

ミミズの手帳

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Predation by a geophilomorph centipede *Strigamia bicolor* (Chilopoda: Linotaeniidae) on a land snail *Trochochlamys crenulata* (Gastropoda: Euconulidae)

We report a case of depredation of a land snail by a geophilomorph centipede. At 08:53 JST on 21 August 2019, the first author observed a centipede preying on a land snail in a broad-leaved forest, Higashiyama District, Kyoto, Japan (34.994181°N, 135.78442°E). Both the centipede and snail were collected and preserved in absolute ethanol. The specimens have been deposited in the Zoological Collection of Kyoto University (KUZ). The centipede (KUZ Z4142) was identified as *Strigamia bicolor* Shinohara, 1981 on the basis of Shinohara (1981). The snail (KUZ Z4143) was identified as *Trochochlamys crenulata* (Gude, 1900) following Azuma (1982).

In the field, the head of *S. bicolor* was observed entering the shell of *T. crenulata* on a leaf of grass (Fig. 1A). Five minutes later, the centipede removed its head from the shell. The centipede then started to bite the snail again (Fig. 1B) and continued feeding on it for 20 min.

Centipedes of the genus *Strigamia*, distributed in temperate regions of the Holarctic, are one of major predators of the forest soil community (Bonato *et al.*, 2017). *Strigamia* species are frequently found in the forest litter layer, and sometimes under the bark of trees (Kuwabara, 1978), and some species inhabit seashores (Barber, 2011).

Strigamia maritima (Leach, 1817), a widespread littoral species, has been documented to feed on a variety of invertebrates including snails (*e.g.*, Blower, 1957; Lewis, 1961, 1981). However, the prey orientation and other ecological features of non-littoral species have not yet been characterized. The present observation documents a predator–prey relation-

ship between a *Strigamia* centipede and a micro land snail. Additional observations are needed to clarify the foraging ecology of forest-dwelling *Strigamia* species.

We thank Dr. Christopher Akcali (Edanz) for editing a draft of this manuscript. The research leading to this note was supported by the Sasakawa Scientific Research Grant from the Japan Science Society (Grant Number 2022-5017).

References

- Azuma, M., 1982. Colored Illustrations of the Land Snails of Japan. Hoikusha Publishing Co. Ltd., Osaka.
- Barber, A. D., 2011. Geophilomorph centipedes and the littoral habitat. *Terrestrial Arthropod Reviews*, 4: 17–39.
- Blower, J. G., 1957. Feeding habits of a marine centipede. *Nature*, 180: 560.
- Bonato, L., Bortolin, F., Drago, L., Orland, M. and Dányi, L., 2017. Evolution of *Strigamia* centipedes (Chilopoda): a first molecular assessment of phylogeny and divergence times. *Zoologica Scripta*, 46: 486–495.
- Kuwabara, Y., 1978. [*Scolioplanes maritimus japonicus*, which is frequently found under tree barks]. *Takakuwaia*, 10: 6 (in Japanese).
- Lewis, J. G. E., 1961. The life history and ecology of the littoral centipede *Strigamia* (= *Scolioplanes*) *maritima* (Leach). *Proceedings of the Zoological Society of London*, 137: 221–248.
- Lewis, J. G. E., 1981. The Biology of Centipedes. Cambridge University Press, Cambridge.
- Shinohara, K., 1981. Two new species of the genus *Strigamia* (Chilopoda: Geophilidae) from Japan. *Acta Arachnologica*, 30: 41–48 (in Japanese with English abstract).
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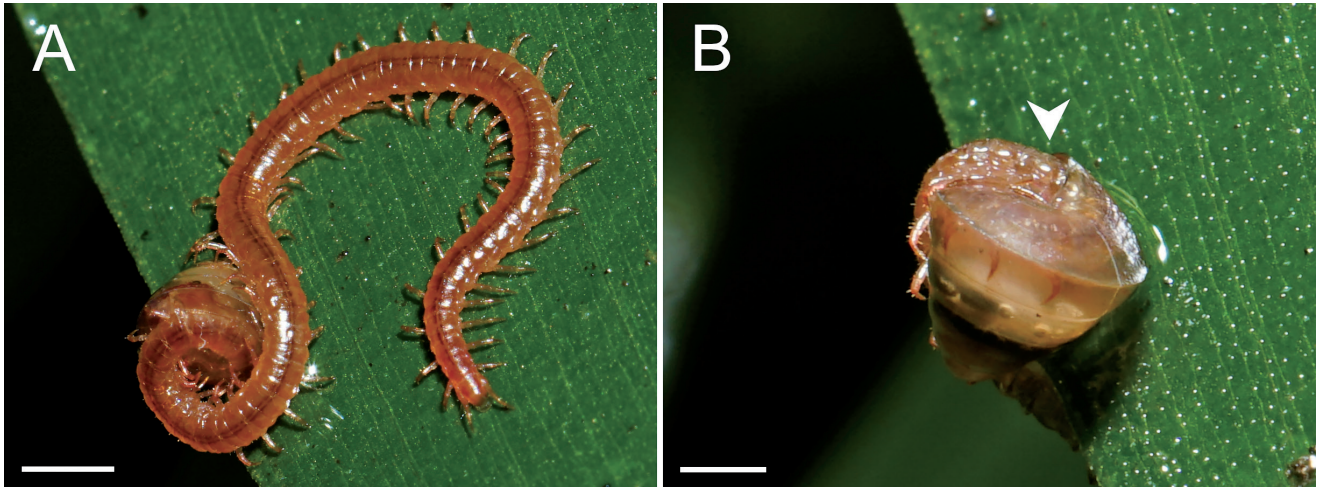


Fig. 1. Depredation of *Trochochlamys crenulata* by *Strigamia bicolor*. A, the head of *S. bicolor* in the shell of *T. crenulata*; B, *S. bicolor* entering the shell of *T. crenulata* through the shell aperture (arrowhead) and biting the snail body. Scale bars: A, 2 mm; B, 1 mm.