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# Distribution Pattern of Jungle Cat (Felis Chaus) In Similipal Tiger Resserve, Odisha, India.

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## ABSTRACT

*A camera-trapping survey was carried out in Similipal Tiger Reserve in between February 2016 to May 2016 as a part of All Odisha Tiger estimation. Camera trapping exercise lasted for 119 days. Each camera was assigned a unique identification number, Date, time, and camera ID was recorded for every capture. Total 73 nos Photo capture during the exercise covering both the core and buffer division of similipal Tiger Reserve. Maximum photo captured in STR core division (55) followed by Baripada division (12), karanjia division (05) and Rairangpur division (01).*

**Keywords:** *Camera-trapping, Similipal Tiger Reserve, Jungle cat.*

## INTRODUCTION

The status of several small carnivores in Asia remains poorly known because of the lack of rigorous population's assessments. The Jungle cat *Prionailurus bengalensis* is one such species assumed to be common and wide spread within the Indian subcontinent. Most of the 36 species in family Felidae however are small cats that are data deficient, but play important ecological and socioeconomic roles since they primarily prey on terrestrial rodents (Pearson 1964: Kitchener 1991: Nowell and Jackson 1996). South and Southeast Asia have more small cat species than elsewhere in the world (Mukherjee 2013).Yet, surprisingly little is known about their population's status and few studies have estimated abundances even for some of the most common small cat species (Brodie 2009).

*Felis chaus* of which English name is Jungle cat, has in reality no strong connection with closed forest, rather with water. Jungle cat occurs mainly in marshes covered by reeds and dense vegetation areas near lakes, sea shores and riversides (Robert, 1977). In Southeast Asia they typically live in non-evergreen tropical forest (Lekagul and McNeely, 1977: Feng et al, 1986: Walker, 1990). It is considered that this is largely dependent on the existence of open lands inside forest. Jungle cat can also be detected inside bushes and meadows. The jungle cats are recorded on elevation of 2400 m above sea level in Himalayas (Guggisberg, 1975) and at the 1000m in the Caucasian Mountains, between Black Sea and Caspian Sea (Vereshchagin, 1967). It is reported that Jungle cats adapt well to agricultural lands in various types. They are widely observed around forest plantations and sugarcanes fields are scattered within their natural habitat. In residential areas Jungle cat are frequently observed while they catch chicken. Besides jungle cats are fed by hares, birds, reptiles, and amphibian. In nature, copulation periods are January-February in the Middle-East (October in Southwest India. Pregnancy period is 63-68 d (Green, 1991), the interval among births is 93-131 d (Schauenberg.1979). Sexual maturation age known varies from 11 months (Schauenberg, 1979) to 18 months (Petzsch 1968). An average life span is 14 years (Green, 1991).

### Study Area

Similipal Tiger Reserve located in the Mayurbhanj District of Odisha and spreads over 2750km$^2$ of the Chotanagpur plateau. The park is surrounded by high plateaus and hills, the highest peak being the twin peaks of Khairiburu and Meghashani (1515m above mean sea level). At least 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, East Deo. An astounding 1078 species of plants including 94 species of orchids find their home in the tiger reserve. It host 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 of ranges with an area of 1194.75km$^2$.

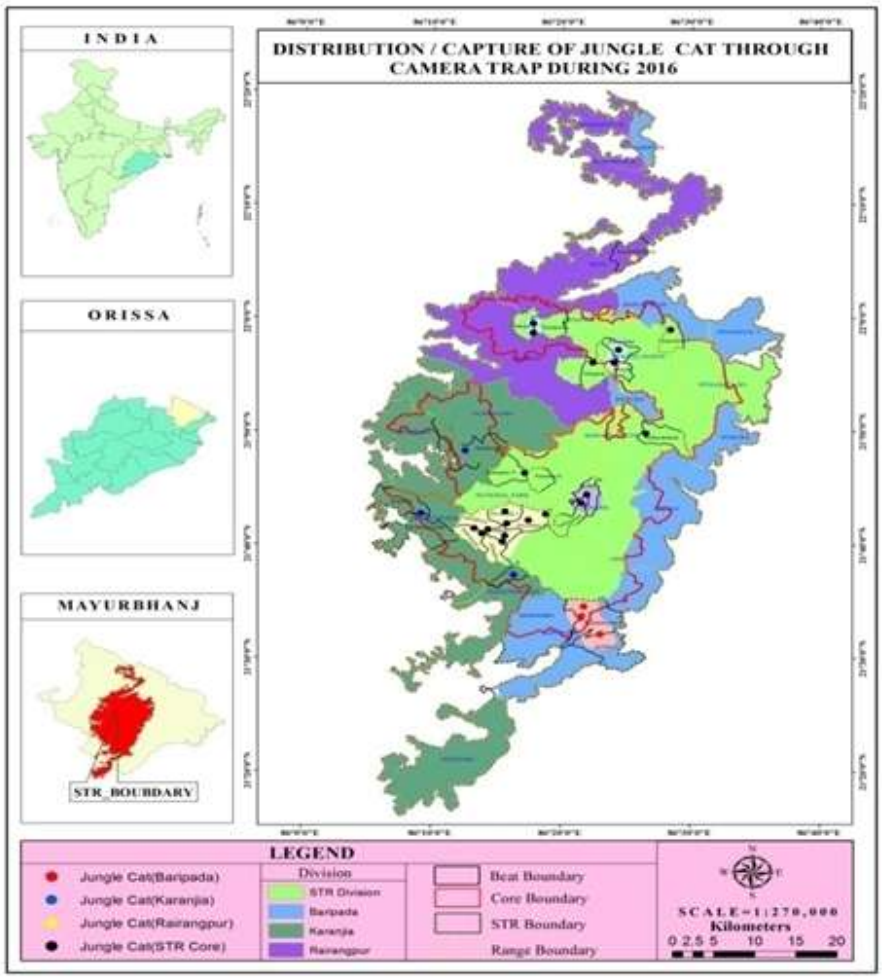



**Figure1.** *Map Showing the study area &distribution of jungle cat*

## METHODOLOGY

The Success of camera-trapping depends on the selection of ideal locations to deploy the camera traps so as to maximize the number of captures. Prior to camera placement, survey is 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 location of camera trap stations were then mapped using ArcGIS 9.3. During the exercise camera were deployed a sampling grid of 4.0s km (2.0x2.0km) for camera trapping, pair of (Cuddy back 1) camera traps was placed opposite to each other so as to photograph of both flanks of animal can captured.

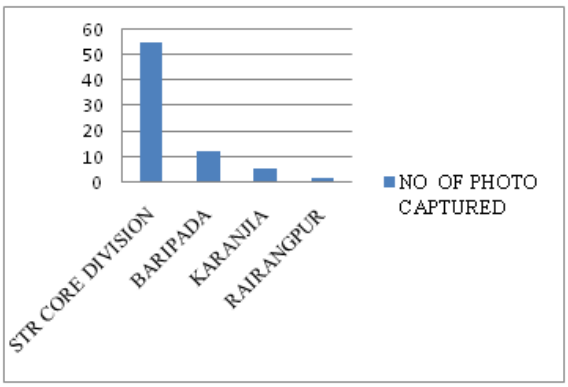
Camera trapping exercise lasted from February2016 to May 2016 for 119 days. The cameras were active 24h period that accounted for one sampling occasion. Each camera was assigned a unique identification number, Date, time, temperature and camera ID was recorded for every capture. The locations of each photo-capture of Jungle cat was recorded and mapped to understand their geographic distribution in the study area.

## RESULTS

Total 73 nos Photo capture during the exercise covering both the core and buffer division of similipal Tiger Reserve. Maximum photo captured in STR core division (55) followed by Baripada division (12), karanjia division (05) and Rairangpur division (01). Similarly Range wise highest Photo captured in UBK (31) followed by National park (08), Jenabil (06), Nawana-N & Chahala (03) , Nawana-S & Pithabata (02) in Similipal Core division. In Baripada division 12 photo captured only in Kaptipada Range. In Karanjia Division Total 05 number of photo captured in two ranges Dudhiani (02) & Kendumundi (03). In Rairnagpur Division only (01) photo captured in Bisoi Range.

**Table.** *Capture Location of Jungle Cat in Different Location during Camera Trap*

| SL No | Division | Range | Camera_ID | Longitude | Latitude | No. Of photo capture |
|---|---|---|---|---|---|---|
| 1 | STR Core | UBK | 113 | 86°17'26.9" | 21°42'07.4" | 3 |
| 2 | STR Core | UBK | 110 | 86°15'39.4" | 21°42'54.5" | 1 |
| 3 | STR Core | UBK | 111 | 86°15'47.1" | 21°41'51.0" | 6 |
| 4 | STR Core | UBK | 108 | 86°14'20.1" | 21°41'19.8" | 1 |
| 5 | STR Core | UBK | 119 | 86°13'51.8" | 21°40'58.7" | 1 |
| 6 | STR Core | UBK | 147 | 86°15'26.3" | 21°40'13.6" | 12 |
| 7 | STR Core | UBK | 148 | 86°15'37.9" | 21°40'44.8" | 5 |
| 8 | STR Core | UBK | 153 | 86°13'15.5" | 21°41'25.6" | 2 |
| 9 | STR Core | Jenabil | 201 | 86°21'57.0" | 21°44'24.0" | 1 |
| 10 | STR Core | Jenabil | 227 | 86°21'32.6" | 21°43'38.9" | 5 |
| 11 | STR Core | National Park | 302 | 86°17'08.4" | 21°46'18.1" | 1 |
| 12 | STR Core | National Park | 312 | 86°18'46.9" | 21°42'40.4" | 7 |
| 13 | STR Core | Nawana (S) | 406 | 86°26'31.8" | 21°49'47.7" | 2 |
| 14 | STR Core | Nawana( N) | 507 | 86°24'22.3" | 21°57'10.6" | 2 |
| 15 | STR Core | Nawana (N) | 508 | 86°24'01.0" | 21°56'01.1" | 1 |
| 16 | STR Core | Chahala | 605 | 86°22'22.3" | 21°56'02.5" | 1 |
| 17 | STR Core | Chahala | 609 | 86°17'46.0" | 21°58'39.8" | 1 |
| 18 | STR Core | Chahala | 611 | 86°17'46.0" | 21°59'28.4" | 1 |
| 19 | STR Core | Pithabata | 701 | 86°28'23.2" | 21°58'57.3" | 2 |
| 20 | Baripada | Kaptipada | - | 86°21'45.0" | 21°34'32.9" | 3 |
| 21 | Baripada | Kaptipada | - | 86°21'33.4" | 21°33'32.3" | 2 |
| 22 | Baripada | Kaptipada | - | 86°23'01.9" | 21°32'05.5" | 7 |
| 23 | RAIRANGPUR | Bisoi | - | 86°25'30.8" | 22°05'14.6" | 1 |
| 24 | KARANJIA | Dudhiani | - | 86°12'32.6" | 21°48'16.0" | 2 |
| 25 | KARANJIA | Kendumundi | - | 86°16'19.9" | 21°37'18.4" | 1 |
| 26 | KARANJIA | Kendumundi | - | 86°09'09.7" | 21°42'43.4" | 2 |



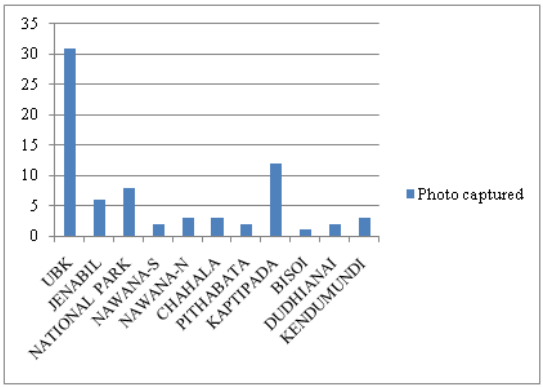





**Figure2.** *Showing the Photo Captured During Exercise Period*

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