# Status of Faunal Diversity of Sariska Tiger Reserve in the Aravallis

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Abstract: The reserve has topography of undulating plateau land and wide valleys with flat vast plains to narrow and deep gorges. The terrain of Sariska Tiger Reserve is hilly maintain the character of Aravalli system with sharp log back ridges. The slopes are steeper on their southern aspects than in other direction. The ridges and plateaus are convulated and curved, and run in many directions. There is a major valley referred to as the main valley which runs in a general east west direction through the reserve. The main valleys width ranges from 0.25 km. to 2 km. comprises with Kushalgarh in the west; it forks into 2 branches towards Tulsiwasla in the north-west and Sariska in the south-west. Another major valley, the Sariska-Kalighati valley, runs in a general north-south direction. It is narrow, about 0.25 km. wide for the distance of about 5 km. before it broaden out at Karnawas. At the Sariska, where it links up with main valley, it is almost 3 km. wide. To the south of core zone–I there is a wide valley (1 km.) which runs northwards from Mandalwas to Kaniyawas near Kankwari at the Sariska. In Sariska, they are in NNE-SSW direction.Sariska in the Northern part of the Aravallis has mainly residual hills, though there is a structural control as well. The residual hills occur as isolated, linear features in the line with the trend of the mountain and are spread from each other by wide gaps (Dhabriya, 1987).

Keywords: Sariska tiger reserve, Aravallis, faunal diversity

#### 1. Introduction

According to the Champion and Seth (1968) the forest of Aravalli region fall under the broad category of Tropical Dry forests. Study area the "Sariska Tiger reserve" (74°14' to 76° 34' N and 25° 5' to 27° 3' E) is situated in the Aravalli hill range and lies in the semi-arid part of Rajasthan (Rodgers and Panwar, 1988). It became a wild life sanctuary in 1955 and Tiger reserve in 1982. According to Department of Forest, Government of Rajasthan the total area of the Sariska Tiger Reserve is 866 sq.km, of which 302.2 sq. km. is buffer zone and 497.8 sq.km is core zone. Sariska core zone is comprised of three isolated; pockets: Core-I (273.8 sq.km), II (126.5 sq.km.) and III (97.5 sq.km). The status of the Core I has been notified as a National park in 1982. Sariska is undulating to hilly and has numerous narrow valleys. Kiraska and Kankwari plateau and two large lakes Mansarovar and Somsagar. Silisad lake is situated just along the north eastern boundary of the reserve. The altitude of Sariska varies from 540 to 777 meters. The vegetation of Sariska correspond to Northern tropical dry deciduous forests (sub group 5 B; 5/E I and 5/E2) and Northern tropical thorn forest (Sub Group 6 B) (Champion and Seth, 1968). The forest being scattered and sparse over a large area on various geological and soil formation and vary greatly in composition. Sariska is very rich in biodiversity with wide spectrum of flora and ample of wild life. The main economically valuable species are dhok (Anogeissus pendula) salar (Boswellia serrata), khair (Acacia catechu), (Dendrocalamus bamboos strictus), dhak (Butea monosperma), kair (Capparis decidua), ber (Zizyphus mauritiana) with having lot of ground flora comprised of shrubs, herbs, grasses and sedges etc. Sariska forests were the exclusive shooting reserve of the Ex-ruler of Alwar princely states. The Sariska in Aravallis used to provide very rich habitat to a wide spectrum of wildlife comprising mammals such as the great Indian tiger, leopard panther, wolf and other predators are caracal, jungle cat, Jackal, hyena. In the herbivores mainly sambar and cheetal and two

species of antelopes namely blue bull and four horned antelope, besides these wild boar, Indian civet, palm civet, ratel, porcupines, chinkara, mangoose, Indian monitor lizard and very common, langur or rhesus macaque.Earlier so many work has been done like, Ajith Kumar, and Sankar, 1993, Caroline and Srivastava 1994, Mathur, 1991, Panwar, 1991, Rodgers, and Panwar 1988. Rodgers1990a,1990b,1991, Ross, and Srivastava, 1994, Sankar and A.J.T. John Singh, 2002, Sankar and Jethwa, 2002.Sankar, Mohan, and Pandey, 1993,Sankar., 1994.



### 2. Material and Methods

Personal observations were taken in the field by visiting the study area and its different landforms. It was a great help that the field staff of Sariska Tiger Reserve, Department of Forest, Government of Rajasthan was associated always in the field. Local sighting near water holes were observed during study period. The Primary information is collected by regular visits to the study area. The secondary sources include books, journals, electronic journals, encyclopedias, news papers, websites and research articles.Observations were carried out with the aid of binoculars and photograph at water hole. The census data for some wild fauna are incorporated by the help of Wildlife Institute India as well Zoological survey of India. The pugmark method was adopted for estimation of tiger and other wildlife population. Traditional water point census was used for estimating the population of wildlife. The investigator also utilized experiences with the team of Wildlife Institute of India as well as the forest officials so far. The census was taken twice a year in season summer and winter. Beside these some methods like vehicle traverse method would be used to derive indices herbivores population monthly studies attempts would be made to develop indices in the bases of scat droppings, scratch mark etc. For the tiger permanent pugmarks impression pads will be laid down at selected places particularly to water holes or hides of tigers after rain or before rainy season. The pits will be recorded and the data would be used along with GIS software in future.

## 3. Result and Discussion

The reserve also supports over forty six wild species and more than hundred species of avifauna, so we can say that Sariska reserve has ample of wild life habitat. Dense woody areas mainly in the valleys like Kalighati, Siliberi, Jhaj, Naldeshwar, Panidhal, Bandipul etc. are occupied by sambar (*Cervus unicolar*) while outskirts of these valleys with modest slopes are linked by chital (*Axis axis*), nilgai (Boselaphus tragocamelus) and wild boar (Sus scrofa). The scrub level type of forest is liked by horned antelope which are seen in open patches of Slopka, Kalighati and Siliberi forest area as visualized during several visits. The langur is common throughout, but concentrated near temples, monkeys, hare, porcupine, great Indian monitor lizard distributed throughout the reserve. Tiger (Panthera tigris) and leopard (Panthera paradus, caracal (Felis caracal) and jungle cat (Felis chaus) are found in the reserve. Jackal (Canis aureus), small Indian civet (Vivenicula indica), palm civet (Paradoxurus hermaphroditus), ratel (Mellivora capensis), mangoose (Herpestes edwardsi) and hyaena (Hyaena hyaena) are both predators and scavengers. They are very common throughout the reserve. The important tiger niches are Bandipole, Algual, Tarunda, Tuda, Chhailipaj, Ghamodi, Naldeshwari, Siliberi, Udainath, Slopka, Panidhal, Bhagani, Kalighati and Jhaj due to the safe hides and water holes there. The sighting of tiger is very rare, not so common, but the some time it may be visualized by the crawling signal of the birds, monkeys and high alert of chital, sambar etc. Leopard prefer the outskirts like Tehla, Talvriksh, Akbarpur of the forest tract but also live in tiger areas. Sariska Tiger Reserve seems to be a breeding ground for many avian species like peafowl (Pavo cristatus) grey partridge (Francolins pondicianus), bush quails (Perdiculaa asiatica), black partridge (Francolinus francolinus asiae) green pigeon (Treron hoenicoptera), rose ringed parakeets, lapwings, pintail sandgrouse with several migratory species. According to management plan for Sariska by W.A Rodgers of the Wildlife Institute of India there is enough forage to maintain level of herbivore population and ample prey to sustained food for carnivores that indicates healthy food web with highly stable ecosystem. In the Sariska Tiger reserve some reptile species are common like, Indian starred tortoise, house gecko, common garden lizard, desert monitor, lizard, Indian python, common wolf snake, Indian Krait, black cobra, Russel's viper etc.



## International Journal of Science and Research (IJSR) ISSN (Online): 2319-7064 Index Copernicus Value (2013): 6.14 | Impact Factor (2013): 4.438

## List of water points (holes) in Sariska Tiger Reserve

S. No.	Name of water point	Status
1.	Garwaji	Natural
2.	Talviriksh	Natural
3.	Paridal Well	Artificial
4.	Ruprel River	Natural
5.	Raika Well	Artificial
6.	Sirouda	Natural
7.	Bara	Natural
8.	Bandipul	Natural
9.	Naldi	Natural
10.	Tiger Den Well	Artificial
11.	Haripura Well	Artificial
12.	Karna Ka was	Artificial
13.	Ganka Well	Artificial
14.	Udainath	Natural
15.	Tarunda	Natural
16.	Algual	Artificial
17.	Algual	Natural
18.	Rotkala	Natural
19.	Kiraska	Natural

20.	Bramnath	Artificial
21.	Tuda	Natural
22.	Kankwari	Natural
23.	Kalighati	Artificial
24.	Pandupole	Natural
25.	Harsaval	Natural
26.	Umri	Artificial
27.	Naharsati	Artificial
28.	Isawala	Artificial
29.	Umri well	Artificial
30.	Phentapol	Artificial
31.	Slopka	Artificial
32.	Chamari Bera	Artificial
33.	Jahaj Kund	Natural
34.	Ram Kund	Natural
35.	Manasrovar Lake	Natural
36.	Parasar	Natural
37.	Somasagar lake	Natural
38.	Narainji	Natural
39.	Bhangarh	Natural

## Table (A): Includes list of the Fauna of Sariska Tiger Reserve

Latin Name	Common Name
Hemiechinus auritus collaris, Gray	Long-eared Hedge-hog, Jhau chuha
Suncus murinus sindensis Anderson	House shrew, Chhachhunder
Pieropus giganteus giganteus Brunich	Indian flying fox, Chamgadad
Megaderma lyra lyra Geoffroy	Indian false vampire, Bagad
Macaca mulattalatta Zimmerman	Red faced or Rhesus Macaque, Bandar
Presbytis entellus entellus Dufresne	Langur or Hanuman monkey
Manis crassicaudata Gray	Indian pangolin, Selusanp
Canis aureus aureus Linn.	Asiatic jackal, Gidad or Siyar
Vulpes bengalensis Shaw	Indian fox, Lomdi
Herpestes auropunctatus pallipes Blyth.	Small Indian Mongoose, Sunhari newala
Herpestes edwardsi ferrugineus Blanford	Indian grey Mongoose, newala
Hyaena hyaena hyanea Linn.	Striped Hyaena, Jarakh or Lakadbagga
Felis chaus prateri Pocock	Jungle cat, Jangli billi
Felis caracal schmizi Matschie	Caracal, Siyagosh
Panthera tigris Linn	Tiger, Bagh, Sher, Nahar
Panthera pardus Linn.	Leopard, Baghera, Tendua, Guldar
Paradoxurus hemaphroditus Pallas	Common plam Civet or Toddy Cat Bijjoo
Viverricula indica deserti Bonhote	Small Indian Civet, Kasturi
Lutra perspicillata sindica Pocock	Udbilao, Jalmanush
Mellivora capensis indica Linn.	Ratel or Honey badger, Beju
Sus scrofa cristatus, Wagner	Wild Boar, Suar
Cervus unicolor niger Blainville	Sambhar
Axis axix axis Erxleben	Spotted Deer, Cheetal
Antelope cervicapra rajputanae Zukowsky	Black buck or Indian Antelope, Krishnasar, Kala hiran
Tetracerus quadricornis Blainville	Chousingha or four horned Antelope, Ghantali
Boselaphus tragocamelus Pallas	Blue bull or Nilgai, Roj
Lepus nigricollis ruficaudatus Geoffroy	Indian Hare or Rufoustailed hare, Khargosh
Funambulus pennati Wroughton	Five-stripped Squirrel, Gilhari
Hystrix indica indica Kerr.	Indian Porcupine, Sehi
Mus musculus bactrianus Blyth.	House mouse, Chuha
Geochelone elegans Schoepff	Indian Starred tortosie, Pahadi Kachhua
Hemidactylus leschenaulti Dumeril and Bibron	House Gecko, Badichhipakali
Hemidactylus flaviviridis Ruppell	Wall lizard or House Gecko
Calotes verscicolar Daudin	Common Garden Lizard, or Blood sucker, Bagan Chhipkali, Kirkantio
Mabuya macularia Blyth	Little Skink, Bhabani
Varanus griseus Daudin	Agra monitor or Desert monitor Lizard, Padagoh
Eryx conicus Schneider	Black or Russel's Earth Boa, Dumuhi
Python molurus molurus Linn	Indian Python or Rock Python, Ajgar
Ptyas mucosus Linn	Rate snake, Dhaman
Lycodon aulicus aulicus Linn.	Common Wolf-snake, Kawadiwala
Xenochrophis piscator Schneider	Checkered Keelback, Pani Samp
Bungarus caeruleus Schneider	Common Indian krait, Karayat
Naja naja naja Linn.	Common Indian Cobra, Nagi Gokhura

## Volume 4 Issue 1, January 2015

Naja naja oxiana Eichwald	Black Cobra, Oxus, Cobra, Nag, Kalasanp
Vipera russelli Shaw	Russel's Viper, Daboia, Kander
Echis carinatus Schneider	Sidewinder or Sawscaled Viper, Phoorsa, Afai

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### 4. Acknowledgement

Author has deep sense of gratitude to his supervisor Director Indira Gandhi centre for Human Ecology and Population studies, University of Rajasthan, Jaipur for their able guidance during the research tenure and also thankful to Dept of forest, Government of Rajasthan and field director to Sariska and other staff members.

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