

Assassin bug feeding on millipede

Subjects: Millipede assassin bug, *Schottus* sp. (Insecta: Hemiptera: Reduviidae: Ectrichodiinae);
Millipede, ? *Leptogoniulus sorornus* (Diplopoda: Spirobolida: Trigoniulidae).

Subject identified by: Contributor.

Location, date and time: Singapore Island, Singapore Botanic Gardens; 25 January 2017; 2025-2100 hrs.

Habitat: On wooden boardwalk, in a small patch of tropical rainforest surrounded by urban parkland.

Observer: Contributor & Hwang Wei Song.

Observation: It had rained earlier in the day and many millipedes were crawling about on the boardwalk and railings. A nymph of an assassin bug of about 10 mm body length was observed with its stylet (proboscis) inserted into the ventro-lateral mid-section of a semi-coiled up millipede of about 3 cm total length (Figs. 1 & 2). After about half hour, millipede was abandoned, sucked dry (Fig. 3). Nearby was an adult assassin bug of about 15 mm body length with similar colour pattern (Fig. 4), perhaps a conspecific imago. A total of two nymphs and two adult bugs were observed. The adult, when prodded with a finger, gave off a noticeable odour similar to that emitted by stink-bugs.

Remarks: The diversity of reduviid bugs in Singapore is poorly known with at least 16 species recorded from there (see Wang & Tran, 2011). Recently, over 20 species of reduviids were recorded from the Mandai Lake Road area (Tan et al., 2015), but there was no representative from the subfamily Ectrichodiinae.

Members of the subfamily Ectrichodiinae appear to be exclusive predators of millipedes, with immature and adult bugs exhibiting both solitary and communal predation. As in the featured observation, they typically target the prey's intersegmental membranes in the ventral or ventro-lateral trunk area (Forthman & Weirauch, 2012).

The identity of the prey millipede in the featured observation is tentative. It appears to be the tropical tramp species *Leptogoniulus sorornus*, which is known to occur in the Botanic Gardens (see Decker, 2013: 5).

References:

- Decker, P., 2013. *Annotated Checklist of the Millipedes (Diplopoda) and Centipedes (Chilopoda) of Singapore*. Raffles Museum of Biodiversity Research, National University of Singapore. 29 pp.
- Forthman, M. & C. Weirauch, 2012. Toxic associations: a review of the predatory behaviors of millipede assassin bugs (Hemiptera: Reduviidae: Ectrichodiinae). *European Journal of Entomology*. 109: 147-153.
- Tan M. K., H. Yeo & J. X. Q. Lee, 2015. Diversity of entomofauna (Orthoptera, Reduviidae and Aculeata) in the Mandai Lake Road area, Singapore. *Nature in Singapore*. 8: 37-51.
- Wang L. K. & A. D. Tran, 2011. Assassin bugs. In: Ng, P. K. L., R. T. Corlett & H. T. W. Tan (eds.). *Singapore Biodiversity. An Encyclopedia of the Natural Environment and Sustainable Development*. Editions Didier Millet & Raffles Museum of Biodiversity Research, National University of Singapore. p. 231.

Contributor: Marcus F. C. Ng

Contact address: thebudak@gmail.com



Fig. 1. A nymph exhibiting solitary predation with its stylet inserted into the ventro-lateral trunk of its prey.



Fig. 2. Closeup view of the feeding nymph.



Fig. 3. Dead millipede, apparently sucked dry.



Fig. 4. Dorso-lateral view of an adult *Schottus*.

Photographs by Marcus F. C. Ng