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Registered Office: 3A2 Varadarajulu Nagar, FCI Road, Ganapathy, Coimbatore, Tamil Nadu 641006, India  
Ph: +91 9385339863 | [www.threatenedtaxa.org](http://www.threatenedtaxa.org)  
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Cover: Marine invertebrates - made with acrylic paint. © P. Kritika.



## Further photographic record of Asiatic Brush-tailed Porcupine *Atherurus macrourus* Linnaeus, 1758 (Mammalia: Rodentia: Hystricidae) from Manas National Park, Assam, India

Urjit Bhatt<sup>1</sup> , Bilal Habib<sup>2</sup>  & Salvador Lyngdoh<sup>3</sup> 

<sup>1-3</sup> Department of Animal Ecology and Conservation Biology, Wildlife Institute of India, PO Box 18, Dehradun, Uttarakhand 248001, India.

<sup>1</sup>urjit@wii.gov.in, <sup>2</sup>bh@wii.gov.in, <sup>3</sup>salvador@wii.gov.in (corresponding author)

Three species of porcupines occur in southern Asia: Indian Crested Porcupine *Hystrix indica*, Himalayan Crestless Porcupine *Hystrix brachyura*, and Asiatic Brush-tailed Porcupine *Atherurus macrourus* (Molur et al. 2005). *Hystrix indica* is found in most of the forested regions in India (Agrawal 2000) but is restricted to only a few locations in northeastern India (Talukdar et al. 2019). *Hystrix brachyura* is found in the forested areas of northeastern India (Agrawal 2000) and northern Bengal (Mallick 2012) but is absent from the other parts of India. *Atherurus macrourus* is distributed across southern and southeastern Asia (Molur 2020). In India, the species was reported from Namdapha National Park (Agrawal 2000; Datta et al. 2008a), Pakke Wildlife Sanctuary in Arunachal Pradesh (Datta et al. 2008b), Intanki NP in Nagaland (Kumar & Kaul 2013), Ngengpui WS in Mizoram (Forest clearance 2013), and Khasi Hills of Meghalaya (Agrawal 2000). In Assam, sporadic records of the species were reported in Karbi Anglong, North

Chachar Hills, Garampani WS, Nameri NP, and Manas NP (Choudhury 2013). Despite continuous and extensive camera trap surveys and other ecological research on carnivores and their prey base every year (Goswami & Ganesh 2014; Lahkar et al. 2018, 2020a,b), there have been few photographic evidences and published records of the species from Manas NP (Choudhury 2013; Jhala et al. 2020). The current note presents the recent photographic record of *A. macrourus* in MNP.

Camera traps (n = 554) were deployed in a grid size of 1X1 km<sup>2</sup> for studying the Clouded Leopard ecology at MNP from April 2017 to May 2019. MNP lies on the borders of the Indo-Gangetic and Indo-Malayan biogeographic realms and is located at the foothills of the Bhutan Himalayas in the Bhabar area of western Assam (26.7460°N, 91.0203°E) (Wikramanayake et al. 2001). Contiguous with Royal Manas National Park (RMNP) in Bhutan, the park forms one of the large areas of conservation significance in southern Asia. The

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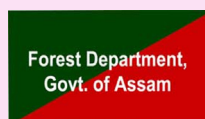
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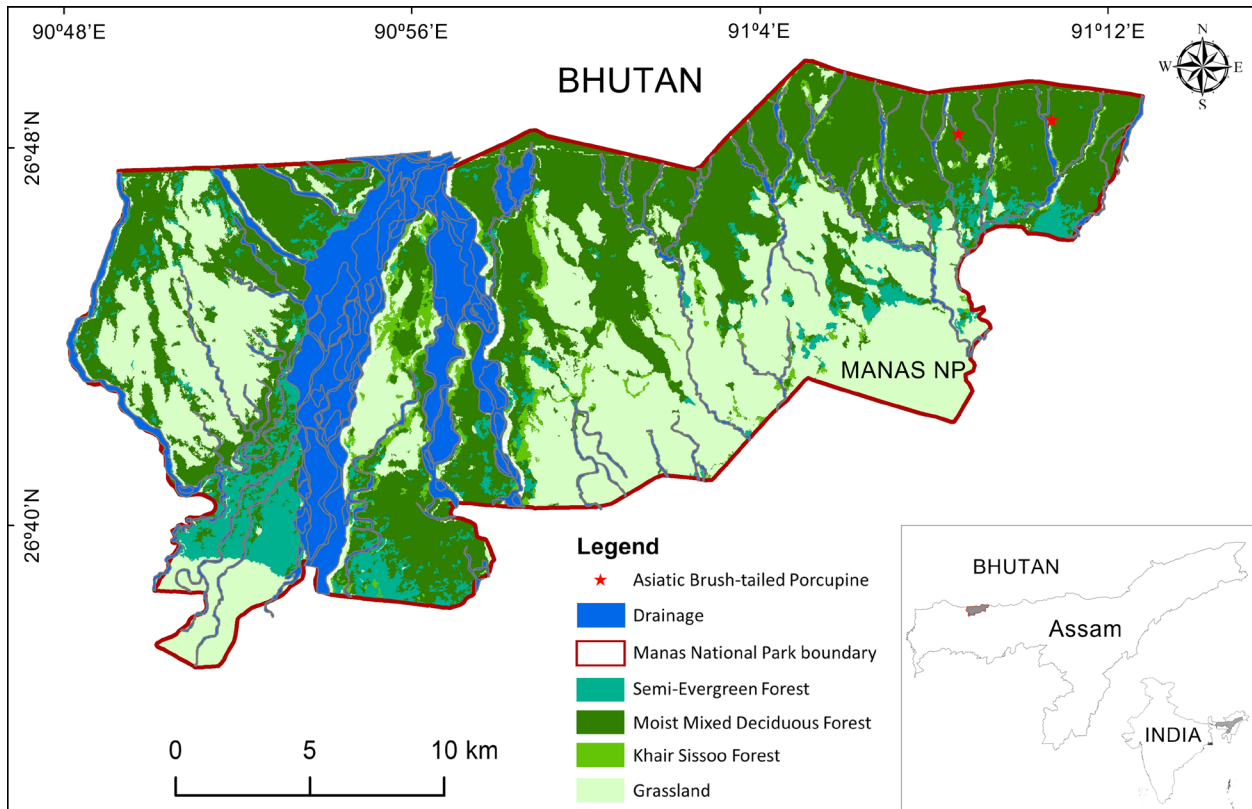


Figure 1. Locations where photos of Asiatic Brush-tailed Porcupine in Manas National Park, Assam, India, were captured.

vegetation of MNP can be broadly classified into eastern wet alluvial grasslands, moist deciduous, and semi-evergreen forests (Champion & Seth 1968).

At each location, a single Cuddeback X-Change colour camera (Cuddeback, Green Bay, WI, USA) was affixed to a tree at approximately 30–45 cm above the ground. Data from more than 500 camera-trap stations were available for analysis, and the Asiatic Brush-tailed Porcupine was recorded from two stations (91.1998°N, 26.8018°E and 91.1623°N, 26.7962°E) with three independent captures (Figure 1 & Image 1). All captures occurred at night (2145 h, 0331 h, and 2031 h), indicating nocturnal behaviour (Image 1). The species was photo-captured in the Bhuyapara range, the eastern part of the NP with a moist mixed deciduous forest type dominated by *Albizia procera*, *Terminalia bellirica*, and *Bombax ceiba* (Figure 1). However, the species also inhabit other forests, such as tropical wet evergreen, tropical semi-evergreen, and sub-tropical broadleaf hill (Talukdar et al. 2019). As reported by the field director, Mr. H.K. Sarma, Manas Tiger Reserve, the previous photographic evidence was recorded in the park by the front-line staff with the help of Aaranyak, an NGO, in 2018 (Jhala et al. 2020).

Our recent photographic evidence complements

the previous occurrence and sporadic records of Asiatic Brush-tailed Porcupine in Manas National Park. Since the presence of the Asiatic Brush-tailed Porcupine in Manas has not yet been published, Manas is not indicated in the IUCN Red List distribution map for this species (Molur 2020). Though classified as 'Least Concern' on the IUCN Red List of Threatened Species, the species is showing a decline in population across its range primarily due to habitat loss, jhum (shifting) agriculture, small-scale logging, subsistence harvesting for food, and accidental mortality (Molur et al. 2005). The Asiatic Brush-tailed Porcupine, one of the least studied species in India, opens up the scope for further studies and highlights the need for conservation efforts to protect them from extinction.

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**Image 1.** Recent photographs of Asiatic Brush-tailed Porcupine from Manas National Park.

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Dr. Hemanta Kafley, Wildlife Sciences, Tarleton State University, Texas, USA

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Dr. Mandar S. Paingankar, University of Pune, Pune, Maharashtra, India (Molecular)  
Dr. Jack Tordoff, Critical Ecosystem Partnership Fund, Arlington, USA (Communities)  
Dr. Ulrike Streicher, University of Oregon, Eugene, USA (Veterinary)  
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Dr. L.D. Singla, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana, India  
Dr. Rupika S. Rajakaruna, University of Peradeniya, Peradeniya, Sri Lanka  
Dr. Bahar Baviskar, Wild-CER, Nagpur, Maharashtra 440013, India

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c/o Wildlife Information Liaison Development Society,  
43/2 Varadarajulu Nagar, 5<sup>th</sup> Street West, Ganapathy, Coimbatore,  
Tamil Nadu 641006, India  
ravi@threatenedtaxa.org





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