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Biodiversity Record: First record of the Raffles' banded langur on Eco-Link@BKE

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Subject: Raffles' banded langur, Presbytis femoralis femoralis (Mammalia: Primates: Cercopithecidae)

Subject identified by: Khairi Doroham.

Location, date and time: Singapore Island, Bukit Timah, Eco-Link@BKE (bridge over the Bukit Timah Expressway); 16 October 2023 at around 1827 hrs and 19 October 2023 at 1630 hrs.

Habitat: Concrete bridge over a six-lane motorway, its topside densely planted with trees and shrubs.

Observers: Images obtained with an arboreal camera trap reviewed by Khairi Doroham, Han Wei Chong and Clement W. S. Chua.

Observations: A camera trap affixed approximately 10 m above ground on a *Sterculia* tree on Eco-Link@BKE captured images of an adult langur on 16 October 2023 at around 1827 hrs. The subject was sitting on a branch looking directly at the camera (Fig. 1). From a video clip recorded immediately thereafter, the monkey was scratching itself and looking around (Figs. 2 & 3). Within the same minute, it appeared to have moved off from the branch (Fig. 4) and there was no further capture of the langur by the camera trap (Fig. 4). On 19 October 2023 at 1630 hrs, a langur was photographed at the same location (Fig. 5). It had likely moved off from the branch within the same minute as there were no further captures on the camera trap. It could not be ascertained if the monkey recorded on both days is the same individual.



Fig. 1. Raffles' banded langur on a branch of a *Sterculia* sp. on Eco-Link@BKE, looking directly at the camera (Camera trap photograph by: Khairi Doroham).



Figs. 2 & 3. Screenshots from a video recorded on 16 October 2023 of a langur scratching itself while resting on a branch. Fig. 4. The same langur leaping off the branch. Fig. 5. A Raffles banded langur on the same *Sterculia* sp. tree, recorded three days later on 19 October 2023 (Camera trap video and photographs by: Khairi Doroham).

Remarks: The Raffles' banded langur is endemic to Singapore and southern Peninsular Malaysia. In Singapore, it is regarded as a 'Critically Endangered' species, with only 68 individuals in the wild as of 2021 (NParks, 2023; Woolloff et al., 2023). In Singapore, these monkeys are known to only reside in the Central Catchment Nature Reserve (CCNR) after the last individual in the Bukit Timah Nature Reserve (BTNR) died in 1987 (Yang & Lua, 1988; Ang et al., 2021). The establishment of the Bukit Timah Expressway (BKE) in 1986 resulted in the split of BTNR and CCNR and poses a challenge for wildlife to cross between the two reserves. In April 2021, an individual was sighted in Dairy Farm Nature Park, adjacent to BTNR, but there was no evidence of it having crossed over via the Eco-Link@BKE (Khoo et al., 2021). The present images are the first record of Raffles' banded langur using the Eco-Link@BKE.

The completion of Eco-Link@BKE in 2013 has re-established the connection between BTNR and CCNR, allowing wildlife to cross over the BKE safely. The landscape concept for the Eco-Link@BKE aimed to replicate a lowland forest habitat with multi-layer planting to mimic the vegetation structure of the adjacent reserves and provide a favourable corridor for different wildlife species (Chan et al., 2023). The trees on the Eco-Link@BKE have since grown to heights similar to the trees in the adjacent reserves, making them suitable for use by arboreal animals.

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