

FIRST PHOTOGRAPHIC EVIDENCE OF ENDANGERED WESTERN HOOLOCK GIBBON (*HOOLOCK HOOLOCK*) IN MARAT LONGRI WILDLIFE SANCTUARY, KARBI ANGLONG DISTRICT OF ASSAM, NORTH EAST INDIA

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ABSTRACT

Hoolock gibbons, classified as lesser apes, are endemic to the tropical and subtropical regions of India, Myanmar, China, and Bangladesh, where they face threats due to habitat loss and fragmentation. This study focuses on the Western Hoolock Gibbon (*Hoolock hoolock*) found in the Marat Longri Wildlife Sanctuary of Karbi Anglong District of Assam, North East India. A field survey conducted during the month of October 2023 to June 2024 tries to estimate their population size and captured their images providing the first photographic evidence of the species within the above mentioned sanctuary. The gibbons were observed in association with diverse flora, including *Dillenia petagyna* Roxb, *Artocarpus chama*, *Bombex ceiba*, and *Terminalia catappa*. Despite their protected status, populations have sharply declined, exacerbated by forest fires and jhum cultivation practices in the Karbi Anglong district of Assam. Conservation efforts are urgently needed to safeguard their habitats and ensure their survival amidst ongoing environmental challenges.

Keywords: *Western Hoolock Gibbon, Endangered Species, Marat Longri Wild life sanctuary, Conservation, Karbi Anglong*

INTRODUCTION

Hoolock gibbons, classified as lesser apes, inhabit the tropical and subtropical regions of India, Myanmar, China, and Bangladesh (Das *et al.*, 2011). They are categorized as 'Endangered' on the IUCN Red List and are protected under Appendix I of CITES and Schedule I of the Indian Wildlife (Protection) Act, 1972 (Kumar *et al.*, 2013). There are two species: the Western Hoolock Gibbon (*Hoolock hoolock*) and the Eastern Hoolock Gibbon (*Hoolock leuconedys*), distinguishable by differences in body coloration. Male Eastern Hoolock Gibbons have a distinctive grizzled silver-colored chest, while adult females have slightly paler hands and feet compared to their limbs, sometimes with white or black hairs (Mootnick and Groves, 2005). The Western Hoolock Gibbon males are black with white eyebrows that taper towards the end; females are copper tan with white eyebrow bands and surrounded by white hair with darker brown cheeks. Hoolock gibbon family groups are typically small, consisting of an adult couple and their 0–4 immature offspring. They maintain specific home ranges due to the scarcity of food in their forest habitats, specializing in ripe, sugary fruits and figs (Choudhury *et al.*, 2022). These gibbons are monogamous and engage in mating predominantly from March to May, with a gestation period of approximately seven months. They produce a single offspring every two to three years, typically giving birth between November and February (Feeroz & Islam, 1992).

Their preferred habitats include tropical and subtropical evergreen forests, moist deciduous forests, and other forest types with a dense canopy (Lwin *et al.*, 2021; Chetry and Chetry, 2010). Hoolock Gibbons are mainly frugivorous and are known for their loud, stereotyped song bouts in the early morning to mark territory and attract mates (Lwin *et al.*, 2021; Geissmann, 1993). The Western Hoolock Gibbons are distributed across Northeastern India, Bangladesh, and Myanmar, while the Eastern Hoolock Gibbons are found in specific areas of Arunachal Pradesh and Assam in India, as well as in parts of China and Myanmar (Chetry and Chetry, 2011; Fan and Ai, 2011). Conservation efforts are critical due to their endangered status, with populations found in various protected areas such as wildlife sanctuaries and national parks across their range (Choudhury, 2006; Gupta and Sharma, 2005; Zoological Survey of India, 2008).

During our research work at the Marat Longri Wildlife Sanctuary in the Karbi Anglong district of Assam, India, we conducted comprehensive field surveys across multiple sites to monitor and estimate the population size of Hoolock Gibbons during the month of October 2023 to June 2024. On November 12th, 2023, at 8:31 am in Thedong, and on November 22nd, 2023, at 8:21 am in Kathebajong, places inside this wildlife sanctuary, we successfully captured the images of a Western Hoolock Gibbon (see Figure 1) using camera Canon EOS 1300 D DSLR. The photographs of the Western Hoolock Gibbon in Thedong and Kathebajong were captured between the coordinates 25.97035° N latitude to 25.86089° N latitude and between 93.31750° E longitude to 93.28634° E longitude, respectively. The elevation was recorded to be 148 meters above mean sea level in Thedong and 172 meters above mean sea level in Kathebajong respectively. Fauna of the areas predominantly consists of *Dillenia petagyna* Roxb, *Artocarpus chama*, *Bombex ceiba*, and *Terminalia catappa*. The Hoolock Gibbons are observed in various wildlife sanctuaries and national parks across North East India (Gupta and Sharma, 2005). However, this research work represents the first photographic evidence of the species sighted in Marat Longri Wildlife Sanctuary of Karbi Anglong District of Assam.



Figure 1 show a Western Hoolock Gibbon captured at Thedong (A) in Marat Longri Wildlife Sanctuary, Assam and another Western Hoolock Gibbon captured at Kathebajong (B) within the same wildlife sanctuary.

The population Hoolock Gibbon in Assam has been severely declined due to extensive habitat loss and fragmentation. Over the past few decades, their numbers have plummeted from over 80,000 individuals to fewer than 5,000 (Das *et al.*, 2011). Forest fires pose a significant threat to the habitats of wildlife's in the Karbi Anglong district, and the region has the highest incidences

of forest fires in India (Ahmed and Goparaju, 2019). These fires not only destroy natural vegetation and wildlife habitats but also have profound socio-economic impacts on tribal communities whose livelihoods depend on forests (Engstrom, 2010; Roy, 2003). Forest fires are particularly prevalent in the month of April in Karbi Anglong but diminish significantly by the end of June due to the onset of the monsoon season (Ahmed and Goparaju, 2019). The practice of jhum cultivation has exacerbated forest degradation in the Karbi Anglong district of Assam, leading to the deterioration of dense and virgin forest covers (Sarkar *et al.*, 2020). Therefore, more research works and field studies are essential in providing critical insights to guide conservation efforts and mitigate potential threats to the survival and existence of this species of Hoolock Gibbon.

ACKNOWLEDGEMENT

The authors would like to thank the Special Principal Chief Conservator of Forest (Spl PCCF) of Karbi Anglong, Assam, and the Karbi Anglong Autonomous Council for granting permission to conduct research in protected areas. The authors also appreciate the support and assistance provided during the field visit by Shri Bibison Tokbi, Divisional Forest Officer of the Western Division of Karbi Anglong, Assam, and Shri Jogen Phangcho, Forest Guard of the Central Range of Marat Longri Wildlife Sanctuary.

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