

## Biodiversity Record: Pink-headed reed snake preying on an earthworm

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**Subjects:** Pink-headed reed snake, *Calamaria schlegeli* (Reptilia: Squamata: Colubridae);  
Earthworm, genus and species undetermined (Annelida: Oligochaeta: Megascolecidae?).

**Subjects identified by:** Cheong Wai Lun.

**Location, date and time:** Singapore Island, Old Upper Thomson Road; 18 November 2023; 2130 hrs.

**Habitat:** Mature secondary forest.

**Observers:** Zyon Aaronel Wee Zhun Wei and Cheong Wai Lun.

**Observation:** A pink-headed reed snake of about 37 cm was observed slithering out of the forest onto the road. It was heading for an earthworm exposed on the road, around 3 m away. The snake flicked its tongue as it slithered towards the earthworm (Fig. 1). It flicked its tongue as it closed in at the mid-section of the worm and then bit it there. Caught in the jaws of the snake, the earthworm wiggled violently and instantly broke in two. Within 5 seconds, the snake swallowed the part of the worm held in its jaws. The other part continued wiggling while the snake was swallowing the severed part. Then the snake located the other part of the worm and bit it in the middle (Fig. 2). That part also broke in two, and the snake ingested the portion in its jaws. The snake went for the worm again and bit it at the side. This time it took much longer to break into two pieces. After swallowing the shorter section (Fig. 3), the snake located the remaining section of the worm and swallowed that whole (Fig. 4). During the feeding process, the snake appeared to have lost track of parts of the earthworm multiple times, often slithering in opposite directions. The entire observation lasted approximately 5 minutes. The observers left after the snake had slithered back into the forest.

The entire feeding process can be viewed at <https://www.youtube.com/watch?v=1k9xvbxuffU>.



Fig. 1. In-situ image of the two subjects on the road at the start of the observation. The earthworm is at the lower left corner, the pursuing snake at the top right. (Photograph by: Cheong Wai Lun) Fig. 2. The snake closing in on its prey and about to bite its midsection (Screen grab from video recorded by: Zyon Aaronel Wee Zhun Wei).



Fig. 3. Snake biting the midsection of the earthworm after having severed and swallowed two sections. Fig. 4. Snake swallowing the last part of the earthworm (Photographs by: Cheong Wai Lun).

**Remarks:** Aside from frogs and slugs, the pink-headed reed snake is known to prey on insect larvae and earthworms (Charlton, 2020). The present observation is interesting because it shows prey being ingested in pieces. Earthworms have been recorded being swallowed whole by a sympatric congener, the variable reed snake (*Calamaria lumbricoidea*) (Tan & Yeo, 2013; Baker, 2014). This may suggest a different predation strategy adopted by *Calamaria schlegeli* that breaks its prey into sections and swallowing each section separately. It could be supported by the observation of the subject attacking the mid-section of the worm instead of targeting the ends (see Fig. 2).

On the other hand, it seems that the earthworm in the present observation is not *Pheretima darnleiensis*, the species that has been observed being ingested whole by *Calamaria lumbricoidea* (see Tan & Yeo, 2013; Baker, 2014). This appears to be a species that is particularly prone to autotomy, which makes it impossible for the snake to ingest entirely at once.

Clearly, many more observations on the feeding behaviour of both species of *Calamaria* are necessary to determine if they indeed have different methods of handling prey. This observation appears to show that the pink-headed reed snake is capable of actively pursuing prey by following its slime/scent trail.

**Literature cited:**

- Baker N (2014) Variable reed snake swallows earthworm. Singapore Biodiversity Records, 2014: 23–24.  
 Charlton T (2020) A Guide to Snakes of Peninsular Malaysia and Singapore. Natural History Publications (Borneo), Kota Kinabalu, viii + 299 pp.  
 Tan HH & Yeo DCJ (2013) Variable reed snake attempting to swallow earthworm. Singapore Biodiversity Records, 2013: 10.