Cobra

Vol.-III Issue -1 January - March 2009

CHENNAI SNAKE PARK TRUST

Quarterly Journal of the Chennai Snake Park Trust

Annual subscription : Individual – Rs. 75/-. Institution – Rs.150/-.

Cover

King cobra (*Ophiophagus hannah*)
Venomous. Mostly in forest areas in Western Ghats, U.P. Orissa, Bihar, West Bengal and the Northeast (to Arunachal Pradesh) and Andaman Islands. About 3 meters long. Mainly feeds on snakes. Lays eggs.

Photo : **P. Gowrishankar**

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Cobra

Volume : III Issue 1 January - March 2009

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FURTHER RECORD OF BLACK KRAIT, *BUNGARUS NIGER*, WALL, 1908 (REPTILIA : ELAPIDAE) FROM CHAMPHAI DISTRICT OF MIZORAM, NORTH EAST INDIA.

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Several snakes have been reported from the state of Mizoram (Harit & Ramanujam, 2002; Mathew, 2007 a & b; Harit, 2008 a, b & c, 2009 a & b). In recent literature no mention has been made on the occurrence of black krait, *Bungarus niger* Wall, 1908, from the state of Mizoram, except Mathew (2007b), who recorded the snake from Saiha district of south Mizoram on 07.06.2006.

On 10.06.2009, while traveling from Aizawl to Champhai district from 07.00 am to 04.00 pm, I recorded several road kills such as white-barred kukri snake *Oligodon albocinctus* 1 no., copper-headed trinket snake *Coelognathus radiatus* 2 no., green pit viper *Trimeresurus* sp.,1 no., checkered keelback *Xenochropis piscator* 1 no., and six other snakes which were not identifiable due to bodies being badly mutilated.

Among the road kills, the body of a black krait, *Bungarus niger*, was found at around 03.00 pm on the roadside, nearly 5 to 6 kilometers away from river Tuipui, on the way to Champhai district. It was photographed on the spot and collected. The snake had probably been run over by a vehicle, but most of the features important for identification were intact and it was identified as black krait, *Bungarus niger* (Das, 2008; Sharma, 2003; Shaw *et al.*, 2000; Smith, 2003; Wall, 2000; Whitaker & Captain, 2008).

Description

Head not very distinct from neck; scales glossy; eyes not very large; pupil appears to be round (not very clear in dead specimen); dorsal row body scales is hexagonal in shape; supralabials 7, 3rd & 4th touching the eye; ventrals 225; anal 1 entire; subcaudals 44, entire; body scalation 15:15:15.

Measurements

Body length : 94.0 cm. Tail length : 11.8 cm. Total length : 105.8 cm

Colouration

Gray black dorsally, lower side of supralabials, infralabials and ventral side of head and neck yellow. Underside of fore body light pinkish, while rest of the body's underside light gray. The intensity of light gray colour increases towards tail tip.

Distributional range

The distributional range of the balck krait *Bungarus niger* in India has been mentioned to be Uttarakhand (Bungapani); Sikkim; West Bengal (Darjeeling and Jalpaiguri districts); Assam (Dibrugarh, Margherita, Sadiya, Sibsagar, Jaipur and Cachar districts); Meghalaya (Garo Hills); Arunachal Pradesh (Papum Pare and Changlang districts) (Das, 2008; Sharma, 2003; Whitaker and Captain, 2008).

Occurrence of the black krait has been reported from Saiha district of south Mizoram (Mathew, 2007b) and the present study it is the first record of the occurrence of black krait from Champhai district of eastern Mizoram.

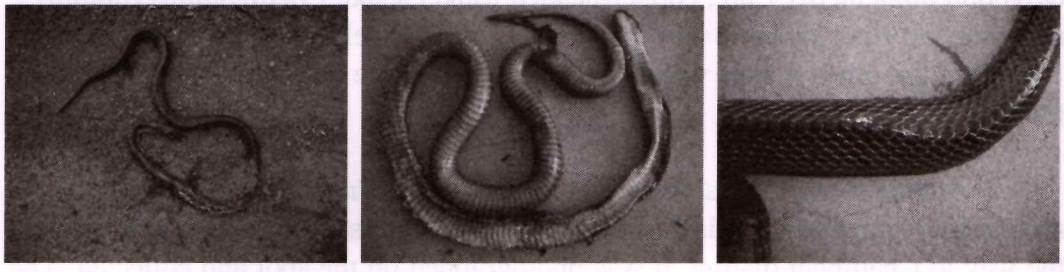

Fig. 1. Black Krait, *Bungarus niger* (left to right); Snake at accidental site; Ventral view; Close up of dorsum.

Acknowledgements

Author is thankful to the Principal, Government Champhai College, Mizoram, for providing facilities. Author is also grateful to the University Grants Commission, NERO, Guwahati, for financial assistance.

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KING COBRA *OPHIOPHAGUS HANNAH* (CANTOR, 1836) (REPTILIA : ELAPIDAE) AND ITS RECORD CLUTCH SIZE IN MIZORAM, NORTH EAST INDIA.

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King Cobra *Ophiophagus hannah,* (Cantor, 1836), normally inhabits dense forests away from human habitations. It preys on snakes of all types, both venomous and non-venomous.

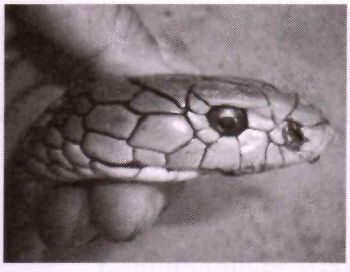
The distribution range of king cobra in India is Western Ghats (Karnataka, Goa, Kerala, Tamil Nadu), Uttar Pradesh (Teri), Bihar, Orissa, West Bengal and North East India (Arunachal Pradesh) and Andaman Islands. It also occurs in Bangladesh, Bhutan and Nepal (Whitaker & Captain, 2008; Das, 2008). The king cobra has been observed at Kawnpuii of Kolasib district of Mizoram (Mathew, 2007a), and at Champhai district, of Mizoram state, North East India (Harit, 2009).

On 06.06.2009, around 02.00.pm, two full-grown king cobras, which are called "Rulngan" in Mizo, were sighted at Hmunhmeltha village of Champhai district of Mizoram, North East India. A villager, working in the field, saw one of the snakes about to attack his younger brother, and so he shot it dead. The snake had taken the shot a little behind the neck (Figs. 1 & 2). The snake was a female, which was guarding its nest nearby. Another snake nearby, presumably the male, escaped. The man later saw the nest and found eggs, which were also collected, in a polythene bag (Fig. 3). They were 55 in numbers, 6 other eggs were damaged by the gun shot, making a total of 61 eggs in the nest.

The incident was reported to the Champhai Forest Division officials, who seized the dead snake along with 55 eggs and the gun. The collected eggs remained in a polythene bag, for nearly 24 hours in a tight compact (Fig. 3). The body of the king cobra was preserved and the eggs were left for hatching in a big bucket, covering it with a net cloth tied over the mouth of the bucket. The shot snake was confirmed as *Ophiophagus hannah* as per Daniel (2002), Das (2002), Mathew (2007b), Sharma (2003) and Whitaker and Captain (2008).

Scalation and Measurements

Body stout; scales smooth and glossy; eyes large with round pupil; a pair of large occipital shield behind parietals, touching it; ventrals 257; anal 1; subcaudals 81, only first sub caudal was complete whereas rest others paired; loreal absent; preocular 1; postoculars 3; supralabials 7, 3rd and 4th touching the eyes; body scalation 15:15:15; body length 212 cm, tail length 41.5 cm, total length 253.5 cm.



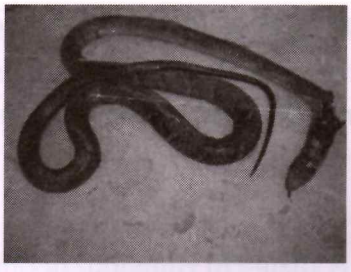


Fig. 1. Dorsolateral head scalation; **Fig. 2.** Injured snake; **Fig. 3.** Eggs in polythene bag.

Clutch Size

Eggs of King Cobra are found in April – July (Daniel, 2002). The reported clutch size in king cobra is 24 (Das, 2002) 51 (Daniel, 2002) 20-40 (Sharma, 2003), whereas in the present case the clutch size was 61, which is significant.

Acknowledgements

The author is grateful to Pu Vanlallawma, Assistant Conservators of Forests and Pu H. Zakima, Forests Range Officer, Champhai Forest Division, Mizoram for providing information and Mr. Liana for their help.

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NOTES ON THE DISTRIBUTION AND NATURAL HISTORY OF THE RARE AND ENDEMIC, STOUT SAND SNAKE, *PSAMMOPHIS LONGIFRONS* BOULENGER, 1896

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Introduction

Psammophines, a colubrid subfamily of mostly Afro-Asian snakes, consisting of 8 genera with 44 species, are characterized by a tiny, quasi filiform and 3-4 Sc short hemipenis (de Haan and Cluchier, 2006) and snakes of the genus *Psammophis* Fitzinger, 1826 are represented by four species namely *P. condanarus, P. leithii, P. longifrons* and *P. schokari* in India (Whitaker & Captain, 2004). The group is poorly known (Brandstaetter & Redl, 1997) and of the four species; *P. longifrons* is the least known in terms of natural history and its status has been considered to be at lower risk and near threatened (Anonymous, 1997). Boulenger (1896) described *P. longifrons* based on a single specimen collected by Col. Beddome from Cuddapah hills, Andhra Pradesh the type locality probably being incorrectly labeled (*fide* Smith, 1943; Whitaker & Captain, 2004). Only the head and neck measuring ca. 1219 mm was preserved and thus Boulenger could describe only the anterior half of the snake (*fide* Dreckmann, 1892). Later, Dreckmann (1892) added further data on the snake based on a specimen collected by D'Aguiar from Kalyan. In this communication we provide a description of a recently rescued specimen from Badlapur (Thane district, Maharashtra, India) and also add some data on the natural history of this species with

respect to published data based on the observations made on individuals in the natural habitat, rescued specimens and material in the collection of the Bombay Natural History Society (BNHS) and our own observations. A map is compiled based on published records and material examined.

Description

SVL 873 mm, TL 240 mm (ca. 30 mm of tail broken during rescue); supralabials 8, 4th and 5th touching eye, 1 loreal, 1 preocular reaching the upper surface of the head, 2 postoculars, 2 + 3 temporals, dorsal scale rows 17:17:13, anal plate divided, ventrals 160, 61 divided subcaudals (excluding those of broken tail), sex male. Colour and pattern: brownish above, white bellow; dorsal scales on posterior half of the body distinctively edged with black and also the scales on the vertebral region forming a chain, very much distinct in juveniles.

Distribution

Smith (1943) gave the range to be Bombay presidency north of lat. 19 ° (Thana and Damanganga district, Bulsar, Panch Mahals); C.P. (Nagpur); Vyas (1987) reported the occurrence of this species from Kamrej Taluka, Surat district, Gujarat; Whitaker & Captain (2004) gave the range to be Maharashtra and Gujarat north of Mumbai (Thane and Damanganga district, Nagpur, Valsad/Bulsar and Panch Mahals) and recently Nande and Deshmukh (2006) reported it from Amravati district and Melghat. Two specimens were rescued from Bhusawal, Jalgaon district of Maharashtra state. Chandra and Gajbe (2005) report it from Madhya Pradesh based a report by Sharma (2000) without any precise locality. This further needs confirmation.

Natural History

Snakes of the genus *Psammophis* are distributed in the arid and drier regions of the country *P. longiforns* is found in dry deciduous and scrub forests. The English common name 'stout sand snake' is thus misleading as this species is never actually found in sand and so we suggest the common name 'stout racer snake'. This species has been rescued from near houses in Badlapur, Neral and Kalyan (Thane district, Maharashtra) and has been found in deciduous forest in adjacent areas as well. Specimens on being captured made no attempt to bite but tried to escape. A swift and agile snake, it exhibits both terrestrial and arboreal habits. A specimen was found coiled in a crow's nest. In captivity, these snakes have accepted as feed *Hemidactylus flaviviridis*, *Calotes versicolor*, *Calotes rouxii*, *Eutropis* sp., mice. These were

constricted and held in the jaw until the prey was dead and then swallowed. A specimen measuring ca. 950 mm regurgitated a freshly consumed mouse due to stress of capture. D'Abreu recovered six skinks from the stomach of a specimen (Smith, 1943). Saurians appear to form a major part of its diet and small mammals upto a certain extent as reported in other species of this genus (Akani et al, 2003; Minton, 1966).

Acknowledgments

We would like to thank Nisarg Trust for their help and to all the snake rescuers in and around Badlapur who added to our knowledge of this species. ZM wishes to acknowledge Rajesh Sanap, Sanjay Khandare and Alex for providing details on the ophidian fauna of Nasik and Jalgaon district. Special thanks to Raju Vyas for his help and comments.

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A SURVEY REPORT OF THE REPTILES & AMPHIBIANS OF POWAI LAKE, AAREY MILK COLONY AND FILM CITY, MUMBAI, MAHARASHTRA

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Abstract

This report contains a detailed checklist of reptiles and amphibians recorded from Aarey milk Colony, Film City and Powai Lake which lie on the periphery of the Sanjay Gandhi National Park between 2004 to 2008 while surveying as well as during snake rescue from various residential areas in and around the study area. A total of 48 species of reptiles and 12 species of amphibians were recorded from this area. We also recorded various threats to local populations of herpetofauna.

Keywords

Aarey milk colony, film city, Powai, reptiles, amphibians, herpetofauna, checklist, study area SGNP, threats

Introduction

Western Ghats is one of the biodiversity hotspots in the world and recent surveys there have yielded notable additions to the herpetofauna of the region (Giri *et al.* 2003, 2004, 2008, Giri & Bauer 2008). With its varied topography and geography, the northern Western Ghats, which run through Maharashtra and parts of Goa and Gujarat, are also home to some unique species of reptiles and amphibians, although

this region still remains relatively poorly explored with respect to herpetofauna (Giri & Bauer 2008). Mumbai lies on the western fringe of the northern Western Ghats and there are scanty publications with respect to herpetofauna of the region. Thus, in this light we take the opportunity to add some data on the herpetofauna of Aarey milk Colony, Film City and Powai Lake which lie on the periphery of the Sanjay Gandhi National Park (SGNP).

Study Area

The study area (Aarey Milk Colony, Film City and Powai Lake) is located to the southern border of the Sanjay Gandhi National Park. The maximum elevation recorded in the area is about ca. 100 m. The much altered scrub forests of the study area are contiguous with SGNP to its north, with the 33 acres of BNHS land (CEC) located to the southwest. The habitat being highly varied consisting of scrub forest, seasonal freshwater marshes, hillocks, rocky outcrops, grass and scrub interrupted by human settlements is host to a variety of life forms, thus making this area a faunistically rich area near Mumbai. The forest here is of mixed moist deciduous type and is dominated by *Tectona grandis, Bombax ceiba, Butea monosperma, Pongamia pinnata, Cassia fistula, Ziziphus* sp., heavily intermixed with exotic species such as *Eucalyptus*, the Rat Poison tree as well as Gulmohur and *Lantana* sp. The temperature ranges from 11-36° C with maximum recorded rainfall of 950 mm.

1. Aarey Milk Colony:
   This area is a grass and scrub environ with a few hillocks, possessing two perennial and one seasonal pond as well as many annual streams in the area covering about 1024 hectares. The area harbors a number of milk dairies and cattle sheds and heralded the dawn of dairy production in Mumbai The vast pastures of the Marutian Para grass are maintained and harvested as fodder for cattle. This area also formed the nexus of human-leopard conflict between 2002 and 2004. Total length of road which runs through Aarey Milk Colony is ca. 50 km.

2. Film City:
   The area is dominated by dense mixed moist deciduous forest with a maximum elevation of ca. 100 m. The floral and faunal composition of this area is similar to that of the SGNP, but is largely degraded and highly disturbed due to human activities.

3. Powai Lake:
This comparatively shallow man-made lake (as opposed to the other lakes of Mumbai) faces sizeable pressure from developmental activities such as construction of residential complexes, roads and landfills. As a result, the water of the lake is polluted and unsuitable for drinking purposes. Powai Lake is the only water body outside the SGNP which supports a viable breeding populace of marsh crocodile *Crocodylus palustris*, the nesting sites of which are now under threat due to concretization of the lakes banks

Methods

Regular year-round surveys were conducted in the study area during various times of the day. The authors also attended most of all the snake rescue calls from residential areas in and around the study area. The underside of rocks, leaf litter and fallen branches were examined for elusive species that might take refuge among them as were sites like road edges, forest pathways and ditches. Road kills were also examined while driving along the roads at various periods during dusk and dawn. Lizards, amphibians and snakes were photographed and released in the same area with the exception of rescued specimens (snakes), which were also appropriately relocated The specimens were captured by hand and transferred to suitable sized plastic containers. Identification was made using 5-20X magnifying lenses. Scale counts and other morphological characteristics were recorded and measurements taken with the help of an Aerospace Dial Caliper to the nearest 0.02 mm. All specimens were examined and were identified with the help of the key provided by Smith (1935 & 1943), Daniel (2002), Daniels (2005), Minton (1966). Nomenclature adopted follows Das (1997 & 2003) and Whitaker & Captain (2004) for reptiles and Das and Dutta (2008) for amphibians.

Results

Reptiles: A detailed checklist of the 48 species of reptiles of 34 genera belonging to 13 different families recorded during the study is presented in Table 1. Amphibians: A total of 12 species of amphibians of 12 genera belonging to seven families were recorded. During the survey, the commonest species of amphibians observed were Common toad *Duttaphrymus melanostictus*, Cricket frog *Fejervarya* sp. and Skittering frog *Euphlyctis cyanophlyctis* whereas Bombay caecilian *Ichthyophis bombayensis* was observed only on a few occasions. Due to the lack of a comprehensive identification key, certain anurans could not be identified to the species level.

Table 1. Systematic list of Amphibians & Reptiles of Aarey Milk Colony, Film City & Powai. Abbreviations for Distribution - Powai = P; Aarey Milk Colony = AMC; Film City = FC; Recorded = + absent/ not recorded = -

Family and common names	Scientific names	Selected regional distribution		
		P	AMC	FC
Amphibia				
Bufonidae				
1. Common toad	*Duttaphrynus melanostictus*	+	+	+
2. Marbled toad	*Bufo stomaticus*	-	-	+
Microhylidae				
3. Ornate microhylid	*Microhyla ornata*	-	+	+
4. Jerdon's narrow- mouthed frog	*Ramanella montana*	-	+	+
Dicroglossidae				
5. Indian bull frog	*Hoplobatrachus tigerinus*	+	+	+
6. Skittering frog	*Euphlyctis cyanophlyctis*	+	+	+
7. Cricket frog	*Fejervarya* cf. *limnocharis*	+	+	+
8. Burrowing frog	*Sphaerotheca breviceps*	-	+	+
Ranidae				
9. Fungoid frog	*Hydrophylax malabarica*	-	+	+
Petropedetidae				
10. Leaping frog	*Indirana* sp.	-	-	+
Rhacohphoridae				
11. Common free frog	*Polypedates maculatus*	+	+	+
Ichthyophiidae				
12. Bombay caecilian	*Ichthyophis bombayensis*	+	+	+
Reptilia				
Gekkonidae				
13. Yellow- green house gecko	*Hemidactylus flaviviridis*	+	+	+
14. Asian house gecko	*Hemidactylus frenatus*	+	+	+
15. Brook's house gecko	*Hemidactylus* cf. *brookii*	+	+	+
16. Spotted house gecko	*Hemidactylus maculatus*	-	+	+
17. Bark gecko	*Hemidactylus leschenaultii*	-	+	+
18. Unidentified gecko	*Hemidactylus* sp.	-	-	+
19. Kollegal ground gecko	*Geckoella collegalensis*	-	+	+
20. Deccan ground gecko	*Geckoella dekkanensis*	+	+	+
Agamidae				
21. Indian garden lizard	*Calotes versicolor*	+	+	+
22. Roux's forest lizard	*Calotes rouxi*	-	-	+
Scincidae				
23. Keeled grass skink	*Eutropis carinata*	+	+	+
24. Bronze grass skink	*Mabuya macularia*	+	+	+
25. Spotted supple skink	*Lygosoma punctatus*	-	+	+
26. Lined supple skink	*Lygosoma lineata*	-	+	+

Family and common names	Scientific names	Selected regional distribution		
		P	AMC	FC
27. Snake-eyed lacerta	*Ophisops jerdoni*	-	-	+
28. Beddome's lacerta	*Ophisops beddomei*	-	+	+
Varanidae				
29. Bengal monitor	*Varanus bengalensis*	+	+	+
Chamaeleonidae				
30. Indian chamaeleovn	*Chamaeleo zeylanicus*	+	+	+
Typhlopidae				
31. Brahminy worm snake	*Ramphotyphlops braminus*	+	+	+
32. Beaked worm snake	*Grypotyphlops acutus*	+	+	+
Boidae				
33. Indian rock python	*Python molurus*	+	+	+
34. Common sand boa	*Gongylophis conicus*	-	+	+
Colubridae				
35. Indian rat snake	*Ptyas mucosa*	+	+	+
36. Montane trinket snake	*Coelognathus helena monticollaris*	+	+	+
37. Common Indian trinket	*Coelognathus helena helena*	-	+	+
38. Common wolf snake	*Lycodon aulicus*	+	+	+
39. Banded kukri snake	*Oligodon arnensis*	+	+	+
40. Streaked kukri snake	*Oligodon taeniolatus*	-	+	+
41. Common Indian cat snake	*Boiga trigonata*	-	+	+
42. Beddome's cat snake	*Boiga beddomei*	-	+	+
43. Forsten's cat snake	*Boiga forsteni*	-	-	+
44. Common bronzeback tree snake	*Dendrelaphis tristis*	-	+	+
45. Banded racer	*Argyrogena fasciolata*	-	+	+
46. Slender racer	*Coluber gracilis*	-	-	+
47. Green keelback	*Macropisthodon plumbicolor*	-	+	+
48. Buff-striped keelback	*Amphiesma stolatum*	+	+	+
49. Checkered keelback water snake	*Xenochrophis piscator*	+	+	+
50. Common vine snake	*Ahaetulla nasuta*	+	+	+
51. Black headed snake	*Sibynophis subpunctatus*	-	+	+
Elapidae				
52. Spectacled cobra	*Naja naja*	+	+	+
53. Common Indian krait	*Bungarus caeruleus*	-	+	+
54. Slender coral snake	*Calliophis melanurus*	-	+	+
Viperidae				
55. Saw scaled viper	*Echis carinatus*	+	+	+
56. Russell's viper	*Daboia russelii*	+	+	+
57. Bamboo pit viper	*Trimeresurus gramineus*	-	+	+

Family and common names	Scientific names	Selected regional distribution		
		P	AMC	FC
Trionychidae				
58. Indian flapshell turtle	*Lissemys punctata*	+	+	+
59. Leith's soft-shell turtle	*Aspideretes leiithii*	+	-	-
Crocodylidae				
60. Mugger crocodile	*Crocodylus palustris*	+	-	-

Threats

The following threats were identified to be potentially affecting the herpetofauna of the study area directly or indirectly:

Vehicular Traffic:

The vehicular traffic in and around the study area adversely affects the herpetofaunal diversity, resulting in many fatalities – listed in Table 2. Maximum mortality was observed during monsoon.

Table. 2. List of road kills observed

Common Name	Scientific name	Comments
Common toad	*Duttaphrynus melanostictus*	Monsoons- In large numbers
Marbled toad	*Bufo stomaticus*	Monsoons- numbers uncertain
Indian bull frog	*Hoplobatrachus tigerinus*	Monsoons- In large numbers as they are seen in amplexus on the roads
Paddy field/ cricket frog	*Euphlyctis cyanophlyctis*	Monsoons- In large numbers
Unidentified fejervarya	*Fejervarya* sp.	Monsoons- In large numbers
Common tree frog	*Polypedates maculatus*	Monsoons- In large numbers
Indian garden lizard	*Calotes versicolor*	Throughout the year
Bengal monitor	*Varanus bengalensis*	Throughout the year
Indian rock python	*Python molurus*	Mostly during winters, juveniles.
Banded kukri snake	*Oligodon arnensis*	Throughout the year
Streaked kukri snake	*Oligodon taeniolatus*	Only two road kills observed
Common cat snake	*Boiga trigonata*	During winter, in a week five dead individuals were found near New Zealand hostel.
Striped keelback	*Amphiesma stolatum*	Throughout the year, but in large nos. during monsoons
Checkered keelback	*Xenochrophis piscator*	Throughout the year
Common vine snake	*Ahaetulla nasuta*	Throughout the year

Agricultural Practices:

Patches of forest are cleared for agricultural purposes, whereas slash and burn practices employed by the locals also take heavy tolls, and any snakes or large lizards stumbled across are immediately destroyed. The agricultural runoff from farmlands containing various pesticides and chemical fertilizers also effects the life cycle of amphibians

Human Settlements:

Human settlements and the resulting developmental activities are important factors contributing to altered/degraded habitats in certain areas as is the encroachment of forest land by immigrants who poach like turtles and monitor lizards for meat and timber for fuel wood thus directly and indirectly impacting herpetofauna of the study area.

Religious activities

Immersion of idols in ponds has a detrimental effect on amphibian fauna.

Fishing Activities:

Destructive fishing practices result in loss of Indian bull frog *Hoplobatrachus tigerinus,* Indian flap shell turtle *Lissemys punctata* and Checkered keel back *Xenochrophis piscator. Xenochrophis piscator* seems to be the species affected the most by the careless use of fishing nets as they are attracted to the fish caught in these nets. The snakes, in turn, get entangled and drown. On one instance 27 *Xenochrophis piscator* were found dead entangled in a fishing net at Powai Lake.

Proliferation of exotics:

Many exotic species of fish namely cichlids like *Tilapia* sp. and Mosquito Fish (*Gambusa sp.*) have been introduced in ponds of the study area as well as Powai Lake which threaten amphibian eggs and larvae. Release of exotic species such as Red Eared Slider *Trachemys scripta* pose a grave threat to the existing Indian species by occupying the same niche.

Other human activities:

The clearing of vegetation around Powai Lake has negatively impacted the marsh crocodile population. Whitaker & Andrews (2003) state that "a reward of Rs. 50 was offered for killing a crocodile and Rs. 10 for destroying a crocodile egg, probably by the fisheries department at Powai Lake". During the survey only adults

were observed. Even the locals and the members of the Powai Angling Club do not report seeing any juveniles.

Discussion and Conclusion

The area hosts ca. 66 per cent of amphibian species and ca. 76 per cent reptile species occurring in Mumbai. This indicates the richness of the species diversity and highlights the need for protecting this unique area. Some parts of the study area are inaccessible either due to rough terrain and/or the likely presence of leopards (confirmed by indirect evidence) and hence could not be surveyed. Certain species might have been missed during our survey. To detect these, an intensive survey of the area along with the SGNP will be needed. An unidentified species of *Hemidactylus* species was encountered during the survey which could possibly be an undescribed species.

The high herpetofaunal diversity indicated by our study conducted in the periphery of the SGNP highlights the need for a more intensive and detailed herpetofaunal survey within (the SGNP) Prior to this, only a single survey was conducted by G. Tiwari (1994), who documented 48 species of reptiles without any voucher specimens. Moreover, Tiwari's survey was incomplete as she could not confirm the occurrence of many species including Jerdon's snake eyed lacertid *Ophisops jerdoni* and green keelback *Macropisthodon plumbicolor.* Bamboo pit viper *Trimeresurus gramineus* a common snake from the SGNP was considered to be rare and recorded from a single village within the SGNP. As there is no data on the status of the marsh crocodile population at Powai Lake, an intensive survey is needed to determine their status. Such in-depth studies will not only help us estimate the species diversity of the entire SGNP landscape but will also help us establish base-line data for future studies. As the pressure of urbanization continues to throttle life out of the last remaining wildernesses within Mumbai city, it becomes extremely important to estimate the biotic value of the SGNP, and a detailed herpetofaunal survey will be a crucial step in this direction.

Acknowledgments

We would like to thank Kedar Bhide for his help and encouragement. All the members of Reptile Rescue & Study Centre have played a crucial role by providing us with information on reptiles observed by them in the study area. We are grateful to Mr. Quentin Desouza for providing us with detailed maps of the study area which

were of great help. Special thanks to Dr. Anish Andheria (Sanctuary Asia), Varad B. Giri (BNHS), Kunal Ullalkar, Gavin Desouza, Shashank Dalvi, Sampat Shetty and Mittal Gala for their help and encouragement. ZM is also thankful to Rajesh Sanap for his assistance. Last but not the least the people who called us to rescue snakes and monitor lizards from their homes/ society/ campus etc. without whom the report could not have been compiled.

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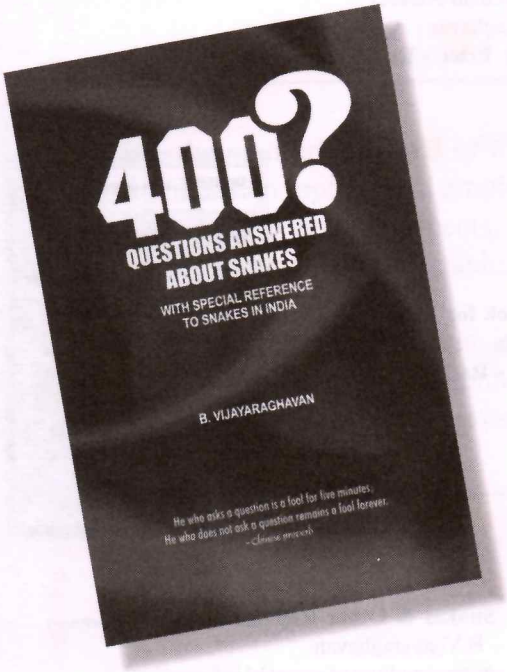

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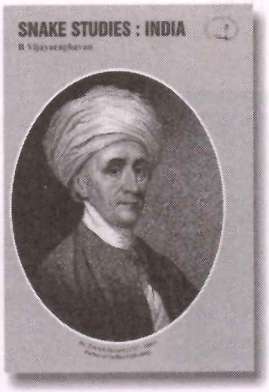

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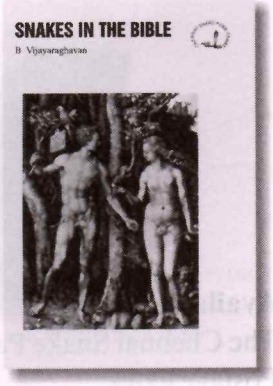

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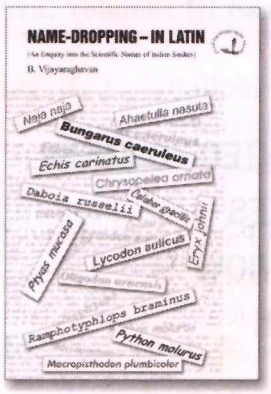

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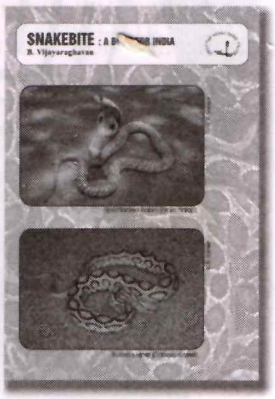

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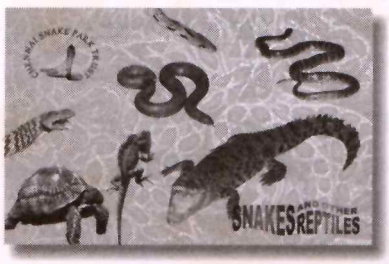

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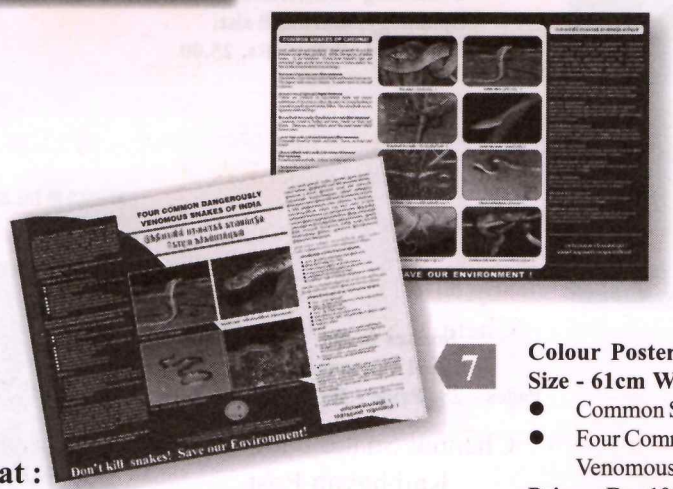

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Registered with the Registrar Office of Newspapers for India
(Ministry of Information and Broadcasting)
Registration No. TNENG/2007/19859
(*vide* letter dated 28.05.2007 of the Registrar of Newspapers for India)

Printer : **N. Arunachalam**, Students Offset Services
Shop No. 3, Apex Chambers, 20, Thiagaraya Road, Pondy Bazar, Chennai - 600 017.
Publisher : **R. Rajarathinam** on behalf of Chennai Snake Park Trust. Published by Chennai Snake Park Trust, Rajbhavan Post, Chennai - 600 022
Editor : **Dr. G. Thirumalai**
