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First record of the Golden Jackal (*Canis aureus* Linnaeus 1758) from Similipal Tiger Reserve, Odisha, India

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ABSTRACT

The Golden Jackal *Canis aureus* is a widespread species of the genus *Canis*. It was recorded first time in Similipal Tiger Reserve (STR), Odisha, India using Camera trapping method from the Karanjia and Baripada division of STR. The golden jackal is a medium-sized predator and omnivore, with a range covering the Southern parts of the Palearctic, South Asia and Northeastern Africa. The entire jackal population is now confined to a few clusters grouped into 7 sub-areas with criteria such as connectivity and isolation. The present study highlights the importance of Golden Jackal and brings attention for the conservation of this species.

INTRODUCTION

The Golden Jackal *Canis aureus* is commonly known as Golden dog in Latin and was first recorded by the Swedish Zoologist Carl Linnaeus in 1758. He documented it in Systema Nature in 1758. It is a typical representative of the genus *Canis* Linnaeus belonging to the family Canidae and class Mammalia. Generally it is 70-105 cm in length with about 25 cm tail. Its height is about 38-

50 cm. the average weight is 7-15 Kg (Brock 1976; Moehlman & Hofer 1997; Khan et al. 2017). Generally the coat color is golden but sometimes pale creamy yellow to dark tawny hue. Pelage is a mixture of black, brown and white hairs. The belly and under parts are creamy and creamy marking on throat and chest make it unique among the populations (Macdonald 1979; Moehlman 1983). Legs are relatively long and feet slender with small pads. Scent glands are present on the face,

anus and genital regions (Macdonald 1992). The common habitat of Golden Jackal is rocky and mountainous terrain (Sheldon 1992). They exhibit flexible social organization depending on the availability of food. 4-5 individuals have been recorded in a family of Golden Jackal. They use scent marking through urination and defecation for territorial defense. The recorded home range sizes are between 1-20 square km. The recorded distribution of Golden Jackal is Bangladesh, Bhutan, Nepal, Sri Lanka, Uzbekistan, Myanmar, Thailand, Iran, Jordan, Turkey, Austria, Bosnia, Hungary, Poland, Ukraine, Belarus, Germany, Denmark etc. In India, Golden Jackal is recorded throughout the country (Yumnam et al. 2015; Khan et al. 2017). During the survey work in Similipal Tiger Reserve, Odisha, authors captured the photographs of Golden Jackal (Figure 2) through camera trapping between November 2017 to February 2018. In the year 2016, Das et al. reported the occurrence of *C. aureus* in Buguda Forest division of Nayagarh district of Odisha. After critical review, it was concluded that the present captured is first record for the occurrence of the Golden Jackal in the Similipal Tiger Reserve, Odisha, India.

MATERIALS & METHODS

Study area: Similipal Tiger Reserve (STR) located in the Mayurbhanj district of Odisha and spreads over 2750 km². The park is surrounded by high plateaus and hills (Figure 1). STR enjoys about 1078 species of plants including about 94 species of orchids. It is also the home of about 55 species of mammals, about 304 species of birds, about 60 species of reptiles, about 21 species of frogs, about 60 species of fishes and about 164 species of butterflies (Nayak et al. 2014; Kumar et al. 2017).

Methods: Prior to camera placement, survey was done along the forest paths, animal trails, dirt-trackers, dried stream bed to record carnivore presence through indirect signs (pug marks, tracks, scat, scraps, rake marks, scent deposits and kills). Potential locations of camera trap sites were mapped using ArcGIS 9.3. Camera trapping exercise was carried out from November 2017 to February 2018 (120 days). The cameras were active 24 hr and it was accounted for one sampling occasion. Date, time and temperature were recorded for every capture. The locations of each photo-capture of Jackal was recorded and mapped to understand the geographic distribution in STR.

RESULTS & DISCUSSION

During the Camera trap exercise from November 2017 to February 2018 each block was sampled for 30 days. During the study, 09 photos of Golden Jackal (Figure 2; Table 1) were captured from Karanjia division and Baripada division. In Kaptipada Range of Baripada division, 07 photos were captured whereas in Satkosia Range of Karanjia division, 02 photos were captured (Figure 1). All the photos were captured during the night time as well as in day time. Jackal human conflict is one of the main constraints to biodiversity conservation effort near and outside protected areas like STR. In India, Jackals are placed in scheduled III species and Appendix II of CITES. They are declared as species with LC (least concern) and could be considered as species requiring no immediate protection in India. However no hunting of any wild animals is permitted under the current legal systems of the country. Jackals are afforded the least legal protection mainly to control trade of skin, fur and tail with caution and knowledge that populations throughout its range are likely declining and need to conserve them.

Table 1: Territorial ranges of Golden Jackal in STR

Range	Camera Id	No of Captured photos of Golden Jackal	Latitudes and Longitudes
Kaptipada	216	07	21° 32' 05.5" 86° 23' 02.3"
Satkosia	199	01	21° 21' 29.1" 86° 10' 18.1"
	280	01	21° 19' 50.6" 86° 07' 39.9"

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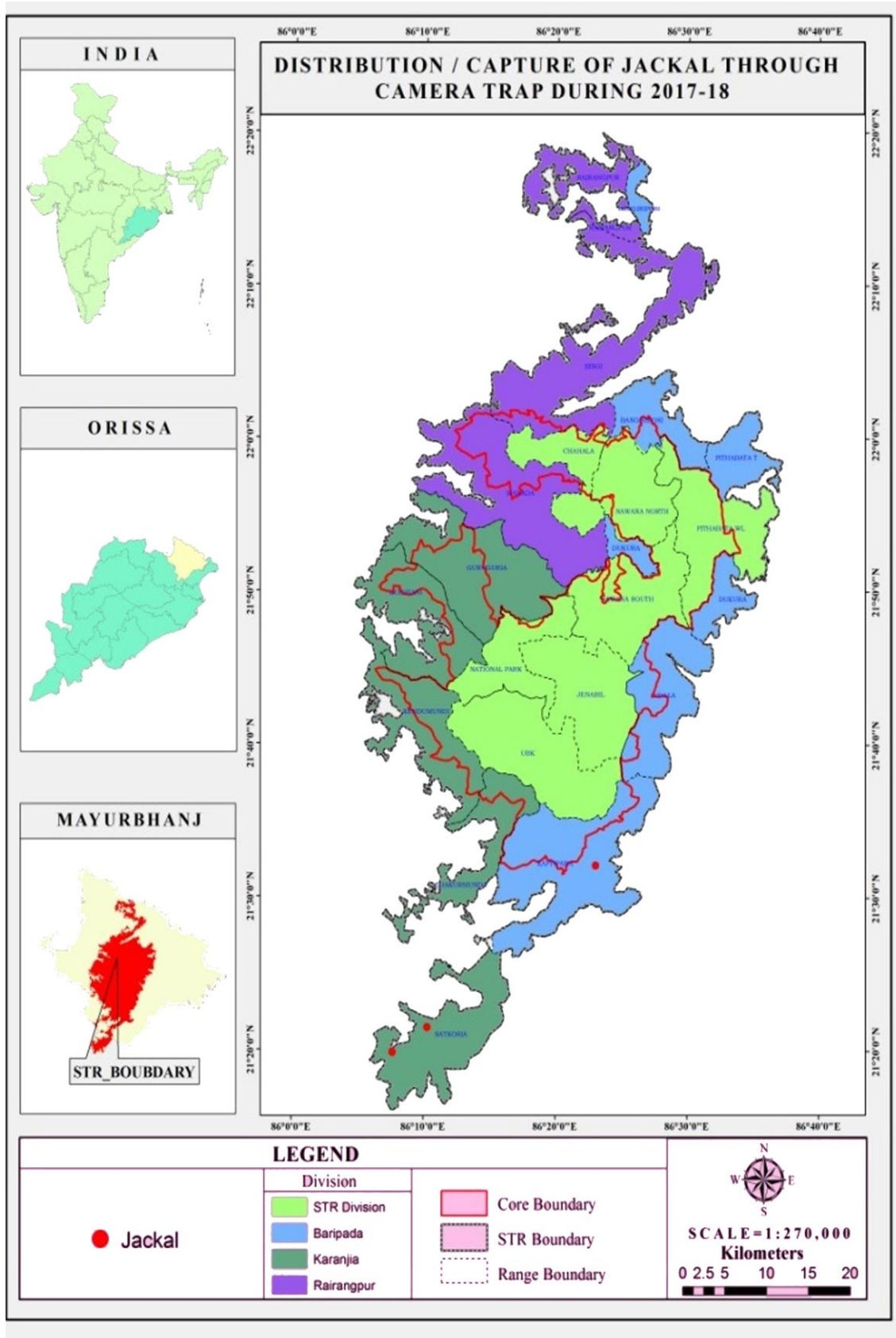


Figure 1: Geographical location of study area and capture locations of Golden Jackal in STR



Figure 2: Golden Jackal (*Canis aureus*) captured through camera trapping methods in STR. A: in day time, b: in night