

## Species Diversity: Bird checklists for Sariska indicate a healthy raptor diversity

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### **ABSTRACT:**

Species Diversity: Bird checklists for Sariska indicate a healthy raptor diversity. Species like the Crested Serpent Eagle and the Indian Scops Owl are inhabitants of this place. The presence of raptors in Sariska Tiger Reserve adds another fascinating layer to the ecosystem. Habitat loss due to deforestation and encroachment is likely a threat to raptor populations in Sariska, as it is for many wildlife species. Additionally, the use of pesticides in nearby agricultural areas can indirectly affect raptors through prey contamination. Raptors within Sariska likely exhibit a preference for specific microhabitats that provide them with hunting advantages and nesting opportunities. Here are some potential microhabitat preferences: Rocky outcrops and cliffs: These areas offer excellent vantage points for raptors to survey their territory and spot potential prey. Open woodlands and grasslands: Open areas with scattered trees provide hunting grounds for raptors that rely on speed and agility to capture prey. Riparian zones (river edges): These areas can be rich in prey like small mammals and birds, attracting raptors that specialize in hunting along water bodies. Dense forests: While not their primary habitat, some raptor species like forest eagles might utilize denser forested areas for nesting and roosting. Detailed studies on raptor populations within Sariska are needed to understand their specific status, habitat preferences, and potential threats. Such information is crucial for developing effective conservation strategies for these top predators. By protecting raptors and their preferred microhabitats, we can maintain a healthy balance within the Sariska ecosystem. Raptors play a vital role in controlling populations of small mammals and reptiles, ensuring a balanced prey base for other carnivores.

**KEY WORDS:** Sariska Tiger Reserve, Microhabitats, Raptors, Ecosystem, Deforestation, Habitat

### **Introduction**

Raptors found worldwide and in all types of habitats. The birds of prey are among the most dramatic of all the birds. Their impressive appearance, spectacular hunting techniques and mastery of the air have inspired generations of bird watchers. Raptors in general large, heavy backed, big footed, large claws, used for catching and killing prey. But these birds also have acute binocular vision and excellent hearing. Most species of raptors subsist mainly on live prey which they

generally capture on ground, on trees and sometime in air, except most vultures because they completely depend on dead carcasses.

The birds of prey or raptors make up the large order falconiformes, with nearly 300 species ranging through the world. At Sariska Tiger Reserve I have two families: Accipitridae and Falconidae.

Out of nine species of vultures found in India (Ali and Replay, 1987). Seven species have been observed in Rajasthan and Gujarat, viz. the King vulture (*Sarcogyps calvus*), Cinereous vulture (*Aegypius monachus*), Egyptian vulture (*Neophron percnopterus*), Eurasian griffon (*Gyps fulvus*), Himalayan griffon (*Gyps himalayensis*), Long-billed vulture (*Gyps indicus*) and White-rumped vulture (*Gyps bengalensis*) (Chhangani et. al. 2002; Chhangani, 2005). Of these, the four species, King vulture (KV), Long-billed vultures (LBV), White-backed vulture (WBV) and Egyptian vulture (EV) are residents and breeds in and around the Sariska Tiger Reserve.

It is interesting to report that Long-billed vulture (LBV) in this part nests and roosts on cliffs and White-backed and King vulture's nests on large and medium trees. They were sighted less in nos. compared to LBV.

## Material and Methods

**Study site:** Sariska Tiger Reserve is a tiger reserve in Alwar district, Rajasthan, India. It stretches over an area of 881 km<sup>2</sup> (340 sq mi) comprising scrub-thorn arid forests, dry deciduous forests, grasslands, and rocky hills. This area was a hunting preserve of the Alwar state and was declared a wildlife sanctuary in 1958. It was given the status of a tiger reserve making it a part of India's Project Tiger in 1978. The wildlife sanctuary was declared as tiger reserve and national park in 1982, with a total area of about 273.8 km<sup>2</sup> (105.7 sq mi). Altitude varies from 900 to 3200 feet metric system above a level. Sariska is characterized by distinct winter, summer and monsoon. During summer, temperature fluctuates between 30 – 35oC, and reach may 48oC during May and June. Mean winter temperature is 5oC, and may go down to 2oC during December – January. The average annual rainfall is about 825 mm; minimum 423 mm and maximum 950 mm. This wide range of climatic conditions along with the great altitudinal variations provides different micro-habitats. There fore, this sanctuary encompasses different vegetation types such as deciduous, dry-deciduous, dry-savannah-forest, euphorbia scrub and dry grasslands. The forest is dominated by 'gorya dhawa' (*Anogeissus latifolia*), dhawa (*A. pendula*), salar (*Boswellia serrata*), gol (*Lannea coromandelica*), kherni (*Wrightia tinctoria*), kumbat (*Acacia senegal*), khair (*A. catechu*), ber

(*Zizyphus mauritiana*), dhonk (*Butea monosperma*), etc. The undergrowth mainly consists of jharber (*Z. nummerlaria*), ardnasa (*Adhatada vasica*), gangan (*Grewia tenex*), franger (*G. flavescens*), kanter (*Capparis separaia*), lantana (*Lantana indicus*), etc. Some climbers and grasses are also found.

The main fauna of Sariska includes Tigers (*Panthera tigris*), leopard (*Panthera pardus*), hyaena (*Hyaena hyaena*), Indian Wolf (*Canis lupus*), Jackal (*Canis aureus*), Sloth bear (*Melwisus ursinus*), Hanuman langur (*Semnopithecus entellus*), Rhesus Macaque (*Macaca mulatta*), Porcupine (*Hystix indica*), Fourhorned antelope (*Tetracerus quadricornis*), Chinkara (*Gazella g. bennetti*), Porcupine (*Hystrix indica indica*), Samber (*Cervus unicolor*), Spotted deer (*Axis axis*), (Bluebull (*Boselaphus tragocamelus*), Toddy cat (*Paradoxurus hermaphroditus*), Jungle cat (*Felis chaus*), Fox (*Vulpes bengalensis*), Crocodile (*Crocodylus palustris*) and Rock python (*Python molurus*).

Methods: Data was collected as and when encountered during travelling and regular field visits recorded from December 2016 to December 2018 in and around Sariska National Park. The aim of this study was to ascertain the nature of birds of prey in various microhabitat types in and around SARISKA TIGER RESERVE. Besides this scane sampling and ad-libitum sampling methods (Altamann, 1974) were also used to collect additional information by direct observations. Photography and videography were also done to confirm the presence of reptors in the study area. The sanctuary itself has no human inhabitants though two small villages are surrounded by the park's boundaries. Some 94,388 people live within five kilometers of the boundary of the park, in 33 settlements and a number of small satellites. The twelve largest and most proximate villages flanking the reserve are home to more than 43,100 people. Over 2 lac animals, which includes about 29200 cows, 18900 buffalos, 90500 sheep, 5500 goats and 4800 camels are living in and around the sanctuary.

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