

# AGGRESSIVE BEHAVIOR OF PHAYRE'S LEAF MONKEYS TOWARDS DOMESTIC DOGS IN CACHAR DISTRICT OF ASSAM, INDIA

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## Abstract

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Phayre's leaf-monkeys (*Trachypithecus phayrei*) or Phayre's langurs are old world monkeys that inhabit South-East Asian tropical forests. The species is under a severe threat due to large scale habitat destruction and disturbances by people living near the habitat of langurs. The present study recorded the aggressive behavior of male langurs towards domestic dogs in the Cachar district of Assam. Response of each member in the troop was observed. The sophisticated behavior of males in safeguarding the weaker members was observed. In conclusion, the harassment by domestic dogs may result in the expulsion of Phayre's langurs from their native habitat.

Keywords: langur, monkey, endangered animal, behavior, aggression, dog

## INTRODUCTION

Phayre's leaf-monkeys (*Trachypithecus phayrei*) or Phayre's langurs inhabit tropical forests in south-east Asia (Figs. 1–3). They are listed under Schedule 1 of the Indian Wildlife (Protection) Act, 1972 and in Appendix II of CITES. IUCN Red list has listed the species as Endangered. Their populations are small and isolated, though locally common in many places in northeastern India (Choudhury, 2001). It is believed to have undergone a decline of more than 50% over the last three generations (Bleisch, 2008). This species is at risk of habitat disturbance and fragmentation, especially due to the establishment of tea gardens, timber plantations, livestock ranching, shifting agriculture, and human settlement. Other threats include pollution, inbreeding, and local trade (Molur *et al.*, 2003).

The Phayre's langur is a folivorous species (Roonwal and Mohnot, 1977; Stanford, 1988;

Ahsan, 1994; Choudhury, 1994; Gupta and Kumar, 1994; Gupta, 1996; Bose and Bhattacharjee, 2002) and prefers to consume immature leaves to more mature ones (Bose and Bhattacharjee, 2002). In Assam, they inhabit the forests in the districts of Cachar, Hailakandi, and Karimganj (Choudhury, 1996). The species was observed in two localities of Silcoorie tea estate and Bilani with a troop size of 11 and 14 monkeys, respectively (Bose, 2003). Phayre's langurs were also seen in two nearby tea estates – Borojale and Irongmara.

In biodiversity rich continents, domestic dogs (*Canis lupus*) (Fig. 4) are posing serious risks to native species as vectors of infections, predators and competitors (Butler and Bingham, 2000; Oliveira *et al.*, 2008; Whiteman *et al.*, 2007). Study conducted by Torres and Prado (2010) in Brazil also clearly demonstrates assimilation of dogs in the processes of occupation and landscape use by humans, as



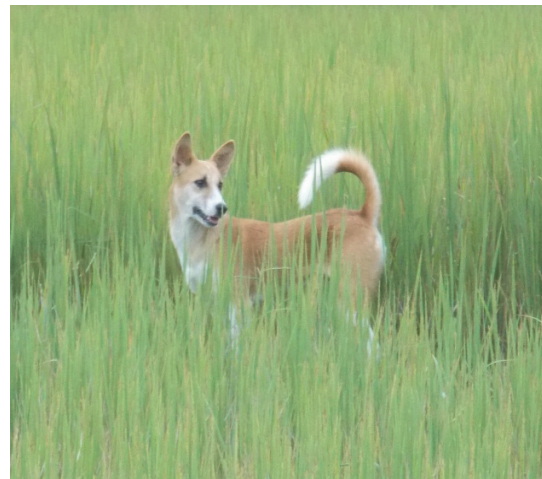
1: Adult female with infant



2: Adult male



3: View of the habitat



4: Domestic dog

the most abundant domesticated carnivore in rural lands. Dogs are generally allowed to roam freely and often they enter forest patches of these tropical areas. The present issue has been neglected for a very long time and sporadic studies has been published till date and thus the actual or potential impacts of domestic dogs on wildlife should be conducted for a greater understanding between the dogs, forest and diminishing wildlife.

### Study Area

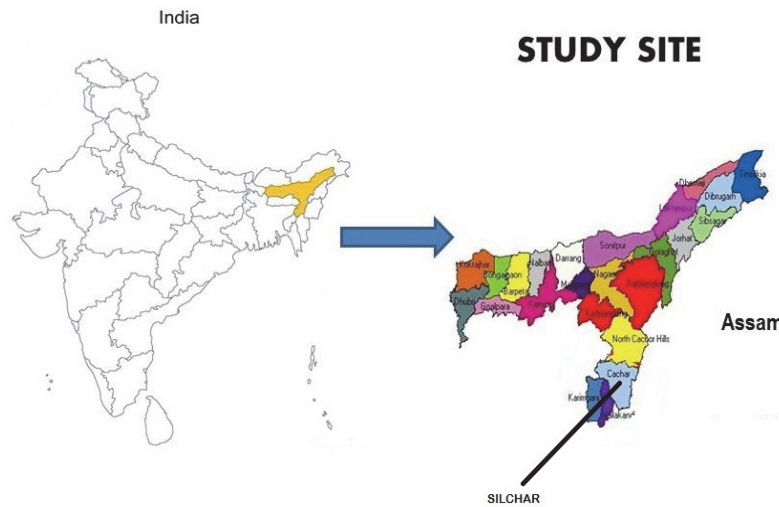
Phayre's troop behavior was recorded in a small forest fragment near Assam University campus located in Silchar, Assam. The observation was carried out near Maltila village in Silcoorie tea estate (24°40'26" N and 92°45'25.5" E) (Figs. 5 and 6). The geographical location of the area was recorded using a GPS. The Phayre's langur was also seen in the area recently (Mazumdar *et al.*, 2011). The habitat of the Phayre's langurs in the area is a mosaic of different matrices. The forest fragment is surrounded by human habitation, paddy fields, tea gardens and a Central University. The vegetation

around the Assam University campus in Silchar represents a secondary succession status with different degrees of disturbance (Mazumdar *et al.*, 2011). The forest fragment has a number of plant species with dominance of bamboo species. It is frequently visited by locals living nearby for the collection of fuelwood and medicinal plants. Bamboo collected from the forest fragments is used for making mats, baskets and are also sold in the local markets. The village people belong to the tea garden community with a very low literacy rate and high poverty. The main activity is agriculture and a few people also engage in unskilled jobs in far-flung areas.

### Phayre's Troop Size

The present troop comprised of 6 individuals. The group has a lactating mother with an infant. Adult males were identified by their well-defined scrotal sac. Identification of the sex of juveniles was not possible on the ground due to lack of time. The infant langur was always carried by the mother.





5: Location of study site in Cachar District of Assam in India



6: Field site showing Maltila village, bamboo grove, Silcoorie tea estate and Assam University, Silchar in India  
(Source: www.googleearth.com)

### Dog Characteristics

Dogs are adopted for the protection of livestock against predators. They are very important for the local people. They are allowed to roam freely throughout the matrix. The owners are quite unaware and indifferent towards any interaction between dogs and native species. On the other hand, the dogs may pose a serious threat to the phayre's langurs. They may harass and cause an evacuation of langurs from the forest fragment. The present study has recorded one such incident between phayre's langur troop and dogs.

### Conflicting Interaction Between Phayre's langur Troop and Dogs

When the sighting of Phayre's langurs in the forest fragment, dogs started barking and jumping towards the monkeys. This created a chaos and

disturbance in their troop. The Phayre's langurs immediately started to alert each other and they showed aggressive behavior towards the dogs. All members of the Phayre's troop climbed at the top of bamboo shoots. The aggressive behavior comprised of a series of reaction involving scowling facial expression, showing of teeth, jumping from one bamboo shoot to another one and production of a threatening sound khaw-kahw-kahw-khow. Both the adult males took active part in showing the aggressive behavior. After a few minutes, females and juveniles went away from the area leaving only the adult males behind. The adult males diverted the interest of dogs from females and juveniles by vigorously shaking the bamboo plants and allowed a safe passage for them to move away. This showed the sophisticated and effective behavior of Phayre's langurs in safeguarding the weaker members

of the troops. This behavior continued for half an hour after which the adult males also moved away from the forest fragment. This whole incident caused an unwanted removal of Phayre's langurs from their habitat.

In the context of the above incident, the dogs may pose a very serious threat to the Phayre's langurs. The key problem is that canine harassment may disturb the privacy of monkeys. There is also a risk that dogs may bite a young Phayre's to death or monkeys may also die due to infection from

a bite. Oliveira *et al.* (2008) observed the predation of capuchin monkey *Cebus nigritus* (Primate: Cebidae) by domestic dog. This problem may occur in other conservation units and should, therefore, be treated with more rigor by the environmental agencies. There are also chances of zoonosis in langurs through the regular contact with humans or domestic dogs. Dogs may also act as potential vectors of dreaded diseases like leishmaniasis and rabies threatening the native species existence (Butler *et al.*, 2004; Curi *et al.*, 2006).

## CONCLUSION

Phayre's langur is one of the most endangered monkeys in the Cachar district of Assam. Large scale destruction of habitat for the procurement of agricultural land and new human settlements is very detrimental to the survival of Phayre's in Cachar district. The high dependence of local people on fuelwood and the harassment by domestic dogs may result in the expulsion of Phayre's langurs from their native area. Thus education and awareness of the local people about the importance of monkeys and their role in the ecosystem is one side of the effective protection of Phayre's langurs. Providing alternative solution to fuelwood and the effective agriculture may also reduce some pressure on the remaining habitats of Phayre's langur.

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