m height. One young one was on the climber of *piper nigrum* spread over *Dysoxylum malabaricum* tree at 3m height. One adult snake was at 0.5m height in the leaves of *Phlebophyllum kunthianum*.

7. Species : *Trimeresurus malabaricus*
 Material : 4 Nos.
 Remarks : Observed on the rocks near running water of the Varatuparai, sholas. Two of them taken at rest above the rock. On disturbance, it fell down into the water. One viper was coiled on the top of the bush of *Phlebophyllum kunthianum* at 2 m height, another one was observed on the road side hiding in the vertical bank at 2m height.

Acknowledgement

Our sincere thanks are due to Chairman Shri B.Vijayaraghavan, Honorary Secretary Dr. R.J.Ranjit Daniels and Director Shri V.Kalaiarasan, of the Madras Snake Park Trust, for suggesting and funding this study.

IN DEFENCE OF *RANA TIGRINA*

Yes, it is *Rana tigrina*, NOT *Rana tigerina* as some authors seem to believe. The English word 'tiger' is derived from the Latin *tigris*, not 'tigeris'. The Shorter Oxford English Dictionary on Historical Principles lists the English word 'tigrine' to mean "of, pertaining to, or resembling a tiger, especially in marking or colouring; in specific names of animals, translation of Latin *tigrinus*".

In fact, plants too have been named similarly, e.g. *Lillium tigrinum* or the tiger lily, *Faucaria tigrina* or the tiger's jaws, etc. The 1995 Oxford publication, *Plants and Their Names* by Roger Hyam and Richard Pankhurst has this entry: "*tigrinus, tigrina, tigrinum*, with tiger-like markings".

The Madras Snake Park Trust
Raj Bhavan Post
Madras - 600 022.

B.Vijayaraghavan

RANDOM HARVEST

"Hiz-z-z-z-z--"

Mark Shand who gave us a fascinating account of his journey across India on elephant back (*Travels on My Elephant*) has now come out with another charming book on his further journeys on elephant back in north-east India in the company of that formidable 'elephant-woman', Parbati Barua, (*Queen of the Elephants*) (1995). Describing a scene of women plucking tea in a tea garden in West Bengal, the author says :

"I noticed that they were making strange hissing sounds as they moved in an orderly and colourful line through the bushes. 'Snakes', Aditya (the author's photographer companion) said, 'snakebites are a common occurrence in the tea gardens... That's how they drive them away'".

An interesting observation this. Do tea pluckers elsewhere resort to this stratagem? Does it really work? In this context, the following passage from *Snakes of the World* (1992) by Peter Brazaitis and Myrna E. Watanabe will be relevant. "Little work has been done on the snake ear and some recent books on reptiles ignore earlier work done on hearing in snakes by E. Wever and J. Vernon, who studied the ear in many species of reptiles. Wever and Vernon found that some species of colubrid snakes could hear quite well in the range of 0.1 to 0.7 kHz, with the best hearing in the range of 0.1 to 0.2 kHz. This is the range of very low-frequency, or deep, sounds. This hiss, a sound made by vertebrates from reptiles to primates, is an example of a low-frequency sound. Baby crocodiles hiss in the 0.1 to 0.4 kHz range. As snakes ... do hiss in threat displays, this means that snakes can hear the most important vocalization they make".

No newt is bad news

In the city of Peterborough, in Cambridgeshire, England, conservationists are up in arms against a politically powerful construction company who plan to convert a brickwork site into a giant residential complex. The reason? The ponds at the site are occupied by the great crested newt (*Triturus cristatus*) listed as a 'most endangered species' under the European Union's Habitat Directive. There are probably 30,000 of the amphibian here, the largest colony of the species in northern Europe. The World Wide Fund for Nature and the British and European herpetological societies have joined the battle. The offer of the constructions company to set apart 225 acres on which ponds would be dug for the newts has not appeased the conservationists who would settle for nothing less than the protection of the total habitat. They are preparing themselves to take the case to court.

(Source: Nevile Stack reporting from London in *The Hindu*, May 7, 1995).

Regulations turn turtle?

"Legal protection of turtles exists in most countries, but they are not always fully effective. Sometimes they protect the wrong species. *Aspideretes gangeticus*, *Iissemys punctata* and *Kachuga tecta* are strictly protected by national and international laws and regulations, yet these three species are widespread and their populations do not appear to decline. In contrast, the rare *Kachuga sylhetensis* has no legal protection in either India or Bangladesh where the few known specimens come from".

(Source: Peter Paul van Digk in *Hamadryad*, 16(1.2) Jun. Dec. 91).

Down-under on top

Among the Asia-Pacific countries, Australia accounts for the largest number of good books (half a dozen) on snakes and the most information on snakes and snakebite.

(Source: Romulus Whitaker in *Hamadryad*, 16 (1.2) June, Dec. 91).

A yen for snakes

Some of the most exhaustive work done on snakebite in the Asian region has been by Dr. Yoshio Sawai and his colleagues in the Japan Snake Institute. Sankebite statistics from many of the countries in this area are based mainly on their work.

(Source: Ibid)

Hearken to the croaker!

Observations made over 17 consecutive years at two widely separated amphibian breeding sites in southern England suggest that some species of frogs may be responding to climate change by altering their breeding cycle times. Amphibians may provide valuable clues about trends in global warming. Monitoring changes in breeding behaviour in amphibians is relatively straightforward and could be pursued at a range of sites around the world.

(Source: Froglog- Newsletter of the World conservation Union (IUCN) Species Survival commission - Declining Amphibian Population Task Force - March, 95.)

(*Croaker: "1. An animal that croaks. 2. a prophet of evil" (*The Concise Oxford English Dictionary*))

"A pronounced and persistent pessimist" (*Penguin Dictionary of Historical Slang*)

But in this case, we ignore the warning at our peril.

Compiled and processed by B. Vijayaraghavan

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AIMS AND OBJECTIVES OF THE MADRAS SNAKE PARK TRUST

- i) To maintain and display a captive collection of snakes and other reptiles as a means of education of the public.
- ii) To promote knowledge on snakes and other reptiles and dispel the erroneous beliefs about them.
- iii) To undertake captive breeding of vulnerable species of snakes and other reptiles.
- iv) To aid and assist research in herpetology.
- v) To provide facilities for the identification and classification of snakes and other reptiles and, for this purpose, maintain a museum of study collections.
- vi) To maintain a library of books and other literature on herpetology.
- vii) To publish scientific and semi-scientific literature on snakes and other reptiles.
- viii) To undertake survey on the distribution and status of snakes and other reptiles.
- ix) To provide consultancy services on snakes and other reptiles.
- x) To provide a common forum for amateur herpetologists to interact.