

Biodiversity Record: A mating pair of Sunda colugo

Charlene Yeong* & Burnard Seow

Wildlife Reserves Singapore, 80 Mandai Lake Road, Singapore 729826; Email: charlene.yeong@wrs.com.sg
(*corresponding author)

Recommended citation. Yeong C & Seow B (2021) Biodiversity Record: A mating pair of Sunda colugo. Nature in Singapore, 14: e2021043. DOI: 10.26107/NIS-2021-0043

Subjects: Sunda colugo, *Galeopterus variegatus* (Mammalia: Dermoptera: Cynocephalidae).

Subjects identified by: Burnard Seow and Charlene Yeong.

Location, date and time: Singapore Island, Mandai Lake Road, in the compound of the Singapore Zoo; 26 October 2020; around 1825–1845 hrs.

Habitat: Parkland surrounded by secondary forest.

Observer: Burnard Seow.

Observations: Three colugos were observed clinging to the trunk of a kapok tree (*Ceiba pentandra*). One of them, with a red-tinged coat, was positioned about 3 m high. The other two individuals were about 10 m above ground. One of the two, with a rufous coat and presumably a male, was partially covering the caudal body of the other, which was grey and presumed to be a female (Fig. 1). The rufous colugo repeatedly and roughly bit at the scruff region of the grey individual. After about 11 seconds, the grey colugo climbed further up the trunk, and glided off to a rain tree (*Samanea saman*) about 18 m away. The rufous colugo did the same almost immediately.

On the rain tree, the rufous colugo pursued and attempted to cover the grey colugo's dorsum and bite at her scruff (Fig. 2). This caused the grey colugo to slip slightly down the trunk before she climbed higher and away from the male. A rough and grating vocalisation was heard during the activity. The rufous colugo continued to pursue the grey colugo, and both then glided to an adjacent branch. While clinging to the tree trunk, the rufous colugo proceeded to cover the caudal body of the grey colugo, who by then was quiet with its head pointed towards the sky. The rufous colugo then moved his hind limbs towards the grey colugo and started pelvic thrusts, while at the same time arching his back in kyphosis. This lasted about 65 seconds. Intromission could not be observed due to the patagium of the rufous colugo obscuring the observer's view (Fig. 3).

A series of pursuits then followed, with the rufous colugo pursuing the grey colugo to neighbouring trees. They ended up back on the kapok tree where they were first seen, with the rufous colugo chasing the grey colugo around and up the trunk. At one point, the grey colugo kicked the rufous colugo with her hind leg, vocalising at the same time. This action caused the rufous colugo to slip off, but he managed to glide and turn back onto the same kapok tree, before continuing with the pursuit. Both colugos glided to another tree across the road, then moved out of the observer's sight.

The entire observation lasted about 20 minutes. The third colugo, initially seen below the pair, had followed them the entire time, but did not appear to catch up with them.

Remarks: In Singapore, the Sunda colugo occurs in forest habitats with closed canopy cover, mainly in the Central Catchment and Bukit Timah Nature Reserves (Lim, 2007; Lim et al., 2013). A thriving population of wild colugos naturally occurs within the compounds of the Singapore Zoo, River Safari and Night Safari (Lim, 2007; Charlene Yeong, pers. obs.). Although commonly seen, little is known about this cryptic and nocturnal species. Byrnes et al. (2011) reported that male colugos glide more often and further than females, which might increase reproductive success. The current record appears to be the first time mating behaviour and copulation, including the male's pursuit of the female, and aggression by both the male and female, is described for *Galeopterus variegatus*. It demonstrates the need for robust, intact habitats with neighbouring tall trees within gliding distance, to allow for courtship activity that includes numerous options for chasing and evasion. That these trees need not be native suggests the adaptability of the Sunda colugo within mature wooded environments. This is supportive of previous findings that secondary and disturbed forests are also important habitats for *Galeopterus variegatus* (Lim et al., 2013).



Fig. 1. A Sunda colugo with rufous pelage covering the rear part of another colugo with grey coat, while both are flat against the tree trunk. (Photograph by: Burnard Seow).



Fig. 2. Rufous colugo biting and attempting to mount grey colugo after vigorous chasing and gliding between trees. (Photograph by: Burnard Seow).



Fig. 3. Rufous colugo with back arched and presumably copulating with the grey colugo. Evidence of intromission is obscured by the rufous colugo's patagium. (Photograph by: Burnard Seow).

Literature cited:

- Byrnes G, Lim NTL, Yeong C & Spence AJ (2011) Sex differences in the locomotor ecology of a gliding mammal, the Malayan colugo (*Galeopterus variegatus*). *Journal of Mammalogy*, 92: 444–451.
- Lim NTL (2007) *Colugo – the Flying Lemur of Southeast Asia*. Draco Publishing Pte Ltd, Singapore, 80 pp.
- Lim NTL, Giam X, Byrnes G & Clements GR (2013) Occurrence of the Sunda colugo (*Galeopterus variegatus*) in the tropical forests of Singapore: A Bayesian approach. *Mammalian Biology*, 78: 63–67.