

TAXONOMY

Suborder: Haplorrhini

Infraorder: Simiiformes

Superfamily: Hominoidea

Family: Hylobatidae

Genus: *Hoolock*

Species: *hoolock*, *leuconedys*

Other names: hoolock gibbon, white-browed gibbon; tooboung, myouk umaigyall (Arakanese); hoolock (French); uluk (Hindi); gibón hulock (Spanish); holockgibbon, holok, hulock (Swedish); wu-wa (Thai); *H. hoolock*: western hoolock; *H. leuconedys*: eastern hoolock.

The taxonomy of the hoolock gibbon has recently been significantly revised. Hoolock gibbons have been placed within their own genus, *Hoolock*, as well as split into two discrete species, the western hoolock gibbon (*H. hoolock*) and the eastern hoolock (*H. leuconedys*) (Mootnick & Groves 2005). However, in many publications, the two species are only considered distinct at the subspecific level. Further, the vast majority of the available published literature is on the western hoolock, but due to presumable similarities between the species, both are included here.

MORPHOLOGY



Hoolock leuconedys

Photo: Gabriela Skollar/Gibbon Conserv Ctr

The hoolock gibbon is tailless like all other apes (Groves 1972; Choudhury 1991). However, the species possesses a tuft of hair in the anogenital region (Marshall & Sugardjito 1986; Choudhury 1991; Mootnick 2006). Sexual dichromatism is seen between males and females but sexual dimorphism is not pronounced (Groves 1972; Jenkins 1990; Choudhury 1991; Alfred 1992). Both sexes have thick and shaggy hair with long limbs (Roonwal & Mohnot 1977; Choudhury 1991). Males are black or blackish, with a white strip above their eyes which curves up at either end (Choudhury 1991; Das et al. 2006; Mootnick 2006). The face of both sexes is black (Choudhury 1991). In contrast to the males, adult females are lighter, usually ranging from buff and pale to various shades of tan with some brown, grey and yellowish coloration (Roonwal & Mohnot 1977; Choudhury 1991; Islam & Feeroz 1992; Mootnick 2006).

Between the species, there are some morphological differences, predominantly between males with females significantly harder to distinguish visually (Jenkins 1990). In *H. hoolock*, males are

black, with a white unibrow (mono-brow) and a black genital tuft (around 5 cm (2.0 in) long) (Groves 1972; Jenkins 1990; Mootnick 2006). *H. leuconedys* males have two distinct white eyebrows and a silver or white genital tuft (around 7.5 cm (3.0 in)) (Groves 1972; Jenkins 1990; Das et al. 2006; Mootnick 2006).

The average height of a hoolock gibbon is 81.2 cm (32.0 in) (A. Mootnick pers comm.). Females weigh around 6.1 kg (13.4 lb) while males weigh around 6.9 kg (15.2 lb) (Leutenegger & Cheverud 1982).



Hoolock leuconedys

Photo: Gabriela Skollar/Gibbon Conserv Ctr

Hoolock gibbons are almost entirely arboreal, coming to the ground only in exceptional circumstances. Movement is primarily through brachiation (70-80% of movement), leaping, climbing and jumping (16-25%) and acrobatics or bipedal walking (4-5%) (Alfred 1992; Islam & Feeroz 1992; Sati & Alfred 2002). When moving bipedally they usually travel for less than a minute and they will move quadrupedally on rare occasions (Islam & Feeroz 1992). Any bipedal movement that does occur is typically unsteady and awkward (Candler 1904; Alfred 1992). Such bipedality can occur both arboreally or terrestrially with and without the animal using its arms for support. Terrestrial bipedality usually only occurs when trees are too far apart to leap between (Jindal & Sharma 1984; Alfred 1992). Hoolock gibbons feed while either sitting or suspended from a support, depending on the food (Sati & Alfred 2002). During the morning in the winter, hoolock gibbons will "sunbathe" in high branches exposing their backs to the sun for several minutes at a time (Tilson 1979; Choudhury 1996). In general, most of the daily activities occur between 6 and 20 m (19.7 and 65.6 ft) above ground level (feeding, movement, resting and calling) except social activities, which normally occur between 5 and 27m (16.4 and 88.6 m) (Hasan et al. 2007).

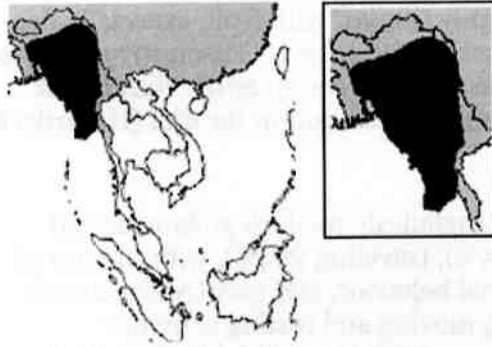
Hoolock gibbons have lived to be as old as an estimated 40 years in a captive setting (Weigl 2005).

RANGE

In general, starting in the east and moving roughly westerly, hoolock gibbons are found only in China, Myanmar, northeastern India, and Bangladesh (Mukherjee 1984; Yang et al. 1987; Ma et al. 1988; Mukherjee et al. 1992). Hoolock gibbons are the only ape present in India and within

China, hoolock gibbons are found only in the western Yunnan province (Yang et al. 1987; Ma et al. 1988; Mukherjee et al. 1992; Das et al. 2006). In addition, they are only found west of the Salween River in Myanmar (Groves 1972). In eastern India, the hoolock is restricted to the states of Assam, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, and Meghalaya. Thus, in general they are found in India south and east of the Brahmaputra, Lohit, and Dibang Rivers (Groves 1972; Choudhury 1987; 2006). Within Bangladesh, hoolock gibbons are only found in the southeast and northeast (Feeroz et al. 1995).

The distributions of the two species are demarcated by the Chindwin and Irrawaddy Rivers in Myanmar, with *H. leuconedys* occurring to the east and *H. hoolock* to the west of the watercourses (Groves 1967; Ma et al. 1988). The distribution of *H. leuconedys* continues east as far as the Salween River in Myanmar (Groves 1972). However, there are recent reports of hoolock gibbons close in appearance to *H. leuconedys* reported in the Lohit district of Arunachal Pradesh, India, the most easterly district in India which may require revision of the current geographical division between species (Das et al. 2006).



Hoolock range (in red)

It is important to remember however, that the distribution is not continuous and in many cases is quite fragmented (Choudhury 1991). There are estimated to be roughly 200 western hoolock gibbons left in the wild in Bangladesh (Biswas et al. 2003; Molur et al. 2005; Walker et al. 2007) and there is no published information on the status of western hoolock gibbons in Myanmar (Kakati 2006; Walker et al. 2007). It is estimated that there are between 1700 and 2200 western hoolock gibbons in northeast India (Choudhury 2006).

HABITAT

Hoolock gibbons are exclusively forest-dwelling and depend on a contiguous canopy. They are found in broad-leaved, moist deciduous forest; mixed evergreen/deciduous forest with tall deciduous trees and an evergreen understory; sub-tropical broadleaf forests, from mountainous, hill, valley, slope and lowland forests to wet evergreen and semi-evergreen forests often consisting of interspersed trees and bamboos as well as various conditions of forest, including primary, secondary, and regenerating (Khan & Ahsan 1986; Mukherjee 1986; Choudhury 1990; 1991; Islam & Feeroz 1992; Mukherjee et al. 1991-1992; 1992; Lan 1994; Choudhury 1996; 2000; Ahsan 2001; Sati & Alfred 2002; Das et al. 2003; Choudhury 2006; Kakati 2006; Srivastava 2006). The best habitats have continual canopy of tall trees with thick undergrowth (Mukherjee et al. 1991-1992; Bai et al. 2007). Typical tree species found in hoolock habitats include *Mangifera*, *Bixa*, *Dipterocarpus*, *Zyzygium*, *Protium*, *Entada*, *Lagerstoemia*, *Shorea*, *Albizia*, *Artocarpus*, and *Ficus* (Mukherjee 1986; Muzaffar et al. 2007). Hoolock gibbons are found at altitudes under 50 m and up to and above 2500 m (Choudhury 2006).

