

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 Amami terrestrial macrophagous leech *Orobdella dolichopharynx* (Hirudinida: Orobdellidae) was taken from the nostril of the Otton frog *Babina subaspera* (Anura: Ranidae)

We report the case of a terrestrial leech that was found emerging from a nostril of a ranid frog. At around 20:30 JST on 1 May 2019, the first author observed a ranid frog at the Wase-toge Pass, Amami-oshima island, Ryukyu Islands, Japan (28.31464°N, 129.48900°E) with a leech emerging from its nose. The frog was identified in the field as *Babina subaspera* (Barbour, 1908) by the first author. The leech was removed from the frog's nasal cavity, and then fixed and preserved in 70% ethanol. The *Orobdella* specimen has been deposited in the Zoological Collection of Kyoto University (KUZ). The leech (KUZ Z2582; body length, 78.2 mm—its anterior part, from the oral tip to somite IV a2, was lost in the process of extraction from the frog's nostril) was identified as *O. dolichopharynx* Nakano, 2011 by the last author.

During the observation in the field, the head region of *O. dolichopharynx* emerged at the nostril of *B. subaspera* (Fig. 1; a short movie has been uploaded on KyU Tube Bio at <https://kyutubebio.sci.kyoto-u.ac.jp/en/archive/zs122>). While several parasitic leech taxa, e.g., the glossiphoniid *Theromyzon* and hirudiniform Praobdellidae, contain mucous-membrane specific species (Sawyer 1986), all *Orobdella* species are non-parasitic macrophagous leeches (Nakano, 2017). Therefore, the present *Orobdella* individual seemed unlikely to have infested the nasal cavity of *B. subaspera*. Instead, we concluded that the *Orobdella* leech accidentally emerged through the nasal cavity of *B. subaspera* after being swallowed by the frog. Although predation of *Orobdella* leeches by a *Achalinus* snake, *Mogera* and *Euroscaptor* moles, and a *Scolopendra* centipede has been reported (Shibata, 1968; Yokohata, 1998; Fukuyama and Nakano, 2018), no predatory-prey relationship

between ranids and *Orobdella* has never been recorded to our knowledge. On the Malay Peninsula, however, a ranoidean frog *Limnonectes kuhlii* (Tschudi, 1838) (Dicroglossidae) was once reported as a predator of a Southeast Asian terrestrial macrophagous *Gastrostomobdella* leech (Leong and Lim, 2003); both the East Asian *Orobdella* and the Southeast Asian *Gastrostomobdella* inhabit moist forest floors, and share ecological traits (Sawyer, 1986). The present finding leads us to the possibility that *Orobdella* leeches may constitute part of the ranoidean frogs' diet.

References

- Leong, T. M. and Lim, G. H. S., 2003. Noteworthy dietary records for *Caudacaecilia larutensis* and *Limnonectes kuhlii* from Maxwell's Hill, Peninsular Malaysia (Amphibia: Gymnophiona and Anura). *Hamadryad*, 27: 268–270.
- 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.
- Fukuyama, I. and Nakano, T., 2018. The Chinese red-headed centipede *Scolopendra mutilans* (Chilopoda: Scolopendridae) is a predator of the terrestrial macrophagous leech *Orobdella whitmani* (Hirudinida: Orobdellidae). *Edaphologia*, 103: 33–34.
- Sawyer, R. T., 1986. *Leech Biology and Behaviour*. Clarendon Press, Oxford.
- Shibata, T. 1968. Reptiles of the Miura Peninsula. *Science Report of the Yokosuka City Museum*, 14: 95–102 (in Japanese with English summary).
- Yokohata, Y., 1998. The ecology of talpid animals. pp. 67–187. *In*: The Natural History of Insectivora (Mammalia) in Japan (eds. Abe, H. and Yokohata, Y.), Hiba Society of Natural History, Shobara (in Japanese).
- Masahiro Nishi (Kyushu Herpetological Society), Takafumi Nakano (Department of Zoology, Graduate School of Science, Kyoto University)



Fig. 1. *Orobdella dolichopharynx* emerging from a nostril of *Babina subaspera*.