

Diversity of Snakes in and Around Mangoan, Western Ghats, (M.S.), India

Tingare, B. P.

Department of Zoology, Dr. Babasaheb Ambedkar College, Mahad, Raigad, India

drbptingare@gmail.com

Abstract: Snakes are intrinsically fascinating and form an important component of the food chain and food web. They play key ecological roles in controlling rodent pests; they maintain the nature and serve a lot to humankind. The present study was undertaken to assess diversity of snakes carried out in the selected adjoining area of Mangoan, Western Ghats Maharashtra during July 2021 to June 2022. The present paper incorporates 30 species of snakes distributed in 07 families. Family Colubridae represented 16 species followed by family Boidae, Elapidae, Viperidae, Typhlopidae, Uropeltidae and Lamprophiidae with 03, 03, 02, 02 and 01 species respectively. During survey, cobra snakes were more encountered in adjoining area of Mangoan Western Ghats and followed by viper and elapids due to favorable ecological condition. However conservation actions are needed for other species with limited distribution.

Keywords: Diversity, Snakes, Mangoan, Western ghats, Maharashtra etc

I. INTRODUCTION

Mangoan is a part of Kokan region, an important part of the Western Ghats biodiversity hotspot, houses of a large number of flora and fauna. Snakes are very important creatures in the nature because as predators they feed on many harmful rodents and insects those may cause damage to us. Snakes are important to farmers because they eat mice, rats, and all other small mammals those may destroy crops. Snake venom is very important in synthesizing various drugs. Snakes control rodent populations. There are about 3273 species of snakes known worldwide, out of which 302 species have been reported from India (www.indian snakes.

Org).

Snakes play very important role in the food web. India has two well-known biodiversity hotspots amongst the 25 biodiversity hotspots of the world. Out of two, Western Ghats is one of the well-known biodiversity hotspot in India. As far as biodiversity is concerned, the southern part of Western Ghats is more explored than the northern Western Ghats, Maharashtra.

The survey and distribution of snakes in India were carried out by different scientists Ganesh et al. (2013), Bawaskar and Bawaskar (2016), Fellows (2014), Pradhan et al. (2014), Raut et al. (2014), Yadav et al. (2014), Bansode et al. (2016), Janani et al. (2016), Mukadam and Kadam (2016), Sirsat et al. (2016), Joshi et al. (2017), Bansode and More (2018), Jadhav et al. (2018), Lalremsanga et al. (2018), Sulabhand Shivahre (2018), Kale et al. (2019) and Pawar et al. (2020)

II. MATERIALS AND METHODS:

Study Area: We surveyed adjoining area of Mangoan is a Taluka place in Raigad District of Western Ghats Maharashtra State, India. It comes under the Kokan region. It is located between latitude of 18° 14' N and longitude 73° 17' E at an elevation of 542 m above MSL.

The materials used are hooked stick, snake bag, torch for night search, field diary and (Nikon D7100; Nikon Inc., Tokyo, Japan) was used for the photographs. The species were identified with the help of available literature. The photographs were compared with the book Khairi 1996, Whitaker (1978), Daniel (2002), Whitaker and Captain (2004). The collected snakes were classified as venomous, non-venomous and semi-venomous snakes.

III. RESULTS AND DISCUSSION

Study sites were visited during dawn and dusk hours, one day in each month. Also, data on snakes was collected from local snake friend NGOs and reports of accidental road kills .A well-trained snake catcher had captured the snakes that have been sighted during visits or randomly or on request of local people, when snakes were observed in their houses or in and around their areas. After catching the snakes their characteristics, predominant features were noted, photographed and identified as per Whitaker and Khaire (1977). Daniel (2002), Whitaker and Captain (2004) and Whitaker (2006).

Table 1: Chick list of Snakes in Adjoining Area of Mangoan, Western Ghats,(M.S.), India

Sr.No	Common Name	Vernacular Name	Scientific Name	States
1. Family Boidae				
Non Venomous Snakes				
1	Indian Rock Python	Ajgar	<i>Python molurus molurus</i>	Rare
2	Common Sand Boa	Dhurkya ghonus	<i>Gongylophis conicus</i>	Rare
3	John’s Sand Boa	Mandul	<i>Eryx johnii</i>	Rare
2. Family : Colubridae				
4	Banded Racer	Patteri Dhulnagin	<i>Argyrogena fasciolata</i>	Rare
5	Gunther’s Racer	Chitrang Naykul	<i>Coluber gracilis</i>	Rare
6	Common Indian Trinket	Taskar	<i>Coelognathus helena helena</i>	Uncommon
7	Indian Rat Snake	Dhaman	<i>Ptyas mucosa</i>	Common
8	Checkered Keelback	Divad	<i>Xenochrophis piscator</i>	Common
9	Buff-Striped Keelback	Naneta	<i>Amphiesma stolatum</i>	Common
10	Green keelback	Gwatya	<i>Macropisthodon plumbicolor</i>	Rare
11	Banded Kukari Snake	Kukari saap	<i>Oligodon arnensis</i>	Uncommon
12	Bronzeback tree snake	Ruka saap	<i>Dendrelaphis tristis</i>	Uncommon
13	Common Wolf Snake	kavdya	<i>Lycodon aulicus</i>	Rare
14	Dumerils Black Headed	Kaaltondya	<i>Sibynophis subpunctatus</i>	Rare
3. Family: Typhlopidae				
15	Brahminy Worm snake	Wala	<i>Ramphotyphlops braminus</i>	Rare
16	Beaked worm snake	Chanchu wala	<i>Grypotyphlops acutus</i>	Rare
4. Family: Uropeltidae				
17	Mahabaleshwar shield tail	Mahabaleshwari khaparkhawlya	<i>Uropeltis macrolepis mahableswarensis</i>	Rare
18	Bombay Shield tail	Khaparkhawlya	<i>Uropeltis macrolepis macrolepis</i>	Rare
Venomous Snakes				
19	Indian Cat Snake	Manjrya saap	<i>Boiga trigonata</i>	Rare
20	Common Vine Snake	Harantol	<i>Ahaetulla nasuta</i>	Rare
21	Brown vine snake	Harantol	<i>Ahaetulla pulverulenta</i>	Rare
22	Ceylon Cat Snake	Ceylon manjrya saap	<i>Boiga ceylonensis</i>	Uncommon
23	Forsten’s Cat Snake	Forsten’s manjrya saap	<i>Boiga forsteni</i>	Rare
5. Family: Lamprophiidae				
24	Stout Sand Snake	Jaad Reti saap	<i>Psammophis longifrons</i>	Rare
6. Family : Elapidae				
25	Common Indian Krait	Manyar	<i>Bungarus caeruleus</i>	Common
26	Slender coral Snake	Powala	<i>Calliophis melanurus</i>	Common
27	Spectacled Cobra	Naag	<i>Naja naja</i>	Rare
7. Family : Viperidae				
28	Russel’s Viper	Ghonus	<i>Daboia russelli</i>	Common

29	Saw Scaled Viper	Fursa	<i>Echis carinatus</i>	Common
30	Bamboo Pit Viper	Chapada	<i>Trimeresurus gramineus</i>	Rare

During the study period, we were reported 30 species of snakes distributed under 07 families namely Uropeltidae, Lamprophiidae, Elapidae, Viperidae, Typhlopidae Colubridae, Boidae and Pythonidae These 30 types of species. 12 venomous snakes, 18 non-venomous and were reported in adjoining area of Mangoan, Western Ghats, India. Nande and Deshmukh (2007) was reported 32 species of snakes in Amravati district. Ingale *et al*(2011) were reported 15 Non-venomous snakes. 04 venomous and 01 semi venomous snakes in Malegaon Tehsil of Washim District. Joshi (2017) was cited Maharashtra. Meshram (2020) recorded 25 species of snake from Panvel. Kalki *et al.*, (2021) was cited 33 species of snakes from Bengaluru Urban District, Karnataka, India. Deepak and Vijaya (2021) was reported 25 species of snakes belonging to 7 families were reported. From the total identified species, 18 were non-venomous, 3 were venomous and 4 were mildly-venomous in and around villages of Shankaraghatta, Shivamogga, Karnataka, India.

IV. CONCLUSION

During this study, we have reported 30 species of snakes distributed in 07 families. Family Colubridae represented 16 species followed by family Boidae, Elapidae, Viperidae, Typhlopidae, Uropeltidae and Lamprophiidae with 03, 03, 03, 02, 02 and 01 species respectively. Out of 30 species of snakes, 18 were non-venomous and 12 were venomous in adjoining area of Mangoan, Western Ghats Maharashtra. The present study indicates rich biodiversity of snakes and presence of some rare snakes in this region. It will help to provide information, awareness and conservation of snakes in adjoining area of Mangoan.

REFERENCES

- [1]. Bansode SA, More VR and Mirza KA. (2016) A Study on snakes from Mokhada and Jawhar (Dist. Palghar) Maharashtra, India". *Intern. J. Fauna Biol. Studies* 3: 103-115.
- [2]. Bawaskar PS and Bawaskar SK (2016) Herpeto fauna diversity from Khamgaon district Buldhana (MS) central India. *Int. J Life Sci.* 4: 412-418.
- [3]. Bansode SA and More VR. (2018) An updated list of serpent from Palghar district of Maharashtra, India. *J. Entomol. Zoology Studies* 6: 375-379.
- [4]. Daniel JC. (2002) The book of Indian reptiles and amphibians. Bombay Natural History Society, Oxford University Press. pp. 238. (ISBN 019566099-4).
- [5]. Deepak KP and Vijaya Kumara. 2021. A preliminary survey on snake diversity and status in and around villages of Shankaraghatta, Shivamogga, Karnataka, India. *J. Acad. Indus. Res.* 9(3): 56-60.
- [6]. Ganesh SR, Chadramouli ER, Sreekar R and Gowri, SP (2013) Reptiles of the Central Western Ghats, India A Reappraisal and Revised Checklist with emphasis on Agumbe Plateau. *Russian J. herpeto.* 20: 181-189.
- [7]. Fellows S. (2014) Species diversity of snakes in Pachmarhi Biosphere Reserve. *Entomol Orithol Herpetol* 4: 136. doi: 10.4172/2161-0983.1000136.
- [8]. Ingale P, Bali S, Khandale. Preliminary Survey of Snake Diversity from Malegaon Tehsil of Washim District. *World Journal of Zoology* 2014; 9(2): 134-137.
- [9]. Jadhav PL (2018) Snake species diversity and their distribution in and around Nanded city, Maharashtra, India". *J. Entomol. Zoology Studies* 6: 1855-1860.
- [10]. Janani S (2016) Diversity of snakes rescued at Chennai, Tamil Nadu, India. *Intern. J. Biol. Studies* 3: 81-86
- [11]. Joshi PS (2017) A herpetofaunal inventory of Vidarbha region, Maharashtra, India. *Bioscience Discovery* 8: 582-587
Joshi P. (2011) A preliminary survey on the snakes of Buldhana district, Maharashtra. *Gloden Research Thought Journal* 2011.
- [12]. Kale GB, Vairale S and Ghait SN (2019) Study of snakes species diversity in rural and semi urban areas of Buldhana district of Maharashtra, India. *J life sci.* A13 219-225
- [13]. Khaire Neelamkumar. (1996) Indian Snakes, Indian Herpetological Society, Pune

- [14]. Lalremsanga HT, Sapari S, and Chinliansiamia (2018) Diversity of snakes (Reptilia: Squamata) and role of environmental factors in their distribution in Mizoram, Northeast India. *Adv. Environ. Chem.* 79:265-268.
- [15]. Manhas A, et al (2016) An assessment of reptilian diversity and their distribution in Jammu and Kashmir state from Jammu city in northern India: A case study. *Intern. J. Fauna Biol. Studies* 3: 20-23.
- [16]. Pawar P, Rokade A, Supnekar S, Meshram LN, Pawar NB and Gavhane UV. (2020) Diversity and distribution of snakes in adjoining area of Panvel, Navi Mumbai West Coast of India. *Inter. J. Zool Inverst.* Vol6 No.2 289-300.
- [17]. Pradhan Devraj M and Sahu KR. (2014) An inventory and assessment of snake diversity of Gandhamardan Hills range of Western Orissa, India. *Int. J. Pure Appl. Zool.* 2:241-245 Whitaker Romulus. (1978). *Common India Snakes, A field Guide* National Book Trust (NBT), New Delhi.
- [18]. Raut SR, Shantaj MD, Jyotsna AM, Vijay KH, Singh AJ and Mehta Gayatri U. (2014) Recent Studies on the biodiversity of snakes in Palghar region, Thane M (MS) India. *adv. Appl. Sci. Res* 5:373-381.
- [19]. Sulabh S and Shivahre PR. (2018) Common Poisonous snake of India, A review *World J. Phharmaceu. Res.* 7:431-442.
- [20]. Whitaker R. (2006). *Common Indian snakes A field guide.* Macmillan India Limited, Delhi. pp. 138. (ISBN: 1403929556, 9781403929556).
- [21]. Whitaker, R. and Captain, A. (2004). *Snakes of India. The Field Guide.* DracoBooks, Chengelpattu. p.438.
- [22]. Whitaker R (1978) *Common Indian Snakes, A field Guide* National Book Trust (NBT), New Delhi.
- [23]. Yadhav OV, Yankanchi SR and Amol MP (2014) Diversity threats and conservation of harpeto fauna in Shivaji University campus, Kolhapur (MS), India. *Int. J. Curr. Microbiol App. Sci.* 3:742-749