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First Record of Eastern Hoolock Gibbon in Assam, India

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Abstract: The western hoolock gibbon (*Hoolock hoolock*) and eastern hoolock gibbon (*Hoolock leuconedys*) are the two representatives of gibbons in India. Their distribution is restricted to the south bank of the Dibang-Brahmaputra river system in the northeast. The western hoolock gibbon has the wider distribution of the two, occurring in all of the seven states of the Northeast region, namely Assam, Arunachal Pradesh, Meghalaya, Mizoram, Tripura, Nagaland and Manipur. It was thought that, in India, the eastern hoolock gibbon was restricted to the state of Arunachal Pradesh. Here, we report the occurrence of this species in three reserve forests of the Sadiya sub-division of the Tinsukia District of the state of Assam, extending the previously known range of the species in the country.

Key words: *Hoolock leuconedys*, *Hoolock hoolock*, distribution, Sadiya, Assam

Gibbons are found only in the tropical and subtropical forests of South and Southeast Asia. There are 17 species in four genera. The genus *Hoolock* is represented by two species: the western hoolock gibbon (*Hoolock hoolock*) and the eastern hoolock gibbon (*Hoolock leuconedys*). The eastern form was earlier considered to be a subspecies of *hoolock* (see Groves 1967). Formerly, they were placed in the genus *Hylobates* along with all the other gibbons, except for the siamang (*Symphalangus*), but a different karyotype and distinctive morphological features resulted in them being placed in a separate genus, *Bunopithecus*, by Prouty *et al.* (1983a, 1983b). *Bunopithecus*, however, proved not to be applicable to the hoolock gibbons, and the generic *nomen* was changed by Mootnick and Groves (2005) to *Hoolock*.

Both the western hoolock (*Hoolock hoolock*) and eastern hoolock gibbons (*Hoolock leuconedys*) are found in India. The western hoolock gibbon is also found in neighboring Bangladesh (Anderson 1878; Gittins 1980; Gittins and Akonda 1982; Khan 1984, 1985) and Myanmar (Tickell 1864; Groves 1967, 1972). The eastern hoolock gibbon extends into Myanmar and China (Groves 1971).

In India, the distributions of the two species are limited to the south of the Dibang-Brahmaputra river system in the Northeast region. The western hoolock gibbon has the wider range in India. It occurs in all of the seven states of

the Northeast: Assam, Arunachal Pradesh, Meghalaya, Tripura, Manipur, Mizoram, and Nagaland. A number of reports have detailed its range in this region (Mukherjee *et al.* 1982, 1988, 1991–1992; Choudhury 1991, 2006, 2009; Das *et al.* 2003; Gupta and Sharma 2005; Chetry *et al.* 2007; Kakati *et al.* 2009).

The eastern hoolock gibbon was discovered in India only recently. Das *et al.* (2006) reported on its occurrence between the River Lohit in the north and the high mountains of the Dafa Bum in the south, in the state of Arunachal Pradesh. Subsequently, Chetry *et al.* (2007, 2008) and Chetry (2009) reported the species from the Lower Dibang Valley district, also in Arunachal Pradesh. Here we report the occurrence of the species in Assam.

From March to May, 2010, we carried out a survey of the hoolock gibbon in the reserve forests of the Sadiya sub-division in the Tinsukia district of Assam. The first time we saw the eastern hoolock gibbon was in the Hallowgaon Reserve Forest (371 ha, 27°50'54.9"N, 95°45'52.9"E; altitude 120 m above sea level). We found two groups and heard calls from two other groups nearby. Using binoculars, we were able to confirm the lighter coat color of the adult female when compared to the western species—one of the most reliable identifying characters. For confirmation, however, we took photographs of both the male and female. For further verification,

we consulted the recent literature (Groves 1972, 2001; Das *et al.* 2003, 2005, 2006; Mootnick and Groves 2005; Chetry *et al.* 2008) and compared them with photographs of gibbons from the Lower Dibang Valley in Arunachal Pradesh. We also sent the photographs to Colin P. Groves, Warren Brockelman and Thomas Geissmann. On the basis of our observations, the photographs and experts' comments, we concluded that the hoolock gibbons in Sadiya are indeed the eastern form, *Hoolock leuconedys*.

Previous surveys of primates in Sadiya (Mohnot 1995; Sharma and Sinha 2007) had reported the gibbons as belonging to the western form, *Hoolock hoolock*. Our findings have not only extended the range of the eastern Hoolock gibbon in India but have also given a new direction to Hoolock gibbon conservation in Assam.

The gibbon survey covered six reserve forests in the Sadiya Range, *H. leuconedys* was found in only three of them—Kukuramara (365 ha) and Kundil Kolia (7,284 ha), besides Hallowgaon. The survey confirmed that the gibbon had already been extirpated from three other reserve forests, Deopani Reserve Forest, Sadiya station North Block, and Sadiya Station West Block. The survey was able to confirm 23 groups of eastern hoolock gibbons in the Sadiya region, north of the River Lohit.

With the inclusion of eastern Hoolock gibbon, Assam has now 10 species of primate, the highest diversity of any part of India. Forest loss and fragmentation due to the expansion of agricultural activities (for example, ginger and mustard), encroachment by human settlements, selective illegal felling,

the collection of firewood, and grazing are the major threats to this species. The Assam State Forest Department should take immediate steps for the conservation of this rare gibbon. The Kundil Kolia Reserve Forest is an important potential conservation site for this species, and would benefit from being upgraded in status to a wildlife sanctuary.

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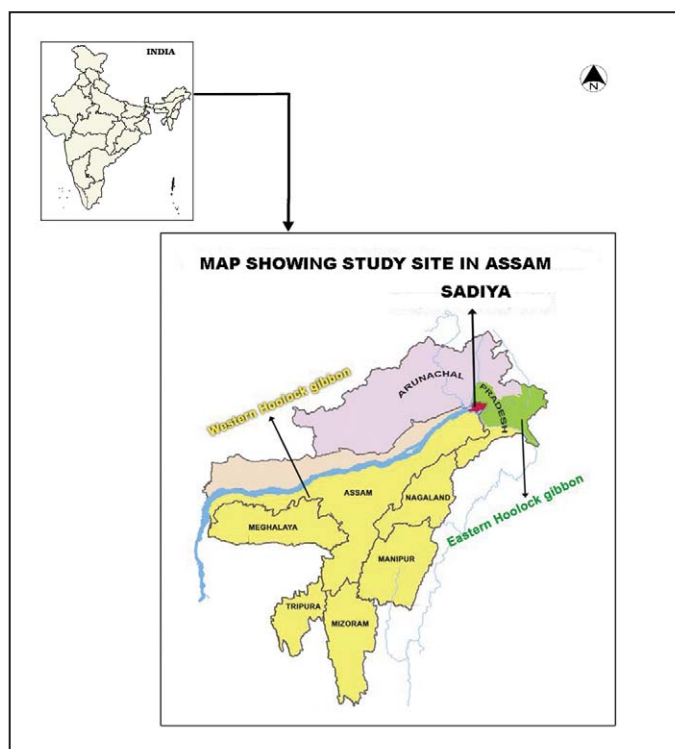


Figure 1. The ranges of the western hoolock gibbon, *Hoolock hoolock* (yellow) and the eastern hoolock gibbon, *H. leuconedys* (green) in Northeast India. In red is the range extension for the eastern hoolock in far northeastern Assam.



Figure 2. Adult female eastern hoolock gibbon, *Hoolock leuconedys*. Photograph by Dilip Chetry.

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