

Check List of Snakes Rescued from Kalamb Dist. Yavatmal Maharashtra with Important Records of Albino Cobra, Indian Egg Eater, Silver Braminus Worm Snakes

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ABSTRACT

In India presence of snakes are very common for people as a result, farmers are frequently recognized to admire certain species of snakes for predatory nature. The conflict between snakes and human's is one of the major examples of human-animal conflict in India today. The largest number of deaths due to animals in India is caused by snakebites. So the present work was carried out to know the assemblage of Snakes with respect to their diversity in around the outskirts of Kalamb. The survey was conducted during September 2020 to August 2021, Snakes were observed sometime rescues mostly from Residential area, back yard or front yard, Garden, trees, ground of farm, beneath stones and in curled and dry leaves along with fencing of farms. Total 25 species were rescued on call during the survey which includes 5 venomous 3 Semi venomous and 17 Non venomous snakes.

Key words: Biological control, Diversity, Non-Venomous, Semi venomous, Snakes

I. INTRODUCTION

Snakes are included in the class Reptilia and order Squamata. Listed in the suborders Serpentes, The primary noticeable study on snakes was carried out by D'Abreu (1928), snakes are distributed universally except Antarctica, and on the majority smaller land masses; exceptions include a few great islands, such as Ireland, Iceland, Greenland, and the islands of New Zealand, in addition to various small islands of the Atlantic and central Pacific oceans. (Roland Bauchot, 1994).

Currently 3900 snake's species belonging to 520 genera from 20 families were reported. (*Reptile-database.org*. Retrieved 7 March 2021). Generally snakes ranges in size from the small, 10.4 cm-long (4.1 in) Barbados thread snake (Hedges SB 2008) to the reticulated python of 6.95 meters (22.8 ft) in length. The fossil species Titanoboa cerrejonensis (Fredriksson, G. M. 2005). was 12.8 meters (42 ft) long (Herrera FA, et al. 2009) Snakes are thought to have evolved from either burrowing or aquatic lizards, perhaps during

the Jurassic period, with the earliest known fossils dating to between 143 and 167 Ma ago. (*Perkins S 2015*). And (*Caldwell MW, et al 2015*)

All most all snakes are firmly predatory and carnivorous, feed on tiny animals including lizards, frogs, other snakes, small mammals, birds, eggs, fish, snails, worms, and insects. (*Hsiang AY et al 2015*) and (*Mehrtens JM. 1987*)

Normally Snakes do not quarry on humans, except anxious or hurt, most snakes favor to keep away from get in touch with and will not assault humans. But there is little exception of huge snake that kills by coiling round its prey and asphyxiating it; no venomous snakes are not a dangerous to humans. Generally Non venomous snakes is harmless; their teeth are not modified for imposing or force a deep stab wound, but quite grabbing and asset, while the chance of infection and tissue damage is there in the bite of a non venomous snake, venomous snakes at hand extreme greater risk to humans. (*Mehrtens JM. 1987*).

Snakes are important predators in the agroecosystem, but close encounters can be uncomfortable – and potentially lethal. According to herpetologist and venom expert Professor Bryan Fry University of Queensland the majority of bites occur when people are annoying to kill a snake “or show off.

In India, studies about the population and abundance of the snakes assemblage in agricultural crops are very rare and few but some basic studies were carried out these studies were not yet identified all the fauna hence this research paper is an attempt to study the fauna associated with Outskirt area of Kalamb , conducted during the month of August to December 2020 and the efforts were made to study diversity and richness among area around Kalamb, Dist.Yavatmal, Maharashtra , India.

II. MATERIAL AND METHODS

- **STUDY AREA:-**



Fig 1.:- Satellite Image of Study area where recued snakes were used to released

The area selected for study snakes is rich with biodiversity of various flora and fauna with well and dense forestry area. Kalamb (about 78.55 E, 20.28 N) is a village in [Yavatmal district](#) of [Maharashtra](#) state in [India](#). Kalamb is an administrative center of a Taluka (sub-district) also called Kalamb. The Taluka has a population of about 96 thousand and has over 140 villages. It is famous today for its temple devoted to the [Hindu](#) god [Ganesh](#). The temple is known as Shree Chintamani Temple, based on another name for Ganesh that emphasizes the belief that praying to him can remove worries ('Chinta' means worry in [Sanskrit](#) and in local

dialect). It is one of the 21 Kshetras of Ganesh throughout India. An annual fair of Shree Chintamani is held here in the month of February. The temperature in the area ranges from 32.0°C to 38.0°C. The region receives an annual rainfall of 289.7 mm to 510.9mm during the monsoon between June and September. The relative humidity varies from 25%-59.

- **Methods:-**

A group of ten rescuers responds to phone calls warning them of snake sightings in the neighborhood. Approximately 10-15 calls per day. The snakes are caught using steel hooks and a canvas bag (Bagging Method). People are being educated about the value of snakes in the ecology at the rescue centre. When a snake protected under Schedule I of the Indian Wildlife Protection Act 1972 is caught, it is given an appropriate 'Panchnama' and released in the presence of forest officials. Otherwise, the snake moved to the adjoining Durg Forest right away At least 5 to 10 kilometers outside of the city borders.

- **Statistical analysis:-**

Shannon Wiener Diversity Index $H = - \sum [(P_i) * \ln (p_i)]$ $E = H/H_{max}$

Where,

SUM = Summation P_i = number of individuals of species I/ Total number of species

S = Number of species or species richness H_{max} = Maximum diversity possible

E = Evenness = H/H_{max}

The samples of 6 families with 25 species are 02, 02, 01, 15, 03, 02 the Shannon Wiener diversity index and Evenness for these sample values are,

Shannon Wiener diversity index and Evenness i

Sum = 554

Sample Values (S) = 554 number of species (N) = 25

$H_{max} = \ln(N) = \ln(25) = 3.21$ Evenness = $H/H_{max} = 2.8769/3.21 =$

Shannon diversity index (H) = 2.87, Evenness = 0.89

Sr. No	Family	Species Abundance	Pi value	In pi	Pi *In pi
1.	I) Typhlopidae Common worm Snake	12	0.0216	-3.8350	-0.0828
2	Beaked worm snake	18	0.0324	-3.4295	-0.1111
3	II) Boidae Common sand boa	17	0.0306	-3.4867	-0.1066
4	Red sand boa	32	0.0577	-2.8524	-0.1645
5	III) Pythonidae Indian rock python	8	0.0144	-4.2405	-0.0611
6	IV) Colubridae Trinket snake	22	0.0397	-3.2264	-0.1280
7	Common rat snake	59	0.1064	-2.2405	-0.2383
8	Common bronzeback snake	8	0.0144	-4.2405	-0.0610
9	Checkered keelback	60	0.1083	-2.2228	-0.2407
10	Buff's Stripped keelback	17	0.0306	-3.4867	-0.1066
11	Green keelback	28	0.0505	-2.9857	-0.1507
12	Common kukari	24	0.0433	-3.1396	-0.1359

13	Common wolf snake	31	0.0559	-2.8841	-0.1612
14	Barred wolf snake	6	0.0108	-4.5282	-0.0489
15	Yellow spotted wolf snake	2	0.0036	-5.6268	-0.0202
16	Dumeril's black headed snake	2	0.0036	-5.6268	-0.0202
17	Stout sand snake	11	0.0198	-3.9220	-0.0776
18	Common cat snake	14	0.0252	-3.6809	-0.0927
19	Banded racer	22	0.0397	-3.2264	-0.1280
20	Indian egg eater	6	0.0108	-4.5282	-0.0489
	V) Elapidae		0.1137	-2.1741	-0.2471
21	Indian Cobra	63			
22	Common Indian krait	39	0.0703	-2.6549	-0.1866
	Slender coral snake		0.0036	-5.6268	-0.0020
23		2			
24	VI) viperidae. Russel's viper	44	0.0794	-2.5332	-0.2011
25	Saw scaled viper	7	0.0126	-4.3740	-0.0551
	SUM	554	0.9989		-2.8769

Table 1 :- Family wise distribution of snakes

III. OBSERVATIONS

Poisonous	
1. Cobra,	<i>Naja Naja</i>
2. krait	<i>Bungarus caeruleus</i>
3. Russell's viper,	<i>Daboia russelii</i>
4. Saw scaled viper,	<i>Echis</i>
5. Slender coral snake,	<i>Callisophis melanurus</i>
Semi poisonous	
6. Stout Sand Snake,	<i>Psemmaphis longifrons</i>
7. Indian egg eater,	<i>Elachistodon westermanni</i>
8. Common cat snake,	<i>Boiga trigonata</i>
Non Poisonous	
9. Common worm snakes	<i>Indotyphlops braminus</i>
10. Beaked worm snake	<i>Myriopholis macrorhyncha</i>
11. Common earth boa	<i>Erycinas</i>
12. Red sand boa	<i>Eryx johnii</i>
13. Indian rock python	<i>Python molurus</i>
14. Trinket snake	<i>Coselognathus helena</i>
15. Common Rat snake	<i>Ptyas mucosa</i>
16. Common bronzeback snake	<i>Dendrolaphis tristis</i>
17. Checkrad keelback	<i>Xenochrophis piscator</i>
18. Buff stripped keelback	<i>Amphiesma stolatum</i>
19. Green keelback	<i>Rhabdophis plumbicolar</i>
20. Common kukari	<i>Oligodon amensis</i>
21. Common wolf snake	<i>Lycodon</i>
22. Barred wolf snake	<i>Lycodon striatus</i>
23. Yellow spotted wolf snake	<i>Lycodon flavomaculatus</i>
24. Dumeril's black headed snake	<i>Sibynophis subpunctatus</i>
25. Banded racer	<i>Argyrogena fasciolata</i>

Table 2:- Comparison amongst Poisonous to Nonpoisonous

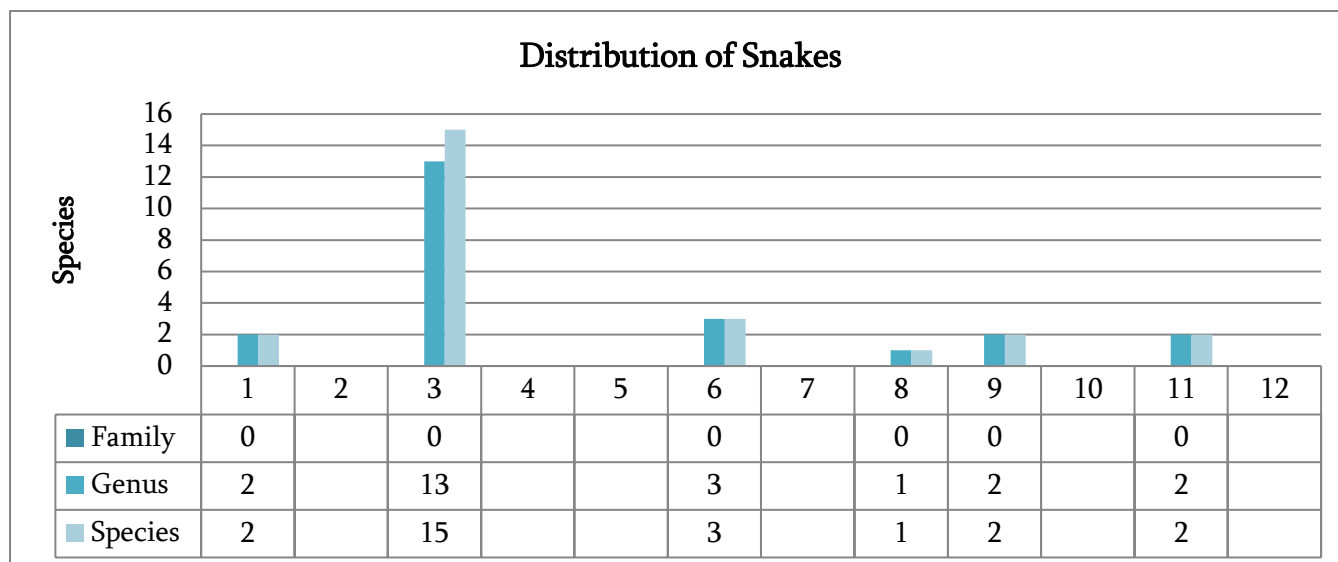


Fig:- 1 Species against Genus

IV. DISCUSSION AND RESULT

A grand total of 554 snakes of 25 species belonging to 6 families were rescued from all around the Kalamb City Including houses, front yard and back yard, farms, gardens, trees, Open areas and from wells, including 5 Poisonous species belonging to *Elapidae* & *Viperidae* Families. Colubridae Semi poisonous and Typhlopidae, Boidae, Pythonidae, Colubridae are non poisonous. The highest diversity of snakes was recorded for Cloubridae family magnificently with 15 species (Table 1). Followed by Elapidae03 , Bionidae and Typhopidae and viparidae02 from each families respectively. And only one from Pythonidae.

Total abundance from Elapidae, Indian Spectacle cobra found to be 63 with the 2 species of rare *Albino Cobra* (First Record of *albino naja naja* from dist. Yavatmal). While from Typhlopidae family Common worm snake (*Indotyphlops braminus*) was recorded firstly from same region. It indicates that the Kalamb and the adjacent region provide healthy habitats for snakes and more efforts are required for exploration of snakes from Kalamb region.

V. ACKNOWLEDGMENTS

The work presented in this paper has been made possible by the involvement of many people and I would like to take this opportunity to acknowledge their help. This article and the findings behind it would not have been possible without the outstanding support of my NGO Wildlife Conservation and Research Yavatmal (Reg. F-19612YVT); the enthusiasm, Courage and exacting attention to detail have been an inspiration and kept my work on track, my sincere gratitude goes to Mr. Nitin Wankhde Sir Range Forest Office Jodmoha Forest Range. I am also grateful to my snake rescuer friends From Wildlife Conservation and Research, NGO Swetal Landage, Sumit Agalave , Sahil Mahajan, Abdul Kalam, Nadim Sheikh, Kartik Landage, Vaibhav Kale, Rutik Landage, Saiyyad Tousif I shall be failing in my duty if I do not acknowledge the help provided by Mr. Nitin Ingole sir, Ankit Tembhekar, Nitin Butein field surveys.

VI. OBSERVATION PLATES

Family - Typhlopidae

Plate 1



Indotyphlops braminus



Myriopholis macrorhyncha

Family - Boidae



Erycinae sp .



Eryx johnia

Family - Pythonidae

Plate 2



Python molurus

Family - Colubridae



Coelognathus helena



Ptyas mucosa

Family - Colubridae

Plate 3



Dendrelaphis tristis



Xenochrophis piscator



Amphiesma stolatum



Rhabdophis plumbicolor

Family - Colubridae

Plate 4



Oligodon arnensis



Lycodon



Lycodon striatus



Lycodon flavomaculatus

Family - Colubridae

Plate 5



Psammophis longifrons



Sibynophis subpunctatus



Family - Elapidae

Plate 6



Naja Naja



Bungarus caeruleus



Calliophis melanurus

Family - Viperidae

Plate 7



Daboia russelii



Echis

First Record from Kalamb

Plate 8



Naja Naja (Albino)



Indotyphlops braminus

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