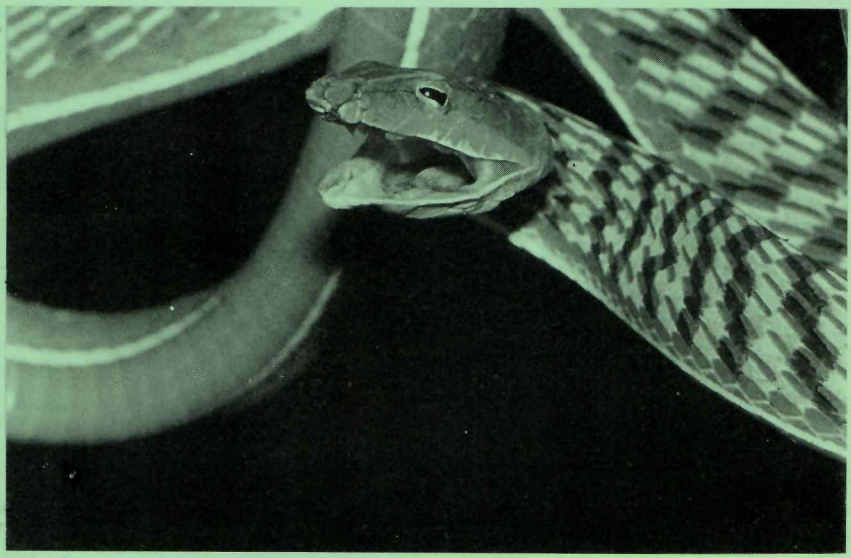
Cobra

Volume - 49 July - September 2002



CHENNAI SNAKE PARK TRUST

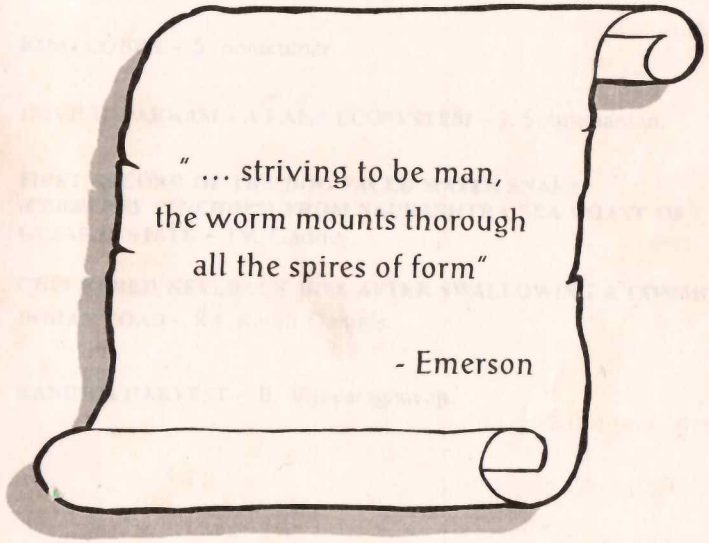
Quarterly Newsletter of the Chennai Snake Park Trust

Cover

Common vine snake (*Ahaetulla nasuta*)

Commonly found in bushes and trees. Feeds on birds, frogs and lizards. Maximum length 2.00 m.

Photo : **R.J. Ranjit Daniels.**



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CONTENTS

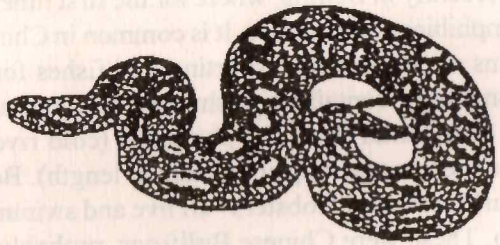
Editorial

Amphibians and reptiles in Chinese culture, food and medicine are quite widely known around the world. Most popular amongst these is the 'Chinese Dragon' that is more or less symbolic of the Culture that we see it in most restaurants that serve Chinese food outside China. The Chinese Dragon is nothing but the fantastic version of the long-lived giant salamanders that are found in the Sino-Japanese regions.

I was recently in Beijing, where for the first time I saw the Chinese appetite for amphibians and reptiles. It is common in Chinese restaurants to have aquariums as 'show cases' sporting live fishes for the table. These aquariums commonly contained freshwater eels and a variety of carps including the ornamental 'koi' and sturgeons (cold river water fishes of Eurasia - some species reaching six meters in length). Besides these there were small sharks, crabs and lobsters - all live and swimming about! There were frogs too. These were Chinese Bullfrogs, probably *Hoplobatrachus rugulosus*. What surprised me was the docile nature of these frogs that sat inside small and open aquariums without attempting to leap out.

I did not come across snakes and lizards in restaurants or in the food racks of departmental stores except in one instance. In one of the stores, there were displayed two large glass jars closed with gold plated lids and tied with red satin ribbon containing some local brand of alcohol-containing drink. These jars contained a number of snakes and lizards pickled inside. None of the species was however familiar.

The Chinese handicrafts were also displaying reptiles in a number of ways. The most popular ones were amber imitations of various sizes - ranging from small key rings to large plate-sized pieces. These contained insects, scorpions and reptiles embedded neatly within. Many small lizards were displayed and, interestingly, at least one large one had a full-grown saw-scaled viper! This species is a snake of semi-arid warm country. Neither Romulus Whitaker nor J C Daniel has suggested that this species naturally occurred in China. It is likely that the snake reached China along with a number of other animals collected from outside the country.



A PRELIMINARY CHECKLIST OF SNAKES OF THE BONDLA WILDLIFE SANCTUARY, GOA

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The Bondla Wildlife Sanctuary (BWS) (74°05′30″ to 74°07′30″E and 15°24′30″ to 15°27′00″N) covers a total area of 8 km². It lies in the biotic province 5A (Malabar plains-Western Ghats) of the biogeographic classification by Rodgers, Panwar and Mathur (2002).

The vegetation of BWS has been classified as Tropical Wet Evergreen type and Tropical Dry Deciduous type. The terrain is gently undulating, with an altitudinal range of 212-375m. There are a few streams flowing through this area which are mostly seasonal. Apart from natural water sources there are man-made water bodies in the sanctuary. Climatically the area has three distinct seasons. The annual range of temperature is between 22°C to 31°C. The average rainfall is 5500mm.

Method

Field visits to the sanctuary were conducted fornightly from June to November 2000. With the help of local people the area was surveyed on foot. Random sampling was done in these areas. Some tracks were frequently visited. Snakes were caught for identification purpose and released immediately. During interaction with the local people, local names were learnt and recorded.

For the identification of snakes Smith (1943), Whitaker (1978) and Daniel (1983) were consulted. This checklist is based on a dissertation titled, 'Distribution and status survey of snakes found in different habitats

of Goa.' submitted to the Goa University during 2000-2001, as partial requirement for the degree Bachelor of Science (Zoology), as well as previous visits made to the sanctuary during 1997-2000.

Results

The snake fauna of the BWS, Goa comprises of 5 families, 20 genera and 24 species (Table 1). From the checklist, the family Colubridae appears to be the most dominant representing nearly 46% of the total ophidiofauna found in this area.

Discussion

The BWS showed a very high diversity of snake species. Twenty-four species is a very high number for such a small area. A total of 91 species of snakes occur in the Western Ghats (Murthy, 1990) and a total of 261 species occur in India (Das,1997). The richness of snake species thus constitutes 26.37 % of that found in the Western Ghats and 9.19% of the total ophidiofauna in the country. No representatives of families Uropeltidae and Leptotyphlopidae were recorded during the study, even though several species have been recorded frequently in many other parts of the Western Ghats (Murthy, 1990). Of the snake species found 3 species viz. *Trimeresurus macrolepis*, *Trimeresurus malabaricus* and *Hypnale hypnale* are endemic to the Western Ghats.

Acknowledgements

I express my deep sense of gratitude to Dr. Y. Modassir, Reader and Head of Department of Zoology, Dhempe College-Goa for guiding me during my Bachelor's Degree dissertation, that contributes a great deal to this checklist.

I also like to thank the National Institute of Oceonography-Goa and the Wildlife Institute of India for extending their library facilities to me.

I owe my special thanks to late Mr. Anil, a snake keeper of Bondla Zoological Park for providing me with information about the various localities in the sanctuaries as well as aiding me with the local names of the snake species found in this area.

Special thanks to my friend Nitin Sawant who was of assistance throughout.

I also like to thank the Forest Department, Goa for providing me all the information I needed about the Sanctuary.

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Table 1: Checklist of snakes of the Bondla Wildlife Sanctuary, Goa.

Family	Species	Common name	Local Name
Typhlopidae	1) *Ramphotyphlops braminus*	Brahminy worm snake	NA
	2) *Rhinotyphlops acutus*	Beaked worm snake	NA
Boidae	1) *Eryx conica*	Common sand boa	Malun
	2) *Eryx johnii*	Red sand boa	Malun
	3) *Eryx whitakeri*	Whitaker's sand boa	Malun
	4) *Python molurus*	Indian rock python	Aar, Azghar
Colubridae	1) *Ptyas mucosus*	Western Rat snake	Diyod
	2) *Oligodon arnensis*	Banded Kukri snake	Pasco
	3) *Lycodon aulicus*	Common wolf snake	Kaydya
	4) *Dendrelaphis tristis*	Common bronzeback tree snake	Nanatto
	5) *Ahaetulla nasutus*	Common vine snake	Chooty, Hariyali
	6) *Boiga trigonatus*	Common Indian cat snake	NA
	7) *Boiga forsteni*	Forstein's cat snake	NA
	8) *Xenochrophis piscator*	Checkered keelback water snake	Yewale
	9) *Amphiesma stolata*	Buff-striped keelback	Naneti
	10) *Chrysopelea ornata*	Ornate flying snake	NA
	11) *Argyrogena fasciolatus*	Banded Racer	NA
Elapidae	1) *Bungarus caeruleus*	Common Indian krait	Kaner, Maniar
	2) *Naja naja*	Spectacled cobra	Nag, Parro
Viperidae	1) *Daboia russellii*	Russell's viper	Ghonos, Mandol
	2) *Echis carinatus*	Indian saw-scaled viper	Phurshem
	3) *Trimeresurus macrolepis*	Large-scaled pit viper	NA
	4) *Trimeresurus malabaricus*	Malabar pit viper	NA
	5) *Hypnale hypnale*	Indian hump-nosed pit viper	NA

(Taxonomy and Common English names follow Das (1997))

KING COBRA

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While coming back from fieldwork at Jainty area of Buxa Tiger Reserve, we came across a king cobra *Ophiophagus hannah* at 19.00 hrs. It was 8 feet (2.5m) long snake crossing the road near the 27th mile road in Rajabathkawa-Baxaduar road, where the area is surrounded by Tropical Moist Semi-Evergreen Forest. When we reached close to the serpent as it reached the sparse, short herbs off the road.

Our jeep was driven close (c.5m) to the king cobra by keeping the vehicle in the herbs, where the snake entered. This sudden approach astonished the serpent. Immediately it raised its hood and keenly looked at the vehicle (with glowing headlights). After a minute it slowly moved towards the vehicle. So our vehicle had to be moved a meter backwards. When we moved the cobra stopped following us. A few seconds after we stopped the vehicle the cobra again moved towards the vehicle. This time we moved the vehicle a little farther from the snake. The cobra paid no more attention to the vehicle and started moving towards the dense wooded area about 5 meters away from the site.

I think, the sudden approach would have caused the alarm and aggressiveness in the animal. When the king cobra demonstrated the alert behaviour, there was no disturbance by the moving the vehicle. Further when it approached, the vehicle was moved backwards only. So the snake probably did not turn more aggressive. Different authors have discussed aggressive behaviour of king cobra. Daniel (1983) mentioned that the king cobra is very courageous and aggressive, sometimes attacking without

provocation, at the same time aggressiveness is dependent on individual temperament. But Whitaker (1978) writes that they are timid snakes, unwilling to attack and always seeking escape when possible.

Acknowledgements

I thank Dr. Vibhu Prakash, Principal Scientist BNHS for his encouragement throughout the study period, U.S.Fish and Wildlife Service for financial support for the project and Elbert Sangma, Driver, Dilip Roy and Raja Sen, Field Assistants for their help in field studies.

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KOVILLAPAKKAM – A LAKE ECOSYSTEM

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Introduction

Kovillapakkam lake and the surrounding countryside lying in south Chennai is an ideal habitat for snakes. The habitat consists of a large water body, which is the lake, the lake-bund with vegetation, a stream which originates in the lake, paddy fields, earth mounds in the middle of the lake, wells and open patches of grassland. The water in the lake maintains the water in the wells at a constant level thus enabling the growth of paddy, which is a seasonal crop.

The presence of snakes is an important indicator of biodiversity of this area. Due to lots of detrimental factors there has been a decline in the population of snakes in the study area. These factors include the construction of a bypass road in the middle of the lake and quarrying of soil by lorries. Real estate industry also seriously threatens the habitats of snakes, which are already under lots of pressure. Lots of visits were made at random over a period of ten years.

A study area of 3 sq. km was surveyed on foot. Photo documentation was made on one visit. Survey was made through vegetation on the mounds, across the stream, in paddy fields and grasslands. Local information on sightings in the previous years was also noted down.

Observation

Abundance of prey for snakes (frogs, geckos, fishes and small birds) and insects were seen. Two species of water snakes, one arboreal

snake and two species of terrestrial snakes were sighted. The water snakes that were sighted are the checkered keelback water snake (*Xenochrophis piscator*) and the olive keelback water snake (*Atretium schistosum*). One species of tree snake, the bronze-back tree snake (*Dendrelaphis tristis*) was once sighted in the open grassland near water. The large terrestrial snake (*Ptyas mucosus*) was often seen basking in the sun early in the mornings. The striped keelback (*Amphiesma stolata*), a common Indian grass snake, hunts for its prey such as small frogs, late in the evenings or early in the mornings in the open grasslands. Unlike the striped keelback, the checkered keelback water snake is truly a snake of the water. It is seasonal in its location. During the early monsoon period it is seen in the periphery of lakes and after the monsoon rains it is seen in the wells. Checkered keelbacks come out to bask in the stairways of the wells after the monsoon rains. The olive keelback water snake is often seen in the waterlogged grasslands near the lake. Fish, tadpoles, frogs and mosquito larvae form a major part of its diet.

The large terrestrial snake, the rat snake is sometimes seen on the bund in the middle of paddy fields. Sighting of this snake is rare since there is regular harvesting of snakes by local tribal snake catchers. This large non-venomous snake is an important predator keeping a check on the rodent population. It is normally seen in the evenings and mornings when it emerges from its burrow to feed. Though mainly rodent eaters rat snakes also feed on frogs, lizards, birds and sometimes even small snakes. Juveniles were also observed.

Venomous snakes like the cobra (*Naja naja*), common krait (*Bungarus caeruleus*), and saw-scaled viper (*Echis carinatus*) could not be sighted. The presence of these snakes was confirmed by sightings by farmers. Snake catcher's regularly come to catch these snakes. Russell's viper (*Daboia russellii*) is not known to occur here. The presence of other snakes could not be confirmed.

Discussion

The presence of snakes is an indicator of a healthy ecosystem. From the observations it is concluded that an ecosystem consisting of various food chains is in existence in Kovillapakkam. Insects, fishes and other small organisms form the base of the ecological pyramid. These are fed upon by predators like snakes, which are in turn preyed on by birds like the black-winged kite. The monsoon rains play a major role in the ecology of this ecosystem. With the arrival of monsoon there is abundance of prey, which provide food for the hatchlings of the snakes. Hatchling mortality may be high due the presence of predatory birds.

Conservation

Kovillapakkam should be protected from the detrimental factors of development. A newly laid road will bring more development in the form of real estate, which will drastically affect this fragile ecosystem. Kovillapakkam could be managed as an important snake habitat and as a model for protecting other such snake habitats.

FIRST RECORD OF THE DOG-FACED WATER SNAKE (*CERBERUS RYNCHOPS*) FROM SAURASHTRA SEA COAST OF GUJARAT STATE

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During a field excursion on 11th May 2002, one of us (I R Gadhvi) found a live snake on the sandy beach of Kuda village, Bhavnagar District. On the basis of the body and tail shape it was clearly not a sea snake belonging to the family Hydrophidae. Its nostrils were on top of the head and this position of the nostrils of the snake indicated that the snake was a water snake and most probably one of the estuarine species. On examination it was confirmed to be a dog-faced water snake (*Cerberus rynchops*).

Description: Total body length 43 cm; snout to vent length 35 cm and tail length 8 cm; mid body scales in 23 rows; ventrals 158; 58 sub-caudals divided, anal plate 2; 1 pre-sub ocular, 1 supra- and 2 post oculars; supra-labials 9, 5th below the eye, 7th one larger than the others; infralabials 8; 3 pairs genials; dorsal body scales keeled, outer laterals two rows, scarcely larger than the median and smooth.

Head broad, rounded, scarcely distinct from neck, nostrils upward, eye small with vertical pupil. Tail short, compressed at base, rapidly tapering to a point. Dorsal body colour dark grey with black coloured dim crossbars; belly dirty white with large black square-shaped spots. Upper lip and chin buff coloured.

According to Smith (1943) the species is a comparatively rare snake on the coasts of India and it is distributed from Bombay (now Mumbai) to Cochin, Ceylon (now Sri Lanka); Andaman and Nicobar Islands; the Malay Peninsula and Archipelago. Daniel (1983) made a general statement on the species distribution that the species is distributed on the coasts of India and tidal rivers from Sind to Chittagong and eastwards. But so far there is not such record of the species from the coastal waters of Pakistan and Saurashtra. According to Minton (1966) "Murray (1886) recorded *C. rhynchops* from the Indus delta. A specimen formerly in the collection of the Karachi Museum and labeled *C. rhynchops* is actually a fresh water snake *Xenochrophis cerasogaster*". This species was not listed by Vyas (1987) in the survey of Bhavnagar district, also. Whitaker (1969) reported that the species is common from coastal water of Mumbai, but afterwards Vyas (1996) recorded the species from big rivers of south Gujarat. Present record of the species is from Kuda coast which is about 50 km away from and on the opposite side of the Narmada River estuary. It is the first record from the Saurashtra coast.

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CHECKERED KEELBACK DIES AFTER SWALLOWING A COMMON INDIAN TOAD

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On August 7, 2002, I found a 56cm long, young Checkered Keelback (*Xenochrophis piscator*) lying dead outside my residence in Chennai. It had rained the previous evening and since normally these water snakes come out and get killed by people or passing vehicles, I just picked up the dead snake and threw it over the wall. However, what struck me was that the snake had no injuries on its body and the area around the stomach was quite swollen as if it had just fed. I then decided to fetch the snake and cut it open. On opening the stomach, I found a small Common Indian Toad (*Bufo melanostictus*) inside. It measured 2.5cm in snout-vent length. The toad had been swallowed headfirst and there was no sign of choking suggesting that the snake died of poisoning.

Common Indian Toads are known to secrete toxins from their paratoid glands and skin that may cause irritation to the human skin. These toxins are also dangerous to cats and dogs that attempt to pick up toads causing the mammals to salivate and drool profusely. Although I have observed Checkered Keelback and Olive Keelback (*Atretium schistosum*) feed on the tadpoles of the Common Indian Toad, there is no report of the two species of water snakes feeding on juvenile or adult toads. It is therefore convincing that the Checkered Keelback that I found indeed died of toad poisoning.

RANDOM HARVEST

Peasant in a pickle

Quoting a news item from China, the *Hindu Business Line* of Oct.16, 2002 reports a strange accident. Li, a peasant in central China, had pickled a 'dead' snake in some spirit, the exact nature of which has not been disclosed. (Alcoholic drinks such as rice wine containing preserved snakes are popular in China). Now that a year had gone and the drink would have matured enough, he opened the bottle, when out came the snake, full of spirit, and sank its teeth into his neck. The peasant is recovering in a hospital. There is no mention of what happened to the snake or whether it preferred to go back to the invigorating surroundings inside the bottle.

Shell on wheels

"During one of Rio de Janiero's regular slum shoot-outs, a 20 year old pet tortoise caught a bullet in its shell paralysing its hind legs. The owner took it to a vet who devised a clever cure: she took two wheels from a TV stand and taped them to the bottom of the tortoise's shell".

[Source: *Time* Aug.19, 2002]

The disappearing amphibians

A Conservation Assessment and Management Plan (C.A.M.P) and a Global Amphibian Assessment (G.A.A) for amphibians of South Asia were held in July 2002 at the State Forest Service College, Government of India, in Coimbatore, Tamil Nadu. Forty seven delegates – primarily amphibian field biologists and taxonomists from five countries of South

Asia (India, Sri Lanka, Bhutan, Bangladesh, Nepal) as well as from Great Britain, USA and France-participated. The workshop gave the following assessment of amphibians in South Asia :-

Extinct : 18 species.

Critically endangered (Facing an extremely high risk of extinction in the wild in the immediate future) : 32.

Endangered (Facing a very high risk of extinction in the wild in the near future) : 58

Vulnerable (Facing a high risk of extinction in the wild in the medium - term future) : 44

Near-threatened (Close to qualifying for a category of threat) : 14

Least concern (Does not qualify for a category of threat; widespread and abundant) : 82

Data deficient :	63
Not evaluated :	8
Total	319

[Source: *Froglog* Aug. 2002, Number 52]

Books

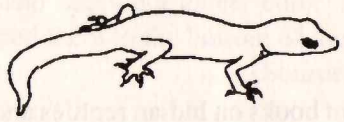
Two excellent books on Indian reptiles and amphibians have come out in recent months. One is J.C.Daniel's *The Book of Indian Reptiles and Amphibians* (BNHS/OUP. Pr. Rs.595). The first 158 pages of this is a "new presentation" (author's words) of his 1983 publication *Reptiles of India*. The earlier text has been revised on the basis of information that has become available subsequently. The next 57 pages are devoted to amphibians on which subject books for the laymen are, as yet, few in number compared to books on reptiles.

The other book is *A Photographic Guide to Snakes and Other Reptiles of India* (New Holland Publishers. Distributed by IBD Pr.Rs.395) by Indraneil Das. This is a handy field guide in a format now being increasingly adopted the world over for all forms of wildlife.

The coverage, the text, the illustrations and the production standards of both the books leave little to be desired.

A much awaited (and long awaited!) publication is a revised and enlarged version of Romulus Whitaker's 1978 book *Common Indian Snakes* which has for the last over two decades remained the most popular book on Indian snakes.

– B. Vijayaraghavan.



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AIMS AND OBJECTIVES OF

CHENNAI 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 undertake captive breeding of vulnerable species of snakes and other reptiles.

iii) To promote knowledge on snakes, and other reptiles and amphibians and dispel the erroneous beliefs about them.

iv) To aid and assist research on reptiles and amphibians.

v) To provide facilities for the identification and classification of snakes and other reptiles and amphibians and, for this purpose, maintain a museum of study collections.

vi) To maintain a library of books and other literature on reptiles and amphibians.

vii) To publish scientific and semi-scientific literature on snakes and other reptiles and amphibians.

viii) To undertake survey on the distribution and status of snakes and other reptiles and amphibians.

ix) To provide consultancy services on snakes and other reptiles.

x) To provide a common forum for interaction among amateur scientists and friends of reptiles and amphibians.