

Analysis of Data on Snakes Diversity and Ecological Status from Parbhani District, (MS) India.

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Abstract

Ecologically snakes are the very significant animals. However, at the present a day this animal of suborder Ophidia is on the verge of danger. Whatever may be the snakes observed or reported, exposed, by the local citizens in study area or all around the human habitations, are caught by an authorized snake catcher, expert, and as per the guidelines of forest department rescued and wildlife and released into the suitable habitat for the survival of the individual species of snakes. This work is most essential for the enrichment of the individual species survival and will fruitful to provide information, awareness and conservation of fauna in Parbhani district of (MH) state. This data collected for 01 years from June 2020 to June 2019. investigation of data showed that, there are 16 species of snakes in Parbhani district, belonging to 05 families out of which only 04 were poisonous, 02 were semi-poisonous and remaining 10 were non-poisonous.

Key words: Snake species, cobra, Parbhani region.

INTRODUCTION

Snakes are abundant around the world apart from in the Ireland, New Zealand and Arctics. It is state that there are near about 3000 species of terrestrial snakes in the world and they are majorly in the temperate climates and lush-green areas of the tropics. About 282 snakes species are occurred in India among which 58 species are venomous (Raut, 2014). The snakes are objects of attraction for studies since moment immemorial. The body of snake is frequently modified to suit its environmental conditions. The body of snake is often adapted to suit its environmental conditions. though, this animal as per the local people became annotated and requires rescue process. Newly this region is hastily undergoing industrialization, infrastructural progress include townships etc. and as such these areas are flat to habitat loss due to which various types of snake including poisonous, non-poisonous, semi-poisonous are being noted in the residential areas throughout winter and monsoons seasons. The current studies are an effort to evaluate the information, abundance, occurrence, & species richness and further help in the knowledge, responsiveness and conservation of snake diversity in this region since there is sensitive rareness of recognized work and data on this subject till today.

Snake bite is a severe life threatening time limiting medicinal urgent situation a occupational risk frequently faced by farmer and farm laborers. It is in common form all over tropical countries like India. In India there are 2.7 lacs snake bites out of which 35,000 to 50,000 deaths per year due to snake bite.

Due to habitat destruction, pollution, scarcity of prey, animals road kills and destruction by humans activities are the mainly threats for the survival of snakes species. Therefore it necessities constant monitoring on distribution and diversity of snakes in an environment. current study was aimed to find out the, distribution, diversity and diverse morphs of the snake species in Parbhani region of Marathwada use of snakes in black magic, Collection of venom from snakes, to pet the snakes, snake shows by charmers, animal trafficking, are a few vital challenges in the conservation and survival and of snakes diversity.

while Maharashtra shows high mortality, up to 2100 deaths per year, mainly in rural residents showed high death rate, 3000 species of snakes are dispersed universally. Out of 500 poisonous snake species 52 poisonous species are occurred in India (Punde, 2008). To prevent such type of complications the current study absolutely helpful to reduce the difficulties of the society and hand towards snake conservation activity.

Materials and Methods

To find out diversity and distribution of snake species in different habitats in Parbhani region the data was collected from unpaid assistant, snake friends, reports on road kills snakes in accidents and encounter during field observations. During this study simply photographs were used. The data was collected during year July 2018 to July 2019. The snake species were grouped as poisonous, semi-poisonous and non-poisonous and also classify as per the habitat differences. The species were identified by using snake identification keys in the standard taxonomic literature as well as snakes identification confirmed through online database 'Snakes of India'

This effort requires well-trained snake-catchers or snake rescuers or charmers on his personal risk, it needs confidence, self daring and experience and most significant is the study of nature of the snake to be caught and their behavior. Sampling was done as per the demand, request of the local people or stress calls made by people, without any time boundary. Individual species of snakes were situated and caught by sticks and throughout pitfall traps in relationship with drift fences. After catching the snakes species, their character, main features were noted on special record notebook, photographed and identified up to species level. Later the captured snakes were free in the forest region as per the guiding principle of forest department rescued and wildlife and released into the suitable environment.

RESULTS AND DISCUSSION

Total of 16 snakes Species belong to 05 families were noted in and around the human habitations of resident

people of Parbhani district this include as below The unavailability of appropriate habitat and prey base, snakes have to shift outside which leading to such conflict that occasionally leads to death of a snake. However, a few people stressfully or ecofriendly call to expert snake catcher/ snakes friends, for the escape from snakes hazard and survival of the snakes species. During the current study such most calls attended beginning rainy season and midsummer of the year. Out of such rescued species 04 species were poisonous, 02 were semi-poisonous and remain 10 was non-poisonous.

Among the non-poisonous snakes the uncommon species noted here as Striped keel back, *Amphiesma stolatum* and Indian rock python, *Python morulus* and belongs from *Colubridae* and *Boidae* family respectively.

The physical development, anthropogenic activities, civilization and chiefly the changing ecological conditions, like global warming are disturbing the habitat of the flora and fauna. Therefore this significant part of the environment conflict against man. In the current investigation abundance of snake diversity rescued opined that snake produced inconceivable fear and anxiety. Right from the cases where initial man lived, snakes would have caused former kind of poisoning (Wankhade and Lingayat, 2008). current study also observed the tress calls and of the people from June 2018to may 2019. whole number of species was 16 belong to 05 families but the individual number of snakes rescued was more than 2000 and all these were residing in the forest habitat. However it is natural that their inquisitive mode of propulsion, poison and constricting mechanism have made them significant group of predators and the interactions maintains a natural balance in the deserts and forest, the hills and plains of India Harney (2011), Walmiki (2012a).

Our study in fact noted that the snakes are extremely well-adapted to their habitats and plays important role in food web and food chain, but because of scarcity of food preyand water, degradation of habitat, rising temperature impels snake to enter in human inhabitation for security which leads to conflicts. The advent of man appears to have increased the hunting abilities as tea plantations, village huts, paddy fields, and city warehouses provided novel opportunities for insects, frogs, worms, mice, birds, rats, etc. many of which enhance in the areas due to these habitat and secure houses and subsequently are an easy prey for snakes. Such growth and also changes in their food supply apparently caused shifts in the kinds and density of snake diversity as well Walmiki (2012b). Our study in fact noted that the snakes are very well-adapted to their habitats and plays key role in food web and food chain, but because of degradation of habitat, scarcity of food prey and water, increasing temperature impels snake to enter in human inhabitation for safety which leads to conflicts.

Sr. No	COMMON NAME	SCIENTIFIC NAME	FAMILY	NATURE	STATUS
01	Spectacled cobra	<i>Naja naja</i>	Elapidae	Poisonous	common
02	Common krait	<i>Bungarus caeruleus</i>			Common
03	Russel's viper	<i>Daboia russelii</i>	Viperidae		Common
04	Indian saw-scaled viper	<i>Echis carinatus</i>			common
05	Common cat snake	<i>Boiga trigonata</i>		Semi- Poisonous	Common
06	Common vine snake	<i>Ahaetulla nasuta</i>			Common

07	Indian rat snake	<i>Ptyas mucosa</i>	Colubridae	Non- Poisonous	Common
08	Common trinket snake	<i>Coelognathus helena</i>			Common
09	Grass snake	<i>Macropisthodon plumbicolor</i>			Uncommon
10	Striped keelback	<i>Amphiesma stolatum</i>			Rare
11	Common wolf snake	<i>Lycodon aulicus</i>			Common
12	Checkered keel back water snake	<i>Xenochrophis piscator</i>			Common
13	Earth boa/Red sand boa	<i>Eryx johnii</i>	Boidae		Common
14	Common Sand boa	<i>Gongylophis conicus</i>	Boidae		Common
15	Indian rock python	<i>Python morulus</i>	Boidae		Rare
16	Brahminy worm snake	<i>Ramphotyphlops braminus</i>	Typhlopidae		uncommon

Figure 1) Diversity and Ecological Status from Parbhani District, (MS) India.

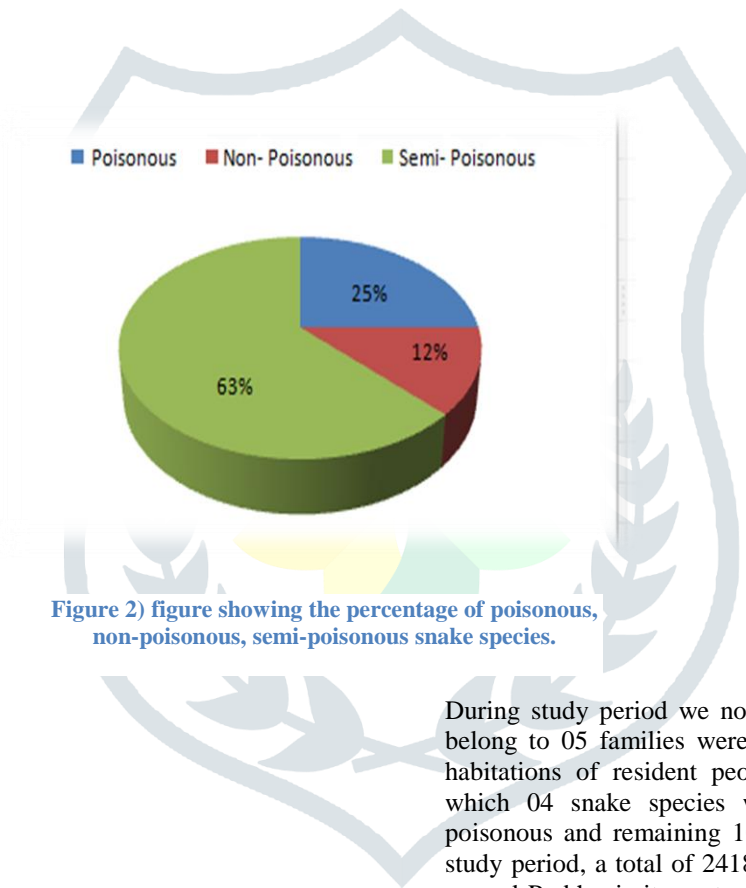


Figure 2) figure showing the percentage of poisonous, non-poisonous, semi-poisonous snake species.

During study period we noted total of 16 Species of snakes belong to 05 families were noted in and around the human habitations of resident people of Parbhani district. Out of which 04 snake species were poisonous, 02 were semi-poisonous and remaining 10 was non-poisonous. During the study period, a total of 2418 snake species were noted in and around Parbhani city, out of these 758 species were found as road killed and 1660 species of snake rescued. A total of 29 species of 27 genera belonging to 06 families were documented in Parbhani city and region. Based on the above information, Noted families and their species obviously indicate high richness of harpato fauna in the this area. Among these, family colubridae were noted maximum 1,748 species, 553 species documented as rescued and among this 1195 species were found road killed. The greatest 121 species were found as road killed in the month of June and rescued 285 in the month of July and minimum in the month of December. Among all the 06 family, only 01 species of python was noted in the month of August (Warghat and Thakur, 2015).while, the rocky fort area sustaining strong vegetation, nearby creek and marshy area supports a great reptilian biodiversity. Total number of 42 species was noted in this area for the study period of 01 years. The reptilian biodiversity include 3 skinks species, 5 gecko species, 23

snake species, and 3 lizard species and 1 turtle and 1 terrapin species. Amphibian includes 1 toad species and 5 frog (Walmiki *et al.*, 2012a)

current study strongly appeal that the survival of snakes species in their habitat is going to endanger and some of them are rare, it means that it is the sign of diverse habitats are quickly changing and it is harmful to their diversity and their habitat. Considering the number of snake species observed it is clear that the destruction forest niche has few species of serpent fauna.

Among the non-poisonous snakes the rare species noted here as Striped keel back, *Amphiesma stolatum* and *Indian rock python*, *Python morulus* belongs from *Colubridae* and *Boidae* family respectively (Pawar and Khobragade, 2015). The current study therefore reveals to conduct a extensive term monitoring and systematic study of this significant group of animal's initiation of investigation, safety measures and public awareness campaigns addressing local society would go a long way in conserving the snakes diversity.

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