



STUDY OF REPTILIAN BIODIVERSITY FROM SHRIRAMPUR CITY.

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ABSTRACTS:

The reptiles are the one of the main group of animals which is greatly diversified to various habits and habitat. There is also a frequent occurrence of various reptiles in city. Most of the occurrence of this reptiles vary month to month. The study was carried from April 2019 to January 2020. The city area is (rural and urban area), water canal area, water supplement area and Pravara river banks and Greenland area was the common home for this animal. From Shrirampur various types of reptilian animals was recorded. The commonly found reptiles are included wall lizards, skink, various garden lizards, and predominantly snakes. The snake bite is common scenario in and around Shrirampur city. Hence there was need to identify and distinguish them as poisonous and non-poisonous. The skink was used as a food by some peoples. While snakes are facing the problem of killing, smuggling and ultimately there is decrease in biodiversity. The frequent reoccurrence of these animals is due to various reasons. Out of these habitat loss and scarcity of food in wild habitat or the food is available near to human dwellings, competition and predations are common one. Avoid poisonous snake bites by using some strategies of prevention. Reptiles are natural predators for various pest. Pests are uneconomical to us and our agricultural income aspects and hence reptiles perform key role as a biological agent. Reptiles are the natural food for other animals like birds and other mammals not to human. The smuggling of reptiles should be prohibited. The maintenance of cleanliness around residential area is also effective against snake bite.

Key words: - Reptiles, Biodiversity, Hemotoxic, Neurotoxic, Shrirampur.

INTRODUCTION:

Shrirampur is a city and a municipal council in Ahmednagar district, Maharashtra situated at 19.62 N, 74.66 E in western Maharashtra. Shrirampur has a tropical wet and dry climate with average temperatures ranging between 20 to 42 °C (68 to 108 °F). Shrirampur experiences three distinct seasons Summer, monsoon and winter. Typical summer months are from March to May, with maximum temperatures ranging from 30 to 40 °C (86 to 104 °F). The overall climate is dry so this climate is more suitable for the reptiles. There are many reptilian animals so there was need to study on them. There was recurrent and regular occurrence of various reptiles like snakes, lizards and rarely tortoises. Shrirampur is one of the cities which is known by sugarcane production practices. Reptiles represent the first class of vertebrates which is fully adapted for terrestrial life style. They are having middle position in between of amphibia

and birds & hence it is believed that it may be evolved from amphibia like ancestor. The study of reptiles is called as Herpetology. 'Reptiles' are the ecologically & evolutionarily Significant group of living organisms, which are successfully adapted for living on the earth. Reptiles are the second species-rich group of amniotes after birds. Reptiles are air-breathing, cold-blooded vertebrates consisting of scales, shields, plates and scutes on their body. They are egg-laying animals. They are creeping, burrowing animals and mostly carnivores, tetrapodal vertebrates. Sexual dimorphism is there and fertilization is internal type. Generally, all animals are bilaterally symmetrical and normally body is divisible into head, neck, trunk and tail. According to Bogert, there are more than 7000 living and several extinct species of reptiles, grouped into approximately 16 orders of which only 4 are living. This are Chelonia or Testudinata,

Rhynocephalia, Squamata, Crocodilia. Turtles, Tortoises, Lizards, Snakes are the main animal groups which constitute the class reptiles. Globally, 989 species of reptiles, or almost 20 percent of evaluated species, are endangered or vulnerable to extinction, according to the International Union for Conservation of Nature's Red List.

MATERIALS & METHODS:

The overall study was based on observations. The all animals were observed and photographed during morning, afternoon, and during early evening. The study area was the RBNB College Shirampur and botanical garden, teak forest Tamarind forest, near water canals are of that college. The all campus was analyzed by regular supervision and by photography of observed animals. For that we require a camera which was provided by Zoology department. The record of observance of animals was justified by using books and data present about it. The reference books and various textbook which are available in college was used for the study. The identification of species was determined by reference books & with the help of online data's, information.

Observations:

- 1. Geckos**-There was occurrence of common **wall lizard** known as **geckos**. This are small lizards having tails shorter than head and trunk. Tongue is sticky and protrusible, the fingers and toes have adhesive lamellae which are useful for climbing vertical surface or walking across walls.
- 2. Calotes**- Garden lizard, It is widely distributed. It is a good climber, It is an insectivorous animal and oviparous in habit. It having a long tail with transverse slit called cloacal aperture. It having 5 toes which ends into claws. Body is covered with scales. The mid dorsal line of Calotes are modified into pointed horny crest which is the

modification of dorsal scales for the protection from weather and enemies.

- 3. Skink (Saapsuruli)**-It is common small, slender lizards. Living in holes and crevices and rocky region. Tail is long, cylindrical and toes often reduce. Scales are thin, smooth and polished. They are viviparous. It is brown above and pale below. While tail is red in colour.
- 4. Indian chameleon (Rangbadlu girgit)**- They are highly specialized for arboreal life. Body is compressed. Feet are with jointed digits by which they grasp branches firmly. Tail is long and generally coiled. Their tongue is projected forward for capturing insect. They are having ability to change their body colour with respect to their surrounding environment.
- 5. Varanus (Ghorpad)**- They are commonly called as monitor lizard or Ghorpad in Marathi. They are about 45 cm long and body is divisible into head, long neck and tail. They are having deeply bifid tongue. They are active predators and feeding on different vertebrate and invertebrate animals. Body is dark brown with black spot.

Poisonous Snakes:

- 1. Cobra**-It is locally called as Nag. It is most common and deadly poisonous. It grows up to 6 feet. It is black or brown in colour. The snake has a hood on the upper surface where a spectacular marking (ten of modi script). It feeds on small birds, rats, frogs, lizards etc. The venom of cobra is neurotoxic.
- 2. Russell Viper / Ghonas**- Head is triangular with tiny skin. Upper surface of body shows 2 rows of large black rings, chains. These chains are deep brown or black in colour. Fangs are large and tubular. It produces large hissing sound during attack or when disturbed. It is nocturnal, viviparous, mainly terrestrial and feeds mainly on

mice and rats. The poison is hemotoxic (vasotoxic).

3. Common Indian Krait-It is commonly called as **Manyar**. It grows about 4-5 feet. Ventralsurface is white, while dorsal surface is bluish or brownish black with white cross strips all over the world. Their fangs are small and inflicted superficially during bite. The poison is 3 times virulent than Cobra. It feeds on amphibian, lizards, snakes and small mammals. The venom is neurotoxic.

4. Saw scaled Viper-It is commonly called as **Phoorsa**. It is having triangular head and rhomboid shaped brown spot all over the body. The scales are strongly keeled and serrated hence commonly called as saw scaled viper. The poison is hemotoxic. The fangs are big, hollow and covered within a sheath.

Non-poisonous snake:

- 1. Ajar / Python**-It may grow up to 6 meters. It is largest non-poisonous snake. They are oviparous. It lives in forest and sometimes in grassland. Body is large, sluggish and heavy in weight. It is brown in colour with gray patterns, while head are pink. The jaws have very strong teeth which introduced deeply inside the body of victim. It has very powerful muscles which can hold and tied the victim. It feeds exclusively on birds and mammals which are suffocated in its coils.
- 2. Dhaman / Ptyas**- It is most common Indian rat snake. Colour is olive, yellowish or deep brown in variety found all over the Shrirampur. It is dirty yellowish above and whitish or pale below. Head is distinct. It grows about 6 to 10 feet. It is active, alert and diurnal in habit. It feeds on mammals, birds, frogs and mainly on rat and mice. Hence called as Indian rat snake.
- 3. Mandul** - It is also called as sand boa or double headed snake. It burrows in dry sandy plains, rocky area. It is a short and thick tail bearing snake. It also having blunt snout. Hence the

belief that it has 2 heads. It is quiet snake. Its colour is brown or sometimes black. It feeds on small mammals, lizards and frogs.

- 4. Common blind snake**- It is small or tiny blind snake looks like earthworm. It is burrowing snake have blackish or brownish in colour. Tail and snout are blunt. Eyes are vestigial hence commonly called as blind snake. It is harmless and feeds on insect larvae, nymph and others small animals.
- 5. Wolf snake / Kawdya**- It grows about 2 to 3 feet. It is grayish with lines of whitish spots and bands all over the body. Its body pattern somewhat like krait (as it mimics with krait). The fangs are adapted for catching lizards. These snake are found in gardens, agricultural areas and grasslands where feeding on lizard, skinks, frogs and tiny mammals.
- 6. Green Keel-back / Gavtya**- It is very common and grass green snake with black marking the neck region. Is is found in vegetation, grasslands, gardens and near houses. Ventrally it is pale yellowish or creamish white in colour. These snake feed on small insect, frogs, and small mammals.
- 7. Checkered Keel-back / Diwad**- It is also very common snake. Its colour is very deep brown to light black with black checkered markings all over the body. It is common snake found water canals, lakes and grasslands. It mainly feeds on frogs, crustaceans, insects and fishes.
- 8. Cat snake**- It is common snake, grayish brown in colour with black markings dorsally. It feeds on lizards on small mammals. It is found in grasslands and forest.
- 9. Trinket / Taskar** -It is commonly found in Maharashtra. Which enters in the houses in search of wall lizard. It grows about 4 to 5 feet in length. The lower posterior region of the body

showing 2 brown colored lines.

10. Occurrence-AB-Abundant, C-Common, O-Occasional, R-Rare

RESULT:

There was a great diversity among reptiles out of which were 1 wall lizard ,1 garden lizard ,1 skink ,1 chameleon and 13 snakes which are either poisonous or non-poisonous.

CONCLUSIONS:

In the study area various above-mentioned reptiles were observed. But due to insufficient knowledge these animals were killed during some agricultural practices. Hence there is need to make awareness and education and provision of literacy in peoples for the identification and differentiating in between poisonous and non-poisonous snakes.

ACKNOWLEDGEMENT:

For the study of this reptiles Department of Zoology provides a Nikon camera which was helpful for capturing their images and Mr. Bakare R.D. giving help for handling & identification of poisonous and non-poisonous snakes.

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Sr. No.	Common Name	Scientific Name (Species Observed)	Habitat	Occurrence
1.	Wall Lizard (paal)	<i>Hemidactylus sp.</i>	H	AB
2.	Garden Lizard (sarda)	<i>Calotes versicolor</i>	S,G	AB
3.	Skink (Saapsuruli)	<i>Mabuiya sps.</i>	L,RA	AB
4.	Indian Chameleon	<i>Chamaeleo zeylanicus</i>	S	O
5.	Varanus (ghorpad)	<i>Varanus sps.</i>	RA	O
6.	Snakes (poisonous) 1. Cobra	<i>Naja naja</i>	AG,F,G	C
	2. Ghonus	<i>Vipera russelli</i>	AG,F,G,RA	C
	3. Common Indian Krait	<i>Bungarus caeruleus</i>	AG,H,F	O
	4. Saw Scaled Viper / Phoorsa	<i>Echis carinatus</i>	F,RA	O
7.	Snakes (Non-poisonous) 1. Ajgar	<i>Python molurus</i>	F,G,WL	R
	2. Dhaman	<i>Ptyas (Zamenis Sp.)</i>	G, AG, H, F,RA	C
	3. Mandul	<i>Eryx johnii</i>	AG,L,F	C
	4. Common blind snake	<i>Typlops sp.</i>	AG,F,L	C
	5. Wolf snake / Kawdya	<i>Lycodon aulicus</i>	G,H,F	C
	6. Green Keel-back / Gavtya	<i>Micropisthodon plumbicolor</i>	AG,G,H,S	AB
	7. Checkered Keel-back / Diwad	<i>Xenochorphis piscator</i>	WL,F,G	O
	9. Trinket / Taskar	<i>Coelognathus helena</i>	H, AG, G,	C