ミミズの手帳

この欄は、土壌動物に少しでも関連のことでしたら、会員のだれでも投稿できる気楽な頁です。短い観察記録、意見、書籍紹介、ニュース、会員の動静、資料や標本の提供・交換依頼などいつでも気楽に利用して下さい。ただし、原稿は1件につき1,200字程度にまとめて下さい。

The Chinese red-headed centipede Scolopendra mutilans (Chilopoda: Scolopendridae) is a predator of the terrestrial macrophagous leech Orobdella whitmani (Hirudinida: Orobdellidae)

We report herein the depredation of a terrestrial leech by an individual of a centipede species. At 02:07 JST on 24 May 2018, the first author observed a scolopendrid individual preying on a terrestrial leech, in a cemetery adjacent to a laurel forest in Sakyo-ku, Kyoto, Japan (35.0223°N, 135.7975°E; elev. 104 m). Both the centipede and leech were collected and transported to the laboratory. The centipede was directly preserved in absolute ethanol, while the leech was preserved in

70% ethanol, following Nakano (2018). The specimens have been deposited in the Zoological Collection of Kyoto University (KUZ). The centipede (KUZ Z2024; body length, 80.1 mm) was identified as *Scolopendra mutilans* L. Koch, 1878, based on Shinohara *et al.* (2015) and Kang *et al.* (2017). The leech (KUZ Z2023; body length, 86.8 mm) was identified as *Orobdella whitmani* Oka, 1895 by the last author.

During the observation in the field, *S. mutilans* was found biting the posterior area around the caudal sucker of *O. whitmani* (Fig. 1). The leech was struggling against the depredation event. Although the first author closely approached the two individuals and took several photographs, *S. mutilans* continued to feed on the leech for 7 min, at which point the organisms were collected by the first author.

Scolopendra mutilans is an aggressive predator that feeds primarily on arthropods and envenomates its prey (Dugon and



Fig. 1. Depredation of Orobdella whitmani by Scolopendra mutilans.

Arthur, 2012). Scolopendromorph centipedes can also feed on earthworms and even small vertebrates (Voigtländer, 2011). *Orobdella* leeches, which are indigenous to the Far East, feeds on earthworms (Nakano, 2017). However, our knowledge of the predators of *Orobdella* has been severely limited. Although predation of *Orobdella* leeches by the burrowing snake, *Achalinus spinalis* Peters, 1869, was once mentioned, this predator record was just based on a personal communication (Shibata, 1968). The present discovery elucidates the predator-prey relationship between scolopendrid centipedes and terrestrial *Orobdella* leeches.

References

- Dugon, M. M. and Arthur, W., 2012. Prey orientation and the role of venom availability in the predatory behaviour of the centipede *Scolopendra subspinipes mutilans* (Arthropoda: Chilopoda). *Journal of Insect Physiology*, 58: 874–880.
- Kang, S., Liu, Y., Zeng, X., Deng, H., Luo, Y., Chen, K. and Chen, S., 2017. Taxonomy and identification of the genus *Scolopendra* in China using integrated methods of external morphology and molecular phylogenetics. *Scientific Reports*, 7: 16032.

Nakano, T., 2017. Diversity of leeches from Japan: recent progress

- in macrophagous and blood-feeding taxa. pp. 319–340. *In*: Species Diversity of Animals in Japan (eds. Motokawa, M. and Kajihara, H.), Springer Japan, Tokyo.
- Nakano, T., 2018. A new quadrannulate species of *Orobdella* (Hirudinida: Arhynchobdellida: Orobdellidae) from Kii Peninsula, Japan. *Species Diversity*, 23: 43–49.
- Shibata, T., 1968. Reptiles of the Miura Peninsula. Science Report of the Yokosuka City Museum, 14: 95–102 (in Japanese with English summary).
- Shinohara, K., Takano, M. and Ishii, K., 2015. Chilopoda. pp. 873–910. *In*: Pictorial Keys to Soil Animals of Japan. The Second Edition (ed. Aoki, J.), Tokai University Press, Hadano.
- Voigtländer, K., 2011. Chilopoda Ecology. pp. 309–325. *In*: The Myriapoda. Volume 1 (ed. Minelli, A.), Brill, Leiden.

Ibuki Fukuyama (Faculty of Agriculture, Kyoto University), Takafumi Nakano (Department of Zoology, Graduate School of Science, Kyoto University)

Fig. 1 is shown in color online; printed in black-and-white.