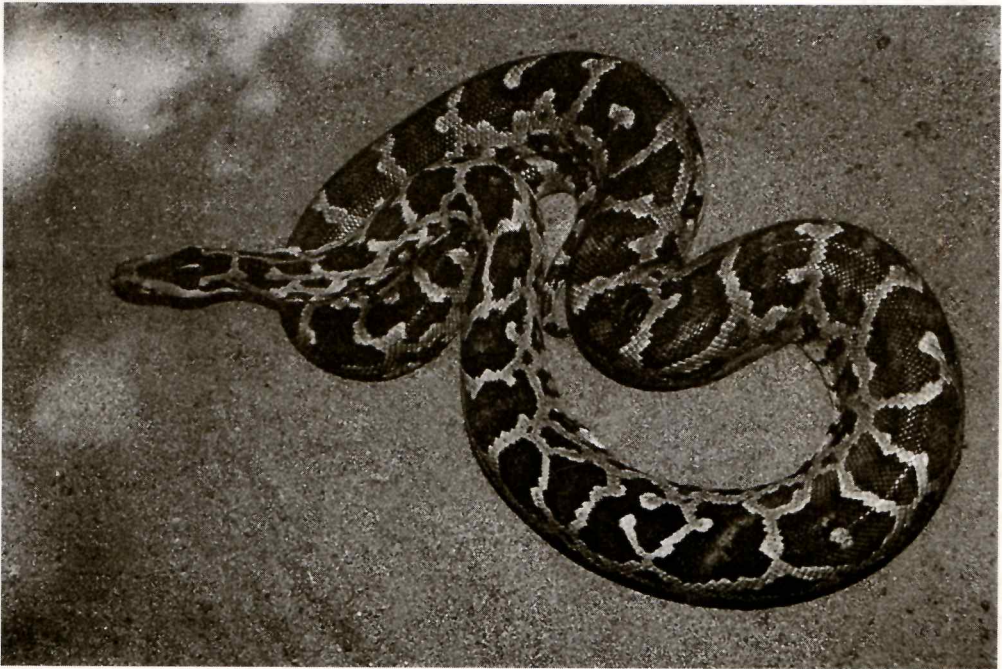


Cobra

Vol.-I Issue-1

January - March 2007



Quarterly Journal
of the Chennai Snake Park Trust

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

**CHENNAI SNAKE PARK TRUST
BOARD OF TRUSTEES**

Shri.B.Vijayaraghavan, I.A.S. (Retd.) Chairman

Dr.S.Lakshmanan

Shri.P.V.Laxminarayana

Shri.V.S.Raghavan

Shri.M.Raghuraman

Shri.S.Subbarayalu Naidu, I.F.S. (Retd.)

Dr.T.Sundaramoorthy

Shri.K.Viswanathan, I.F.S. (Retd.)

Wildlife Warden, Chennai

(Shri.Ashish Kumar Srivastava, I.F.S.,)

Jt. Director, Tourism Dept.

(Shri.K. Marimuthu)

Officer-in-Charge,

Zoological Survey of India,

Southern Regional Station,

Chennai.

(Dr.G.Thirumalai)

Head, Dept. of Zoology,

Madras University.

(Dr.M.Arumugam)

Regional Deputy Director (WLP)

Wildlife Regional Office (SR)

Govt. of India, Chennai.

(Shri.P.Subramanyam, I.F.S.)

Editor:

Dr. G. Thirumalai

Cover

Indian rock python *Python molurus* (Linn.)

Non-Venomous. Rare. Throughout India. Average length:10'. Maximum length : 25'.
In forests, scrub and mangroves. Listed as 'endangered' under Indian law.

Photo : Anand Pakkurti, GNAPE.

Chennai Snake Park Trust, Rajbhavan Post, Chennai – 600 022. India.

Ph: 91-044-22353623 E-mail: cspt1972@md5.vsnl.net.in

Cobra

Vol. 1 Issue - 1

January - March 2007

CONTENTS

PAGE

SEA SNAPES ASSOCIATED WITH TRAWL BY-CATCH IN KERALA COAST, INDIA - Biju Kumar, A., Sudhakar Kumar, M., Divya, C.R. and Mithun, S.

ADDITIONS TO THE SPANIELS OF NIZORAM - Reshmi Mathew

ORGANIZATION OF THE MONUMENT OF ARIYAN-CHERUPPILACK ABANDONED FURNITURE OF TRAVELERS - Rajesh Sreedhar

“So many of us owe zoo animals for our love of the natural world. Our debt to these captives is large”.

BONGARMAH, WESTERN ASSAM, INDIA - J.A. Thomas & S.P. Chel

RANGE EXTENSION OF THE ASIAN TIGER ASSAMESIS (ANURA: MICROHYLIDAE)

Spotted Salamander, *Pleurodeles waltersi* (Anura: Salamanders)

The Modern Ark - The Story of Zoos: Past, Present and

Future.

Erratum

Volume 69 (April-June 2006), Page number 14.

For *Japaha* a *trichrinata*, read *Japaha* *trichrinata*.

CHENNAI SNAKE PARK TRUST
BOARD OF TRUSTEES

Shri B. Vijayaraghavan, I.A.S. (Retd.) Chairman

Dr. S. Lakshminarayanan

Shri R.V.L. Srinivasan

Shri V.P. Rajgopal

Shri M. Rajaraman

Shri S. Subramanyam Naidu, I.F.S. (Retd.)

Dr. T. Sundararajulu

Shri K. Varadarajan, I.F.S. (Retd.)

Wildlife Warden, Chennai

(Shri. Ashish Kumar Bhavastava, I.F.S.)

Jr. Director, Tourism Dept.

(Shri K. Marimuthu)

Officer-in-Charge

(Shri. S. Srinivasan)

Officer-in-Charge

(Shri. S. Srinivasan)

Officer-in-Charge

(Shri. S. Srinivasan)

Biologist in Charge

(Shri. S. Srinivasan)

Biologist in Charge

(Shri. S. Srinivasan)

Biologist in Charge

(Shri. S. Srinivasan)

Biologist in Charge

(Shri. S. Srinivasan)

"So many of us owe our lives to the
natural world. Our debt to these captives is large."

Dr. G. Thirumala

Dr. G. Thirumala

Dr. G. Thirumala

Dr. G. Thirumala

Dr. G. Thirumala

Dr. G. Thirumala

Dr. G. Thirumala

Dr. G. Thirumala

Editor:

Dr. G. Thirumala

Cover

Indian rock python *Python molurus* (Linn.)

Non-Venomous. Rare. Throughout India. Average length 10'. Maximum length 30'.
In forests, scrub and mangroves. Listed as 'endangered' under Indian law.

Photo: Anand Pakkand, D-WPE

Chennai Snake Park Trust, Rajbhavan Post, Chennai - 600 022, India.

Ph: 91-844-2235323 E-mail: capt1973@vsnl.net.in

CONTENTS

PAGE

SEA SNAKES ASSOCIATED WITH TRAWL BY-CATCH OF KERALA COAST, INDIA - Biju Kumar, A., Susheel Kumar, M., Deepthi, G.R. and Mithun, S.

1

ADDITIONS TO THE SNAKE FAUNA OF MIZORAM - Rosamma Mathew.

5

OBSERVATIONS ON THE MOVEMENT OF A RED-NECKED KEELBACK *RHABDOPHIS SUBMINLATUS* (SCHLEGEL, 1837) - Rakesh Soud and Kripal.J.Mazumdar.

10

DIVERSITY OF ANURAN FAUNA AT KAKOIJANA RESERVE FOREST, BONGAIGAON, WESTERN ASSAM, INDIA - B.K. Saha and B.B.P. Gupta.

12

RANGE EXTENSION OF THE ASSAM PAINTED FROG, *KALOULA ASSAMENSIS* (ANURA: MICROHYLIDE) TO WESTERN ASSAM - Simi Talukdar, Rakesh Soud, and Kaushik Deauti.

18

RANDOM HARVEST - B.Vijayaraghavan.

21

Erratum

Volume 64. (April-june 2006). Page number 14.

For *Japalura tricarinata*, read *Japalura variegata*.

PAGE

CONTENTS

1 SEA SNAGS ASSOCIATED WITH TRAWL BY-CATCH IN KERALA COAST INDIA - Biju Kumar, A., Joseph Kumar, M., Deepthi, C.R. and Mithun, S.

2 ADDITIONS TO THE SPARE PARTS OF MIXORAM - Rosanna Mathew.

10 OBSERVATIONS ON THE MOVEMENT OF ARED-NECKED KERRI BUCK RABBIT (*Capreolus sumatranus* (Schlegel, 1837)) - Rajesh Sood and Kunal J. Manandhar.

15 DIVERSITY OF ANOBIAN BEETLES AT LAKSHADWEEP RESERVE FOREST, BONGALGOD, WESTERN ASSAM, INDIA - B.K. Saha and B.P. Gupta.

18 RANGE EXTENSION OF THE ASSAM PAINTED BROOD PHOENIX (*Phoenicurus phoeniceus*) TO WESTERN ASSAM - Smiti Talukder, Rajesh Sood, and Kunal J. Manandhar.

21 WINTER HARVEST - B. V. Jayaraman.

For advertisement rates, contact the publisher.
Volume 04 (April-June 2006) Page number 14
Birmann

SEA SNAKES ASSOCIATED WITH TRAWL BY-CATCH OF KERALA COAST, INDIA

Biju Kumar, A.¹, Susheel Kumar, M., Deepthi, G.R. and Mithun, S.

Research Department of Zoology, N.S.S.College,
Pandalam, Kerala – 689 501.

¹Present Address: Kerala State Biodiversity Board,
K.F.R.I., Peechi, Kerala – 680 653.

E-mail: abiju@rediffmail.com

Introduction

Sea snakes of five distinct lineages, represented by the file snakes (Family: Acrochordidae), the mud snakes (family: Colubrididae; Homalopsinae), the sea kraits (Family: Laticaudidae) and the true sea snakes (Family: Hydrophiidae) inhabit the world's oceans. The hydrophiids are restricted to the Indian and Pacific Oceans and most of the species occur in the shallow seas of the Indo-Malayan archipelago, northern Australia and Oceania (Guinea *et al.*, 2004). They exhibit characteristic features such as paddle-like tail, dorsal valvular nostrils, fangs at the front of the mouth, a hinged opening at the front of the mouth through which the tongue is protruded, salt glands and a single lung; all of them are air-breathing and feeding on fish, including eels and their eggs (Dunson, 1975). Out of the 58 species of true sea snakes described from various seas around the world (Guinea, 2003), nine species inhabit Indian coastal waters (Whitaker and Captain, 2004). Though sea snakes are common by-catch in fishing operations along the Indian coast, there is no scientific documentation of their diversity and abundance. This paper reports on the four species of hydrophiid sea snakes recorded from the trawl by-catch of Kerala coast.

Materials and Methods

The sea snakes were collected by random sampling from the by-catch landed by trawlers in fishing harbours of Kerala. The fortnightly samples were collected from Neendakara, Munambam, Ponnani, Puthiyappa and Azheekkal landing centers of Kerala coast during May 2004 to April 2006 except in June in both the years when there is a ban on trawler operations. The study was done as part of the biodiversity assessment of trawl by-catch in Kerala coast. The species collected were sorted according to species and sex and stored in 10 per cent formalin for taxonomic studies.

Results

Four species of sea snake representing the family Hydrophiidae were recorded from the trawl by-catch. These were *Enhydrina schistosa* (Daudin), *Hydrophis cyanocinctus* Daudin, *Hydrophis ornatus* (Gray) and *Lapemis curtus* (Shaw) (Table 1). Hydrophiids inhabiting Indian waters include *Laticauda colubrinea* (Schneider), *Kerilia jerdonii* (Gray), *Enhydrina schistosa* (Daudin), *Hydrophis cyanocinctus* Daudin, *H. ornatus* (Gray), *H. caerulescens* (Shaw), *Lapemis curtus* (Shaw), *Astrotia stokesii* (Gray) and *Pelamis platurus* (Linn). The results show that out of the six species of sea snakes recorded from the Kerala coast, four species occur in the trawl by-catch. The other two species are *Kerilia jerdonii* and *Pelamis platurus*, both rare in the coastal waters (Whitaker and Captain, 2004).

Table 1

Diversity of hydrophiid sea snakes in the trawl by-catch of Kerala coast

Sl.No.	Fishing harbours	Species				Total
		<i>Enhydrina schistosa</i>	<i>Hydrophis cyanocinctus</i>	<i>Hydrophis ornatus</i>	<i>Lapemis curtus</i>	
1	Neendakara	10	2	-	4	16
2.	Munambam	10	5	1	3	19
3.	Ponnani	7	1	-	-	8
4.	Puthiyappa	8	2	-	-	10
5.	Azheekkal	8	-	-	1	9
	Total	43	10	1	8	62

According to Ward (2000), the presence of sea snakes in the trawl by-catch varies with locality, depth, season and previous trawl history of the area. Further, their distribution is influenced by a variety of identifiable features including seasonal factors associated with either mating or breeding aggregations of females (Guinea *et al.*, 2004). In Kerala coast, majority species of hydrophiid sea snakes were collected from the trawl by-catch of Munambam (19) and Neendakara (16) fishing harbours. The diversity of sea snakes was also more in these harbours, represented by four and three species respectively. In Kerala coast, largest numbers

of trawlers are operated from these fishing harbours. Only two species were recorded from Ponnani, Puthiyappa and Azheekkal fishing harbours. *Hydrophis ornatus* was recorded only from Munambam area.

Since all sea snakes are highly venomous and there are occasional reports of human mortalities due to sea snake bite, the sea snakes entangled in nets are killed and thrown back into the sea by the fishermen. The sea snakes which accidentally die during fishing operations are also discarded. Thus the sea snakes in fish landing centers of Kerala coast represent only those in the unsorted samples, particularly from the last haul. This explains the lesser abundance and diversity of sea snakes in the trawl by-catch. However, the study shows the possibility of more sea snakes being caught in the trawl nets, just like other non-target species (Biju Kumar and Deepthi, 2006). The analysis of discards on board would provide a realistic estimation of the diversity and abundance of sea snake catches in trawl nets.

None of the sea snakes encountered during the study is included in the IUCN list of endangered species or in the Wildlife (Protection) Act of India. Trawling has been reported as the greatest danger to the sea snake populations throughout the world (Guinea *et al.*, 2004). Even though the economic significance of sea snakes in the trawl by-catch as a source for leather is limited and unsustainable (Heatwole, 1997), the venom could be used for the production of antivenom. The number and diversity of sea snakes play an important role in the ecology of the oceans (Voris, 1972). Considering the fact that sea snakes are slow growing and late maturing individuals that reproduce either infrequently or only once a year over a life time of about 10 years and have smaller broods than their terrestrial counterparts (Ward, 2000), development of by-catch reduction devices and its use in trawl nets has been recommended in Indian coast to reduce mortality of sea snakes. It is also necessary to sensitize the fishermen against the wanton killing of seasnakes. More research on the abundance and diversity of sea snakes and their biology in the coastal waters of India would facilitate their conservation.

SYSTEMATIC ACCOUNT

CLASS : REPTILIA
ORDER : SQUAMATA
FAMILY : COLUBRIDAE

References

- Biju Kumar, A. & Deepthi, G.R. (2006):** Trawling and by-catch. Implications on marine ecosystem. *Current science* 90(7): 922-931
- Dunson, W.A. (1975):** Adaptations of sea snakes. In: *The Biology of Sea Snakes* (Dunson, W.A.Ed.), University Park Press, Baltimore, USA, pp. 3-19
- Guinea, M.L. (2003):** *Ecology, Systematics and Biogeography of Sea Snakes*. Faculty of Education, Health and Science, Northern Territory University, Darwin, Australia.
- Guinea, M.L., Limpus, C.J. & Whiting, S.D. (2004):** Marine Snakes. In: *National Oceans Office. Description of Key Species Groups in the Northern Planning Area*. National Oceans Office, Hobart, Australia.
- Heatwole, H. (1997):** Sea snakes: are they a sustainable resource? *Wildlife Society Bulletin*, 25(4): 766-772.
- Heatwole, H. (1999):** *Sea Snakes*. UNSW Press, Sydney, Australia.
- Voris, H.K. (1972):** The role of sea snakes (Hydrophiidae) in the trophic structure of coastal oceanic communities. *J.mar.boil.Ass. India*, 14(2): 429-442.
- Ward, T.M. (2000):** Factors affecting the catch and relative abundance of sea snakes in the by-catch of trawlers targeting tiger and endeavour prawns on the northern Australian continental shelf. *Austr.J.Mar.Freshw.Res.*, 51:155-164.
- Whitaker, R. & Captain, A. (2004):** *Snakes of India - The Field Guide*. Draco Books, Chennai, India, 481 pp.

ADDITIONS TO THE SNAKE FAUNA OF MIZORAM

Rosamma Mathew
 Eastern Regional Station
 Zoological Survey of India
 Risa Colony, Shillong -793 003

Mizoram- the land of Mizos (Mizo means highlanders) is a hilly state that lies between $21^{\circ} 58' - 24^{\circ} 30' \text{ N}$ and $92^{\circ} 16' - 93^{\circ} 25' \text{ E}$. Though rich in biodiversity, the state is poorly explored for its faunal diversity. Harit and Ramanujam (2002) listed the reptile species of Mizoram till then reported from the state wherein 14 species of snakes were recorded. During a recent faunistic survey tour to the state, the present author collected eight species of snakes, mostly road-kills. Added to these are three more species collected during earlier surveys of the State and deposited in the holdings of the Eastern Regional Station, Zoological Survey of India. Asterisks indicate new records.

SYSTEMATIC ACCOUNT

CLASS	:	REPTILIA
ORDER	:	SQUAMATA
FAMILY	:	COLUBRIDAE

1. *Ahaetulla prasina* (Boie, 1827)*

1827. *Dryophis prasinus* Boie, Isis, p.545

Material examined: 2 exs: 1 ex, VR/ERS/ZSI/226, Thiltang, Lunglei District, 24.09.05, Coll. R.Mathew and party; 1ex, VR/ERS/ZSI/227, Lungdi, Kolasib District, 24.09.05, Coll. R..Mathew and party (Plate I).

Distribution: Within N.E.India: Arunachal Pradesh, Assam, Meghalaya, Mizoram, Nagaland. Elsewhere West Bengal, Sikkim. The whole of Indo-Chinese regions and Indo-Australian Archipelago, Bangladesh, Bhutan, Cambodia, China, Indonesia, Laos, Malaysia, Myanmar, Singapore, Thailand.

Remarks: Both the specimens were road-kills. This species is recorded for the first time from Mizoram.

2. *Amphiesma xenura* (Wall, 1907)

1907. *Tropidonotus xenura* Wall, J.B.N.H.S.xvii, p.616

Material examined: 1 ex, VR/ERS/ZSI/230, Sailam Dernam Stream, Serchhip District, 23.09.05, Coll. R.Mathew and party (Plate.I)

Distribution: Within N.E.India : Meghalaya , Mizoram and Nagaland.

Remarks: This was collected from a stream. This species is endemic to India and is reported from Meghalaya (Mathew, 1995), Mizoram and Nagaland (Whitaker & Captain, 2004).

3. *Lycodon jara* (Shaw, 1802)*

1802. *Coluber jara* Shaw, Gen.Zool, iii.p.525

Material examined: 1 ex, VR/ERS/ZSI/231, 2 km from Sainik Rest House towards Lungsen, Lunglei District, 21.09.05, Coll.R.Mathew and party. (Plate II).

Distribution: Within N.E.India : Assam, Meghalaya. Also Orissa, Tamil Nadu and West Bengal.

Remarks: This specimen was found lying motionless on the road in the night, even after our vehicle accidentally passed over it, and was picked up live. This species is recorded for the first time from Mizoram.

4. *Oligodon albocinctus* (Cantor, 1839)*

1839. *Coronella albocincta* cantor, P.Z.S., p.50

Material examined: 1 ex: VI/ERS/ZSI/9281, Aibak Road, Aizawl District, 7.9.89, Coll. Y.P.Sinha and party.

Distribution: Within N.E.India: Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura. Elsewhere Sikkim, West Bengal, Bangladesh, Myanmar and Nepal.

Remark: This species is recorded for the first time from Mizoram.

5. *Psammodynastes pulverulentus* (Boie, 1827)*

1827. *Psammophis pulverulentus* Boie, *Isis*, p.547

Material examined: 2 exs: 1 ex. VR/ERS/ZSI/232, Lungpuizawl village, Lunglei, 22.09.05 Coll.R.Mathew and party. (Plate. II)

Distribution: Within N.E.India: Arunachal Pradesh, Meghalaya, Elsewhere Orissa, West Bengal, Bangladesh, Bhutan, Borneo, China, the whole of Indo-Chinese region, Malay Archipelago, Philippines.

Remarks: This species is recorded for the first time from Mizoram.

6. *Rhabdophis himalayanus* (Gunther, 1864)

1864. *Tropidonotus himalayanus* Gunther, *Rept. Brit. Ind.*: 265

Material examined: 1 ex; VR/ERS/ZSI/233, Phairuanokai, Lungsen block, Lunglei, 21.09.05, Coll.R.Mathew and party.

Distribution: Within N.E.India: Arunachal Pradesh, Manipur, Meghalaya, Nagaland. Elsewher Bangladesh, China, Myanmar, Nepal, Sikkim.

Remarks: This specimen was caught alive and photographed inside a polythene packet. It later regurgitated a frog.

7. *Rhabdophis subminiatus* (Schlegel 1837)

1837. *Tropidonotus subminiatus* Schlegel, *Phys.Serp.*,ii,p.313

Material examined: 1. ex, VR/ERS/ZSI/234, Near Horticulture Division Road, Kolasib, 19.09.05, Coll.R.Mathew and party.

Distribution: Within N.E.India: Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura. Elsewhere Cambodia, China, Indonesia, Laos, Malaysia, Myanmar, Nepal, Thailand, Vietnam.

Remarks: This was a road-kill.

8. *Sibynophis collaris* (Gray, 1853)

1853. *Psammophis collaris* Gray, *Ann. Must. Nat.Hist.*(2) xii, p.390

Material examined: 1 ex, VR/ERS/ZSI/42, North Vanlaiphai, Mizoram, 13.05.1993, Coll. S.J.S.Hattar and party.

Remarks: Mathew (1995) reported it from Mizoram.

FAMILY: ELAPIDAE

9. *Ophiophagus hannah* (Cantor, 1836)

1836. *Hamadryas hannah* Cantor, *Asiat.Research*, xix p.187

Material examined: 1 ex, VR/ERS/ZSI/235, Kawnpui Kanan, Kolasib district, 19.09.05, coll. R.Mathew and party.

Distribution: Within N.E. India: Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura. Elsewhere Karnataka, Tamil Nadu, Kerala, Orissa, West Bengal, Andaman Islands, the Indo-Chinese Region, China, Malaya Peninsula and Archipelago, Myanmar, Philippine Islands, Siam, and French Indo-China.

Remarks: A fine specimen measuring 2010 mm was found lying by the side of the road with one injury on mid body. Putrefaction had already set in when picked up. Blackish gray; body and tail with narrow white cross bands.

FAMILY: CROTALIDAE

10. *Trimeresurus albolabris* Gray, 1842*

1842. *Trimeresurus albolabris* Gray, *Zool. Misc.*p.48

Material examined: 1 ex, V1/ERS/ZSI/9287, Bilkhawthlir approximately 20 km north of Kolasib, 05.09.89, Coll.Y.P.Sinha and party.

Distribution: Within N.E.India: Assam, Meghalaya, Elsewhere Andaman and Nicobar Islands, the whole of Indo-Chinese region, Formosa, Hainan, Hong Kong, Java, Malaya Peninsula, Myanmar, Siam, Sumatra.,

Remarks: This species is recorded for the first time from Mizoram.

11. *Trimeresurus erythrurus* (Cantor, 1839)

1839. *Trimeresurus erythrurus* Cantor, P.Z.S. p.31

Material examined: 1 ex, VR/ERS/ZSI/228, IOC Veng, Vairangte, Kolasib, 19.09.05, Coll.R. Mathew and party.

Distribution: Within N.E. India: Assam, Meghalaya, Nagaland. Elsewhere Sikkim, West Bengal:

Remarks: Mathew (1995) and Harit & Ramanujam (2002) reported it from Meghalaya and Mizoram respectively.

Acknowledgement

The author is grateful to Dr.J.R.B. Alfred, Director, Zoological Survey of India and to Dr.N.Sen, Officer-in-Charge, Eastern Regional Station, Zoological Survey of India, Shillong, for permission to survey Mizoram and for laboratory facilities.

References

Harit, D.N. and Ramanujam, S.N.(2002):Reptilian fauna of Mizoram, India, *Cobra*, 47: 5-7

Mathew, R. (1995):Reptilia, In *State Fauna Series 4: Fauna of Meghalaya, Part I (Vertebrates)*. 379-454 Edited and Published by Director, Zoological Survey of India, Kolkata.

Whitaker, R. and Captain, A. (2004):*Snakes of India - The Field Guide*, , 1-481. Published by Draco Books, P.O. Box 21, Chengalpattu - 603 001, Tamil Nadu, India.

OBSERVATIONS ON THE MOVEMENT OF A RED-NECKED KEELBACK *RHABDOPHIS SUBMINIATUS* (SCHLEGEL, 1837)

Rakesh Soud¹ and Kripal.J.Mazumdar²
Department of Ecology and Environmental Science

¹ School of Environmental Science
Assam(Central) University,
Silchar – 788 011, Assam.

² Nature's Foster, P.O.Box No.41,
Bongaigaon – 783 380, Assam

The red-necked keelback snake *Rhabdophis subminiatus* (Schlegel, 1837) is a widely distributed species being recorded in eastern Himalayan from Sikkim and Assam to Arunachal Pradesh in India and also from Bangladesh, Nepal, Myanmar, China, Thailand, Cambodia, Vietnam, Laos, Malaysia and Indonesia. This venomous species is very common in the entire Barak valley of Southern Assam, India. It is commonly known as '*Lalmatha sap*' among the local communities of this region. During a bird watching trip around Assam University campus, Cachar District, Assam on 30th December 2005 around 10.00 hrs. we had observed a peculiar movement pattern of a four feet long red-necked keelback (*Rhabdophis subminiatus*) snake.

During close observation we came to know that this snake had lost its right eye in some accident. Due to this, it showed a peculiar movement pattern which drew our attention. It was avoiding movement towards its right side and tried to move towards the left as much as it could. We could catch the snake very easily and, after a close observation to record data, we released it in the same place. It was in a healthy condition except for its missing eye.

The brief observation gave us an idea about the ability of the individual to cope in its natural habitat notwithstanding its handicap.

References

- Das, I.(2002):** *Snakes and Other reptiles of India*, New Holland Publishers (UK) Ltd.
- Whitaker, R. and Captain, A. (2004):** *Snakes of India - The field Guide*, Draco Books, Chengalpattu-603 001.
- Thirumalai, G and Bhutia, P.T. (1997):** Recent record of the Red-necked keelback *Rhabdophus subminiatus* (schlegel) from Arunachal Pradesh. *Rec. Zool. Surv. India* 96 (1-4):243.

DIVERSITY OF ANURAN FAUNA AT KAKOIJANA RESERVE FOREST, BONGAIGAON, WESTERN ASSAM, INDIA.

B.K. Saha¹ and B.B.P. Gupta²

¹Senior Lecturer in Zoology

Birjhora Mahavidyalaya, Bongaigaon, Assam.

Telephone : 03664 223196

Email : bksaha_bm@yahoo.co.in

²Department of Zoology

North-Eastern Hill University,

Shillong – 22

This study is on the amphibian diversity of Kakoijana Reserve Forest under Bongaigaon district, Western Assam.

Study area

Kakoijana Reserve Forest (KRF) is situated under Bongaigaon district, Western Assam. The geographical location is Latitude: 26° 22' N to 20° 21' S; Longitude 90° 23' W to 90° 23' E; Altitude; 1181 feet ASL. It covers an area of 17.20² km.

Materials and methods

The survey was carried out during January 2005 to December 2006. The anurans were collected by hand or nets by active searching both day and night. Randomized walk design was followed during searching. The collections were examined with Z.S.I., Eastern Regional Station, Shillong. Collected anurans were preserved in 8 % formalin for future study.

Water temperature, pH of the water, air temperature, relative humidity, days length and rainfall were also recorded during these periods.

Result and Discussion

It was found that the anurans collected and identified belonged to 5 families, 8 genera and 12 species. It is probable that the richness of the anuran species might be greater than the reported figure because of diverse habitats.

Species account of anurans

1 *Bufo melanostictus* (Schneider, 1799)

- Family : Bufonidae
 Habit : Terrestrial
 Habitat : Plains and grass land
 Status : Common
 Activity : Diurnal / Nocturnal
 Threats : Harvest, human interference, loss of habitat and pesticides
 Position of IUCN : Vulnerable (nationally); data deficient (globally)

2 *Hyla annectans* (Jerdon, 1870)

- Family : Hylidae
 Habit : Arboreal
 Habitat : Thick evergreen forest, on the edges of hill streams
 Status : Rare
 Activity : Nocturnal
 Threats : Habitat destruction and human interference
 Position of IUCN : Lower risk, near threatened (nationally); data deficient (globally)

3 *Uperodon globulosus* (Gunther, 1864)

- Family : Mycrohylidae
 Habit : Fossorial
 Habitat : Subterranean, Swamps, paddy fields and sometimes on the outskirts of human habitations.
 Status : Rare
 Activity : Nocturnal
 Threats : Loss of habitat
 Position of IUCN : Lower risk, near threatened (nationally); data deficient (globally)

4 *Euphlyctis cyanophlyctis* (Schneider, 1799)

- Family : Ranidae
 Habit : Aquatic
 Habitat : All kinds of water bodies. The species possesses salt tolerance to some degree.
 Status : Common
 Activity : Diurnal / Nocturnal
 Threats : Pesticides, human interference, loss of habitat, habitat fragmentation, poisoning, pollution
 Position of IUCN : Lower risk, near threatened (nationally); data deficient (globally)

5 *Hoplobatrachus tigerinus* (Daudin, 1803)

- Family : Ranidae
 Habit : Semiaquatic
 Habitat : Inundated area particularly edges of water bodies.
 Status : Common
 Activity : Diurnal / Nocturnal
 Threats : Pollution, pesticides, human interference, harvest for medicines and trade for parts
 Position of IUCN : Vulnerable (nationally); data deficient (globally)

6 *Fejervarya limnocharis* (Gravenhorst, 1829)

- Family : Ranidae
 Habit : Semiterrestrial
 Habitat : Water edges in forest, plains, paddy fields
 Status : Common
 Activity : Nocturnal
 Threats : Loss of habitats, human interference, pesticides, loss of habitat due to fragmentation and hunting.
 Position of IUCN : Lower risk, near threatened (nationally); data deficient (globally)

- 7 *Rana leptoglossa* (Cope, 1868)**
 Family : Ranidae
 Habit : Semi-aquatic
 Habitat : Evergreen forest near the hill streams
 Status : Endangered
 Activity : Nocturnal
 Threats : Loss of habitat, human interference
 Position of IUCN : Endangered (nationally); data deficient (globally)
- 8 *Rana taipehensis* (Van Denburg, 1909)**
 Family : Ranidae
 Habit : Semi aquatic, terrestrial and swampy
 Habitat : On the leaves of shrubs
 Status : Rare
 Activity : Nocturnal
 Threats : Human interference, pesticides and loss of habitat
 Position of IUCN : Lower risk (nationally); data deficient (globally)
- 9 *Rana humeralis* (Boulenger, 1887)**
 Family : Ranidae
 Habit : Semi aquatic / terrestrial
 Habitat : Evergreen bushes
 Status : Rare
 Activity : Nocturnal
 Threats : Human interference
 Position of IUCN : Lower risk (nationally); data deficient (globally)
- 10 *Rana erythraea* (Schlegel, 1837)**
 Family : Ranidae
 Habit : Semiaquatic
 Habitat : Damp places, on the leaves of trees
 Status : Rare
 Activity : Nocturnal
 Threats : Loss of habitat, human interference
 Position of IUCN : Lower risk (nationally); data deficient (globally)

11 *Polypedates leucomystax* (Gravenhorst, 1829)

- Family : Rhacophoridae
Habit : Arboreal
Habitat : Evergreen forest, on the bamboo trees, banana trees and human settlement at high lands
Status : Infrequent
Activity : Nocturnal
Threats : Nil
Position of IUCN : Lower risk (nationally); data deficient (globally)

12 *Microhyla ornate* (Dum. & Bibron, 1841)

- Family : Microhylidae
Habit : Terrestrial
Habitat : Fossorial, moist humus
Status : Lower risk — least concern
Activity : Nocturnal
Threats : Nil
Position of IUCN : Lower risk (nationally); data deficient (globally)

Acknowledgements

The first author is grateful to Dr.N. Sen, Eastern Regional Station, Z.S.I. Shillong for identification of the species, Principal Chief Conservator of Forest, Guwahati, Assam for permission to survey in Kakoijana Reserve Forest, Bongaigaon, Assam and Prof. Mrigen Das, Principal of Brijhora Mahavidyalaya for granting him two years UGC Teacher Fellowship.

References

- Chanda, S.K. (1991):** Amphibians of North East India: Present status and distribution, *Herpetron*, 4, 1-7.
- Chanda, S.K. (1992):** Further note on distribution pattern of amphibian in North East India: *J.B.N.H.S II*, pp.25-33.
- Chanda, S.K. (1993):** Food and feeding habits of some amphibian species of North East India: *Rec. Zool. Surv. India*, 93, 15-29.

Dutta, S.K. (1997): *Amphibians of India and Srilanka* (Check list and Bibliography).
Odyssey Publishing House, 1-342.

Sengupta, S and et al., (2001): *Leptobrachium smithi* Matgui, Nabhibhati & panha
(Anura : Megophyidae), A new record for India *J.B.N.H.S.*98 (2), 289-291.

Pillai, R.S. and Chanda, S.K. (1981): Amphibian fauna of Garo hills, Meghalaya
with description of a new species of *Rana*. *Rec. Zool. Surv. India.*79, 159-
168.

**RANGE EXTENSION OF THE ASSAM PAINTED FROG,
KALOULA ASSAMENSIS DAS ET AL. (ANURA:
MICROHYLIDE) TO WESTERN ASSAM**

Simi Talukdar¹, Rakesh Soud², and Kaushik Deuti³

¹ Nature's Foster, P.O.Box No.41, Bongaigaon – 783 380, Assam
E-mail: simi_tal@rediffmail.com

² Department of Ecology and Environmental Science,
Assam(Central) University, Silchar – 788 011, Assam
E-mail: assam_rhino@rediffmail.com

³ Zoological Survey of India, M-Block, New Alipore, Kolkata-700 053,
E-mail: kaushikdeuti@rediffmail.com

Kaloula assamensis Das, Sengupta, Ahmed & Dutta, 2004 is a species new to science. This is based on six specimens collected between 1998 and 2004 from four different localities of Majbat, Sirajuli, Orang National Park and Namari wildlife sanctuary of Sonitpur District, Assam and locality of Pakhui Wildlife Sanctuary, Arunachal Pradesh.

In the course of a field study organized by Nature's Foster, a Wildlife NGO, on 24th August 2005, the first author collected a male specimen of the species at 23.45 hrs, from a wooden post at a height of 1.2 meter above the ground adjacent to her residence garden at Mount View Colony (26° 28' 52.43" N and 90° 31' 5.43" E, 48 meter msl.), 5 km West of Bongaigaon town in Bongaigaon District of Western Assam. The garden is covered with various kinds of herbs and lesser trees. The main 'water body' around the site is a drain, flowing at a distance of 27 meter from the site of collection. No other specimens were found at the site. During this comprehensive herpetological survey, some other amphibians were also collected around that area and these were *Bufo melanostictus* (Schneider) (Bufonidae), *Fejervarya limnocharis* (Gravenhorst) (Ranidae), *Microhyla ornate* (Dumeril and Bibron) (Microhylidae) and *Polypedates leucomystax* (Gravenhorst) (Rhacophoridae).

The specimen was deposited at the Amphibian Section of the Zoological Survey of India, Kolkota (Registration Number: A11384). The morphometric measurements of the collected specimen are given below (in millimetres):

Snout-vent length	:	37.10
Head length	:	7.85
Head width	:	11.15
Head depth	:	8.65
Snout length	:	5.35
Eye diameter	:	3.65
Intra-ocular length	:	5.25
Intra-narial length	:	3.35
Intra-nostril length	:	2.95
Nostril-snout tip length	:	2.20
Humerus length	:	6.85
Radius-ulna length	:	9.75
First finger length	:	5.65
Second finger length	:	6.20
Third finger length	:	8.85
Fourth finger length	:	6.55
Axilla-groin length	:	17.75
Femur length	:	13.25
Tibia length	:	13.70
First toe length	:	4.75
Second toe length	:	5.25
Third toe length	:	7.55
Fourth toe length	:	9.45
Fifth toe length	:	6.05

This collection extends the distribution of the species by 170 km west of the known range of distribution in Assam. More study is needed of this species.

Acknowledgements

We thank Mss.A.Bose, R.Das, S.N.Sen, J.Chakraborty, and K.J.Majumdar of Nature's Foster for their support and Dr.S.Sengupta of Arya Vidyapith College, Dr.A.K.Gupta of Assam (Central) University, Dr.H.J.Singha of Birjhora Mahavidyalaya for their continuous encouragement.

Reference

Das, I.S.Sengupta, M.F.Ahmed & S.K.Dutta (2004): A new species of *Kaloula* (Anura: Microhylidae) from Assam State, North-Eastern India. *Hamadryad.*, 29(1): 101-109.

RANDOM HARVEST

In memoriam

Though he called himself 'crocodile hunter', a more apt description would be 'crocodile lover' or, better still, 'reptile lover'. Steve Irwin. Conservationist and showman *par excellence*. He endeared himself to a worldwide audience within a very short time by his superb wildlife films, a staple feature on Animal Planet. These films on his encounters with crocodiles and snakes in many parts of the world and on his life and work at his private zoo in Queensland, Australia, have been a source of immense pleasure and knowledge to many the world over. His death at a young age after an attack by a sting-ray while filming underwater near the Great Barrier Reef, off the northeastern coast of Queensland, Australia, has inflicted a terrible loss on the cause of conservation of reptiles.

The New Indian Express of 18th September 2006 reports that the Government of Kerala have proposed to name the Neyyar Crocodile Centre after Steve Irwin. The Centre is located near the Neyyar dam, about 30 km. from Thiruvananthapuram and was set up in 1977. A small, nevertheless fitting, tribute to the great Steve Irwin!

* * *

New species of gecko from Tamil Nadu.

In a paper published in *Current Science* Vol.89, No.8, 25th September 2005, Debanik Mukherjee *et al.* report the discovery of a new species of gecko from Anaikatti Hills, Western Ghats, Tamil Nadu. The specimen was collected by A.M.A Nixon and Debanik Mukherjee on 17th September 2003 and is now with the Zoological Survey of India, Kolkata. It is a day gecko with snout-vent length of 61 mm. and tail length of 58 mm. and has been named *Cnemaspis anaikattiensis*.

Snakes in Iceland and Ireland

According to Boswell, Johnson once boasted that he could repeat from memory the complete chapter 72 of *The Natural History of Iceland* (1758) by Horrebow, a Dane. But, then, the said chapter titled “Concerning Snakes” consists of exactly one sentence: “There are no snakes to be met with throughout the whole island”.

In the retelling of this joke, Iceland sometimes mistakenly gets substituted by Ireland. The confusion is understandable because, the similarity in names apart, Ireland also has no snakes. This phenomenon is attributed to a miracle performed by St. Patrick (c.385 – 461) who, according to legend, commanded all the snakes on the island to cast themselves into the sea.

Ireland not only has no snakes of its own but only a single reptile—the common lizard. Many animals found in nearby England are also absent in Ireland. How is this explained? When the last Ice Age ended some 12,000 years ago, the bridge of land and ice that connected Ireland to England went under what is now the Irish Sea. All those animals which had not by then crossed over to Ireland could no longer do so. The bridge of land connecting England to the European Continent survived for another 5,000 years and so new species continued to cross over to England from the Continent until England also was cut off from the Continent by the sea.

Reptiles, being cold-blooded animals, are unable to survive in very cold climates and were thus the last species to arrive in England from the Continent but, then, they were 5000 years too late to cross over to Ireland.

The saintly croc.

For the past 60 years, the Ananthapura temple in Kasargod, Kerala, has a crocodile for its guardian. Named Babia, he is a strict vegetarian and does not touch even the fish in the temple pond. His austere diet is reported to consist of a gruel made of jaggery and rice offered by the temple staff!

Source: *The Week*, Sep.10, 2006.

Turtle in danger

A news item in the *Hindu* of 9th August 2006 says that the leatherback turtle is in danger of becoming extinct in Malaysia. This is based on a report released through the U.N.Environment Programme which blames legal and illegal egg-harvesting and turtle hunting. Global climate change could also have affected breeding. According to the report, Malaysian leatherback rookeries have declined from approximately 5000 nests per year in the 1960^s down to less than 10 nests per year so far this decade.

A companion report found that leatherback populations are under pressure after the Dec.2004 tsunami destroyed or damaged nesting habitats in 11 countries.

- B.Vijayaraghavan

Our Publications



1

Snake Studies: India

- B. Vijayaraghavan

(CSPT Occasional Papers No.1)

Containing "A Brief History of Indian Ophiology" and much else.

Pages - 34 Price - Rs. 25.00



2

Snakes in the Bible

- B. Vijayaraghavan

(CSPT Occasional Papers No.2)

Pages - 28 Price - Rs. 25.00



3

Name-dropping - In Latin

(An Enquiry into the Scientific Names of Indian Snakes)

- B. Vijayaraghavan

(CSPT Occasional Papers No.3)

Pages - 28 Price - Rs. 25.00

Snakes & Other Reptiles (English & Tamil versions)

- B. Vijayaraghavan

A compendium of essential information.

Pages - 20

Price - English: Rs. 15.00

Tamil: Rs. 10.00

4

5

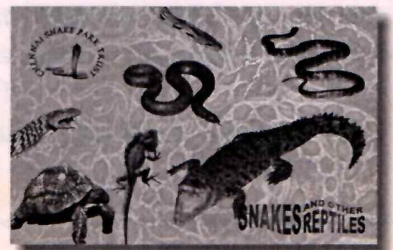
Colour Posters:

Size - 61cm W x 43cm H

- Common Snakes of Chennai
- Four Common Dangerously Venomous Snakes of India

Price - Rs. 10.00 each

Available at The Chennai Snake Park or by Post.
Postage extra



Cobra, the quarterly journal of the Chennai Snake Park Trust, invites articles and 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.

All manuscripts must be sent in hard copy or on a floppy disk or CD-Rom to the Editor, *Cobra*, Chennai Snake Park Trust, Rajbhavan Post, Chennai – 600 022. Or through email to cspt1972@md5.vsnl.net.in

Annual subscription for 4 issues of *COBRA*
commencing from the date of
subscription including postage.

Individual – Rs. 75/-
Institution – Rs.150/-

by MO/DD in favour of
“Chennai Snake Park Trust”
Payable at Chennai.

Chennai Snake Park Trust
Rajbhavan Post
Chennai – 600 022. India.

Printer : N. Arunachalam, Students Offset Services
Shop No. 3, Apex Chambers, 20, Thiagaraya Road, Pandy 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
