

First photographic record of *Melogale personata* I. Geoffroy Saint-Hilaire, 1831 (Mustelidae) from the protected area of Nepal

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ABSTRACT

Burmese Ferret-Badger is observed for the first time in Gaurishankar Conservation Area of Nepal. Local community informed the conservation area authority when they found the species near to the human settlement. This species is generally distributed in the tropical and sub-tropical region and is not studied comprehensively. The identification was complex as both Burmese and Chinese Ferret Badger apparently looks similar. Confirmation was made after observing the large sized molar teeth.

Keywords: Gaurishankar Conservation Area, Mustelidae, Eastern landscape, Community awareness, Sustainable Conservation

1. INTRODUCTION

Burmese Ferret-badger (I. Geoffroy Saint-Hilaire, 1831) ("*Sano Sungurebhalu*" in Nepalese language) also called Large-toothed Ferret Badger (Kingdom: Animalia, Phylum: Chordata, Class: Mammalia Order: Carnivora Family: Mustelidae) is recorded from Nepal, India, Bangladesh, Myanmar, Thailand, Cambodia, Lao People's Democratic Republic, Viet Nam, and China (Chutipong et al. 2014, Kakati et al. 2014, Duckworth et al. 2016).

Studies reveals that Burmese and Chinese ferret-badgers are difficult to differentiate from each other. The major identification includes the close observation of size of molar teeth which is only possible if it is caught or examined in a dead animal (Choudhury, 1999). The former has large and wide-crowned molars whereas later has small and narrow-crowned molars, so is called Large-toothed Ferret-badger and Small-toothed Ferret-badger respectively (Datta, 1999; Prater, 1980).

Burmese Ferret-badger was generally found in tropical and sub-tropical region. It is listed as least concern on the IUCN Red List category of Threatened Species (Duckworth et al. 2016). However, National Red list of Nepal shows this species as Data deficient. Large-toothed Ferret Badger has been recorded from the lowlands (e.g., 15 m a.s.l.; Schank et al. 2009) up to at least 1,520 m (Pocock 1941). Camera-trap records suggest that it is largely nocturnal (Schank et al., 2009). This species is omnivorous in nature feeding on insects, small reptiles, small mammals including young rats, amphibians such as frogs & toads, decaying dead animals, birds and their eggs, vegetation and fruits (Jackson, 2001).

In Nepal, albeit, Thapa (2014) argued extinction of this species from Nepal and Jnawali et al., (2011) reported that the species is not observed in protected areas of Nepal, inquisitively, we found and confirmed the presence of the species from the Gaurishankar Conservation Area, a north-east Himalayan protected area of Nepal.

2. METHODS

Burmese Ferret-badger (*Melogale personata*) was spotted on January 24, 2021 in Gaurishankar Conservation Area of Nepal. Photographic evidence, weight, body length and tail length of the observed Burmese Ferret-badger was taken. The identification was assisted by wildlife biologist J. W Duckworth, Dr. Hem Sagar Baral and Santosh Bhattarai. We worked with ArcGIS v. 10.1 for the mapping purpose. Permit was taken from Gaurishankar Conservation Area office for the documentation.

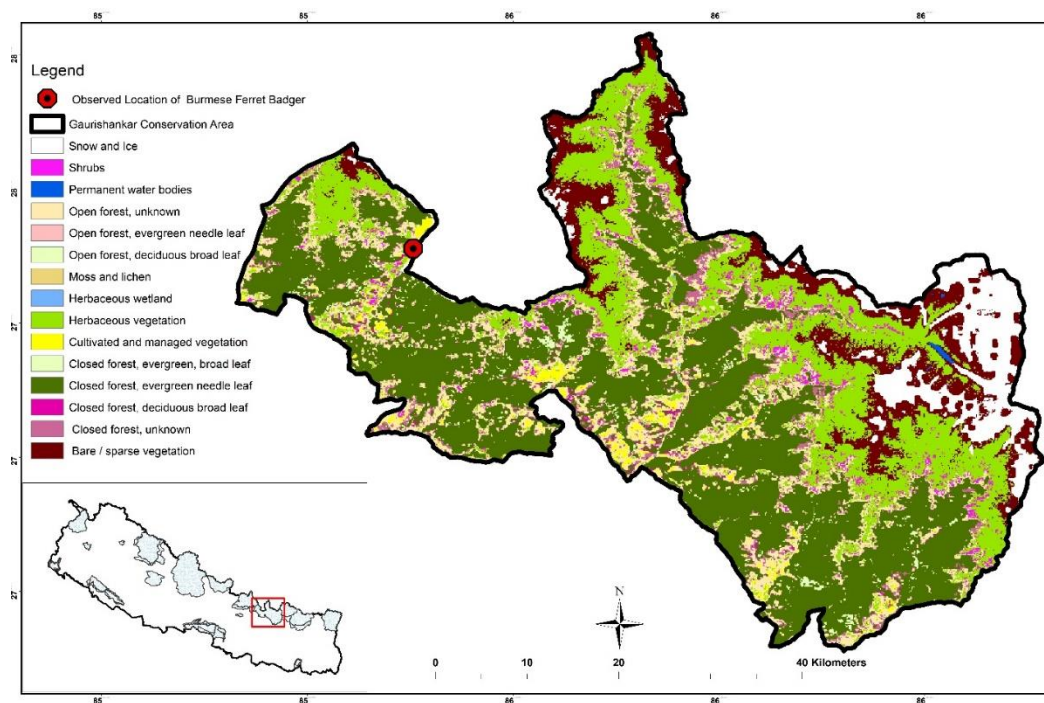


Figure 1 Observed location of Burmese Ferret Badger in Gaurishankar Conservation Area of Nepal

3. RESULTS

New records

A Burmese Ferret-badger was observed in Gaurishankar Conservation Area of Nepal. Gaurishankar Conservation Area, a high altitude protected area is located in the eastern Himalayan region of Nepal comprising 2179 Sq. km. The northern boundary of the conservation area is connected with China. This protected area in northern part of the country is highly rich in biodiversity which alongside provides biological corridor connectivity to crucial protected areas of Nepal viz Sagarmatha National Park in eastern side and Langtang National Park in the west. The specific location includes Bhotekoshi riverbank of Bhotekoshi Rural Municipality ward number 3 of Sindhupalchok district; 85°57'28.51"E, 27°57'47.07"N; 1617 m a.m.s.l. The observed location is human dominated landscape with indigenous communities of Sherpa and Tamang. The nearby area where Burmese Ferret-badger was observed includes vegetation such as bamboo species, Uttis (*Alnus nepalensis*), Barberries, banana etc. whereas wildlife such as common leopard, black bear, Chinese pangolin, yellow throated marten, common goral, squirrel, jungle cat, etc. are observed frequently.

Identification

Weight of the observed Burmese Ferret-badger was 1.5 kg with body length 35 cm and tail length 15 cm. Identification was confirmed by observing large and wide-crowned molars, fur colour which ranges from fawn brown to black brown, possessing white dorsal stripe and face marked with black and white patches.



Figure 2. A. Burmese Ferret Badger rescued and placed in Central Zoo (Left) B. The teeth pattern, (Right). (Photo by Dr. Parbat Jung Thapa/ NTNC-Central Zoo)

4. DISCUSSION

Records of Burmese Ferret-badger were mentioned in different studies and research articles. Hinton and Fry (1923) and Pocock (1941) express the presence of the species in Nepal. Jnawali et al. (2011) mentioned that these species reported to occur in far eastern districts of Province 1, namely Illam and Jhapa and had not been recorded in protected areas of Nepal. Similarly, Thapa (2014) excluded this species from his checklist reasoning as no records found yet after Hodgson 1836- holotype for subspecies. Recently, this species is also observed in Syangja district of western mid-hills of Nepal which proves its presence and range extension in western region of the country (Bhatta et al., 2021). However, the confirmed first photographic record from Gaurishankar Conservation Area convinced the species existed in north-east landscape and protected area of Nepal.

It is inspiring as well as challenging for the conservationist and local communities to have recorded one new species in the Gaurishankar Conservation Area. Our study recommends proper research program and community awareness to conserve this species for long run as it is the first evidence of its presence in the protected area. Nevertheless, this record emphasized the necessity to document and prioritize small carnivore in Nepal for the sustainable conservation of the species.

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Authors' Contributions:

Conceptualization: AP, CPP, SK, PL, PP. Data curation: AP, PL, SL, PK, GK, SP. Formal analysis: AP, CPP, SK, PP. Visualization: AP, SK. Writing original draft: AP, CPP, PP, SK. Writing review and editing: AP, CPP, SK, PP, PL.

Ethical approval

The study has received approval from Department of National Parks and Wildlife Conservation, NTNC-Central Zoo, Gaurishankar Conservation Area, Liaison Office, Gaurishankar Conservation Area Project, Gaurishankar Conservation Area Management Committee and the local community for their support to record *Melogale personata* species.

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Conflicts of interests

The authors declare that there are no conflicts of interests.

Data and materials availability

All data associated with this study are present in the paper.

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