

# Primates in Peril

The World's 25 Most Endangered Primates  
2016–2018



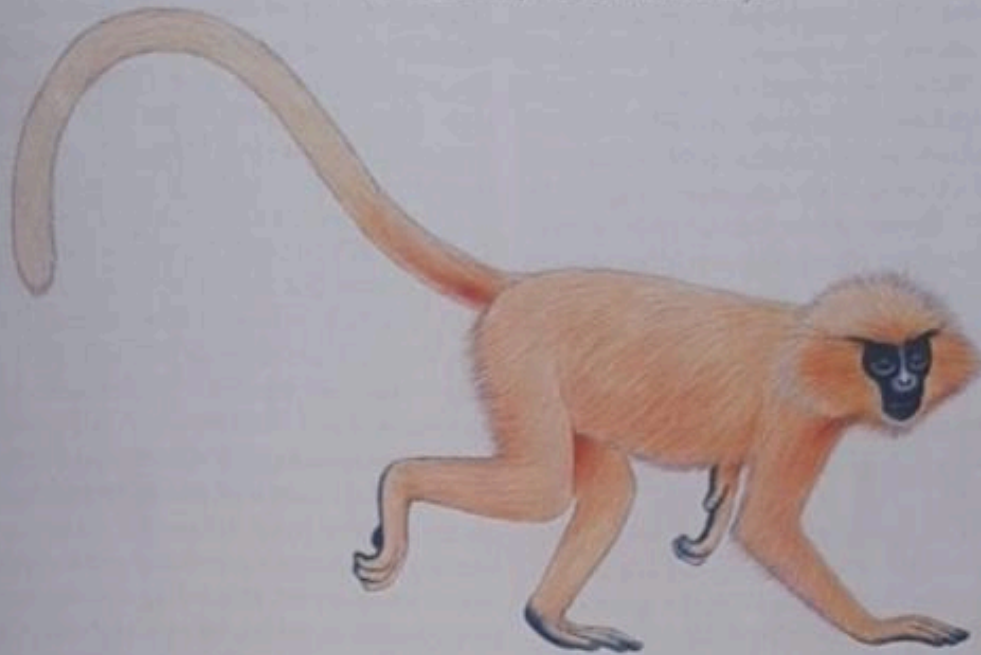
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**Golden Langur**  
*Trachypithecus geei* Khajuria, 1956  
India and Bhutan  
(2016)

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The Golden Langur (*Trachypithecus geei*) (Illustration: Stephen D. Nash)

The golden langur (*Trachypithecus geei*) is a beautiful primate discovered in 1953 (Gee 1955), and found to be restricted to India and Bhutan. The distribution of golden langurs in India is restricted to an area bounded by the Manas River in the east, Sankosh in the west, and the Brahmaputra River in the south (Srivastava 1999). The distribution of the species in India extends over 2,500 km<sup>2</sup> between 26°15'N to 26°33'N and 89°47'E to 92°55'E. Its distribution is equally restricted in neighbouring Bhutan, where the golden langur is found between the Sankosh River and the Chamkhar-Mangde-Manas river complex (Wangchuk 2005). In Bhutan, the range of the species covers an area of 4,782 km<sup>2</sup> (Wangchuk 2005). There are two small introduced populations of golden langur outside this range, one on Umananda River Island in the Brahmaputra River at Guwahati in Assam, and the other in Sipahijala Wildlife Sanctuary in Tripura (R. Chetry and D. Chetry 2009).

Golden langurs primarily inhabit the wet evergreen forests and the tropical semi-evergreen forests of their range. The sal (*Shorea robusta*)-dominated forests of

western Assam and secondary forests also support the golden langur. In Bhutan, they generally inhabit warm broadleaf forests between 1,000 m and 2,400 m asl and sub-tropical forests between 200 m and 1,000 m asl. The species' elevational range has been ascertained to be up to 2,400 m asl. However, it has also been recorded from 2,600 m at Chendebji in Bhutan (Wangchuk 2005). The total potential habitat for golden langurs in Bhutan is 4,782 km<sup>2</sup>, of which 3,475 km<sup>2</sup> is the actual available habitat (Wangchuk 2005, Choudhury 1990). The estimated available habitat in India is 1,255 km<sup>2</sup> (Srivastava *et al.* 2001).

Since its discovery, the golden langur has been considered to be a monotypic species. Wangchuk *et al.* (2003), however, strongly advocated that the golden langur has two subspecies based on mitochondrial DNA studies, namely a northern subspecies (*Trachypithecus geei bhutanensis*) and southern subspecies (*Trachypithecus geei geei*). Across their known range, golden langurs can be found in sympatry with the Assamese macaque (*Macaca assamensis*), the rhesus macaque (*Macaca*

*mulatta*) and the slow loris (*Nycticebus bengalensis*). Golden langurs maintain a peaceful co-existence with the sympatric diurnal species. Primarily arboreal, the golden langur spends 99% of its active time in trees (Biswas 2004). They generally explore the top and middle strata of the forest, but in degraded habitat they also descend to the ground (R. Chetry and D. Chetry 2009). The diverse social groups generally observed in the golden langur are – uni-male: multi-female troops or societies, bi-male: multi-female troops, multi-male: multi-female societies, all-male bands or all-male societies, and lone males (Biswas 2004). The most common social dynamic is the uni-male: multi-female troop or society (Biswas 2004). Social bonds between troop members are very strong. The annual home range is between 10 and 58 ha for diverse social troops in different habitats (R. Chetry and D. Chetry 2009). As far as day range is concerned, each golden langur troop covers around 200–700 m. Major activities of golden langurs are locomotion, resting, feeding and monitoring. Other activities include grooming and playing. Golden langurs spend 12.8–33% of time feeding, 40–63.1% resting, 6.3–19% on locomotion, 5–11.5% monitoring, 2–3.7% playing and 0.3–6% grooming and engaging in other social activities (Mukherjee 1996; D. Chetry 2002; Medhi and Chetry 2003; Biswas 2004; Medhi 2004).

Leaves (both young and mature) constitute 60% or more of their daily diet. In addition to leaves, they regularly eat other plant parts such as fruits, seeds and flowers, stem cortex and twigs. Gum feeding, soil feeding, algae feeding, snail feeding and alcoholic effluent feeding have also been observed (Medhi 2004; Biswas 2004). Identified plant species used as food by the golden langur number more than 200. They use tall trees for sleeping in order to avoid nocturnal predators. Leopards (*Panthera pardus*), wild dogs (*Cuon alpinus*) and pythons (*Python morulus*) are the prominent predators of golden langurs (R. Chetry and D. Chetry 2009). Domestic as well as stray dogs (*Canis familiaris*) attack golden langurs near human habitats (D. Chetry *et al.* 2005). Golden langurs are seasonal breeders, and June to January is the breeding season. The estimated gestation period is 168–180 days, and inter-birth interval is two years (Biswas 2004; R. Chetry and D. Chetry 2009). January to June is the birthing season. Male golden langurs attain sexual maturity at 5–7 years while the age of sexual maturity for a female is four years.

At present, 86% of the golden langur population is in Bhutan, with Wangchuk (2005) estimating the population for the entire country to be approximately

6,637 individuals. Ghosh (2009) and Biswas *et al.* (2010) directly sighted 5,141 golden langurs in 566 troops in Assam (India). The global population of the species was thus estimated at >12,000 (R. Chetry and D. Chetry 2009; Horwich *et al.* 2013).

The golden langur is a Schedule – I species in the Wildlife (Protection) Act of India 1972 (amended 2002). The Forest and Nature Conservation Act of Bhutan 1995 has also designated it as a Schedule – I species. It is classified as Endangered on the IUCN Red list and is an Appendix – I species in CITES. The main conservation threat the species is facing is loss of habitat. Srivastava *et al.* (2001) reported a 50% loss of original habitat for golden langurs in India. Parallel to habitat loss, habitat fragmentation and habitat shrinkage are also affecting the species. Golden langurs were extirpated in as many as eight forest patches between 1970 and 1990 (Choudhury 2002). There are reports of individuals dying due to electrocution and roadkill, which is a problem for the species in certain areas (R. Chetry and D. Chetry 2009). Domestic dogs have emerged as another threat for the species in forest fringe villages (D. Chetry *et al.* 2005). Hunting and smuggling, anthropogenic dependency on forests, social unrest, inbreeding and diseases are some other threats to golden langurs in India. Chakrashila Wildlife Sanctuary is the only protected habitat for this endangered species in India. It is more secure in neighbouring Bhutan, with almost 50% of its habitat in Bhutan falling in three protected areas, namely Royal Manas National Park, Black Mountain National Park and Phipsoo Wildlife Sanctuary. Yet in Bhutan, anthropogenic pressure, changing land-tenure systems, development, shifting cultivation and commercial logging are posing threats to golden langurs and their habitat (Wangchuk 2005). Construction of suspension bridges over the Chamkhar has opened the way for hybridization between capped langurs and golden langurs (Wangchuk *et al.* 2009; Choudhury 2008). Ram *et al.* (2016) also revealed possible hybridization of golden langurs with capped langurs. According to Wangchuk (2005), hybrids form 15% of the total golden langur population in Bhutan. The conservation scenario of the golden langur is, therefore, alarming and critical. Conservationists are extremely concerned that each of the major threats to golden langurs are increasing and likely to worsen considerably over the coming years, despite a number of conservation initiatives.

Golden langurs have undoubtedly drawn the attention of the public and law makers, yet they are still overshadowed by big charismatic species

such as the tiger and elephant. There is a clear and urgent need for further surveys through the entire range of the species in order to record the spatial and temporal demographic changes in dwindling forest patches. Given that in India most of its populations are outside protected areas, there is an urgent need to protect such as the proposed Ripu-Chirang Wildlife Sanctuary, and Kakojana Wildlife Sanctuary in Assam. Chakrashila Wildlife Sanctuary, which supports a healthy population along with its adjacent reserve forests such as Sreegram Reserve Forest, Katrigacha Reserve Forest, Buxamara Reserve Forest and Nadangiri Hill Reserve Forest, should be upgraded to national park status. Forest fragments with golden langur populations can be connected with forest corridors in the near future. A future metapopulation management plan will need to incorporate the translocation of threatened and fragmented populations. New projects to address these conservation and research issues should be implemented to ensure the long-term conservation of the golden langur and its habitat.

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