

FIRST DISTRIBUTION REPORT OF THE ASIATIC BRUSH-TAILED PORCUPINE *ATHERURUS MACROURUS* (LINNAEUS, 1758): A PHOTOGRAPHIC EVIDENCE FROM DEHING PATKAI NATIONAL PARK, ASSAM

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ABSTRACT

The present study aims to record the distribution of *Atherurus macrourus* (linnaeus, 1758) - Asiatic Brush-tailed Porcupine in the tropical wet evergreen forest of Dehing Patkai National Park, Assam. In a camera trap positioned in the Soraipung range of the forest, the *Atherurus macrourus* was observed during the study, which lasted from February to September 2022. This discovery represents the first confirmed occurrence of the Asiatic Brush-tailed Porcupine in the Soraipung range in May 2022, although there have been reported sightings in other national parks in northeastern India. This finding emphasizes the need for systematic research into the ecology and distribution of the species, particularly considering the risks to its habitat caused by human activities. Further research is essential for conserving and reduce potential risks to the habitat of the Asiatic Brush-tailed Porcupine.

Keywords: Assam, Camera Trap, Conservation, Distribution, National Park, Northeast India

INTRODUCTION

Atherurus macrourus, commonly referred to as the Asiatic Brush-tailed Porcupine, is a lesser-known species of rodent belonging to order Rodentia and family Hystricidae. The species can be distinguished by its absence of a crest, its back covered in stiff spines, and its tail covered with scales interspersed with short, spiky bristles. The tail ends in a cluster of alternating, papery hairs that are 8-10 cm long, which gives the species a distinctive brush-like appearance (Agarwal, 2000).

The Asiatic Brush-tailed Porcupine can inhabit a wide variety of environmental conditions (Talukdar *et al.*, 2019). They reside in burrows, crevices, and cavities, showing a preference for habitats such as plantations, cultivated areas, riverine forests, forest islands, as well as primary and secondary forests (Choe, 2006). These porcupines are terrestrial and nocturnal animals capable of surviving at elevations up to 4571 meters (Eisenberg *et al.*, 2015; Talukdar *et al.*, 2019). The species has a geographical distribution that spans southern Asia, extending from central China to Malaysia. It can be found in various countries including India, Bhutan, Bangladesh, Myanmar, Laos, Vietnam, Thailand, and Cambodia (Molur, 2016; Molur, 2020; Dhendup and Dorji, 2017). Sightings of this animal were recorded in various locations in northeastern India, including Namdapha National Park in Arunachal Pradesh (Datta *et al.*, 2008), Garampani Wildlife Sanctuary in Assam (Choudhury, 2013), Intanki National Park in Nagaland (Kumar and Kaul, 2013), Ngeingpui Wildlife Sanctuary in Mizoram (Forest Clearance, 2013), and the Khasi Hills in Meghalaya (Talukdar *et al.*, 2019). In 2014, the species was reported in the Gedu Territorial Forest Division of western Bhutan (Dhendup and Dorji, 2017). The Asiatic Brush-tailed Porcupine is categorized as "Least Concern" on the IUCN Red List of Threatened Species. It is also safeguarded in India under Schedule II of the Wildlife (Protection) Act, 1972 (Molur, 2016). These species are essential for ecosystems as they serve as natural developers by pruning trees, dispersing seeds, and supporting rare bulb species. Their selective herbivory and disruption of soil contribute to the increase in biodiversity and the functioning of the ecosystem.

As part of our research investigation into the biodiversity of northeastern India at the Soraipung range of Dehing Patkai National Park, we randomly deployed camera traps in two different sites (Site 1= near Premier camp and Site 2= near Beth camp) to monitor and estimate the faunal population from February

2022 to September 2022. The random points were generated using data management tool in ArcMap version 10.7.1. At near Premier camp, 10 camera traps were deployed between February and May 2022, while another 10 camera traps were utilized near Beth Camp from June to September 2022. Premier camp ranges ($95^{\circ}29'35''\text{E}$ and $95^{\circ}29'50''\text{E}$ to $27^{\circ}17'50''\text{N}$ and $27^{\circ}18'20''\text{N}$) is situated 4.12 km northeast from the Soraipung forest range office. The habitat is dominated by *Dipterocarpus retusus* and includes other species such as *Mesua ferrea*, *Shorea robusta*, and *Dillenia indica*, along with small patches of shrubs, and is surrounded by streams. Beth camp ($95^{\circ}28'35''\text{E}$ and $95^{\circ}29'15''\text{E}$ to $27^{\circ}17'10''\text{N}$ and $27^{\circ}17'40''\text{N}$) is situated at a distance of 3.8 km from the Soraipung forest range office towards southwest. A few small ponds and canals are found in this camp and vegetation is dominated by *Dipterocarpus retusus*, *Vatica lanceifolia*, *Shorea assamica*, and *Dillenia indica*. All the camera traps were positioned at a height of 40-50 cm above the ground. To ensure a proportional distribution of sampling effort across all available habitat types, we excluded plots predominantly covered by reservoirs, those with difficult and inaccessible terrain, and plots with repeated ecosystems (Rovero *et al.*, 2013).

At 9:30 pm on May 9th, 2022, a camera trap positioned at Premier camp in the Soraipung Range of the National Park captured a photograph of a solitary Asiatic Brush-tailed Porcupine (Figure 1). The coordinates of the location where the photograph was taken near Premier camp ($95^{\circ}29'37.71''\text{E}$ and $27^{\circ}18'11.13''\text{N}$), at an elevation of 183 meters. The Asiatic Brush-tailed Porcupine has been reported in various national parks in northeast India (Talukdar *et al.*, 2019; Gassah and Ismavel, 2020; Bhatt *et al.*, 2023; Piraisoodan *et al.*, 2024). However, the present record is the first-time photographic evidence of the species found in the Soraipung range of Dehing Patkai National Park, Assam.

Despite being classified as a species of least concern, the population of the Asiatic Brush-tailed Porcupine is currently experiencing a decline. Molur *et al.*, (2005) reported due to habitat fragmentation the Asiatic Brush-tailed Porcupine is threatened and thereby leads to decline in their population. Hence, conducting systematic research on its ecology and distribution is imperative. The habitat in the Soraipung range has been threatened by habitat modification and other human activities, according to reports (Bhuyan *et al.*, 2024). Henceforth, further studies will provide crucial knowledge to guide conservation initiatives and reduce potential threats to its survival and existence.

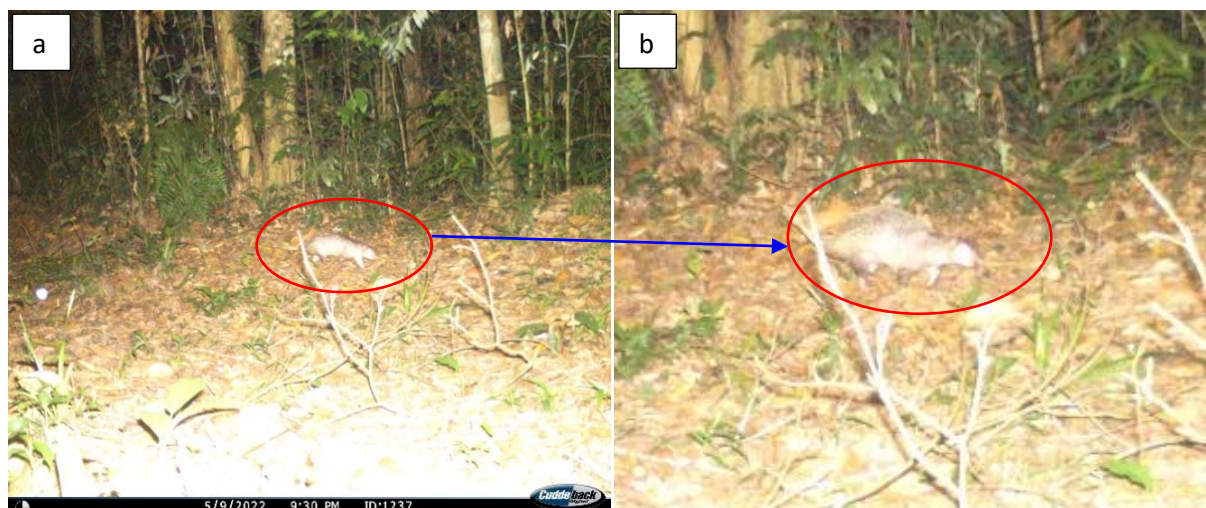


Figure 1: a) Asiatic Brush-tailed Porcupine captured in camera trap from Dehing Patkai National Park, Assam. (b) Enlarged view of the same Asiatic Brush-tailed Porcupine.

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