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Rukhsar Bano

Research Scholar, Department of
Zoology, Janki Devi Bajaj
Government Girls College, Kota,
Rajasthan, India

Dr. Fatima Sultana

Professor, Department of
Zoology, Government College,
Antah, Rajasthan, India

Occupancy of striped hyena in Ramgarh Vishdhari tiger reserve, Bundi, Rajasthan

Rukhsar Bano and Dr. Fatima Sultana

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Abstract

In the present study, we assessed the occupancy of striped hyena in Ramgarh Vishdhari Tiger Reserve. For this Purpose, reconnaissance survey of Ramgarh Vishdhari Tiger Reserve was done in collaboration with forest staff. Indirect observations were made by pugmarks and scats or pellets of animals observed along natural trails. Direct observations were made of animals using binoculars. Pugmarks and scats of striped hyenas were collected and observed as well as direct sighting was also done. In addition, droppings of nilgai, scratches on tree barks made by sloth bear, pugmarks and scats of leopard, jackal pellets were observed.

Keywords: Striped hyena, occupancy, reconnaissance survey

Introduction

Hyenas are carnivorous mammal of family Hyaenidae. General appearance of hyenas suggest their relation with the dog family, but the structure of skull, teeth and other anatomical features place them in the Feliformia suborder of the Carnivora. Due to these considerations they have been placed in separate family Hyaenidae (Prater, 1971) [6]. Globally there are four members of the Hyaenidae family; striped hyena (*Hyaena hyaena*), spotted hyena (*Crocuta crocuta*), brown hyena (*Hyaena brunnea*), and aardwolf (*Proteles cristatus*) (Mills & Hofer, 1998) [4]. Striped hyenas (*Hyaena hyaena* Linnaeus, 1758) are widely distributed in an area extending from east and northeast Africa, through the Middle East, the Caucasus region, and Central Asia, to the Indian subcontinent. (Mills & Hofer, 1998, Abi-Said & Abi-Said, 2007) [4, 1]. Striped hyena is the only species of family Hyaenidae found in India. In India, the striped hyena occupies habitats located in arid and semi-arid regions to the wet zone of the southwestern coast (Rieger, 1979a) [7], except the moist forests of the northeastern region (Prater, 1971) [6]. Large number of striped hyenas found in Ramgarh Vishdhari Tiger Reserve, Bundi, Rajasthan.

Based on prior studies, Striped Hyena (*Hyaena hyaena*) is one of the most important large scavengers; its role in clearing off carrion in tropical ecosystems and in recycling mineral compounds from dead organic matter enhances its biological importance (Kruuk, 1976) [3]. The dietary preferences of this species include vertebrates and invertebrates, dried bones, various fruits, vegetables and human-sourced organic wastes (Wagner, 2006) [9]. International Union for the Conservation of Nature (IUCN) considers the striped hyena as Near Threatened species (Arumugam *et al.*, 2008) [2], while in India it is placed in schedule-III and hunting is prohibited (The Wildlife Protection Act 1972).

Research Methodology

Study Area: Ramgarh Vishdhari Tiger Reserve is located in Bundi district of Rajasthan state and 45 Km. away from it. The sanctuary lies in the south-eastern part of Rajasthan between 24° 59' 11" to 25° 53' 11" North latitude and 75° 19' 30" to 76° 49' 30" East longitude. A number of water ponds founds in this area. Mez River flows in the middle of the Ramgarh Vishdhari Tiger Reserve and it is the life line of flora, fauna and ethnic societies (Sharma, 2022) [8]. The floral diversity in the reserve is dhok, khair, ronj, gurjan, saler, tendu etc. The reserve is home for the leopard, sloth bear, wolf, striped hyena, jackal, sambhar, blue bull, langur, porcupine, Indian hedgehog, Indian fox, jungle cat, rhesus macaque, chital and chinkara and other animals (Nawar, 2015) [5].

Corresponding Author:**Rukhsar Bano**

Research Scholar, Department of
Zoology, Janki Devi Bajaj
Government Girls College, Kota,
Rajasthan, India

Reconnaissance Survey: Two-day reconnaissance survey of Ramgarh Vishdhari Tiger Reserve was carried out after taking permission from the forest department. The survey was done in collaboration with forest staff. Survey was primarily carried out on foot. Camera, binoculars, GPS, compass and other equipment's were used during survey. Animal presence was recorded based on sightings and other indirect evidence like pugmarks, scats etc. No trapping was carried out. Survey was done for direct encounter of striped hyenas as well as indirect evidences such as scats, pugmarks, dens etc. was recorded to document the presence of striped hyena in the reserve.

Results and Discussion

The striped hyena (*Hyaena hyaena*) was recorded during the Reconnaissance survey. Direct sightings of 2 striped hyenas were recorded in the reserve early in the morning. During day time, indirect evidences of the presence of striped hyenas like pugmarks and scats were also observed along with natural trails of the reserve. Scats were identified by shape, size, texture and color. Striped hyenas leave prominent white scats at their dens, near the dens, roads and trails. Dens of striped hyenas were recorded. The confirmation of striped hyena dens in the Ramgarh Vishdhari Tiger Reserve was made through indirect signs. During the survey, presence of other animals was observed by indirect evidences: Scratches made by Sloth bear on the tree barks, droppings of nilgai, pugmarks and scats of leopard, porcupine spines were recorded. In addition, rattle snake and few birds were also observed in the reserve.

Striped hyenas play an important ecological role in tropical & subtropical forest and grassland ecosystem as they are indicators of healthy tropical & subtropical forests and grassland ecosystem (Mills & Hofer, 1998) [4]. The striped hyena (*Hyaena hyaena*) is one of the most important large scavengers. Its role in clearing off carrion in tropical ecosystems and in recycling mineral compounds from dead organic matter enhances its biological importance (Kruuk, 1976) [3].



Fig 1: Pugmark of Striped Hyena



Fig 2: Scat of Striped Hyena



Fig 3: Droppings of Nilgai

Conclusion

The Ramgarh Vishdhari Tiger Reserve is 4th Tiger Reserve of the Rajasthan. It is rich in both flora and fauna. Large number of striped hyenas and other mammals are found in the reserve. The reserve is also rich in reptilian and avian diversity. The occupancy of striped hyena in the reserve is confirmed by direct sighting as well as indirect evidences like scats, pugmarks and dens. The striped hyena is a predominantly nocturnal animal that emerges from its den in the night time and returns before sunrise. Indirect evidences of other animals prove their presence in the reserve.

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