International Journal of Life Sciences
International Peer Reviewed Open Access Journal

Special Issue A 10: January 2018
UGC Approved Journal No 48951

Original Article Open Access

Serpentine diversity of Atpadi city and adjoining area. Tal. Atpadi. Dist. Sangli (MS) India

Vibhute Shivaji M

Department of Zoology Shrimant Babasaheb Deshmukh Mahavidyalay, Atpadi. Dist. Sangli. (Affiliated to Shivaji University, Kolhapur)
Email: profshivaji.vibhute@gmail.com |+919421125102

Manuscript details:

Available online on
http://www.ijlsci.in

ISSN: 2320-964X (Online)
ISSN: 2320-7817 (Print)

Editor: Dr. Arvind Chavhan

Cite this article as:
Vibhute Shivaji M (2018) Serpentine diversity of Atpadi city and adjoining area. Tal. Atpadi. Dist. Sangli (MS) India, *Int. J. of. Life Sciences*, Special Issue, A10: 77-82.

ABSTRACT

The observation of biodiversity of snakes was carried out in Atpadi city and adjoining area from last 10 years. This work was done in the study area as a rescue operation. The record of rescued snakes was kept for last 10 years and the snakes were released in their natural habitat away from human habitat. Many species of snakes recorded here are endangered and found only in India only like Rat snake, Indian Cobra, etc. In recent years it was also observed that there is a sharp increase in number of Russels Viper. Out of big four poisonous snakes Indian Cobra, Russels Viper and Common krait were recorded in this area. In recent times more victims of Russels Viper snake bite were recorded in this area. Along with these poisonous snakes in all 13 species of poisonous and nonpoisonous snakes are recorded in this area.

Keywords: snake, Russels Viper, Cobra, Atpadi.

INTRODUCTION

Snakes are extremely well- adapted to their habitats namely aquatic, fossorial, arboreal and other terrestrial forms observed in this region. The variation of their sizes, shapes and colours are generally due to the adaptive radiation in mode of life (Nande *et al*. 2000). Snakes are intrinsically fascinating and form an important component of the biota. It is natural that their curious mode of propulsion, venom and constricting mechanism have made them important group of predators and the interactions maintains a natural balance in the forest and deserts, the plains and hills of India (Harney *et al*. 2011; Walmiki *et al*. 2012a) The advent of man appears to have increased the hunting abilities as tea plantations, paddy fields, village huts and city warehouses provided new opportunities for worms and insects, frogs, birds, rats, mice, etc. many of which increased in the areas due to these habitat & safe houses and subsequently are an easy prey for snakes(Fayer *et al*. 1872; Whitaker et al. 1978). Such expansion and also changes in their food supply apparently caused shifts in the kinds and density of snake population as well (Walmiki *et al*. 2012 b).

The snakes found in India show great biodiversity and their length varies from 6mm to 10 m, while weight ranges between few grams to several kilograms (Harney *et al*. 2011).

Snakes have formed an object of awe and curiosity in all lands. In India they have been associated with mysticism, apart from being objects of fear (Deoras, 1963).Snakes are not yet seriously considered as agents of human disease and the scientific insights provided by the clinical phenotype of human envenoming have been ignored for a long time (Warrell 2010). There are records in the Ayurveda which pertain to snake venom, particularly the cobra venom. Snakes occupied deserts, forests, marshy, swampy places, lakes, streams and rivers of difficult terrains (Dhamankar 2006). Fifteen families are currently recognized, comprising 456 genera and over 2,900 terrestrial species. They range in size from the tiny, 10 cm long thread snake to pythons and anacondas of up to 7.6 meters (25 ft) in length (Joshi 2011).

The biodiversity refers to the different genera and species of organisms present in an area. The degree of species diversity varies from one ecosystem to the other (Chavan 2013). India is very rich country in terms of the flora and fauna present in the natural ecosystem. About 3500 species of snakes are recorded on earth inhabiting both land and sea of which about 375 are venomous (Sharma1982).

METHODOLOGY

Snakes were observed and caught in Atpadi City and adjoining area on random basis and also after receiving calls from peoples who see the snakes in and around their houses, fields, roadsides, etc.

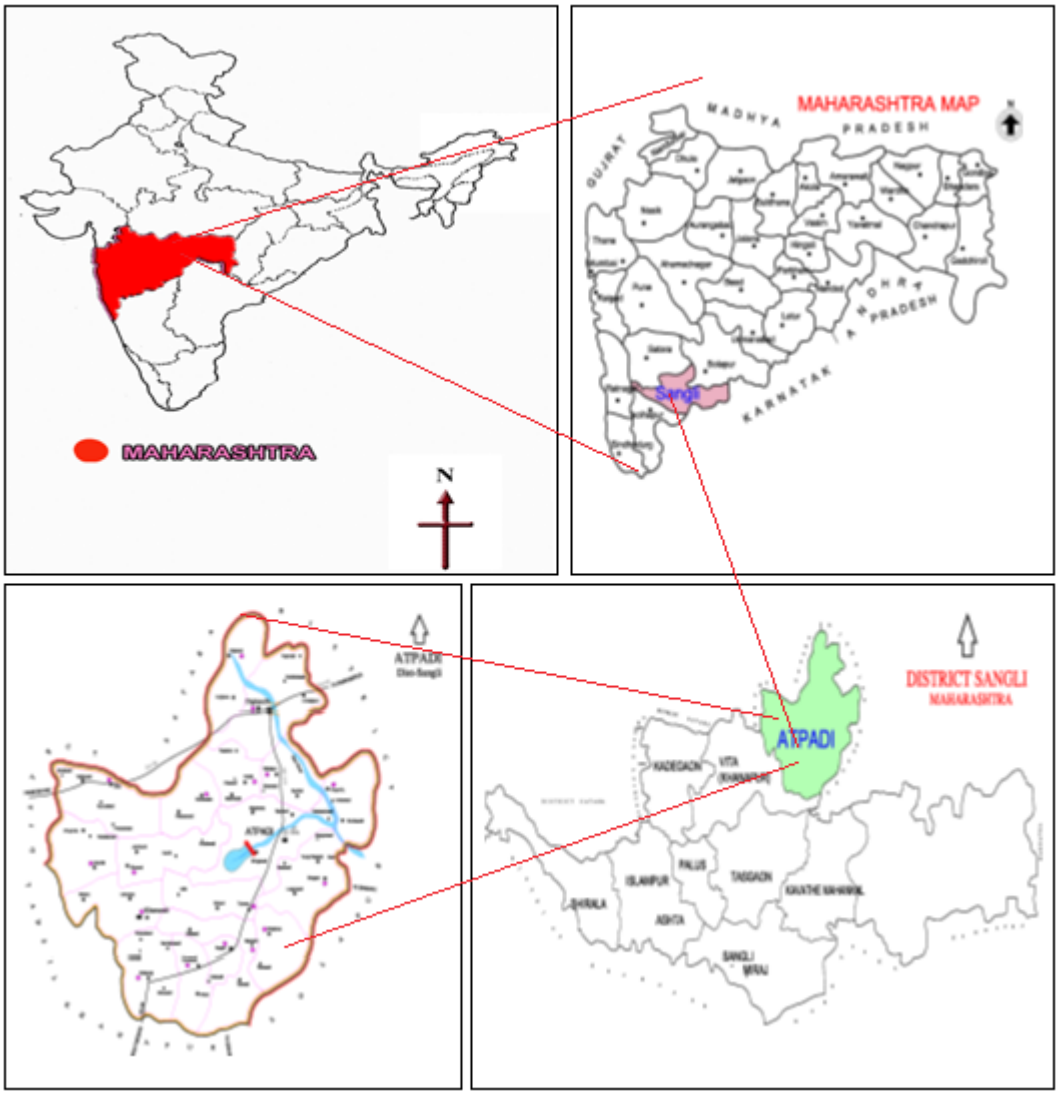

Fig 1. Map Showing study area Atpadi Tahasil, Sangli District, Maharashtra, India

The snakes were caught with the help of snake stick and were packed in cotton bags. These snakes were brought to the laboratory for further investigations. The snakes brought were identified using books by Romulus Whitaker (1978) and Ashok Captain, Deoras (1965) and Khaire (2010). The details regarding their length, weight, colour and other specific details were observed and maintained. After collecting the data the snakes were safely released in their natural habitat long enough from human habitat with in 2 or 3 days of catch. Such excersize was carried out in the study area from 2007 to 2016. There are over 270 different species of snakes in India but not all are found everywhere. This activity of rescuing snakes from human habitat was undertaken. This work of conservation of serpentine diversity is carried out from last 10 years in the Atpadi city and adjoining area. This work was done in the study area as a rescue operation. The record of rescued snakes was kept for last 10 years and the snakes were released in their natural habitat away from human habitat. Many species of snakes recorded here are endangered and found only in India only like Rat snake, Indian Cobra, etc. In recent years it was also observed that there is a sharp increase in number of Russels Viper. Out of big four poisonous snakes Indian Cobra, Russels Viper and Common krait were recorded in this area. In recent times more victims of Russels Viper snake bite were recorded in this area. Along with these poisonous snakes in all 14 species of poisonous and nonpoisonous snakes are recorded in this area.

Showing Study Area

I have recorded 14 species of snakes in the study area. Out of total 14 species recorded 10 were non venomous, 1 is semi venomous and 3 were venomous as shown in table no. 1. 9 species recorded were common and 5 species were rare as shown in Table no.2. The 14 species recorded in the study area falling into 5 different families. Family colubridae is represented by 8 species followed by Elapidae 2, Typhlopide 2, Boidae 1 and Viperidae 1. Earlier no study was carried out in the study area. It is also observed that there is a sharp increase in occurance of Russels viper in and around human habitat.

RESULTS AND DISCUSSION

An annotated checklist of snakes is prepared on the basis of the collected information from studies/survey from 2007 to 2016.

Table 1: Snakes reported from study area

Sr.No.	Common Name	Scientific Name	Family
Nonvenomous Snakes			
1	Worm Snake	*Typhlops braminus*	Typhlopidae
2	Beaked worm snake	*Grypotyphlops acutus*	Typhlopidae
3	Red Sand Boa	*Eryx Johnii*	Boidae
4	Common Trinket Snake	*Elaphe Helena*	Colubridae
5	Indian Rat Snake	*Ptyas mucosus*	Colubridae
6	Banded Racer	*Argyrogena fasciolatus*	Colubridae
7	Banded Kukri Snake	*Oligodon arnensis*	Colubridae
8	Common Wolf Snake	*Lycodon aulicus*	Colubridae
9	Checkered Keelback Water Snake	*Xenochropis piscator*	Colubridae
10	Green keel back	*Macropisthodon plumbicolor*	Colubridae
Semivenomous Snakes			
11	Common cat snake	*Boiga trigonata*	Colubridae
Venomous Snakes			
12	Spectacled cobra	*Naja naja*	Elapidae
13	Common krait	*Bungaru scaeruleus*	Elapidae
14	Russells Viper	*Daboia russelli*	Viperidae

Plate 1: 1. *Typhlops braminus* **2.** *Grypotyphlops acutus* **3.** *Eryx Johnii* **4.** *Elaphe Helena* **5.** *Ptyas mucosus* **6.** *Argyrogena fasciolatus* **7.** *Oligodon arnensis* **8.** *Lycodon aulicus* **9.** *Xenochropis piscator* **10.** *Macropisthodon plumbicolor* **11.** *Boiga trigonata* **12.** *Naja naja* **13.** *Bungaru scaeruleus* **14.** *Daboia russelli*

Table 2: Snakes reported as per their occurrence status

Sr.No.	Common Name	Scientific Name	Marathi Name	Type	Occurrence
1	Worm Snake	*Typhlops braminus*	Wala	NV	C
2	Beaked worm snake	*Grypotyphlops acutus*	Wala	NV	C
3	Red Sand Boa	*Eryx Johnii*	Mandol	NV	C
4	Common Trinket Snake	*Elaphe Helena*	Taskar	NV	C
5	Indian Rat Snake	*Ptyas mucosus*	Dhaman	NV	C
6	Banded Racer	*Argyrogena fasciolatus*	Dhul Nagin	NV	R
7	Banded Kukri Snake	*Oligodon arnensis*	Kukri	NV	R
8	Common Wolf Snake	*Lycodon aulicus*	Kavdya	NV	R
9	Checkered Keelback	*Xenochropis piscator*	Virola	NV	C
10	Green keel back	*Macropisthodon plumbicolor*	Gavtya	NV	C
11	Common cat snake	*Boiga trigonata*	Manjarya	SV	R
12	Spectacled cobra	*Naja naja*	Nag	V	C
13	Common krait	*Bungaru scaeruleus*	Manyar	V	R
14	Russells Viper	*Daboia russelli*	Ghonus	V	C

NV – Non venomous, SV – Semi venomous, V – Venomous. C – Common, R – Rare

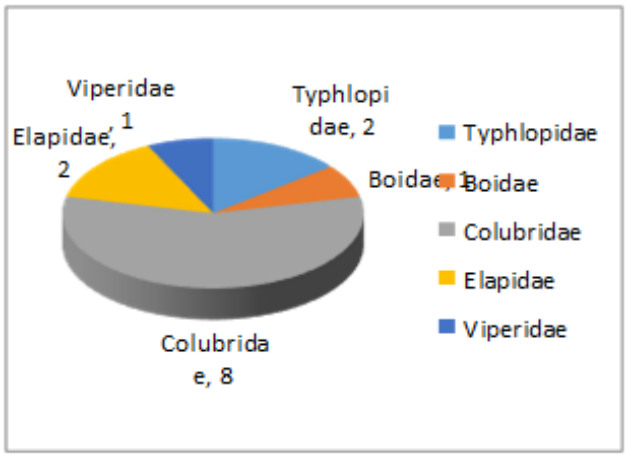

Fig 1: Family wise distribution of snake

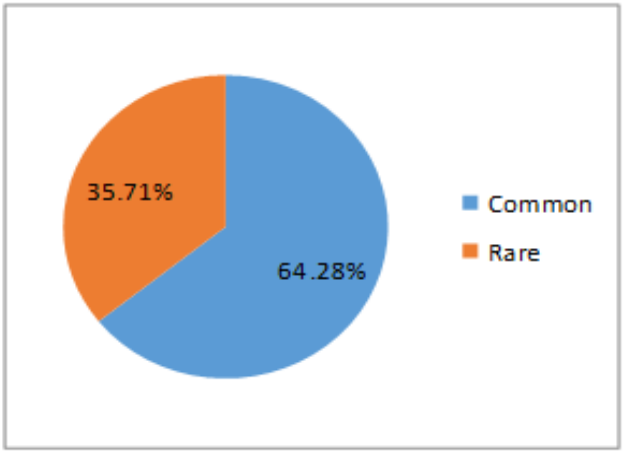

Fig 2: Percentage wise occurrence of snakes

CONCLUSION

During the study period from 2007 to 2016, 14 species of snakes were observed in the study area, of which 10 were non venomous, 1 was semi venomous and 3 were venomous species of snakes. Majority of species are reported in and around human habitat. It was also reported that the number of Russels Viper has sharply increased around human habitat, the reason may be loss of their natural habitat.

Acknowledgements

I wish to express my deep sense of gratitude to all peoples who contacted me for snake rescue and Principal Dr. S.M. Karande for allowing me to use laboratory infrastructure to carry out my research work.

REFERENCES

Fayer J (1872) The Thanatophidia Of India, Being A Description Of The Venomous Snakes Of The Indian Peninsula, With An Account Of The Influence Of Their Poison On Life And A Series Of Experiments.

Deoras, P.J. (1965). Snakes of India, National Book Trust (NBT), New Delhi

Whitaker Romulus (1978).Common India Snakes, A field Guide National Book Trust (NBT), New Delhi

Sharma R.C. (1982): Taxonomic and ecological studies on the reptiles of Gujarat, India. Rec. Zoological Survey of India. 80:85- 108.

Nande Raghvendra and Deshmukh Sawan(2000): *Zoos' Print Journal*. Vol. 22(12): 2920-2924

Dhamankar, Atul (2006) AranyaVachan, Shri Vidya Prakashan, Pune.

Khaire N. (2010): Snakes, Indian Herpetological Society, Pune Deshpande V.Y., KulkarniSidharth, Mahamuni K.D. and Mahamuni H.R. (2012): Pelagia Research Library, *Advances in Applied Science Research*, 3(2): 735-737 ISSN:0976-8610

Warrell, David A, (2010) Snake bite, Lancet seminar.

Joshi PrasannaSubhash (2011) A Preliminary Survey on the Snakes of Buldhana district, Maharashtra, Golden Research Thoughts ISSN No. 2231- 5063, Vol. 1, Issue. II/Agust 11pp.1-4

HarneyNarendra V. *India Online International Interdisciplinary Research Journal* (Bi-Monthly), Issue-I,Volume-I, Sept-Oct-2011.

Walmiki N., Awsare V., Karangutkar S., Wagh V., Yengal B., Salvi S. and Pillai R.(2012 a) : *World Journal Of Environmental Biosciences,* Volume 1(2): 90-99

Walmiki Nitin , Karangutkar Siddhesh , Yengal Bhaskar , KayandeManisha , Wagh Vishal , PillaiRishab and DalviSwapnil(2012 b) : *INDIA Trends in Life Sciences* An International peer reviewed Journal Vol. 1 No. 3 ISSN: 2319–4731 (Print); 2319–5037 (Online)

Chavan Utkarsha M. ,Narayane Vinod S., Deshbhratar Shantaj M. (2013) : Avifauna Of The Riparian Zone Of River Savitri At Mahad (Raigad) – A Preliminary St udy, JSI,Sp. Conf. Issue- 8 March,2013,ISSN: 2229- 5836.