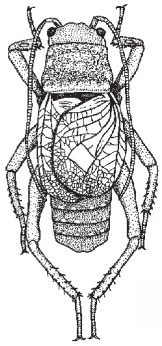


Far Eastern Entomologist

Дальневосточный энтомолог

Journal published by Far East Branch of the Russian Entomological Society and Laboratory of Entomology, Federal Scientific Center of the East Asia Terrestrial Biodiversity, Vladivostok

Number 550: 1-8 | ISSN 1026-051X (print edition) ISSN 2713-2196 (online edition) | June 2026

https://doi.org/10.25221/fee.550.1
https://elibrary.ru/idojnw
https://zoobank.org/References/AF3A568A-6D36-4018-9043-77C0FA431AB1

NEW RECORDS OF YPONOMEUTID MOTHS (LEPIDOPTERA: YPONOMEUTIDAE) FROM THE RUSSIAN FAR EAST

A. A. Tarasova[1)], M. G. Ponomarenko[2*)]

1) *Institute of Biological Problems of the North, Far Eastern Branch of the Russian Academy of Sciences, Magadan, 685000, Russia.*

2) *Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far Eastern Branch of the Russian Academy of Sciences, Vladivostok, 690022, Russia.*
**Corresponding author E-mail: margp@biosoil.ru*

Summary. Two species of the family Yponomeutidae have been recorded for the first time in the south part of Russian Far East. One of them, *Yponomeuta mayumivorella* Matsumura, is new to the fauna of Russia. *Swammerdamia glaucella* Junnilainen is firstly discovered in Amurskaya oblast and Primorskii Krai. Its known range is expanded eastward in Russia, including south of Russian Far East, and northward in East Asian region. Diagnostic characters of these species with illustrations of their adults and genitalia are provided.

Key words: ermine moths, *Yponomeuta*, *Swammerdamia*, fauna, new records, Far East, Russia.

А. А. Тарасова, М. Г. Пономаренко. Новые находки горностаевых молей (Lepidoptera: Yponomeutidae) на Дальнем Востоке России // Дальневосточный энтомолог. 2026. N 550. С. 1-8.

Резюме. На юге Дальнего Востока России впервые обнаружены два вида горностаевых молей. Один из этих видов, *Yponomeuta mayumivorella* Matsumura, является новым для фауны России. *Swammerdamia glaucella* Junnilainen впервые

обнаружен в Амурской области и Приморском крае. Его известный ареал расширяется на восток до юга российского Дальнего Востока и на север в Восточноазиатском регионе. Приведены диагностические признаки обнаруженных видов, а также иллюстрации их имаго и гениталий.

INTRODUCTION

To date, the family Yponomeutidae in Russia is represented by 71 species from 16 genera (Ponomarenko & Sinev 2025). Of these, 43 species from 13 genera are distributed in the Russian Far East. However, the taxonomic diversity of ermine moths in this region is studied insufficiently as the faunal list continues to expand with the new discovered species (Ponomarenko & Beljaev 2023; Ponomarenko & Sinev 2024; Tarasova & Ponomarenko 2025a, 2025b). The study of material collected in south of Russian Far East revealed two yponomeutid species that had not been previously recorded in this region. Moreover, one of them is new for the fauna of Russia. The aim of the present paper is to document these new faunal records, provide diagnostic characters of found species and illustrate their adults and genitalia.

MATERIAL AND METHODS

The present study is based on material was collected mainly by the second author in Amurskaya oblast, Primorskii Krai, Sakhalin and South Kuril Islands. Specimens were identified based on their external morphology and characters of genitalia. Genitalia were prepared using traditional lepidopterological techniques (Falkovitsh & Stekolnikov, 1978) with maceration of abdominal soft tissues in 10–15% KOH solution. The genitalia were stained by chlorazol black, and then examined in glycerol using a Nikon SMZ-10 stereomicroscope. The slides were made by mounting the genitalia in Euparal following Robinson (1976). Images of adults were taken using an Olympus SZX16 microscope equipped with a DP74 Nikon digital camera. Photographs of genital slides were made using a Zeiss Axioskop 40 microscope with an incorporated an AxioCam HRc digital camera. General morphological terminology mainly follows Klots (1970), with the addition of specific terms for morphostructures in Yponomeutidae according to Moriuti (1977). The studied specimens are stored in the Bioresource collection (registration number 2797657) in the Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far Eastern Branch of Russian Academy of Sciences (Vladivostok, Russia).

The following abbreviations were used in the text: AT – A.A. Tarasova, who prepared the genital slides; BC FSCB – Bioresource collection in the Federal Scientific Center of the East Asia Terrestrial Biodiversity, abbreviation of the Center where the examined material is stored; GS – genital slide; ZIN – Zoological Institute of Russian Academy of Sciences (Sankt-Petersburg, Russia), where some studied specimens are deposited.

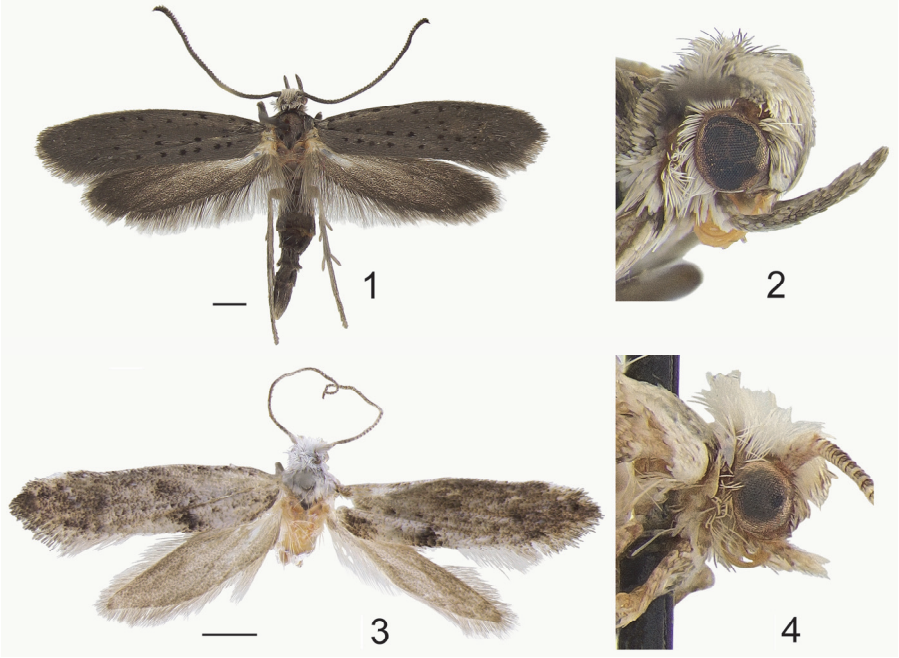
NEW FAUNAL RECORDS

Genus *Yponomeuta* Latreille, [1796]

REMARKS. The genus includes about a hundred species worldwide, almost half of which are distributed in Palaearctic. Hitherto only 30 species have been recorded from Russia, and more than two thirds of these known from the Far East of Russia (Ponomarenko & Sinev, 2025).

***Yponomeuta mayumivorella* Matsumura, 1931**
Figs 1, 2, 5–7, 10, 11

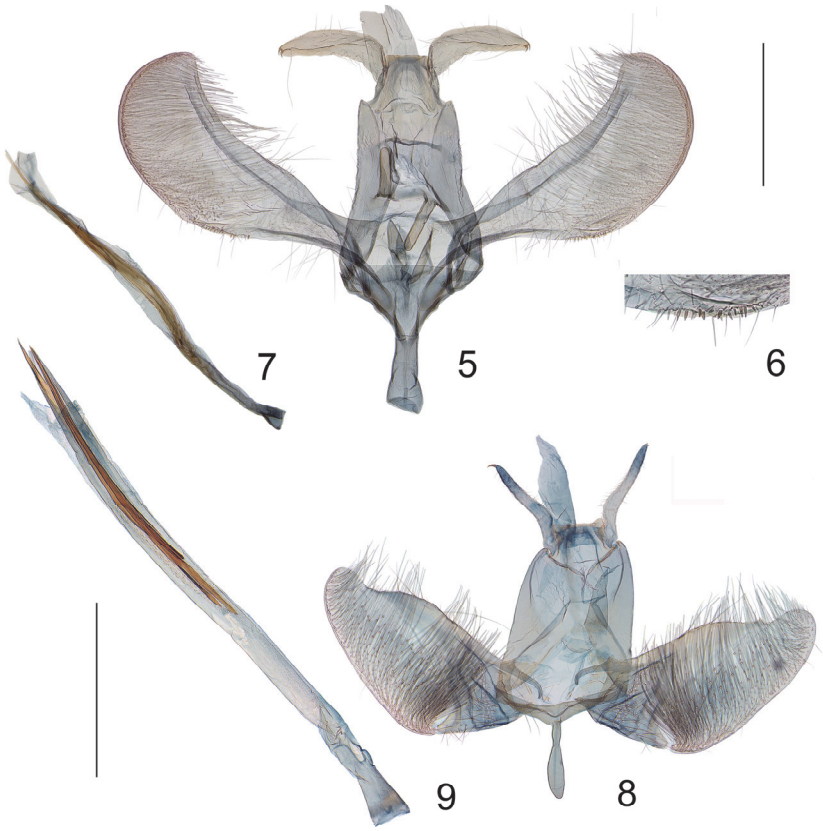
MATERIAL EXAMINED. **Russia:** South Kuril Islands, Kunashir, Belkino, coniferous-birch forest, 11.VIII 1967, V.I. Kuznetsov leg., 1 ♂; Kunashir, Sernovodsk vicinity, forest with *Quercus*, 01.VIII 1967, E. Zabello leg., 1 ♀ (ZIN). Amurskaya oblast, vicinity of Pashkovo village, 01.VII 2007, M. Ponomarenko leg., 1 ♀; Primorskii Krai, Shkotovskii district, 6 km SW of Anisimovka village, “Gribanovka”



Figs 1–4. External morphology of moths. 1, 2 – *Yponomeuta mayumivorella* Matsumura, male; 3, 4 – *Swammerdamia glaucella* Junnilainen, female; 1, 3 – adult, 2, 4 – head. Scale bar for figures 1 and 3 – 1 mm.

ski camp, h=480 m, 43°07'28" N, 132°47'42" E, 11.VIII 2016, M. Ponomarenko leg., 1 ♀; Vladivostok, 5 km SEE Okeanskaya station, Shamora pass, 43°13'01" N, 132°03'48" E, 06.VII 2017, M. Ponomarenko leg., 2 ♂, GS 367 (♂), 368 (♂) AT. Sakhalin Island, Nevelskii district, Yasnomorskoe village, 46°45′ N, 141°55′ E, 21, 23.VII 2019; 17–19.VIII 2020, M. Ponomarenko leg., 6 ♂, 6 ♀, GS 369 (♂), 370 (♀), 372 (♀), 374 (♀) AT (all in BC FSCB).

DIAGNOSIS. Externally this species resembles to *Y. anatolicus* Stringer, 1930 and *Y. montanatus* Moriuti, 1977 by dark ground colour of the forewing and the arrangement of the series of dots (Fig. 1). It can be distinguished from *Y. anatolicus* by smaller dots in pattern of forewing, and from *Y. montanatus* Moriuti by only a few (no more 2–4) dots or none at all in area between supramedian and submedian series. *Y. mayumivorella* differs from both species greyish-white head (Fig. 2), whereas



Figs 5–9. Male genitalia. 5–7 – *Yponomeuta mayumivorella* Matsumura; 5 – ventral view without aedeagus, GS 369 AT; 6 – sacculus, enlarged; 7 – aedeagus. 8, 9 – *Swammerdamia glaucella* Junnilainen; 8 – ventral view without aedeagus, GS Sw-1 AT; 9 – aedeagus. Scale bar for figures 5, 7, 8, 9 – 0.5 mm.

Y. anatolicus has white head and *Y. montanatus* has light-grey head. In the male genitalia *Y. mayumivorella* differs from all congeners by socius bearing a sclerotised medial fold, valva almost three times as long as wide and more or less parallel-sided in distal half, medial sclerite of gnathos with long digital lobes, an aedeagus approximately 1.25 times longer than valvar length, with well-developed cornuti about 4/5 of aedeagus length (Figs 5–7). In the female genitalia it distinguished by the broad and rounded lobes of the postvaginal plate, which fused anteriorly with ventral arms of the anterior apophyses, forming a rib located caudal to the preostial area (Figs 10, 11).

HOST PLANT. *Euonymus fortunei* (Turcz.) Hand.-Mazz. (Celastraceae) in Japan (Moriuti, 1977; Yamauchi & Hirowatari, 2013).

REMARKS. According to Moriuti (1977), *Y. mayumivorella* has "Forewing grayish-white; in some specimens overcast to a greater or lesser degree with grey scales; …". Among the specimens examined, all males from Primorskii Krai and Sakhalin Island have a very dark-grey ground colour of the forewings with a barely distinguishable pattern, whereas specimens of both sexes from the South Kuril Islands, as well as specimens from Japan have grey and greyish-white forewings. Specimens from China differs by pattern of forewing with much more dots between supramedian and submedian series (Liu & Li, 2026, Fig. 4E).

The indication of *Euonymus sieboldianus* (Blume) as the host plant for this species (Matsumura, 1931; Gershenson & Ulenberg 1998; Liu & Li, 2026) is most likely wrong. Although the scientific name is derived from the Japanese name of this plant (Mayumi), the larvae do not feed on this plant (Yamauchi & Hirowatari, 2013).

DISTRIBUTION. Russia (Amurskaya oblast, Primorskii Krai, Sakhalin and South Kuril Islands), **first record**; Japan (Hokkaido, Honshu); China (Zhejiang) (Yamauchi & Hirowatari, 2013; Ponomarenko & Sinev, 2025; Liu & Li, 2026).

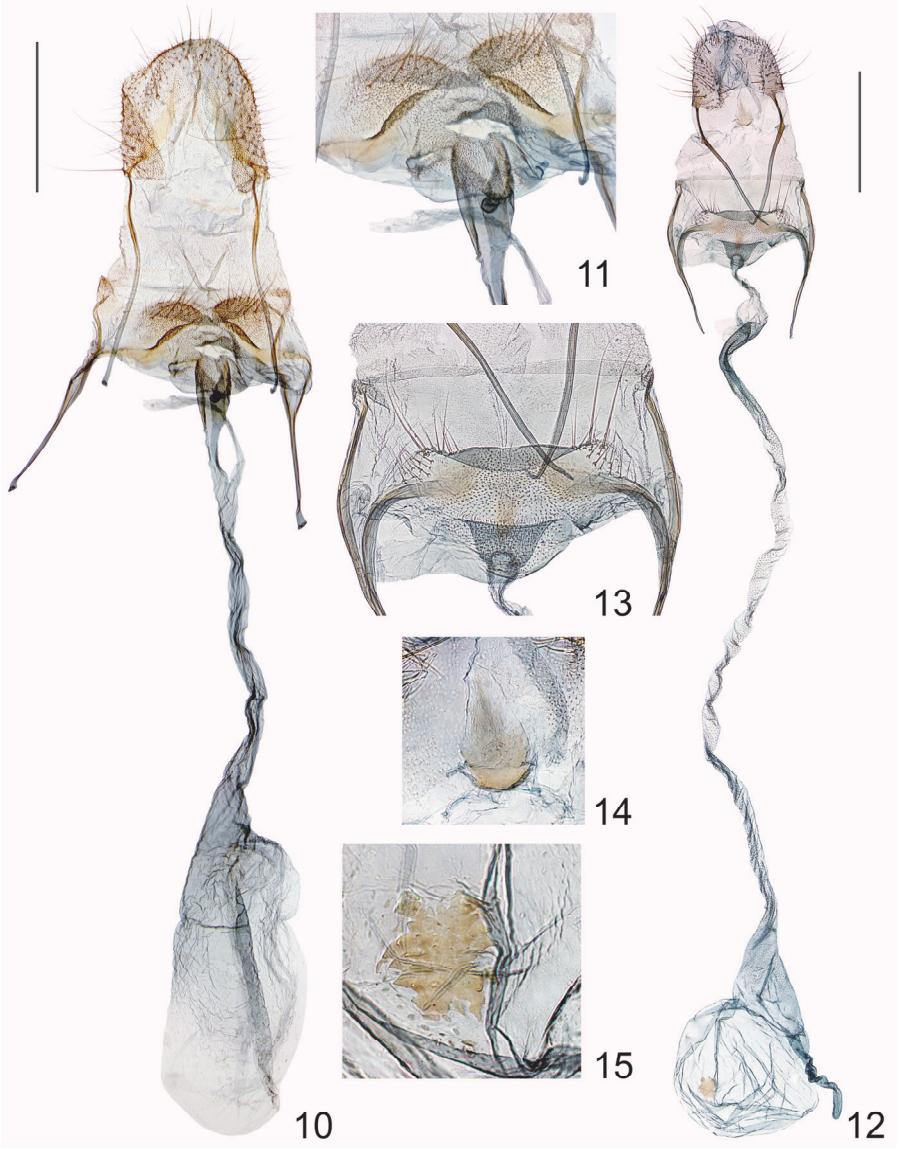
Genus *Swammerdamia* Hübner, 1825 [1826]

REMARKS**.** The genus includes 12 species. Six species are recorded in Russia, of which two trans-holarctic species, *S. caesiella* (Hübner, [1796]) and *S. pyrella* (de Villers, 1789), are distributed in the Russian Far East.

Swammerdamia glaucella Junnilainen, 2001

Figs 3, 4, 8, 9, 12–15

MATERIAL EXAMINED. **Russia:** Amurskaya oblast, Svobodnenskii district, Klimoutsy village, 51°28′24" N, 127°35′44" E, 4.VI 1959, M.I. Falkovitsh leg., 1 ♂, 1 ♀, GS Sw-1 (♂), Sw-2 (♀) AT (ZIN). Amurskaya oblast, Zeya Nature Reserve, "34 km" cordon, 53°57′46″ N, 127°22′21″ E, 13.VII 2013, A. Streltzov leg., 1 ♂, GS 385 AT. Primorskii Krai, Ussuriiskii district, 20 km SE of Ussuriisk, Gornotajezhnoe village, 43°41'44" N, 132°09'26" E, 05.VII 1995, M. Ponomarenko leg., 1 ♀, GS 323 AT (all in BC FSCB).



Figs 10–15. Female genitalia. 10, 11 – *Yponomeuta mayumivorella* Matsumura, GS 374 AT; 10 – ventral view; 11 – postvaginal plate, ostium and antrum. 12–15 – *Swammerdamia glaucella* Junnilainen, GS 323 AT; 12 – ventral view; 13 – 8th segment and antrum; 14 – drop-shaped sclerotisation on the membrane between 8th and 9th segments; 15 – signum. Scale bar for figures 10 and 12 – 0.5 mm; figures 11, 13–15 – enlarged.

DIAGNOSIS. *S. glaucella* is similar to *S. caesiella* Hübner, [1796] by the forewing pattern (Fig. 3), also by parallel-sided and pointed socii in the male genitalia. This species can be distinguished by pure white head and thorax (Fig. 4), whereas *S. caesiella* has head and thorax with yellowish-brown scales at the middle. In the male genitalia it can be easily distinguished by valva with rounded apex elongated dorsally and notch on costal margin before it, the aedeagus is 2.4 times longer than valva and with cornuti longer than half of its length (Figs 8, 9). In the female genitalia *S. glaucella* differs by flat posterior edge of the postvaginal plate, lobes located on its sides and not protruding beyond posterior edge and a much shorter ductus bursae, which is only 3.7 times longer than corpus bursae, signum as a plate with an uneven and incised edge (Figs 12, 13, 15). The membrane between the 8^{th} and 9^{th} abdominal segments with drop-shaped sclerotisation located medially, immediatelly anterad the base of papillae anales (Fig. 14). The similar species, *S. caesiella*, has valva without notch on the costal margin before non-elongated rounded apex, the aedeagus is 3.5 times longer than valva and cornuti 7.8 times shorter than total aedeagus length in the male genitalia. In female genitalia *S. caesiella* has postvaginal plate with notch on posterior edge, lobes producing caudally, much longer ductus bursae, which is about 12 times longer than corpus bursae and dentate signum.

DISTRIBUTION. Russia (Southern Ural, south of West Siberia, Tyva Republic, Irkutskaya oblast, Buryatia; Far East (**first record**): Amurskaya oblast and Primorskii Krai), SE Kazakhstan, Mongolia, South Korea (Junnilainen, 2001, Lewis & Sohn, 2015, Na *et al*., 2019; Ponomarenko & Sinev, 2025).

ACKNOWLEDGEMENTS

The authors are grateful to Dr. S.Yu. Sinev (Zoological Institute of RAS, Sankt-Petersburg) for providing the material for the study.

The research was carried out within the state assignment of Ministry of Science and Higher Education of the Russian Federation, themes No. 122041900011–9 for Tarasova and 124012400285-7 for Ponomarenko.

REFERENCES

Falkovitsh, M.I. & Stekolnikov, A.A. 1978. Introduction. P. 5–27. *In*: Medvedev, G.S. (Ed.), *Key to the insects of European part of Russia*. Vol. 4. Lepidoptera. Part 1. Nauka, Leningrad. [In Russian]

Gershenson, Z.S. & Ulenberg, S.A. 1998. *Yponomeutinae of the World exclusive of the Americas*. Koninklijke Nederlandse Akademic van Wetenschappen Verhandelingen Afdeling Natuurkunde, Tweede Reeks. Deel 99. Amsterdam, The Netherlands. 202 pp.

Junnilainen, J. 2001. Two new species of *Swammerdamia* from the southern Ural Mountains and southern Siberia. *Entomologica Fennica*, 12 (2), 112–118.

Klots, A.B. 1970. Lepidoptera. *In*: Tuxen, S.L. (Ed.), *Taxonomist's glossary of genitalia in insects*. Munksgaard, Copenhagen, pp. 115–130.

Lewis, J.A. & Sohn, J.C. 2015. Lepidoptera: Yponomeutoidea I (Argyresthiidae, Attevidae, Praydidae, Scythropiidae, and Yponomeutidae). *In*: Landry, B. (Ed.), *World Catalogue of Insects*. Vol. 12. Brill, Leiden and Boston, Massachusetts, pp. 1–253.

Liu, H. & Li, H. 2026. Review of the genus *Yponomeuta* Latreille, 1796 (Lepidoptera: Yponomeutidae) in China. *European Journal of Taxonomy*, 1047: 1–63. DOI: 10.5852/ejt.2026.1047.3227

Matsumura, S. 1931. *6000 Illustrated Insects of the Japan-Empire*. Toko Shoin, Tokyo, Japan. 1496 pp.

Moriuti, S. 1977. *Fauna Japonica, Yponomeutidae s. lat. (Insecta, Lepidoptera).* Keigaku publishing Co., Tokyo, 327 pp.

Na, S.M., Ulziijargal, B., Lee, D.J. & Bae, Y.S. 2019. Taxonomic review of the genus *Swammerdamia* Hübner (Lepidoptera: Yponomeutidae) from Korea. *Journal of Asia-Pacific Biodiversity*, 12, 74–78. DOI: 10.1016/j.japb.2018.10.005

Ponomarenko, M.G. & Beljaev, E.A. 2023. Description of a new species of the genus *Xyrosaris* Meyrick (Lepidoptera: Yponomeutidae) from the Far East of Russia with notes on congeneric species. *Zootaxa*, 5306(1): 135–143. DOI: 10.11646/zootaxa.5306.1.7

Ponomarenko, M.G. & Sinev, S.Yu. 2024. Taxonomic status of *Xyrosaris melanopsamma* Meyrick, 1931 (Lepidoptera: Yponomeutidae) with notes on congeneric species in East Asia. *Zootaxa*, 5486(3): 338–350. DOI: 10.11646/zootaxa.5486.3.2

Ponomarenko, M.G. & Sinev, S.Yu. 2025. Family Yponomeutidae. *In*: Sinev, S.Yu. (Ed.), *Catalogue of the Lepidoptera of Russia*. Version 2.5. Available from: https://www.zin.ru/publications/books/Lepidoptera_Russia/Catalogue_of_the_Lepidoptera_of_Russia_ver.2.5.pdf (accessed 12 April 2026)

Robinson, G.S. 1976. The preparation of slides of Lepidoptera genitalia with special reference to the Microlepidoptera. *Entomologist's Gazette*, 27: 127–132.

Tarasova, A.A. & Ponomarenko, M.G. 2025a. New data on Microlepidoptera (Lepidoptera: Micropterigidae, Adelidae, Glyphipterigidae, and Yponomeutidae) from the Far East of Russia. *Zootaxa*, 5715(1): 456–475. DOI: 10.11646/zootaxa.5715.1.40

Tarasova, A.A. & Ponomarenko, M.G. 2025b. New taxonomic and faunistic data on yponomeutid moths (Lepidoptera: Yponomeutidae) with description of a new species from the Far East of Russia. *Far Eastern Entomologist*, 524: 1–13. DOI: 10.25221/fee.524.1

Yamauchi T. & Hirowatari T. 2013. Yponomeutidae. *In*: Hirowatari, T., Nasu, Y., Sakamaki, Y. & Kishida, Y. (Eds.). *The Standard of Moths in Japan III*. Gakken Education Publishing, Tokyo, pp. 26–29, 156–169.