

Exploring capacity of eco-hotels for the conservation of the endangered Sri Lankan grey langur (*Semnopithecus priam thersites*)

Alice Martin

alicemartin@live.com

Department of Anthropology and Geography, School of Social Sciences and Law, Oxford
Brookes University, Gipsy Lane, Oxford, Oxon, OX3 OBP, UK

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Abstract

Sri Lanka is a biodiversity hotspot characterised by detrimental amounts of deforestation, habitat fragmentation and human exploitation. With little natural forest remaining, private industries owning large plots of land are beginning to play a prominent role in providing protected areas for primate species to utilise. This study aimed to investigate how eco-hotels can conserve Sri Lanka's 12 endemic primate taxa, with a focus on the Endangered Sri Lankan grey langur (*Semnopithecus priam thersites*). A multi-faceted study was employed to record the ranging, feeding behaviour and interactions between humans and two groups of *S. p. thersites*. The study took place at sister hotels Cinnamon Lodge and Chaaya Village in Sri Lanka's Dry-Zone between May and July 2010.

The Ranges software was employed to estimate home range using 100% Minimal Convex Polygon (MCP) and 95% and 20% Kernel analyses. Home ranges were small (14-20 ha) and primarily restricted to the hotel grounds. Three 20% Kernel cores were identified for the installation of initiatives to promote conservation and regulate tourists, including education material, set viewing areas and guided tours. Groups were primarily seed predators, regularly consuming five species: rain tree (*Albizia saman*), Indian mango (*Mangifera indica*), orchid tree (*Bauhinia racemosa*), Indian beech (*Pongamia pinnata*) and Ceylon oak (*Schleichera oleosa*). As seed predators *Semnopithecus p. thersites* contribute little to seed dispersal and habitat heterogeneity. High-use species can be planted on-site to maintain resources, enhance habitat and act as food lures away from man-made structures.

Viewing of primates was the most commonly observed interaction and was primarily performed by tourists. Person type significantly influenced the behaviour exhibited, with those living commensally with primates being more likely to exhibit negative behaviours (e.g. throwing objects and chasing). Educational material and mitigation techniques need to be explored on-site to regulate the behaviour of tourists and staff and to help diffuse conflict.

The eco-hotels in this study do indeed seem to be a safe refuge for *S. p. thersites*. A long-term study is required to record ranging and feeding behaviour across seasons and further quantify interactions between humans and primates. This study indicates the potential for private sector industries to promote and assist primate conservation in Sri Lanka and beyond.



Juvenile *S. p. thersites* feeding on Indian mango fruit (*Mangifera indica*). Photo © Alice Martin