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## First Sighting of *Herpestes smithii* Gray 1837 in Similipal Tiger Reserve, Odisha, India through camera trapping method

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### ABSTRACT

The habitat of *Herpestes smithii* Gray 1837 in the Similipal Tiger Reserve, Odisha, India has been confirmed by camera-trapping methods. The study extends its distribution in Similipal Tiger Reserve (STR) of the Eastern Ghats.

### INTRODUCTION

*Herpestes smithii* Gray 1837 is a known mammal from India. It is commonly known as Ruddy Mongoose. Outside India, it occurs only in Sri Lanka (Pocock 1939; Prater 1971; Corbet & Hill 1992; Hussain 1999, Menon 2003). It is listed in Schedule II of the Indian Wildlife Act, 1972 and on Appendix III of CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) and is classified as Least Concern in the IUCN (International Union for Conservation of Nature) Red List of threatened species (Molur et al. 1999; Choudhury et al. 2008). *Herpestes smithii*

(HS) resembles to the Grey Mongoose (GM) but differ with reddish brown infusions on its underparts. The base colour can vary from yellowish brown to ruddy to grey. The tail of HS is key of identification which is equal to or slightly larger than the head and body length. The legs of HS are dark rufous tending to black, especially the hind ones. The feet are partially webbed and the hind feet soles are naked. The impacts of habitat loss and degradation and hunting on populations of the species are not precisely unknown but the population is unlikely to be reducing in alarming rate. This species not only has a wide geographic

distribution but it also occurs in diverse vegetations from arid regions in the plain of Northern and Western India to high altitudes of Southern India (Dookia 2012; Choudhury 2013). During the camera-trapping practices in Similipal Tiger Reserve (STR), Baripada, Odisha, authors found *Herpestes smithii* at UBK (Upper Barakamuda), Jenabil, Katipada, Udala and Bisoi ranges in STR. After critical reviews, it was concluded that *Herpestes smithii* was captured first time in the study areas. This first scientific record of the occurrence of *H. smithii* in STR showing its extending distribution up to STR in Eastern Ghats. The present work brings attention towards its conservation.

## MATERIALS AND METHODS

**Study area:** Similipal is situated in the central part of Mayurbhanj district of Odisha. It covers the major part of Eastern Ghats. The name Similipal is derived from the abundance of Simili Tree (*Bombax ceiba*) in the study areas. It is the home of diverse flora and fauna due to the diverse climatic conditions and landscapes. Among them, it is the home of Royal Bengal Tiger and the associate prey species. Similipal is divided into Similipal Biosphere Reserve (SBR), STR (Similipal Tiger Reserve) and Similipal National Park (SNP). STR (Figure 1) is designated under Project Tiger, 1973 (Nayak et al 2014; Kumar et al 2017).

**Methods:** Standard method of Camera trapping (Meek et al. 2014) was used to capture *Herpestes smithii* Gray 1837 during 2016 to 2017 in the selected five forest ranges of STR. The locations of each photo-capture of *H. smithii* was recorded (Plate 1) and mapped to understand the geographic distribution in STR.

## RESULTS & DISCUSSION

The camera trapping results revealed that authors captured *Herpestes smithii* during 2016 to 2017. The sampled of 30 days were taken from each

selected block. 47 Photos of *H. smithii* were captured from five ranges in the study areas covering both the core and buffer divisions (Table 1). Highest 34 numbers of photos were captured in UBK followed by 07 numbers in Jenabil, 02 from Katipada, 02 from Udala and 02 from Bisoi ranges. The results revealed that UBK showed appropriate vegetation and landscapes for the population of *H. smithii* in STR. From survey, it was observed that mongooses are hunted for the food and medicines by local tribal communities. Such practices may be cause for the declination of its population in near future. Hence the conservation strategies of this species are needed.

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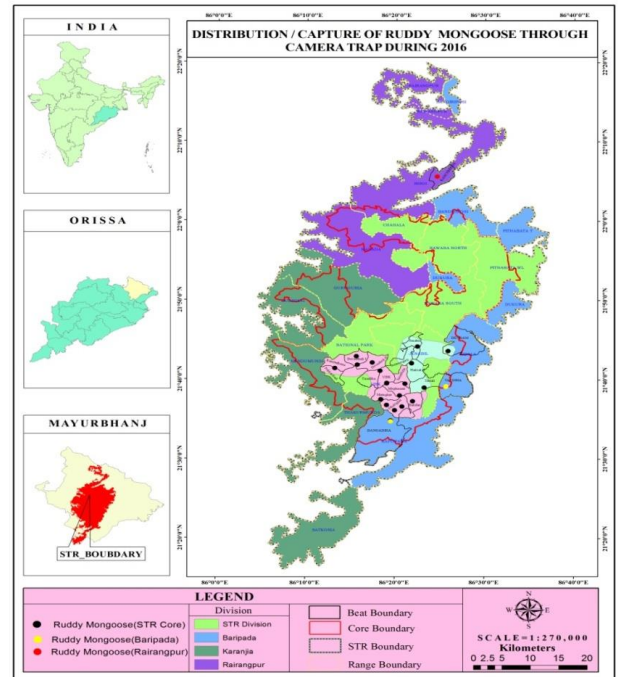
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**Figure 1:** Geographic location of study area & captured locations of Ruddy mongoose

**Table-1:** Territorial Ranges of Ruddy mongoose in STR

Range	Site	No of photo captured
UBK	Jhinka ghara forest	01
	Galkund	01
	Sarudala Daldali	01
	Phulbadia	01
	Bandhamuha	02
	Mathasila Chhak	03
	Putuldiha Chhak	01
	Kiabasa	01
	Tiktali	05
	Near Meghasani	02
	Pick	
	Near Amba chaka	01
	Teleilata Forest	04
	Dhobighat Forest	01
	Nadiabanka	05
	Baladaghar Danda	04
	Kankadajodi Danda	01
	JENABIL	
		02
		01
		01
KAPTIPADA		01
UDALA	Taldiha	02
BISOI	Kanchinda	02



**Plate 1:** *Herpestes smithii* captured through camera trap in STR