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continued on the back inside cover

Cover: Nilgiri Large Burrowing Spider *Haploclastus nilgirinus*. Acrylic on canvas. © Aakanksha Komanduri.

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SHORT COMMUNICATION

New record of Mysore Slender Loris *Loris lydekkerianus* near Puducherry, India

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Abstract: The Mysore Slender Loris *Loris lydekkerianus*, a nocturnal and 'Near Threatened' primate, is found in the Eastern Ghats and eastern foothills of the southern Western Ghats; mainly occurs in dry deciduous, and scrub forests with high tree density areas. Three individuals of loris were sighted in the upper canopy of *Pterocarpus santalinus* and *Acacia auriculiformis* trees in the planted forest patches near Puducherry, southern India, during September and October in 2024. All three lorises were located within a 300-m radius, with inter-individual distances of 270–500 m. This was the first sighting of slender lorises near Puducherry. This observation reiterates the importance of continuous monitoring to better understand the recovery of biodiversity in the restored forests and its significance in conserving threatened native species such as the slender loris.

Keywords: Aranya forest, Auroville, density estimation, endangered species, nocturnal primate, primate conservation, restored forests.

Slender lorises are one of the two genera of nocturnal primates (genus *Loris*) that inhabit India and Sri Lanka (Nekaris 2001). Slender lorises are confined to India and Sri Lanka, where they inhabit moist to dry and lowland to montane forests (Singh et al. 2021). Three species of slender lorises are found in South Asia: the Mysore Slender Loris *Loris lydekkerianus* found in southern India and Sri Lanka, the Malabar Slender Loris *Loris malabaricus*, and the Red Slender Loris *Loris tardigradus,* found only in Sri Lanka (Groves 2001; Teja et al. 2023). The Mysore Slender Loris is a cryptic, solitary, and nocturnal primate, found in the dry deciduous and scrub forests of the Eastern Ghats, and southern Western Ghats (Singh et al. 1999, 2000; Molur et al. 2003; Radhakrishna et al. 2011; Teja et al. 2023).

In southern India, the highest number of loris sightings occur in dry deciduous forests, followed by moist deciduous forests, evergreen forests, and restored forests (Singh et al. 1999, 2000; Kumara et al. 2006; Radhakrishna et al. 2011; Kumara & Sasi 2014; Kumara et al. 2016). The variation in habitat preferences between regions highlights the slender loris' adaptability to different environments. The slender loris is primarily insectivorous, detecting prey mainly through vision, and smell. It uses acrobatic postures to catch insects like ants and termites, typically with one or two hands. It rarely drinks water, possibly obtaining hydration or detoxifying ants through fruit pods, and prefers terminal branches for foraging (Nekaris 2000, 2002, 2005; Radhakrishna & Singh 2002).

The Mysore Slender Loris and Malabar Slender Loris are both classified as 'Near Threatened' (Kumara et

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al. 2022a,b) and listed in the Schedule I of the Wildlife (Protection) Amendment Act, 2022. Hunting and trading of lorises or their parts are prohibited in India (Gnanaolivu et al. 2022). Major threats to its survival include habitat loss, fragmentation, poaching, and trapping for traditional medicine and biomedical research (Kumara et al. 2006). These factors are expected to cause further decline in loris populations (Molur et al. 2003). Slender loris conservation prospects are positive in certain regions due to the absence of human-loris interactions, as lorises don't compete with humans for resources. Additionally, cultivated areas with fences & roadside trees can serve as essential corridors for lorises that link fragmented forest patches (Singh et al. 1999). These factors offer potential for supporting loris populations. Therefore, the study aims to assess the distribution, and population density of slender loris in various restored forest patches near Puducherry region, evaluate habitat conditions, and identify threats to inform conservation strategies and management plans for this threatened species.

Methods

Study area

A survey on Mysore Slender Loris was conducted in the Aranya Forest and Sanctuary (11.573 ^{0}N, 79.460 ^{0}E), a restored man-made forest located in the west of the Villupuram District border between Tamil Nadu and Puducherry (Image 1). It spans 100 acres, 60% of which is managed by the Auroville Foundation, while the rest comprises previously barren, unused land. It is located 8 km north-west of Puducherry city and 2 km east of Puducherry's Ossudu Lake Bird Sanctuary. This forest habitat supports nearly 400 indigenous plant species, 240 bird species, including the Indian Eagle Owl *Bubo bengalensis*, and 54 butterfly species (D. Saravanan per. comm.). It is home to rare mammals such as Indian Crested Porcupines, Jungle Cats, Golden Jackals, Small Indian Civets, Palm Civets, and monitor lizards. Deep ravines and several seasonal streams mark the terrain.

The climate shows a mean annual temperature of 29.5 °C and an average annual rainfall of 1,200 mm. Monthly temperatures range 25–34 °C. The region experiences a

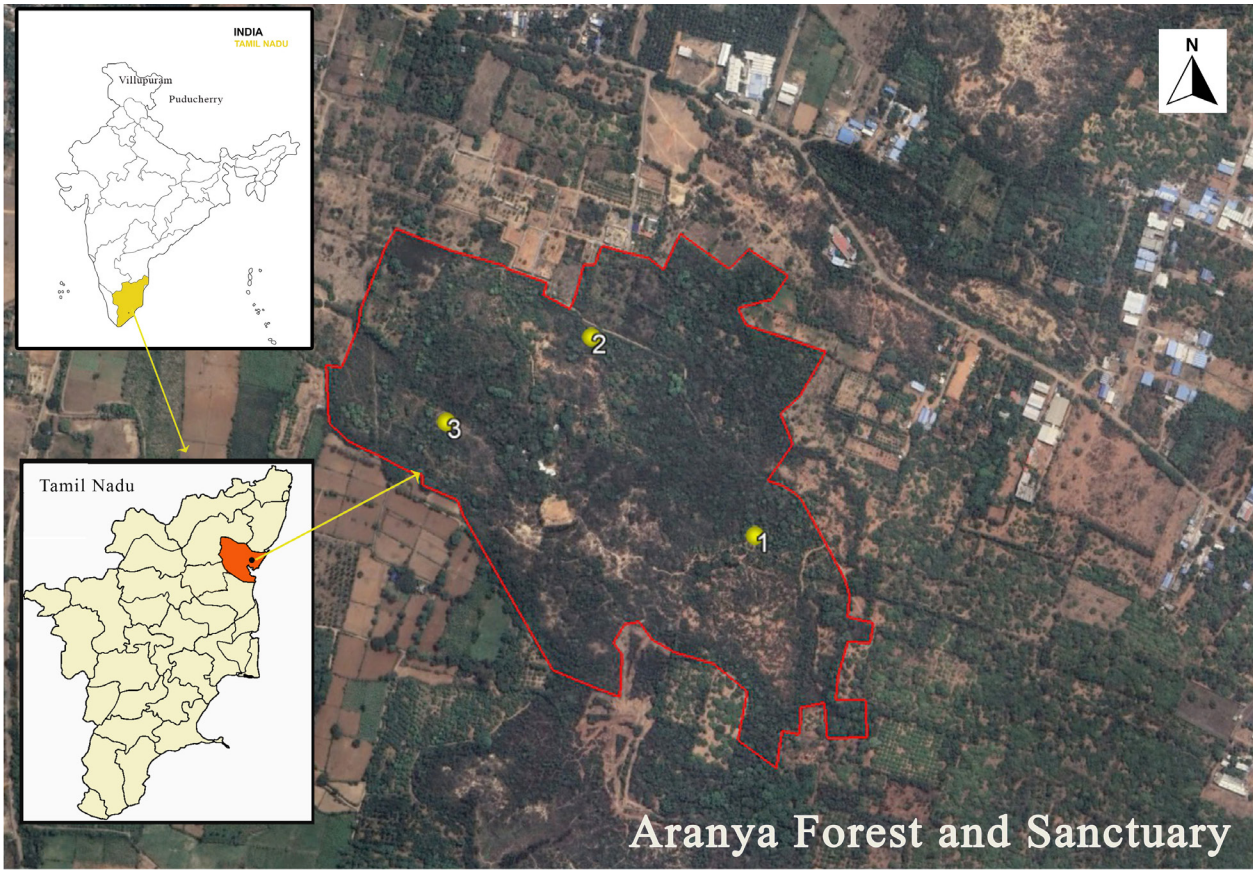

Image 1. Map and location of Mysore Slender Loris *Loris lyddekerianus* sightings recorded in the Aranya Forest and Sanctuary near Puducherry, Tamil Nadu, India.

tropical asymmetric climate, with most rainfall occurring during the north-east monsoon (October–December). In the Aranya Forest, the upper storey consists of tree species such as *Pterocarpus santalinus*, *Hardwickia binata*, *Acacia auriculiformis*, *Pterospermum canescens*, *Garcinia spicata*, *Lannea coromandelica*, *Chloroxylon swietenia*, and *Pongamia pinnata*. The middle storey features species like *Lepisanthes tetraphylla*, *Drypetes sepiaria*, *Psydrax dicoccos*, *Tricalysia sphaerocarpa*, *Diospyros ebenum*, and *Albizia amara*. The understorey is dominated by *Memecylon umbellatum* and *Glycosmis pentaphylla*.

Field survey

Surveys were conducted for loris on the extent of forest cover in the restored forests of the Auroville Bioregion. Depending on accessibility and terrain topography, foot transects were employed following the method described by Singh et al. (1999). We used all existing natural trails and roads for surveying loris. Night surveys were conducted between 1900 h and 2200 h with a team comprising 4–5 people walking at an average speed of 1.5 km/h along each side of the trails in September–October 2024. Flashlights and headlamps were used to detect the characteristic orange-red eye shine of the slender loris, which is visible from over 100 m and serves as a reliable indicator of their presence (Singh et al. 1999, 2000). The species was confirmed when individuals were visually sighted; vocalizations alone were not considered sufficient evidence. For each detection, the time of sighting, host tree species, and the number of individuals were recorded.

Results And Discussion

Over eight nights and a total of 24 hours of observations, we recorded sightings of three individuals of the Mysore Slender Lorises within the Aranya Forest and Sanctuary (Table 1). The first individual loris was observed in a *Pterocarpus santalinus* tree at an average height of 15 m, positioned within the terminal branches (Image 2). The loris was observed feeding, although the prey could not be identified due to rain, which limited visibility during the 20-minute observation from a distance of approximately 20 m. The individual appeared calm, displaying active behaviour with no signs of distress or aggression. The loris was observed detecting the prey visually, capturing it with acrobatic suspensory postures, and grasping it with one or both hands rather than directly with the mouth as similar to the observations of Nekaris (2001).

On a subsequent survey, we found two more individuals at a distance of 270 m interval. The second individual was located at an average height of 8 m in the terminal branches of a *Pterocarpus santalinus* tree that was sighted from a distance of 60 m. This individual exhibited quadrupedal locomotion with rapid movements along the terminal twigs, probably looking for prey. On the same night, the third individual was observed at a height of 8 m in an *Acacia auriculiformis* tree (Image 3). All lorises were observed on the terminal branches and twigs of large trees, where they frequently gathered ants or termites directly from the branches, appearing to rely primarily on sight, and smell for detecting prey (Nekaris & Rasmussen 2003). The richness of tree species emerged as a major factor in loris occupancy and abundance, as anthropogenic impacts tend to create secondary forests with higher species diversity, enhancing loris habitats (Morris 2010).

All three individuals were located within a 300-m radius, with inter-individual distances ranging 270–500 m, resulting in an average encounter rate of one individual/500 m walk. Most of the slender loris populations in Tamil Nadu were reported from the south-central districts, typically found at altitudes below 300 m, with some reaching up to 1,257 m (Singh et al. 2021). Singh et al. (1999) documented four individuals within a 50-m range in Dindigul, Tamil Nadu. However, abundance patterns of loris varied spatially, as south-central Tamil Nadu shows high slender loris population densities (2.21–0.75 /km), while densities in north-central, and western Tamil Nadu ranged 0.90–0.03 /km

Table 1. Observations of Mysore Slender Loris *Loris lyddekerianus* in the Aranya Forest and Sanctuary near Puducherry.

Date and time	Location	Host tree	Remarks
20.ix.2024 at 1950 h	11.574 N & 79.461 E; 75 m	*Pterocarpus santalinus* (Image 2)	Sighted at a height of 15 m with active behaviour, climbing up and down on the terminal branches. No agonistic behaviour was observed.
21.x.2024 at 1735 h	11.575 N & 79.463 E; 67 m	*Pterocarpus santalinus*	Sighted at a height of 8 m with active behaviour and quadrupedal rapid walk on the terminal twigs. Unable to take clear photos.
21.x.2024 at 2050 h	11.574 N & 79.455 E; 57 m	*Acacia auriculiformis* (Image 3)	Sighted at a height of 8 m with active behaviour, quadrupedal running, and climbing up and down on the terminal twigs. No agonistic behaviour was observed.

Image 2. Mysore Slender Loris *Loris lyddekerianus* on the *Pterocarpus santalinus*. © P. Aravind Aathi.

Image 3. Mysore Slender Loris *Loris lyddekerianus* on the *Acacia auriculiformis*. © P. Aravind Aathi.

and 0.25–0.01 /km, respectively (Kumara et al. 2016).

According to the slender loris occurrence recorded from 22 districts of Tamil Nadu (Kumara & Sasi 2014), the mean relative abundance of lorises varied between 0.03 /km and 2.21 /km. Of the 22 districts, three individuals were recorded in Villupuram District (one individual from Tirukoilur-Rishivandiyam reserve forest and two from Tirukoilur-Tandarpattu reserve forest). Whereas the

present study site of the Aranya Forest and Sanctuary that is also located in the same Villupuram District but near Puducherry is reported for the first time with three individuals of Mysore Slender Loris, which is 65 km away from the previous sightings of loris, and there is no forest connectivity between Aranya Forests and Tirukoilur Reserve Forest. Though calls have been heard, there are no direct sightings recorded from the other restored forests of Auroville including Pitchandikulam, southern forests (Newland, Success, Forecomers, Ravena), and Auroville Botanical Garden. More surveys are required to confirm the occurrence of Mysore Slender Loris in the other restored forests of Auroville region.

Conclusions

First time observations of three Mysore Slender Lorises near Puducherry in the restored forests of Auroville, provides valuable data on their distribution range, and habitat use in the restored forests. Continued monitoring is essential to gain a deeper understanding of their habitat use, behavioural ecology, food habits, and movement patterns of this species within both the Aranya Forest and Sanctuary, and other restored forests in Auroville. This study reveals that the restored forests can accommodate threatened species provided better management and protection.

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