

A new *Meghimatium* species from Vietnam (Gastropoda, Pulmonata, Philomycidae)

A. Varga

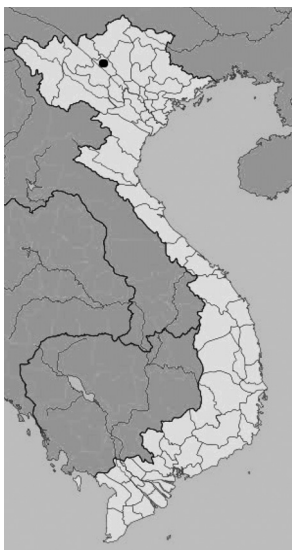
Abstract: The author describes a new species of Philomycidae, from the rain forest of Northern Vietnam.
Keywords: Gastropoda, Pulmonata, terrestrial slugs, Philomycidae, taxonomy, Vietnam.

Introduction

Coloration of live *Meghimatium* species is diverse and attractive (Schilthuizen, M. & Liew, T. S. 2008). The colour of alcohol-preserved specimens, however, fades and changes within a short period of time. Early authors have described numerous species of the genus found in Asia. These descriptions were based only on external characteristics, especially the coloration of preserved slugs, leaving the examination of genitalia out of consideration (Collinge, 1901, 1903; Cockerell, 1890; Simroth, 1902). It was Hoffmann (1924) who critically revised and synonymized many of the described species.. Wiktor et al. (2000) followed the same principles.

Meghimatium lucyenensis n. sp. (figs. 1–5)

Material: Vietnam, Yên Bái Province, Luc Yen (Lục Yên) (Map. 1), fringe of the rain forest next to a stream, from underneath stones, 05 December, 1971., leg. István Matskási &

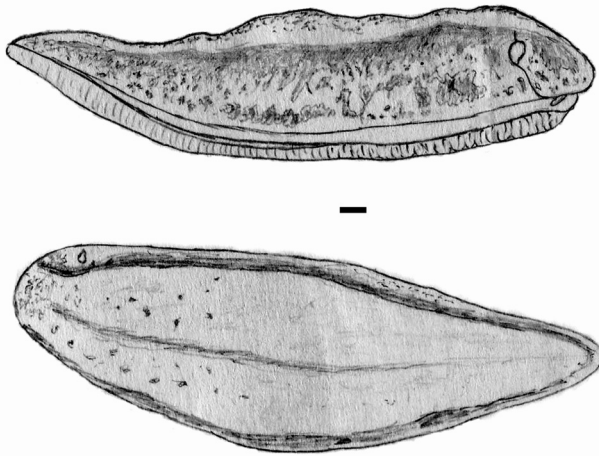


Map 1. Locality
of *Meghimatium lucyenensis* n.
sp. in Vietnam

György Topál. Holotype HNHM 92601/1, Paratype HNHM 92602/1 (Hungarian Natural History Museum, Budapest).

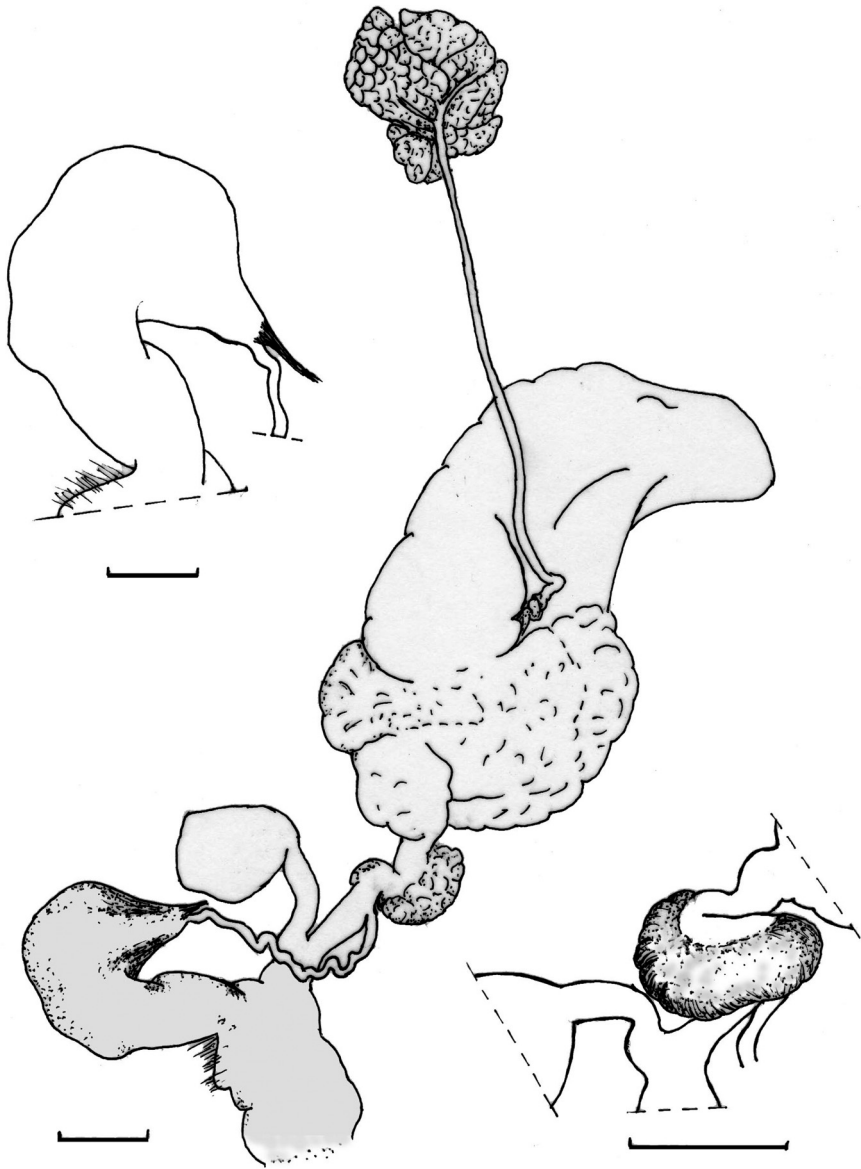
Diagnosis: – Animal small-sized, genital system with large atrium, short and thick penis, short and thin vas deferens, short and thick-set vagina.

Description (alcohol-preserved) (figs 1–2): The sexually mature slug is very small: the length of the preserved specimens are 23 (HT) and 22 (PT) mm. The colour of the body of the alcohol-preserved specimens is creamy. The dorsal side is less pigmented. There is a dark streak running along both edges and a fading greyish streak running in the middle. Laterally the slug is marked by a darker reticulate pattern. The reticulate pattern merges into a broader streak near the back, which is very distinct from the lighter part of the dorsal side. Sole colourless, creamy.



Figs 1–2. *Meghimatium lucyenensis* n. sp. – lateral and dorsal views of the holotype, scale bar: 1 mm

Genitalia (Holotype) (Figs 3–5): Vas deferens is thin and kinky, approximately as long as the penis. Penis is short, thick, curved, its proximal part is much thinner than the distal one, and its apical part is in the shape of a crooked club. The apex of the penis is pointed; vas deferens opens apically here, and the penial retractor muscle (fig. 5) is attached slicking to it. Atrium is large; it is longer than its width. Vagina is short; it is twice as wide as the oviduct. Oviduct is about twice as long as vagina. Spermatheca is angularly ovate, the spermathecal duct is short, and its length is roughly equal to that of the spermatheca. Vagina : oviduct = 1:1. Spermoviduct swells and curves in an arch over the mouth of vas deferens, then becomes much thinner in a short section (fig. 4). The central part of spermoviduct is robust. Glandula albuminalis is large, curved in an arch, and its volume is equal to, or slightly exceeds, that of the spermoviduct. The hermaphroditic duct is long and thin, and its length almost equals the joint length of the spermoviduct and glandula albuminalis. Glandula hermaphroditica : ductus hermaphroditicus = 1 : 2.5.



Figs 3–5. *Meghimatium lucyenensis* n. sp. – (fig. 3) copulatory organs of the holotype, (fig. 4) spermoviduct, (fig. 5) apex of the penis, scale bar: 1 mm

Comments: Based on its size the slug can well be distinguished from the larger *Meghimatium bilineatum* (Benson, 1842) [Synonyms in Hoffmann (1924) and Wiktor, A. et al. (2000): *Philomycus australis* Bergh, 1870; *Philomycus campestris* Godwin-Austen, 1876; *Philomycus chinensis* Cockerell, 1890; *Philomycus confusus* Cockerell, 1890; *Philomycus doderleini* Simroth, 1902; *Philomycus fruhstorferi* Collinge, 1901; *Philomycus laoshanensis* Chen &

Gao 1985; *Philomycus monticulus* Godwin-Austen, 1876; *Philomycus taivanensis* Simroth, 1890; *Philomycus viperinus* Simroth, 1902] and ***Meghimatium rugosum*** (Chen et Gao, 1982).

Meghimatium lucyenensis n. sp. differs well from the medium-size (40 to 50 mm) species of the genus, such as ***Meghimatium pictum*** (Stoliczka, 1873) [Synonyms in Hoffmann (1924) and Wiktor, A. et al. (2000): *Philomycus dendriticus* Collinge, 1901; *Philomycus balius* Simroth, 1902; *Philomycus fruhstorferi* var. *picta* Collinge, 1901; ?*Philomycus melachlorus* Simroth, 1902; ?*Philomycus reticulatus* Deshaies in Ferussac, 1830; *Philomycus tonkinensis* Simroth, 1902], ***Meghimatium baoshanense*** Tsai, Lu & Kao, 2011 (40–53 mm), ***Meghimatium striatus*** (van Hasselt, 1824), by its smaller size.

From the minute (12–16 mm) ***Meghimatium burchi*** Tsai & Wu, 2008 it differs by the structure of genitalia. The penis of ***Meghimatium burchi*** is long and thin, while that of ***Meghimatium lucyenensis*** n. sp. is short and thick.

Etymology: The name of the species is derived from the city of Luc Yen, the type locality of the new slug.

References

- Collinge W. E. (1903): On some species of slugs collected by Mr. H. Fruhstorfer – Journal of Malacology, 10: 16–17, Pl. 1.
- Cockerell, T. D. A. (1890): XLV, Notes on Slugs, chiefly in the Collection at the British Museum – The Annals and Magazine of Natural History, London, 6: 380–390.
- Collinge W. E. (1901): Description of some new species of slugs collected by Mr. H. Fruhstorfer – Journal of Malacology, 8: 118–121.
- Hoffmann, H. (1924): Zur Anatomie und Systematik der Philomyciden – Jenaische Zeitschrift für Naturwissenschaft, 60: 363–396.
- Schilthuizen, M. & Liew, T. S. (2008): The slugs and semislugs of Sabah, Malaysian Borneo (Gastropoda, Pulmonata: Veronicellidae, Rathouisiidae, Ariophantidae, Limacidae, Philomycidae). – Basteria, 72: 287–306.
- Simroth, H. (1902): Über Philomyciden und Arioniden – Sitzungsberichte der Naturforschenden Gesellschaft zu Leipzig, pp. 32–45.
- Tsai CL, Lu, C-C & Kao, H-W. (2011): Morphology and Molecular Phylogeny of the East and Southeast Asian *Meghimatium* slugs (Gastropoda: Pulmonata: Philomycidae) and description of a new species – Zootaxa, 2890: 1–19.
- Tsai CL & Wu SK (2008): A New *Meghimatium* Slug (Pulmonata: Philomycidae) from Taiwan – Zoological Studies, 47(6): 759–766.
- Wiktor, A., Chen DN., & Wu M. (2000). Stylommatophoran slugs of China (Gastropoda: Pulmonata) – Prodrum – Folia Malacologia, 8(1): 3–35.

Andras VARGA
Mátra Múzeum
Gyöngyös, Kossuth út 40.
H-3200
E-mail: avarga46@freemail.hu