

Biodiversity Record: A glow-worm, *Diplocladon hasseltii*, at Mandai Lake Road

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Subject: Glow-worm, *Diplocladon hasseltii* (Insecta: Coleoptera: Rhagophthalmidae).

Subject identified by: Abdul Razak Jaffar.

Location, date and time: Singapore Island, Mandai Lake Road, compound of the Night Safari; 7 December 2023; around 1040 hrs.

Habitat: Sub-urban parkland with native-dominated secondary forest.

Observers: Scarlet Mayo, Ernie Fazlihana and Abdul Razak Jaffar.

Observation: One larvae of 3.6 cm was found under a rock at the back of house area of the hog badger exhibit (Fig. 1). It was held temporarily in a plastic container for observation (Fig. 2). A millipede (*Trigoniulus corallinus*, Diplopoda: Spirobolida: Trigoniulidae) of about 6 cm was placed in the container. It was attacked by the glow-worm with a dance-like manoeuvre. The glow-worm intertwined with the millipede and found a soft spot below the latter's first body ring or the collum. There, it made an incision with its mouthparts and ingested the millipede's body juices (Fig. 3), leaving the millipede's exoskeleton quite intact.



Fig. 1. Dorso-lateral view of the larval *Diplocladon hasseltii* from the Night Safari (Photograph by: David Tan, Mandai Wildlife Group).



Fig. 2. Dorsal view of the larval *Diplocladon hasseltii* being held temporarily in a plastic container for observation. Fig. 3. Dorso-lateral view of the *Diplocladon hasseltii* (curled up at right) preying on a millipede, *Trigoniuulus corallinus* (Photographs by: Ernie Fazlihana).

Remarks: The glow-worm, *Diplocladon hasseltii* Gorham (1883), was recorded from Singapore by Haneda (1950) with drawings of adult male and female and positions of luminous organs. Kundrata et al. (2022) suspect that these may represent members of the con-familial genus *Haplocladon* instead. Glow-worms of the genus *Diplocladon* have been recorded from Singapore by Chan et al. (2012) and Tan (2018), but these have not been identified to species.

Diplocladon hasseltii is one of two species of glow-worms that have been recorded in the compound of the Night Safari. The other is an unidentified species of the genus *Stenocladus* (family Lampyridae) which feeds on earthworms (N. Ohba, personal communication). These two genera can be distinguished from each other by the number of rows of bioluminescent spots on their bodies. *Diplocladon* has three (one dorsal and two lateral) rows while *Stenocladus* has only two lateral rows of bioluminescent spots (Tan, 2018). Their diets also differ, with *Diplocladon* feeding on millipedes (present observation).

Note: We thank N. Ohba (personal communication on 15 October 2011) for information on *Stenocladus* at the Night Safari.

Literature cited:

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 Tan JC (2018) Fireflies of Pulau Ubin, Singapore. *Nature in Singapore*, 11: 127–138.