Ecologica Montenegrina
ISSN 2336-9744 (online) | ISSN 2337-0173 (print)

Ecologica Montenegrina 65: 47-50 (2023)
This journal is available online at: www.biotaxa.org/em
https://dx.doi.org/10.37828/em.2023.65.6

Article

https://zoobank.org/urn:lsid:zoobank.org:pub:DE3ECCC3-4524-4E16-9798-7D2321825AAC

New species of genus *Trismelasmos* Schoorl, 1990 (Lepidoptera, Cossidae, Zeuzerinae) from Obi Island (Indonesia)

ROMAN V. YAKOVLEV

Altai State University, Lenina pr. 61, Barnaul, 656049, Russia.
E-mail: yakovlev_asu@mail.ru, *https://orcid.org/0000-0001-9512-8709*
Tomsk State University, Lenina pr. 36, 634050, Tomsk, Russia.

Received 26 August 2023 | Accepted by *V. Pešić*: 4 September 2023 | Published online 6 September 2023.

Abstract
The article describes *Trismelasmos obiensis* Yakovlev sp. nov. distributed in Obi Island (Indonesia, North Maluku Province). The article has two illustrations.

Key words: biodiversity, species richness, Cossoidea, Maluku Islands, Paleotropics, taxonomy.

Introduction

The genus *Trismelasmos* was established by Schoorl (1990) for *Cossus maculatus* Snellen, 1879 (by original designation). Currently, there are 38 known species, widely distributed from the Philippines to New Guinea and the Solomon Islands (Roepke 1955, 1957; Holloway 1986; Schoorl 1990, 2001; Yakovlev 2011a, b, 2015, 2022). Examining the rich materials on Cossoidea, deposited in Witt Museum in Munich (later – MWM), we found a species new to science from the island of Obi (Indonesia, Maluku Islands, North Maluku Province), its description and diagnosis is provided in this article.

Material and methods

The male genitalia were mounted in euparal on slides following Lafontaine and Mikkola (1987). The slides were photographed using an Olympus DP74 camera attached to an Olympus SZX16 stereomicroscope. The type material is deposited in the MWM. The images were processed using Corel Photo-Paint 2017 software. Male genitalia was mounted in euparal on slides following Lafontaine and Mikkola (1987) and examined with an Olympus SZX16 microscope. The images were taken with the digital camera CMOS 20.7 megapixels and processed using Corel Photo-Paint 2017 software. The morphological terminology follows Kristensen (2003).

Description of new species

***Trismelasmos obiensis* Yakovlev, sp. n.**
https://zoobank.org/urn:lsid:zoobank.org:act:581F24D4-4ED4-426E-BA27-447986CE2CD9
Figs 1−2

Material. Holotype (male), Indonesia, Obi Isl., S. Coast, Seribu Mts., 22 km N Tapaya vill., 1200−1500 m, 1°38′S, 127°48′E, 20.xi−10.xii.2008, leg. Jakl (MWM, Genitalpräparat Heterocera Nr. 27.404).

Description. Male (Fig. 1). Length of fore wing 24 mm. Antenna bipectinate in basal half, serrated in distal half, setae twice longer than antenna stem diameter. Thorax and abdomen densely covered with light-creamy scales, sputtering of brown scales on thorax from upside, brown stripes on thorax lateral sides. Fore wing light-creamy with brown pattern: intense brown stroke along costal margin in basal third, small brown strokes distally along costal margin, slight sputtering of brown scales basally and discally; postdiscal and submarginal portions of wing light-brown with fine wavy strokes between veins (forming thin reticulated pattern on periphery of wing), dense sputtering of brown scales along anal margin, fringe mottled (light between veins, dark at veins). Hind wing light-brown with poorly expressed thin brown pattern of strokes and mesh on wing periphery.

Figure 1. *Trismelasmos obiensis* Yakovlev, sp. n., holotype (MWM).

Male genitalia (Fig. 2). Uncus long, with beak-like acute apex; gnathos arms thin, ribbon-like, gnathos reduced; valve simple, costal margin almost smooth, abdominal margin poorly concave, outer margin oblique, apex semicircular; juxta with long ribbon-like lateral processes; saccus small, semicircular; phallus slightly shorter than valve, poorly curved in basal third, with long robust spindle-shaped cornutus in lateral surface of vesica.

Female unknown.

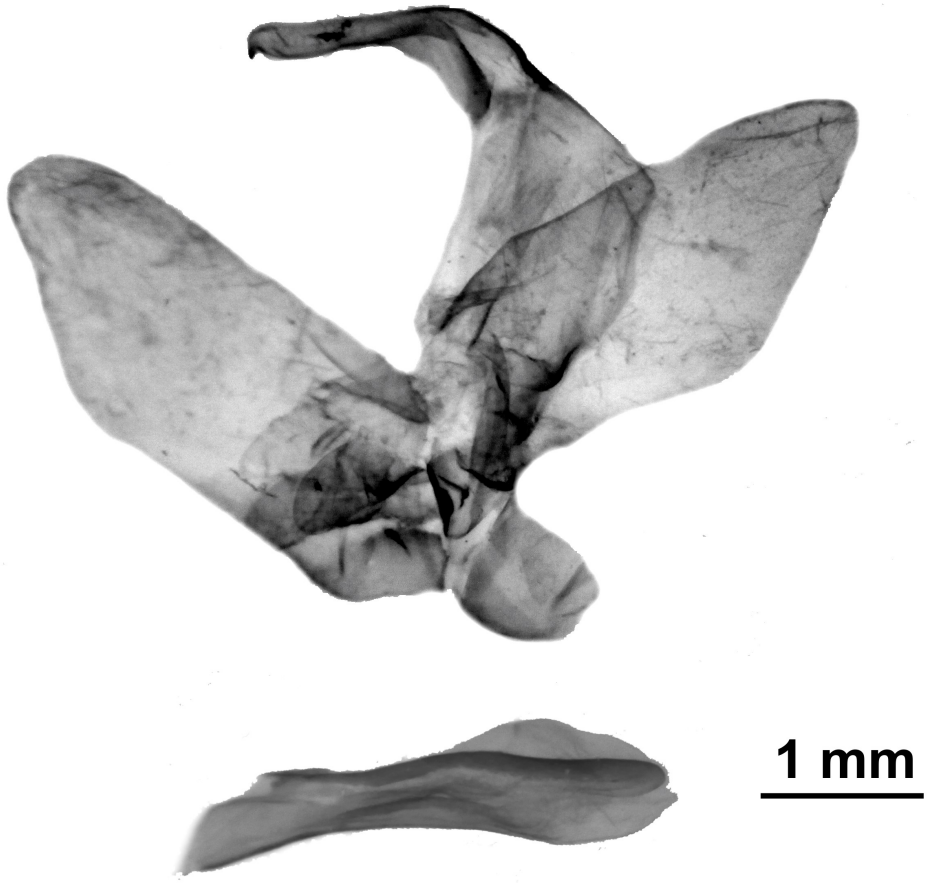

Figure 2. Male genitalia of *Trismelasmos obiensis* Yakovlev, sp. n., holotype (MWM; Genitalpräparat Heterocera Nr. 27.404).

Diagnosis. The new species clearly differs from the known species of the genus in the poorly modified pattern on the fore wing (in particular, the completely reduced dark portion on the costal margin of the fore wing postdiscally).

Distribution. Indonesia, North Maluku Province, Obi Island.

Flight period. November – December.

Acknowledgments

The author is indebted to Mr. Thomas Witt† and Mr. Harald Sulak (Museum Witt, Munich) for their kind assistance provided during the study of the deposited material. The author is grateful to Anna Ustjuzhanina (Tomsk, Russia) for language improvements.

References

Holloway, J.D. (1986) The moths of Borneo: Part I. Key to families; Families Cossidae, Metarbelidae, Ratardidae, Dudgeonidae, Epipyropidae and Limacodidae. *Malayan Nature Journal*, 40, 1−166.

Kristensen, N.P. (2003) Skeleton and muscles. *In*: Kristensen N.P. (Ed.). 36. *Lepidoptera, moths and butterflies*. 2. *Morphology, physiology, and development*. *Handbuch der Zoologie / Handbook of zoology*, IV. *Arthropoda: Insecta*: 39–131. Berlin & New York: Walter de Gruyter. https://doi.org/10.1515/9783110893724.39

Lafontaine, J.D. & Mikkola, K. (1987) Lock–and–key system in the inner genitalia of Noctuidae (Lepidoptera) as taxonomic character. *Entomologiske Meddelelser*, 55, 161–167.

Roepke, W. (1955) Notes and descriptions of Cossidae from New Guinea (Lepidoptera: Heterocera). *Transactions of the Royal Entomological Society of London*, 107, 281−288.

Roepke, W. (1957) The cossids of the Malay Region (Lepidoptera: Heterocera). *Verhandelingen der Koninklijke Nederlandse Akademie van Weterschappen, Afd. Natuurkunde (Tweede Reeks)*, Deel LII (1), 1−60.

Schoorl, J.W. (1990) A phylogenetic study on Cossidae (Lepidoptera: Ditrysia) based on external adult morphology. *Zoologische Verhandelingen*, 263, 1–295.

Schoorl, J.W. (2001) A new species of *Trismelasmos* (Lepidoptera: Cossidae) from Irian Jaja. *Entomologische Berichten, Amsterdam*, 61 (7), 99−100.

Yakovlev, R.V. (2011a) Catalogue of the Family Cossidae of the Old World (Lepidoptera). *Neue Entomologische Nachrichten*, 66, 1–130.

Yakovlev, R.V. (2011b) Two new species of the goat moths (Lepidoptera, Cossidae) from New Guinea. *Amurian zoological journal*, 3 (3), 284–286 (in Russian)

Yakovlev, R.V. (2015) Patterns of Geographical Distribution of Carpenter Moths (Lepidoptera: Cossidae) in the Old World. *Contemporary Problems of Ecology*, 8 (1), 36–50. https://dx.doi.org/10.1134/S1995425515010151

Yakovlev, R.V. (2022) New species of *Trismelasmos* Schoorl, 1990 (Lepidoptera, Cossidae: Zeuzerinae) from Eastern Indonesia. *Ecologica Montenegrina*, 50, 43−46. https://dx.doi.org/10.37828/em.2022.50.7