

FIRST SIGHTING OF PREDATORY ATTACK ON A MALABAR GREY SLENDER LORIS *Loris lydekkerianus malabaricus* BY BROWN PALM CIVET *Paradoxurus jerdoni*

Smitha D. Gnanaolivu^{1*} and Mewa Singh²

Biopsychology Laboratory and Institution of Excellence, Vijnana Bhavan, University of Mysore, Manasagangotri, Mysore 570006, Karnataka, India. E-mail: ¹simmy.smitha@gmail.com; ²mewasinghltm@gmail.com

*Corresponding author

ABSTRACT

The Malabar Grey Slender Loris *Loris lydekkerianus malabaricus* plays an important role as a predator of insects, but there is little confirmed knowledge of predation on lorises. Several animals are assumed to be their potential predators, but no direct predation on slender lorises has ever been reported. In this paper, we report a direct observation of predation on an adult female Malabar Grey Slender Loris by an adult Brown Palm Civet *Paradoxurus jerdoni*, a species not generally recognised as a predator of lorises. The incident was observed at the Aralam Wildlife Sanctuary, Kerala, India. The predominantly frugivorous Brown Palm Civet apparently includes animal protein in its diet during periods of fruit scarcity.

Keywords: Aralam Wildlife Sanctuary, palm civet, slender loris, predation, Western Ghats.

INTRODUCTION

Prey and predator relationships have always played an important role in every ecosystem, by being the prime movers of energy through food chains and by balancing the ecology of populations in determining the mortality of prey and the birth of new predators (Purves et al., 2004).

Such is the case with the Malabar Grey Slender Loris *Loris lydekkerianus malabaricus* Wroughton (Fig. 1), a nocturnal primate, which plays an important role in its ecology by preying on insects and hence, regulating the insect population in the region (Nekaris & Rasmussen, 2003; Kumara et al., 2005). However, little is known of predation on slender lorises, very likely due to their nocturnal behaviour and that such observations are opportunistic.

A literature search did not yield any confirmed reports of predation on slender lorises. However, potential nocturnal predators of lorises include Jungle Cat *Felis chaus* Schreber and Rusty-spotted Cat *Prionailurus rubiginosus* (l. Geoffroy Saint-Hilaire), the domestic cat *Felis catus* Linnaeus, Indian Krait *Bungarus caeruleus* (Schneider) and Common Sand Boa *Eryx conicus* (Schneider), Common Barn-owl *Tyto alba* (Scopoli) and Spotted Owlet *Athene brama* (Temminck) (Bearder et al., 2002; Radhakrishna & Singh, 2002). In addition, the

Malabar Pit Viper *Trimeresurus malabaricus* (Jerdon) and Green Vine Snake *Ahaetulla nasuta* (Bonnaterre) have been observed in the trees where lorises were foraging or mating (SDG, pers. obs.). Malabar Grey Slender Lorises, however, did not show any signs of being threatened by them (Bearder et al., 2002; Nekaris et al., 2007). The prior evidence came from dietary studies of Barn Owls and Spotted Owlet, and from the comparisons of the calls of lorises and owlets through the night, but there was no direct evidence of owls preying on lorises (Bearder et al., 2002). Domestic cats have been observed to chase lorises up the trees during which the lorises gave out loud shriek threat calls (Nekaris, 2001).

The sighting of predation reported here is thus the first in more than a century; it has thrown light on one of the predators for the Malabar Grey Slender Loris. The Brown Palm Civet *Paradoxurus jerdoni* Blanford, has not been previously listed as a potential predator for the Malabar Grey Slender Loris. An incident of predation on an adult female Malabar Grey Slender Loris by an adult female Brown Palm Civet took place during our study on relative loris densities in different forest types at the Aralam Wildlife Sanctuary, Kannur District, Kerala, India. The study site, Chullikkandim (11°56'4"N, 75°48'33"E), is a semi-evergreen forest fragment with an area of around 1.5 km². Three



Fig. 1. The Malabar Grey Slender Loris *Loris lydekkerianus malabaricus* ©Roshin Tom Chandrankunnel.

species of civets, Brown Palm Civet, Asian Palm Civet *Paradoxurus hermaphroditus* (Pallas) and Small Indian Civet *Viverricula indica* (É. Geoffroy Saint-Hilaire), are found in the Aralam Wildlife Sanctuary.

The following observations were made by the author (SDG). On 7 April 2016, at 23:45 h, four of us (SDG, two volunteers, and one tracker) were surveying one of the line-transects in the Chullikkandim region. The observations were made on foot, using a red light from our red cellophane-covered headlamps. We recorded the incident using *ad libitum* sampling.

Sudden loud loris shrieks were heard 45 minutes after we began our survey. We moved in the direction of the sound and spotted four pairs of eyes on a *Olea wightiana* Wall. ex G. Don tree. The tree was 50 m ahead of us and at a perpendicular distance of 6 m from the line transect. We went closer for a better view of the animals that we sighted. We observed two Brown Palm Civets at a height of about 6 m which were in close proximity to an adult female loris at the same height on a secondary branch. A juvenile loris was about 1 m away at a height of about 9 m from the female loris. The civets had cornered the female loris to the edge of the secondary branch of the tree and surrounded it from both sides (perpendicularly). Soon after, one of

the volunteers observed that one of the civets had her mouth gripped around the female loris. It was the bright white light from one of our torches that alarmed them. The civet, distracted by the bright light, lost its grip and the loris fell onto a branch which was situated about 50 cm below. The civet immediately jumped onto the branch below and grabbed the loris at its neck and thorax region, using its sharp teeth, and disappeared into the foliage. The juvenile loris, meanwhile, escaped higher into the foliage. The other civet stared at us from a distance for 38 seconds and then escaped into the foliage. The entire incident took place in the dead of night, giving us no time to focus our white lights or to take pictures.

Brown Palm Civets, being primarily nocturnal, inhabit the dense canopy cover of the rainforests (Mudappa et al., 2010). They are also endemic to the Western Ghats (Ashraf et al., 1993). Food habits of the Brown Palm Civet by previous scat analysis indicated that they are mostly frugivorous, with 97% of scats containing plant matter – mainly fruit (Mudappa et al., 2010). Even though they show such a high level of frugivory, Brown Palm Civet scats contained invertebrate and vertebrate remains during 23 months of 1998 and 1999, with higher proportions in some months when

only a few fruit species were consumed (Mudappa et al., 2010). The increase in proportion of non-fruit items in the diet is possibly related to periods of relative fruit scarcity, making civets more opportunistic in their diet, and subsequently dependent on animal matter as a supplement (Mudappa, 2001). It is the usual behaviour of many frugivorous species either to migrate to habitats that have larger food resources during times of scarcity, or to shift to other rarer, aseasonal, or non-preferred fruits (van Schaik et al., 1993) or on animal matter as a supplementary source of nutrition (Ray & Sunquist, 2001; Zhou et al., 2008).

Being mainly arboreal and frugivorous in habit, Brown Palm Civets can survive in areas that contain a relatively undisturbed canopy and adequate food resources, such as in coffee estates which retain most of the natural rainforest canopy tree and liana species. Judging by their requirements, the species is not able to withstand conversion of its rainforest habitat into plantations such as Tea *Camellia sinensis* (L.) Kuntze, eucalyptus *Eucalyptus* spp., and Teak *Tectona grandis* L.f., although they may continue to use patches that have been converted to coffee *Coffea* spp., and Cardamom *Elettaria cardamomum* (L.) Maton plantations, since the large-canopy trees are preserved in such instances (Rajamani et al., 2002). Although mostly solitary (Mudappa et al., 2010), pairs of civets are not uncommon at the Aralam Wildlife Sanctuary (SDG, pers. obs.).

This new sighting opens up a host of possibilities in the study of loris predation, where animals that were not previously considered to be loris predators, can be studied and concentrated efforts to make such sightings can be made.

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