


FIRST RECORD OF MELANISTIC RHESUS MACAQUE *Macaca mulatta* FROM THE FIRST ADDITION TO MANAS NATIONAL PARK, ASSAM, INDIA

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ABSTRACT

During an anti-snare walk, a team from the Wildlife Trust of India and Forest Department encountered a melanistic Rhesus Macaque *Macaca mulatta* from the First Addition to Manas National Park in Assam, India. This is the second case of melanism recorded in *M. mulatta* from the Northeastern part of India.

Keywords: Melanism, Primate, India.

Melanism can be defined as the excessive production of the dark-coloured pigment known as melanin in an individual's skin, plumage or fur, which makes it distinct from the entire population. Rhesus Macaque *Macaca mulatta* (Zimmermann) is a cercopithecine primate that is widely distributed across South Asia, Southeast Asia, and China (Koyama & Shaker, 1981; Southwick & Siddiqi, 1983; Wada, 2005). The species is protected under Schedule II of the Wildlife Protection Act of India, 1972. However, due to uncontrolled population growth and nuisance activities, *M. mulatta* are often regarded as pests by the public. During the 1960s the population was at risk as they were captured and exported for biomedical research but this was banned in 1978 (Imam & Ahmed, 2013). The ecology, distribution and feeding habits of *M. mulatta* have been well studied in India (Koyama & Shaker, 1981; Southwick & Siddiqi, 1983; Malik et al., 1984; Wada, 1984). However, studies of variation in pelage colouration were not the centre of focus. Melanism appears to be rare in primates. A case was reported from Tamil Nadu in India in Tufted Sacred Langur *Semnopithecus priam* (Blyth) by Samson et al. (2021), and King et al. (2014) reported melanism in a Crowned Sifaka *Propithecus coronatus* (Milne-Edwards) from Madagascar. A case of total albinism was also reported from Goa, India, in a Bonnet Macaque *M. radiata* (Geoffroy) (Mahabal et al., 2012). Melanism was recently reported in a young *M.*

mulatta from Lakhimpur district in Assam (Barhadiya, 2021). Its occurrence in *M. mulatta* has not been previously recorded in Manas National Park. Here, we report the first observation of a melanistic *M. mulatta* from Manas National Park and the second record from India.

MATERIALS AND METHODS

The Greater Manas Landscape (26°35'00" N to 26°50' 00" N & 90°45'00" E to 91°15'00" E) lies in the districts of Chirang, Baksa and Udalguri of the Bodoland Territorial Council (BTC) of Assam and encompasses Manas National Park (950 km²), the First Addition to Manas National Park (350 km²), declared in 2016, and Raimona National Park (422 km²), declared in June 2021 (Choudhury, 2021). Manas National Park is also a UNESCO World Heritage Site, a Biosphere Reserve, Tiger Reserve and an Important Bird Area (IBA) (Nath et al., 2009) and part of Chirang-Ripu Elephant Reserve. The indigenous population consists of Bodo, Rajbangshi, Nepali, Adivasi and others (Das et al., 2009). The area is rich in floral and faunal diversity but due to a socio-political crisis in the late 1980s suffered major vegetation loss (Nath et al., 2009). However, present conservation strategies have been effective in restoring habitat in the region.

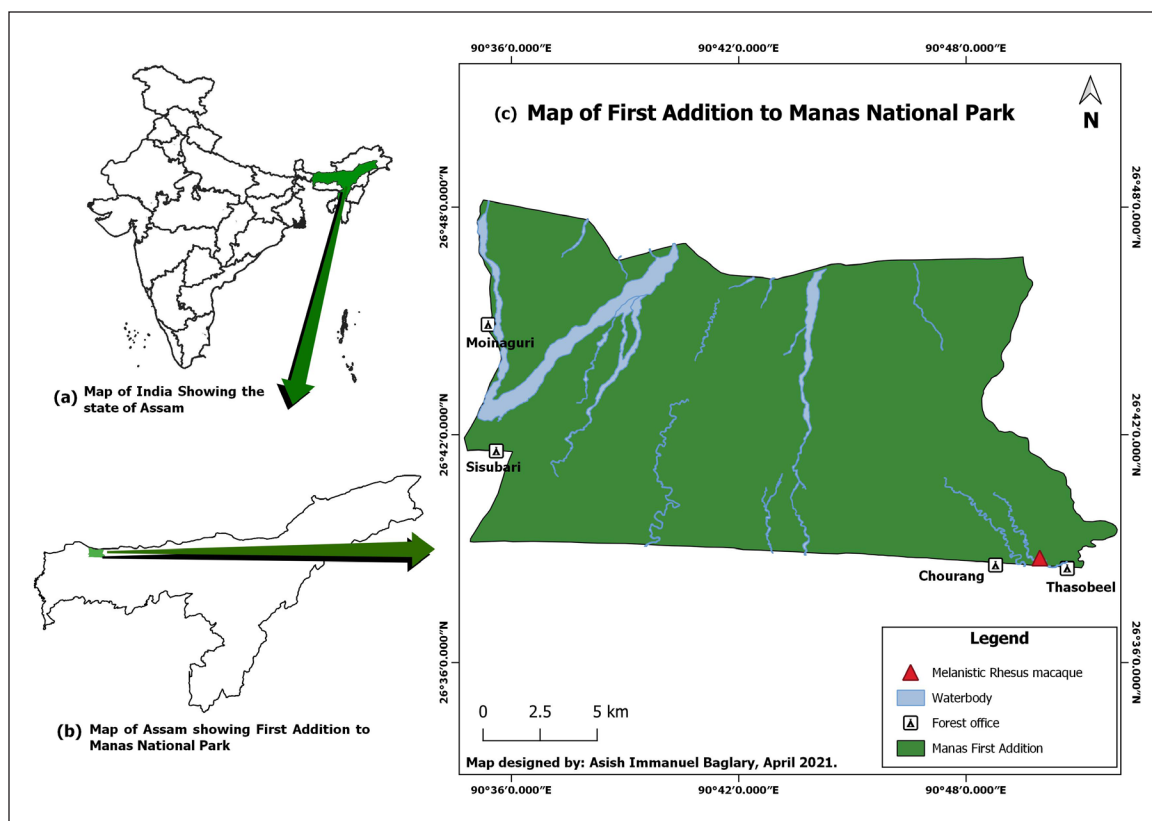


Fig 1. (a) Map of India showing the state of Assam; (b) Map of Assam showing the First Addition to Manas National Park; (c) Map showing geo-location of melanistic Rhesus Macaque in the First Addition to Manas National Park.

RESULTS

On 18 March 2021 at 10:22 h during an anti-snare survey walk in a line transect, we encountered a troop of *M. mulatta* with an estimated 17 individuals. We identified a dark-coloured (blackish) adult female with a young juvenile near Jiapagla river bed (26°38'45.132" N, 90°49'56.712" E). The young juvenile had the normal coat colour. The dorsal part of the adult female's body was black in colour with a gradient of silky golden yellow and a blackish tail. Unlike other individuals, the inner thigh of the hindlimb was reddish and the buttock was red due to oestrous. Hence, we concluded that the individual had melanism. We photographed the individual for further consideration.

DISCUSSION

Macaques of several species vary in colour from light to dark brown (e.g., Japanese Macaques *M. fuscata* [Blyth] and *M. mulatta*), whereas others are entirely black (e.g., Sulawesi Crested Black Macaques *M. nigra* [Desmarest] [Bradley et al., 2013]). Habitat

fragmentation, stress and inbreeding, and even global warming (temperature & humidity) can be contributory factors to melanism (Tougas, 2011; Mahabal et al., 2012; Ramakrishnan et al., 2016). Close observation and genetic analysis of the melanistic individual might yield more information about this phenomenon. In conclusion, further studies are encouraged to understand the incidence of melanism and albinism in populations of wild primates and to understand the ecological and physiological implications for their survival in the wild (Samson et al., 2021).

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Fig. 2. The melanistic Rhesus Macaque with a young juvenile and another member of the troop.
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Fig. 3. The melanistic adult female with a young juvenile. © Sanatan Dekka



Fig. 4. The melanistic individual with a young juvenile.
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Fig 5. The melanistic individual with reddish medial hindlimb ©Tiken Ray.

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