

## Biodiversity Record: A moribund Sunda pangolin at Lornie forest

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**Subject:** Sunda pangolin, *Manis javanica* (Mammalia: Pholidota: Manidae).

**Subject identified by:** Amy Ferguson and Ng Bee Choo.

**Location, date and time:** Singapore Island, Central Catchment Nature Reserve, Lornie forest next to Lornie Park Connector; 11 September 2021; around 1000 hrs.

**Habitat:** Secondary forest.

**Observers:** Amy Ferguson, Ng Bee Choo, Nick Baker, Heng Yirui and others.

**Observation:** A large male example was found “sleeping” along a forest path at around 1000 hrs by Amy Ferguson. It was laying on the leaf litter with its eyes shut, and Amy heard the pangolin “snoring”. Amy observed the pangolin for nearly an hour and recorded many images. During this period, the animal turned its body around at least once (Fig. 1). Later on the same day, at around 1600 hrs, Ng Bee Choo and Nick Baker arrived and located the pangolin still laying on its side, eyes closed, at the same spot. It did not open its eyes or move after being given a gentle nudge, but was breathing. It appeared to have no external injury. A contractor from National Parks Board came to retrieve and transfer the pangolin to Mandai Wildlife Group for medical evaluation.

At Mandai Wildlife Group, Heng Yirui found the animal moribund and poorly responsive, making several feeble attempts at curling up when touched. It was a large male, weighing 9.4 kg, with good body condition (7/9). Radiology findings were generally unremarkable, with no evidence of spinal trauma or other musculoskeletal disorders. An abdominal ultrasound scan was also generally unremarkable. At the end of the examination, the pangolin was unable to retract its tongue when it was tugged gently. With the debilitating clinical outlook, the animal was euthanised on welfare grounds. A post-mortem examination was carried out the next day, within 24 hours of death. There was cerebral oedema, gastroenteritis with parasitic nematode infestation, as well as kidney disease. No signs of trauma were observed. Further samples were sent to the National Parks Board (NParks) for disease surveillance.

**Remarks:** The Sunda Pangolin is regarded as a ‘critically endangered’ species in Singapore (Lim et al., 2008). This mammal is largely nocturnal and usually conceals itself in tree hollows or burrows in the day (Lim, 2007). The observation of one laying exposed is unusual, and suggests that the animal was not well.

Rescued wild pangolins admitted to Mandai Wildlife Group for health assessments usually still have their defensive reflexes present, even when weak (Heng Yirui, pers. obs.). With the featured individual, the absence of defensive reflexes, including the inability to curl up and retract its tongue, as well as the animal not requiring any form of restraint when being examined, reflected a grave prognosis. The findings were consistent with systemic inflammatory response syndrome (SIRS), which is inflammation affecting the whole body due to an infectious or non-infectious cause, resulting in the animal’s moribund presentation.

**Note:** The featured animal was discovered by Amy Ferguson. The authors are grateful to Alice Early and Shamla Subaraj for reporting this interesting find. Benjamin Lee of NParks and Charlene Yeong of Mandai Wildlife Group kindly facilitated the transfer of the animal to Mandai Wildlife Group.



Fig. 1. Male Sunda pangolin in situ at Lornie forest between 1000 and 1100 hrs, laying on its right side (A), then on its left (B). (Photographs by: Amy Ferguson).

**Literature cited:**

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