

SURVEY OF HABITAT QUALITY OF GOLDEN LANGURS IN SOME NEGLECTED DISTURBED FOREST NEAR MANAS BIOSPHERE RESERVE

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The golden langur (*Trachypithecus geei* (*khajuria*), is an endangered and endemic primate species of India. It is under great threat due to severe anthropogenic disturbances of its habitat. A survey was undertaken, using remote sensing techniques, of the populations south of Manas Biosphere Reserve (26°13'3.2"N-26°29'00"N and 90°29'18"E-90°41'45.4"E) in a number of different hill zones in the Bongaigaon District, Assam. The results showed that all sites, except Bhairab Hill, (i.e. Kakoijana proposed wildlife sanctuary, Bamungaon reserve forest, Nakkati reserve forest, Khoragaon proposed reserve forest, Mahadeb reserve forest and Kabaitari Hill) have been badly degraded due to excessive exploitation of trees and monocultures of unsuitable trees such as teak (*Tectona grandis*) and rubber. The habitat is characterized by mixed deciduous forest including bamboo breaks (33.3%), sal forest and teak forest (6.4%) and degraded forest (56 %) and it covers a total of 116 km².

In the past 30 years, there has been a severe decline in the langur population due to habitat loss and smuggling. The survey indicated that langurs have been extirpated from Mahadeb R. F. and Kabaitari Hill. So far 164 individuals in 22 troops, with an average troop size of 7.45 individuals, have been identified. Langurs are generally distributed in mixed deciduous forest and also use community forests. The habitat quality of Bhairab Hill indicated that more troops might be present there.

These folivorous primates were observed to use 52 food plants. They showed preferences for different food plants in the different seasons. The preferred food plants included *Bridellia retusa*, *Bambusa tulda*, *B. balcooa*, *B. arundinacea*, *Bauhinia purpurea*, *Ficus hispida*, *F. religiosa*, *F. bengalensis*, *Oroxylum indicum*, *Terminalia chebula*, *Toona ciliata*. The langurs generally rested, travelled or fed in trees such as *Careya arborea*, *F. religiosa*, *F. bengalensis*, *Shorea robusta*, *Terminalia belerica*, *T. chebula*, *Toona ciliata*, *Stereospermum chelonoides*. Sometimes, due to a lack of food, they ventured into nearby community forests, thus inviting trouble from domestic dogs and uninformed young people.

The project helped us to extend our survey into new areas. We also undertook conservation education and capacity building amongst young people and shared our knowledge with tribal communities who have been protecting the forests for 14-20 years. We were involved with publicity at the national and international level and with the overall evaluation of golden langur conservation. Despite continuous insurgency activities, the field work for this project was accomplished successfully.

The project identified two potential areas - a) Kakoijona and Bamungaon, and b) Nakkati and Bhairab Hill for creating forest corridors. We also recommended fencing with electric wires, using solar power

for energy, controlling the speed of vehicles on nearby highways, the control of domestic dogs, discouraging settlement by outsiders, encouraging ecotourism and the mass planting of key species in degraded areas. Infrastructure development, increases in manpower and more conservation initiatives by tribal communities are required to enable monitoring of the areas and protection of the habitats. In addition, political solutions to the insurgency problem, socioeconomic development, and capacity building of the local community are needed. Indigenous communities and their cultures should be protected. Bhairab Hill should be developed as a wildlife sanctuary, while other areas should be upgraded so that they can be effectively managed. A strong umbrella organization should be created to design a management plan.



Golden langurs (*Trachypithecus geei*) near Manas Biosphere Reserve in India