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Distribution of the Indian fox *Vulpes bengalensis* in Similipal Tiger Reserve, Odisha, India

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ABSTRACT

The Indian fox is reportedly the most widespread fox species known to occur in India. Despite this generalization, however, its exact distribution and status are virtually unknown. Although the Indian fox occurs in many protected areas in India, but the research works are not focused on them. The Indian fox Vulpes bengalensis, one of two fox species recorded in Similipal Tiger Reserve (STR), is endemic to the Indian subcontinent. The present communication, report the distribution of Indian fox in STR to understand their behavior. The present paper will be helpful in making the conservation plan.

INTRODUCTION

The Indian fox ranges from the foothills of the Himalayas to the Southern tip of the Indian peninsula, found most frequently in dry open areas with low tree and shrub cover (Pocock 1936; Prater 1971; Johnsingh and Jhala 2004). Tolerant of human presence they can be found in agricultural fields and the vicinity of rural habitation (Johnsingh 1978; Manakadan and Rahmani 2000; Vanak 2003; Johnsingh and Jhala 2004). Indian foxes are listed by IUCN as Least Concern (Sillero-Zubiri et al 2004). In India, they are listed under Schedule II of the Indian wildlife (Protection)Act which affords a lower degree of protection

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The Indian fox is opportunistic and has an omnivorous diet consisting of small mammals, reptiles, birds, insects, and fruits (Johnsingh 1978; Manakadan and Rahmani 2000; Vanak 2003; Johnsingh and Jhala 2004). Studies of its behavior and ecology are only preliminary to date, and basic knowledge is lacking. Detailed information on current distribution and population status is not available (Johnsingh and Jhala 2004). Further studies are therefore required to better understand the ecology of this species, which although not necessarily threatened, is under considerable pressure from human activities in parts of its ranges. In this paper, the authors reported its distribution in STR.

MATERIALS AND METHODS

Study Area*:* Similipal Tiger Reserve is located in the Mayurbhanj District of Odisha and spreads over 2750 km^2. The park is surrounded by high plateaus and hills, the highest peak being the twin peaks of Khairiburu and Meghashani (1515 m above mean sea level). About twelve rivers cut across the plain area, all of which drain into the Bay of Bengal. The prominent among them are Budhabalanga, Palpala, Bandan, Salandi, Khairi, Khadkei, Budhabalanga, West Deo, and East Deo. About 1078 species of plants including 94 species of orchids find their home in the tiger reserve. It hosts 55 species of mammals, 304 species of birds, 60 species of reptiles, 21 species of frogs, 60 species of fishes, and 164 species of butterflies that have been recorded from the park. The core area comprises ranges with an area of 1194.75 km^2 (Kumar et al. 2017a; Kumar et al. 2017b; Mahanti et al. 2018; Figure 1).

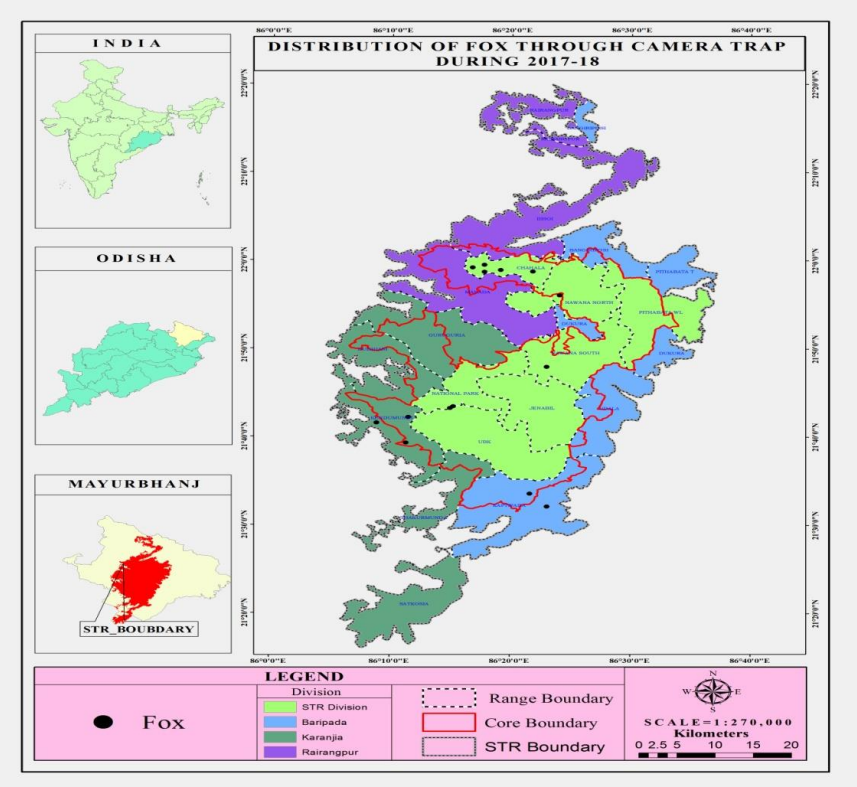

Figure 1: Map showing the study area & Captured locations of foxes

Methodology of Study: The camera trapping exercise lasted from November 2017 to February 2018 for 120 days. The locations of each photo-capture of Indian foxes were recorded and mapped to understand their geographic distribution in the study area. This exercise was mainly for the purpose of phase-iv Tiger monitoring. During the exercise, the tiger reserve was divided into different blocks. In the first block total of 126 cameras were fixed within the four ranges. Similarly, in Block two total 187 cameras were fixed in seven ranges. In Block, three total 214 and Block four 131 camera was fixed within the six ranges and four ranges respectively.

RESULTS AND DISCUSSION

During the camera trap exercise from November 2017 to February 2018 each block was sampled for 30 days. During the study period, 19 photos of Indian foxes were captured from different locations. Maximum Indian foxes (N=11) photo captured from Similipal core division from Chahala range (N=05), followed by Nawana-S (N=03), National Park (N=02), and Upper Barakamuda (N=01). Similarly, from Karanjia division (N=08) photos were captured from Kaptipada range (N=04) and kendumundi range (N=04). All the photos of Indian fox were captured in the meadow area, near saltlicks and open grassland area. Maximum photo captured from Chahala range. Indian fox images were captured from camera points on the main forest tracks as well as the interior animal's trail (footpath). Foxes in general have been known to tolerate moderate levels of human disturbances and often do well in human-altered environments. Human activities such as hunting and habitat destruction have been suggested as the cause for the low population density of Indian foxes over most of their ranges (Johnsingh, 1978, Johnsingh and Jhala, 2004). More ever we have very little knowledge of the ecology and conservation status of this endemic species, its prey dynamics, and its vulnerability to disease outbreaks. Detailed studies are therefore required since the species may be under considerable pressure from human activities (Plate 1).

Plate 1: Captured Indian Fox during Camera trap

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