

Faunal diversity of Ajmer Aravalis with special reference to Reptiles

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Abstract: Reptiles are cold blooded vertebrates which breath by lungs throughout their existence and have the body covered by scales. The skull articulates with the vertebral column by a single median occipital condyle. This is the way reptiles can be distinguished by other vertebrates. Ajmer is located in the center of Rajasthan (INDIA) between 25 0 38 " and 26 0 58 " north Latitude and 73 0 54 " and 75 0 22" east longitude covering a geographical area of about 8481sq km hemmed in all sides by Aravalli hills . About 7 miles from the city is Pushkar lake created by the touch of lord Brahma. The Dargah of khawaja Moinuddin chisti is holiest shrine next to Mecca in the world. Ajmer has hot dry summer and cold bracing winter. The winter extends from November to February and summer extends from March to June followed by rainy season till mid September. The temperature varies from 2 o c in winter and 49 0 c in summer. The normal annual rainfall is 527.3mm. The total population of the district is 2180526 persons. Around 5.56 % of total area available for land utilization is covered under forest. Ajmer is abode of certain flora and fauna that are particularly endemic to semi-arid and are specially adapted to survive in the dry waterless region of the state. Out of 19 orders of reptiles 4 survive today. Rhynchocephalia Single living species Tuatara , Sphellodoll pz 111 ctatlts, found only in Newzealand. .Testudines (Turtles, Tortoises, and Terrapins).Of these one species of Tortoise (Star Tortoise), Geochelone elegans is found in Ajmer. .Crocodylia (Gharial and Crocodile)..Squamata (Lizards and Snakes). Reptiles Lizards and Snakes are of immense ecological importance. Reptile diversity is highest in Deserts. But now these are declining at fast rate. 25 species of Reptiles are recorded from Ajmer out of which 16 species of Lizards and 8 species of snakes. Reptiles are specially adapted to survive dry waterless region of the state.

Keywords: Faunal diversity, Lizards, Snakes, Aravalis, Ajmer.

I. Introduction

Geographical Identification of the Area Rajasthan



Geographical identification of Ajmer



Ajmer is located in the center of Rajasthan (INDIA) between 25° 03' 38" and 26° 05' 58" north Latitude and 73° 05' 54" and 75° 02' 22" east longitude covering a geographical area of about 8481sq km hemmed in all sides by Aravalli hills . The district is somewhat triangular in shape. It is centrally located in Rajasthan also known as heart of Rajasthan. About 7 miles from the city is Pushkar lake created by the touch of lord Brahma. The Dargah of khawaja Moinuddin chisti is holiest shrine next to Mecca in the world. Ajmer has hot dry summer and cold bracing winter. The winter extends from November to February and summer extends from March to June followed by rainy season till mid September. The temperature varies from 20 c in winter and 49 0 c in summer. The normal annual rainfall is 527.3mm. The total population of the district is 2180526 persons. Around 5.56 % of total area available for land utilization is covered under forest. Ajmer is abode of certain flora and fauna that are particularly endemic to semi-arid and are specially adapted to survive in the dry waterless region of the state. The word faunal refers to assemblage of animals of a region or the list of taxonomic entities of animals to be found in an area. And floral refers to plant biodiversity. The year 2010 has been declared as International year of biodiversity The IUCN Red list estimates that 12-52% species within well studied higher taxa such as vertebrates are threatened with extinction. The total number of species known to currently exist in the world are 1,589,361. Of which Reptiles are 8,240, Source Faunal diversity in India. India ENVIS centre Zoological Survey of India. 1998.

II. Materials and methods

The present studies were carried out during the year 2014. The identification is was mainly based on morphometric observation and high resolution close up photographs using still and video digital camera (Nikon, \Sony H50). . They were identified , photographed and relieved in their habitat. Notpad is essential to note down and sketch the species seen. Surveying Reptiles is done by direct observation the feeding and watering sites attract these animals. Animals were identified and classified using the standard method of taxonomy.

III. Observation and Results

There is a strong relationship between presence of certain tree species and animals, with herbs and grasses. Ecological vegetation of the study area fall under the catogary of thorn forest type. Some changes are seen due to cultivation and changes in soil conditions the natural vegetation has a substantial contribution to the productivity of trees like Khejri , khimp, keekar, rohera, neem, prosopis cineraria, which are highly valued and maintained. 14 Species of Lizards, 8 Species of snakes, and 1 species of Tortoise are identified In the area. Table 1.

Table1 List of Reptiles of Ajmer

Zoological name	Common name	Abundance	Preffered habitat
<i>Stenodactylus orientalis</i>	gecko	o	T
<i>Cyrtodactylus scaber</i>	Garden gecko	F	T
<i>Hemidactylus brooki</i>	Spotted house gecko	F	T
<i>H. triendrus</i>	Gecko	F	T
<i>H. leschenaulti</i>	Bark gecko	F	T
<i>H. flaviviridis</i>	Yellow bellied gecko	O	T
<i>Calotes versicolor</i>	Garden lizard	F	T
<i>Agama agilis</i>	Agama	R	T
<i>Agama minor</i>	Agama	R	T
<i>Phrynocephalus laung walensis</i>	Frynosoma	R	T

Uromastix hardiwicki	Spiny tailed lizard	O	T
Ophiomorus tridactylus	Sand skink	O	T
Acanthodactylus cantoris cantoris	Fringed toed lizard	R	T
Ophisops microlepis	Cobra eyed lizard	R	T
O. jerdoni	Golden striped lizard	O	T
Varanus bengalensis	Monitor lizard	F	T
Ramphotyphlops bramina	Blind snake	O	T
Leptotyphlops macrorhynchus	Beaked thread snake	O	T
Eryx johni johni	Sand boa	O	T
Ptyas mucosus	Dhaman	O	T
Argyrogena ventromaculatus	Glossy bellied rasev	O	T
Bungarus caculus	Krait	F	T
Naja naja naja	cobra	F	T
Echis carinatus	viper	F	T
Geochelone elegans	Star Tortoise	F	T

Lizards

1. Stenodactylus orientalis
2. Cyrtodactylus scaber
3. Hemidactylus brooki
4. H. triendrus
5. Bark gecko H. Leschenaultia
6. Yellow bellied house gecko H. Flaviviridis
7. Calotes versicolor
8. Agama agilis
9. Agama minor
10. Uromastix hardiwicki
11. Indian sand skink Ophiomorus tridactylus
12. Indian sand lizard Acanthodactylus cantoris cantoris
13. Cobra eyed lizard Ophisops jerdoni
14. Monitor lizard Varanus bengalensis

Tortoise

1 Star tortoise *Geochelone elegans*

Snakes

1. Blind snake Ramhpotyphlops
2. Beaked thread snake Leptotyphlops macrorhynchus
3. ndian sand boa Eryx johni johni
4. Dhaman Ptyas mucosus
5. Indian krait Bungarus Carulcus
6. Cobra Naja naja naja
7. Russels viper Vipera russelli russelli
8. Viper Echis carinatus.

IV. Summary and Conclusion

The fauna are particularly adapted to semiarid conditions. 24 species of Reptiles are found out of which 16 species of Lizards and 08 species of Snakes.

The faunal diversity observed

House gecko, Hemidactylus brooki, H. triendrus, H. Leschenaultia, H. Fleviviridis, Calotes, Cyrtodactylus scaber, Agama agilis, A. minor, Uromastix hardiwicki, Skink Ophiomorus tridactylus, Acanthodactylus cantoris cantoris, Ophisops jerdoni, Varanus bengalensis, Blind snake Ramphotyphlops, Thread snake Leptotyphlops macrorhynchus, Sand boa Eryx johni, Dhaman Ptyas mucosus, Krait Bungarus carulcus, Cobra Naja naja naja, Russel viper Vipera russelli russelli, Viper Echis charinatus. Calotes versicolor, Stenodactylus orientalis. Aravalli Mountains are Marvellous to be viewed, since these are oldest Mountains of the world. But the faunal diversity is rapidly decreasing, due to mining and fast rate of urbanisation. Zinc mining and cutting of mountains to obtain rock for building houses and buildings is the main cause for loss of biodiversity. Fast steps should be taken and hard laws should be introduced to stop the loss of biodiversity.

Suggestions

- Strict laws should be imposed to stop minning and mountain cutting, since Aravallis are the oldest mountains of the world and habitat of many animals eg Snakes, Lizards. Habitat loss will lead to biodiversity loss.

- The local people should be educated and made aware of effects and consequences of Biodiversity loss.
- Documentation of biodiversity is an urgent requirement as latest statistics and data on floral and faunal biodiversity has not been compiled and documented.
- Degradation / Fragmentation of habitat extinction of species and destruction of unique habitat need to be monitored.
- A programme “ Eco –development “ for in situ conservation of biological diversity involving local communities has been initiated in recent years, for sustained conservation of ecosystem by involving the local communities with maintainance of earmarked regions surrounding protected areas.
- Increase allocation of financial resources for conservation of biodiversity.
- To conserve representative ecosystem, a biosphere reserve programme should be implemented. . Aravallis should also be included in Biosphere reserves.
- Major central acts relevant to biodiversity include forest act , and wildlife protection act, 1972, Forest conservation act 1980 and environment protection act 1986.

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