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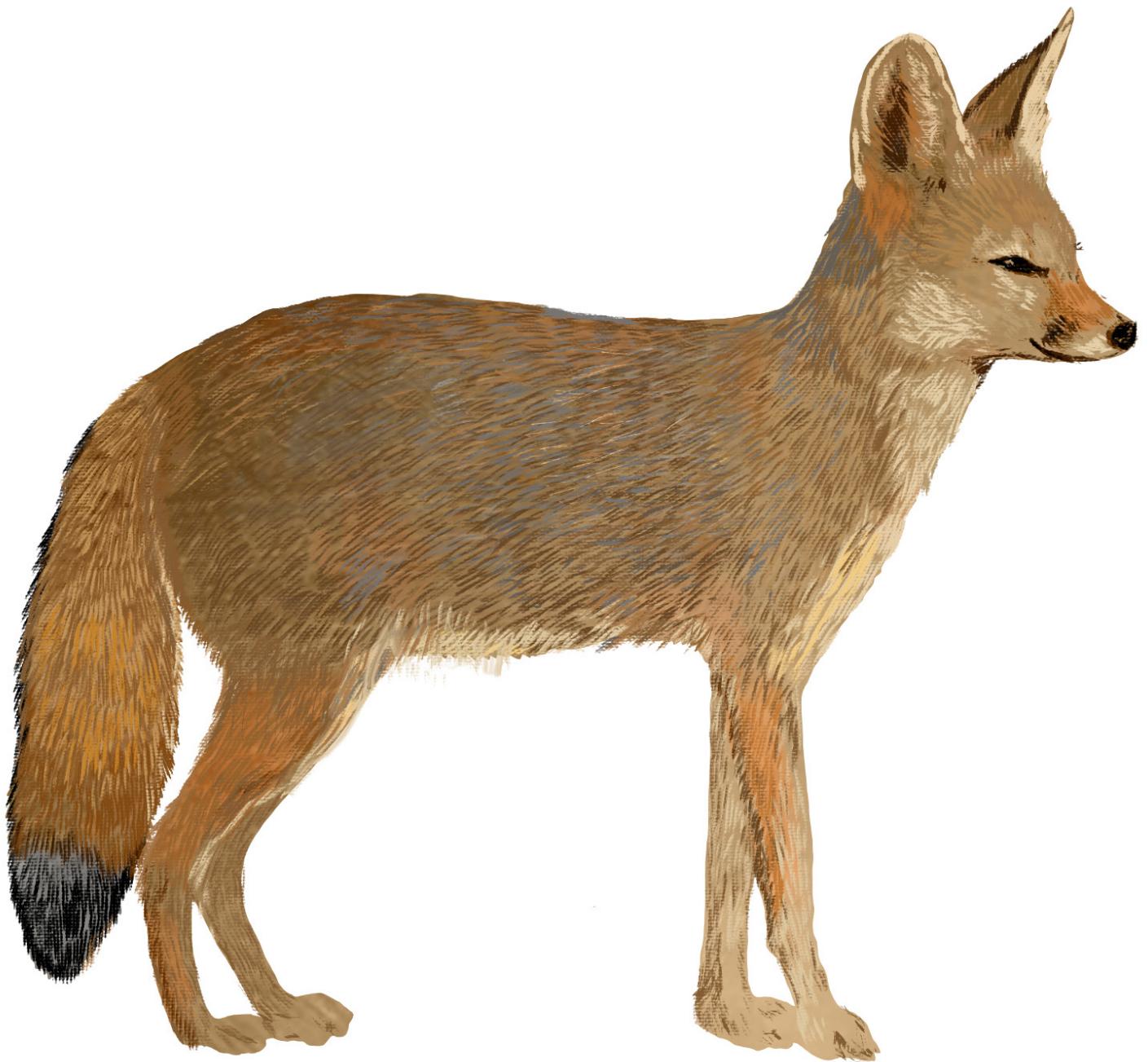
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Cover: Bengal Fox *Vulpes bengalensis*—digital illustration. © Alagu Raj.



## Rare Honey Badger *Mellivora capensis* (Schreber, 1776) sighted in Tarai East Forest Division, Haldwani, Uttarakhand, India

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**Abstract:** The presence of Honey Badger *Mellivora capensis* (Schreber, 1776) is widely distributed but in-depth of ecological understanding this species is still lacking from Asian portion of its global range. The species is listed in Scheduled-I of the Wildlife (Protection) Act, 1972 providing it with the highest level of protection as this is very rare. The current note presents, the first known camera-trap records of this species in Tarai East Forest Division (TEFD), Uttarakhand, India. During the survey exercise, a total 35 camera traps were randomly installed in different habitats (e.g. Natural Sal forest patch, Mixed forests, Sharda River-Canal) in Surai range of the division. As resulted, two images of Honey Badger were captured from the Sharda River bank-Canal habitat of Bagha-I beat, of Surai range. The camera trap study suggests that Honey Badger is rarely sighted in Tarai east sal forest. For protection and management of this species, further need to generate more information and in-depth understanding of their ecological and of population status in around forest habitat of the division.

**Keywords:** Camera trap, conservation, distribution, GPS, sal forest, Terai Arc Landscape.

The Honey Badger *Mellivora capensis* (Schreber, 1776), also called Ratel, is a mammal widely distributed in Africa (Begg et al. 2016), southwestern Asia, and in the Indian subcontinent. Furthermore, there is no explicit information about the present population of the Honey Badger in Uttarakhand (Kumar et al. 2022).

Thus, conservation strategies are difficult to implement, as information on their population status in India is not well documented and their behavioural patterns and social structure are not studied systematically or understood. Though IUCN Red List mentions it under the 'Least Concern' category, it is a very rare species and is protected under Schedule 1 of the Wildlife (P) Act 1972.

The Honey Badger is classified under the Mustelidae family, subfamily Mellivorinae. Each paw has five toes, with the hind legs having shorter claws than the forelegs; this assists them with digging and climbing. They stand approximately 25–30 cm high at the shoulder; their skin is loose and tough; this allows the animal to twist and work its way free from either an attacker or from being stuck in a tight space, whilst also providing protection from bites inflicted by other carnivores. They are solitary animals, but a female and her cub can be seen foraging together, and they can hunt in pairs during the mating season (Begg et al. 2005). It lives in a variety of biomes, including mountains, woods, and deserts, and spreads widely throughout South Africa, except the northwestern coastal regions. A study in South Africa suggests that the

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Honey Badgers prefer Eucalyptus plantations to natural habitat types (Kheswa et al. 2018, Allen et al. 2018). Honey Badgers were also reported by researchers in the coastal area of Chilika lagoon, Odisha during a fishing cat survey of the human-dominated landscape (Adhya & Dey 2022). The following studies were reported; it's sightings in different regions of India (Table.1).

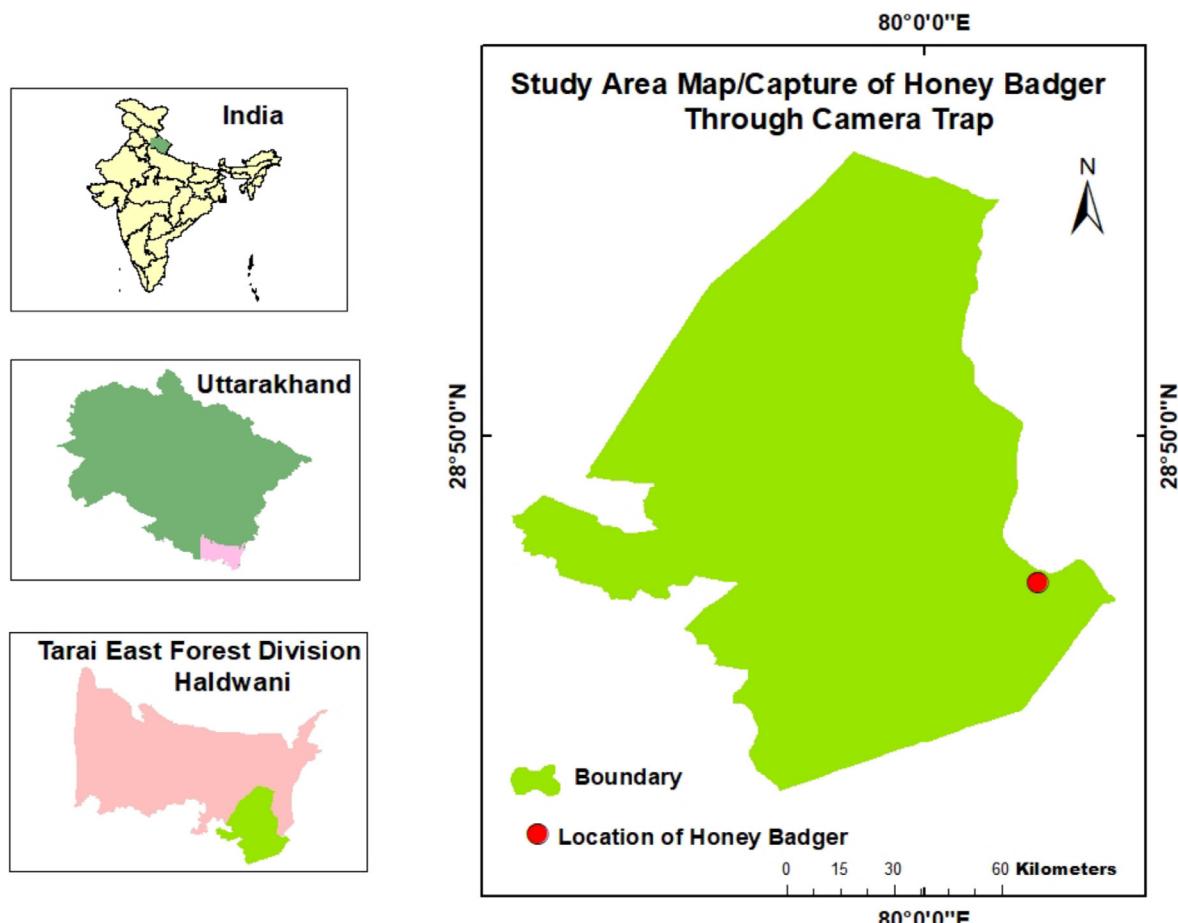
A camera trap survey focused on Striped Hyena done in Central Tarai Landscape Nepal documents Honey Badger presence in Sal-dominated Forest (Adhikari et al. 2022). Similarly, a survey done in Bennerghatta National Park, Karnataka, reported the presence of Honey Badger images through camera trapping (Krishnan et al. & 2016). A camera trap survey was conducted to ascertain the presence of tigers and captured the photo of Honey Badger in an opportunistic manner in Simlipal Tiger Reserve (Mishra & Bisht 2023). Here we document the sightings of the Honey Badger from Tarai East forest Division of Uttarakhand.

## STUDY AREA

Tarai East Forest Division is a part of the vast Terai Arc Landscape ( $28^{\circ}53'24''$ – $31^{\circ}27'50''$ N and  $77^{\circ}34'27''$ – $81^{\circ}02'22''$  E) and comprises an area of 82,429.0 ha of Terai and Bhabar tracts between the Gola and Sharada rivers (Figure 1). In the Tarai East Forest Division, the Sal Forest is covering a total of 23,080.12 ha (28%) area of the division. It also connects the Nandhaur Wildlife

**Table 1.** Review of sightings of Honey Badger in India.

	Location	State	Year of study	Reference
1	Bannerghatta NP	Karnataka	2015	Krishnan et al. (2016)
2	Chilika Lagoon	Odisha	2019	Adhya & Dey (2022)
3	Northern Eastern Ghats	Andhra Pradesh	2019	Aditya et al. (2020)
4	Tadoba-Andhari TR	Maharashtra	2016	Chatterjee et al. (2020)
5	Simlipal TR	Odisha	2016	Mishra & Bisht (2023)
6	Cauvery WS	Karnataka	2014	Gubbi et al. (2014)
7	Sariska TR	Rajasthan	2009	Gupta et al. (2012)



**Figure 1.** Study Area map showing the location of Honey Badger.

Sanctuary with the Pilibhit Tiger Reserve through the Kilpura-Khatima-Surai corridor. The area is home to very important wildlife species like elephants, tigers, leopards, bears, hyenas, crocodiles etc. Increasing population and dependency on forests, encroachment, overgrazing, poaching etc. are some of the challenges that threaten wildlife and its habitat. The division has covered a total of nine ranges: Kilpura, Khatima, Surai, Gaula, Ransali, Dauli, Barakoli, Kishanpur, and Jaulashal. In this division, Surai range is well known for the presence of 'Royal Bengal Tiger' and a total of 53 individual were reported in Tarai East Forest Division after tiger census (AITE-2022; Qureshi et al. 2023).

## RESULTS AND DISCUSSION

As a routine practice under tiger population monitoring, the researchers and staff of the forest department checked the camera trap on 12 January 2024 in which two photos of the camera trap were observed (Image 1 & 2) in Bagha I beat, Surai Range, clicked at 1834 h & 1837 h on 07 January 2024 in the deployed camera trap 13 (CAM 13) which looked like a civet. After matching, the species was identified as a Honey Badger through its morphological characters such as larger size of the skull and mantle color (Menon & Daniel 2003). This is the first photographic evidence of Honey Badger presence in Tarai East Forest Division. This forest division is characterized by Moist Tarai Sal *Shorea robusta* forest (3C/C2C) (Champion & Seth 1968), which provides a rich habitat for Honey Badgers. The age could

not be ascertained, but the sex of the Honey Badger was male as the reproductive organ (penis) is clearly visible in the recorded image. The Pilibhit Tiger Reserve (PTR) and the Sharda canal of the Indo-Nepal border territories encompass the eastern boundary of Tarai East Forest Division (TEFD), providing possible habitat for the Honey Badger. The Honey Badger sightings and movements have been documented numerous times in the Pilibhit Tiger Reserve (PTR) area; being a border area (PTR & TEF), the Honey Badger's frequent travels have been seen. Camera traps detected its movement for the first time on 07 January 2024, in the TEF's Surai range. Therefore, it is highly vital to safeguard and conserve their habitats in the area.

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Image 1. Camera trap photo of Honey Badger recorded in Surai Range, Tarai East Forest Division, Uttarakhand.



Image 2. Camera trap photo of Honey Badger recorded in Surai Range, Tarai East Forest Division, Uttarakhand.

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