

# 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 516: 1-6

ISSN 1026-051X (print edition)  
ISSN 2713-2196 (online edition)

February 2025

<https://doi.org/10.25221/fee.516.1>

<https://elibrary.ru/flgoru>

<https://zoobank.org/References/94B90B77-1FE7-44E1-90D8-8367FFB00BF4>

## FIRST RECORD OF THE GENUS *MALESIA* VAN EECKE, 1920 (LEPIDOPTERA: EREBIDAE, ARCTIINAE) FOR WALLACEA WITH DESCRIPTION OF A NEW SPECIES FROM LOMBOK ISLAND

E. S. Koshkin

*Institute of Water and Ecology Problems of the Far Eastern Branch of the Russian Academy of Sciences, 56 Dikopoltsev Str., 680000, Khabarovsk, Russia. E-mail: ekos@inbox.ru*

**Summary.** *Malesia spitsyni* sp. n. is described from the Lombok Island (Lesser Sunda Islands). This is the first record of the genus *Malesia* van Eecke for Wallacea. The new species is distinguished from all known species of the genus by the structure of the male genitalia, especially by the presence of distinct distal processes of the costa and sacculus.

**Key words:** moths, Lithosiini, biodiversity, taxonomy, new species, Lesser Sunda Islands, Indonesia.

**Е. С. Кошкин. Первое указание рода *Malesia* van Eecke, 1920 (Lepidoptera: Erebiidae, Arctiinae) для Уоллесии с описанием нового вида с острова Ломбок // Дальневосточный энтомолог. 2025. N 516. С. 1-6.**

**Резюме.** С острова Ломбок (Малые Зондские острова) описан *Malesia spitsyni* sp. n. Это первое указание рода *Malesia* van Eecke для Уоллесии. Новый вид хорошо отличается от всех известных представителей рода строением гениталий самца, а именно наличием выраженных дистальных выростов кость и саккулуса.

## INTRODUCTION

Wallacea is a biogeographical region in the centre of the Indonesian archipelago, between Wallace's line in the west and Lydekker's line in the east. Wallacea is a hotspot in central Indonesia and Timor-Leste in Southeast Asia (Lelej, 2024).

The small lithosiine genus *Malesia* van Eecke, 1920 currently contains four species, which are distributed in Sundaland and the Philippines (Eecke, 1920; Holloway, 2001; Černý & Pinratana, 2009; Bucsek, 2012; Černý & Bucsek, 2014).

During research on Lombok Island in 2024, the author collected a specimen belonging to the genus *Malesia*, whose unique features of the male genitalia suggest that it belongs to an undescribed species. No members of this genus have been recorded for Wallacea. A checklist of known species of the genus *Malesia* is also provided.

## MATERIAL AND METHODS

A specimen of the new species was collected at night on a light trap using a LepiLED® UV lamp. For genitalia preparation, a specimen was prepared by boiling the abdomen in 10% KOH for 5 minutes. Photograph of the specimen were taken using a Sony SLT-A65 digital camera with a Sony 2.8/50 macro lens. The male genitalia were photographed using a Zeiss Stemi 2000-C stereomicroscope with a Zeiss AxioCam ERc5s microscope camera.

The holotype of the new species is deposited in the private collection of E.S. Koshkin (Khabarovsk, Russia) (EKC) and will be transferred to the collection of the Zoological Institute of the Russian Academy of Sciences, St. Petersburg (ZISP).

## TAXONOMY

### Genus *Malesia* van Eecke, 1920

*Malesia* van Eecke, 1920: 132.

Type species: *Malesia eugoana* van Eecke, 1920.

DIAGNOSIS. All known species of *Malesia* are characterized by small size and similar external appearance. Forewing narrow, ochreous. Forewing pattern includes two rounded black spots in the middle and at the end of the discal cell and a dark oblique band in the postmedial area; in some specimens, a dark discontinuous transverse band in the submarginal area. Hindwing translucent. Antenna bipectinate in male, filiform in female. In male genitalia uncus long, slender, slightly extended at tip. Tegumen broad, v-shaped. Valva elongate, costa with distal process (absent in *M. cana* Černý, 2014). Distal sacculus present only in *M. cana*. Aedeagus straight, short, broad, tapering distally (except in *M. cana*, where aedeagus is longer and thinner). Vesica long, with a longitudinal ridge with a series of spine-like cornuti (except in *M. cana*, where vesica is short and broad with other arrangements of cornuti and scobination).

***Malesia spitsyni* Koshkin, sp. n.**

<https://zoobank.org/NomenclaturalActs/3B3DF5AD-F8D1-4CAB-8EC5-99F295A4506C>

Fig. 1

TYPE MATERIAL. Holotype (Fig. 1A): ♂, **Indonesia:** West Nusa Tenggara province: Lombok Island, near Sembalun Bumbung vill., 8°24'10" S, 116°32'11" E, 1425 m, 30.VIII 2024, Evgeny S. Koshkin leg. (ex EKC, will be deposited in ZISP).

DIAGNOSIS. The new species clearly differs from the other congeners in the peculiarities of the structure of the male genitalia – the presence of a hook-like distal process of the costa and a massive spine-like distal saccular process. Apart from *Malesia spitsyni* sp. n., the distal saccular process is present only in *M. cana* Černý, 2014, where it is strongly curved and the costa lacks any processes. The distal costal process is also present in *M. eugoana* van Eecke, 1920, *M. tanahratana* Bucsek, 2012, and *M. luzonao* Černý, 2014, but in these species it is bifurcated (in *M. spitsyni* sp. n. it is not bifurcated and looks like a slightly curved hook). The aedeagus of the new species is short and broad, tapering distally, as in *M. eugoana*, *M. tanahratana* and *M. luzonao*. The size of the cornuti in *M. spitsyni* sp. n. is larger than in the above species. Externally, *M. spitsyni* sp. n. has no clear differences from other *Malesia* species, and is the same size as *M. eugoana*, which is the largest species in the genus.

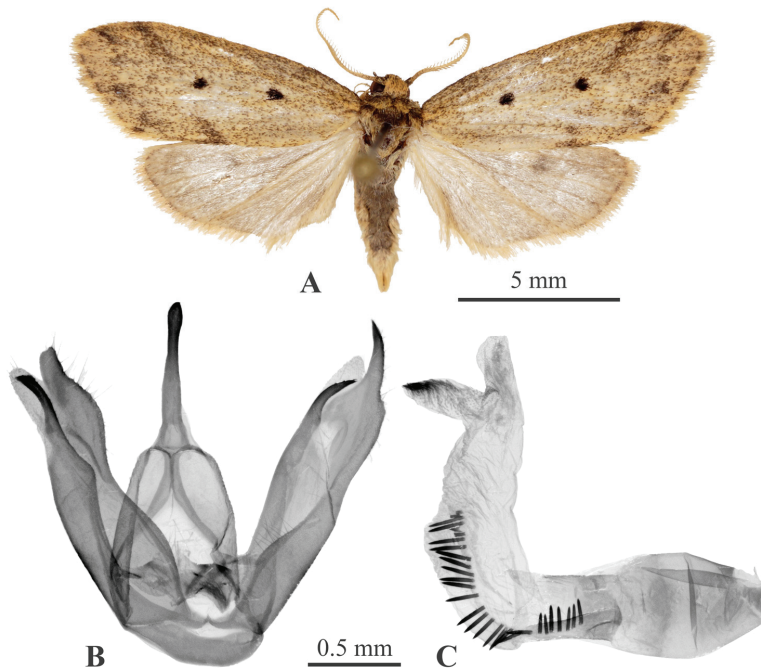


Fig. 1. *Malesia spitsyni* Koshkin sp. n., male, holotype: A – adult; B – male genitalia; C – aedeagus with everted vesica.

DESCRIPTION. Male (Fig. 1A). Wingspan 20 mm. Forewing length 9.5 mm. Antennae bipectinate, yellowish. Labial palpus short, slender, yellow. Proboscis very thin, yellowish. Eyes rounded, brown. Head pale ochreous. Thorax, patagium, and tegula gray with ochreous margins. Abdomen gray on upperside, pale ochreous laterally and on last segments. Femurs gray, rest of legs light ochreous. Forewing narrow, ground color pale ochreous, with heavy diffuse dusting of dark brown scales. Two large rounded black spots in middle and end of discal cell. Dark postmedial band oblique, weakly expressed in middle, and most distinct at costal and inner margins. In submarginal area dark wavy discontinuous band. Terminal series of spots is dark. Hindwing translucent, pale gray with ochreous tint, slightly darker at costal and outer margins. Dark rounded discal spot weakly expressed. Cilia on fore and hind wing pale ochreous. Underside of forewing dark gray with pale ochreous outline, and dark spots in discal cell. Underside of hindwing pale gray, darker on costal and outer margins; discal spot dark.

Male genitalia (Figs 1B, C). Uncus long, slender, slightly expanded at tip. Tegumen broad, v-shaped. Saccus U-shaped. Valva elongate, narrow, costa straight with hook-like, slightly outwardly curved distal process. Distal saccular process massive, spine-like on right valva, rounded on left, slightly curved inwards, longer than apex of valva. Apical lobe of valva weakly sclerotized, rounded. Juxta small, strongly sclerotized, upper margin almost straight, lower concave. Aedeagus straight, short, broad, tapering distally and basally. Vesica longer than aedeagus, twisted, with lateral ridge on which 28 spine-like cornuti are arranged in a row. Apical diverticulum short, pointed, strongly sclerotized distally, otherwise finely scobinated.

Female. Unknown.

ECOLOGY. A specimen of the new species was collected in a mountainous disturbed deciduous forest at an altitude of 1425 m (Fig. 2).



Fig. 2. Habitat of *Malesia spitsyni* Koshkin sp. n.

DISTRIBUTION. The new species is known only from the type locality in the northeastern part of Lombok Island (Lesser Sunda Islands, Indonesia).

ETYMOLOGY. The new species is named after Russian entomologist Vitaly M. Spitsyn, who made a remarkable contribution to the study of the fauna and taxonomy of Arctiinae of Flores, another island in the Lesser Sunda Islands group.

#### Checklist of *Malesia* valid taxa

##### ***Malesia eugoana* van Eecke, 1920**

*Malesia eugoana* van Eecke, 1920: 132, fig. 18 (Type locality: "Oost-Java" [East Java, Indonesia]).

DISTRIBUTION. Thailand, Peninsular Malaysia, Java, Borneo, (Eecke, 1920; Holloway, 2001; Černý & Pinratana, 2009; Bucsek, 2012).

##### ***Malesia tanahratana* Bucsek, 2012**

*Malesia tanahratana* Bucsek, 2012: 19, pl. 3, figs 40, 40a, figs Mal017, Mal197 (Type locality: Malaysia, Pahang distr., Cameron Highlands, Tanah Rata env., 1450–1500 m, 4°28'25,3" N, 101°22'43,7" E).

DISTRIBUTION. Peninsular Malaysia (Cameron Highlands) (Bucsek, 2012).

##### ***Malesia luzonao* Černý, 2014**

*Malesia luzonao* Černý in Černý & Bucsek, 2014: 468, figs 9a, b, c, d, e (Type locality: Philippines, Mindanao, Misamis Norte prov., 22 km NE of Claveria, Brg. Mat I, 1160 m, 8°39,874' N, 124°59,516' E).

DISTRIBUTION. Philippines (Mindanao, Luzon) (Černý & Bucsek, 2014).

##### ***Malesia cana* Černý, 2014**

*Malesia cana* Černý in Černý & Bucsek, 2014: 469, figs 10a, b, c, d, e (Type locality: Philippines, Mindanao, Misamis Norte prov., 22 km NE of Claveria, Brg. Mat I, 1160 m, 8°39,874' N, 124°59,516' E).

DISTRIBUTION. Philippines (Mindanao) (Černý & Bucsek, 2014).

##### ***Malesia spitsyni* Koshkin, sp. n.**

DISTRIBUTION. Indonesia (Lombok).

#### ACKNOWLEDGMENTS

This work was carried out within the state assignment of Ministry of Science and Higher Education of the Russian Federation (project No. 121021500060-4).

## REFERENCES

- Bucsek, K. 2012. *Erebidae, Arctiinae (Lithosiini, Arctiini) of Malay Peninsula – Malaysia*. Institute of Zoology SAS, Bratislava. 170 pp.
- Černý, K. & Bucsek, K. 2014. Review of the *Eugoa*-group in the family Erebidae (Lepidoptera: Erebidae, Arctiinae, Lithosiini) from the Philippines. *Entomofauna*, 35(22): 461–524.
- Černý, K. & Pinratana, A. 2009. *Moths of Thailand. Vol. 6. Arctiidae*. Brothers of Saint Gabriel in Thailand, Bangkok. 283 pp.
- Eecke, R. van. 1920. Studien over Indo-Australische Lepidoptera. IV. Bijdrage tot de kennis der Heterocera-Fauna der Oost-Indische Koloniën. *Zoologische Mededeelingen*, 5(13): 112–138.
- Holloway, J.D. 2001. The moths of Borneo [Part 7]: Arctiidae, Lithosiinae. *Malayan Nature Journal*, 55: 279–486.
- Lelej, A.S. 2024. Review of the velvet ants (Hymenoptera: Mutillidae) of Wallacea with special reference to Lombok, Indonesia. *Far Eastern Entomologist*, 504: 1–25. DOI: 10.25221/fee.504.1