

***Nipwalmasa boletusana* gen. nov. and spec. nov. from Papua, Indonesia (Lepidoptera: Tortricidae, Tortricini)**

Frans Groenen¹ & Jozef Razowski²

¹Kastanjedreef 7, 5571 AE Bergeijk, The Netherlands
e-mail: groene.eyken@onsbrabantnet.nl

²Śląkowska 17, 31-016 Kraków 31-016, Poland
e-mail: razowski@isez.pan.krakow.pl

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Abstract: A new tortricine monotypical genus, *Nipwalmasa* **gen. nov.**, and a new species *N. boletusana* **spec.nov.**, from Papua, Indonesia are described. The male and female and the genitalia are illustrated.

Rangkuman: Genus baru tortriciniek yang monotipis, *Nipwalmasa* **gen. nov.**, dan spesies baru *N. boletusana* **spec.nov.**, dari Papua, Indonesia dideskripsi. Gambar bentuk jantan dan betina bersama gambar genitalianya disajikan.

Keywords: New Guinea, Oriental, new genus, new species.

Introduction

The Tortricidae fauna of New Guinea is still insufficiently known and ongoing research leads to the discovery of many new species and even new genera. In this paper one of these genera is recognized and described including its, until now, only representative new species. In the facies it resembles *Reptilisocia tarica* Razowski, 2013, *R. baratana* Groenen, 2021, *Trophocosta nummifera* (Meyrick, 1910), from New Guinea, and some *Spatalistis* Meyrick, 1907 species which have a large dorsal blotch on the forewing, e.g. *S. christophana* (Walsingham, 1900). *Nipwalmasa* **gen. nov.** is closely allied to the Tortricini genera *Reptilisocia* Razowski, 1964 and *Trophocosta* Diakonoff, 1983. Externally it is similar but differs from them in the hindwing venation and the presence of modified scales in the male. The male genitalia in *Nipwalmasa* **gen. nov.** are characterized by the absence of the brachiola and the presence of a mushroom shaped structure at base of the valva. The female genitalia are characterized by the large plate-shaped eighth sternite, the spined entrance of the ductus bursae and the absence of a sclerotized structure in the ductus bursae and signum.

The specimens were collected during the UNCEN-ZMA expedition in 2005 and 2008, in Walmak (District Nipsan) in the Jayawijaya Mountains in Central Papua, by Rob de Vos en Piet Zumkehr.

Materials and methods

Specimens were collected with light traps in the central mountain area of the province Papua, Indonesia at 1700 meters above sea level. After collecting the insects were pinned or stored in paper bags, and dried for shipping. For further research the material was relaxed, if necessary pinned and prepared. The genitalia were dissected and mounted on glass slides in

Euparal. Photographs of the moths were made with a Nikon D5100 camera, using a NikonMicro Nikkor 40 mm lens with 20 mm extension. Genitalia photographs were made with an Olympus triocular microscope and a MDC320 digital camera.

The collected material is deposited in the collection of Naturalis Biodiversity Center (Leiden).

Abbreviations

FG – Acronym for slide numbers, made by the author

RMNH – Collection of Naturalis Biodiversity Center, Leiden, The Netherlands (former Rijksmuseum voor Natuurlijke Historie)

RMNH.INS. – Acronym for unique collection numbers of specimens and slides in RMNH

Systematic part

Nipwalmasa gen. nov.

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Type species: *Nipwalmasa boletusana* spec. nov.

Diagnosis: The new genus is closely allied to *Reptilisocia* Razowski, 1964 and *Trophocosta* Diakonoff, 1983. It is distinguished by the forewing venation where all veins ramify, in the hindwing venation Cu3-A1 originating from one point. In the male genitalia it differs by the mushroom-shaped structure at base of the valve, the sharp thin projection of the sacculus, which is hardly to discern, and the absence of brachiola. The female genitalia differs in the broader ductus bursae and the absence of the signum.

Description: Wingspan 12-14 mm. Head rough scaled. Median joint of labial palpi segment straight, at dorsum in distal half strongly thickened, ventrally with projecting scales extending beyond base of segment 3; segment 3 straight, short, top blunt.

Forewing from base to middle strongly expanding, in apical part broad, costa parallel to dorsum, convex medially, apex pointed; costal fold present, dorsum and termen straight, tornus rounded. All veins ramify: Sc to about middle of costa, R₁ R₂, R₃ and R₄ at equal distance, R₅ and M₁ approximated at base, R₅ to costa, M₁ to termen, parallel to M₂, M₂, M₃ and CuA₁ at equal distances, M₂ straight, M₃ and CuA₁ curved at base and approximated to base of M₂, Cu₂ opposite to R₁.

Hindwing broad, apex protruding. Sc from before middle of cell, R to costa, M₁ to termen, approximated at base, M₂, M₃ and CuA₁ at equal distance, M₂ curved and from one point with stalk of M₃ and CuA₁, M₃ and CuA₁ stalked to ¼, Cu₂ sinuate, parallel to CuA₁. Modified scales along upperside of A3, in anal field a large group of scent scales present.

Male genitalia: Tegumen with top flattened, square. Uncus absent. Socii triangular. Tuba analis simple, membranous. Valva short, abruptly broadening proximally, a peculiar postbasal mushroom-shaped structure originating above basal part. Sacculus distinctly convex, with slender posterior process. Brachiola entirely reduced. Aedeagus pistol-shaped, cornuti present. Bulbus ejaculatorius with sclerite.

Female genitalia: Papillae anales moderate. Apophyses unequal, short. Eighth tergite broad. Sterigma with broad lateral parts and developed projections. Antrum slender and sclerotized. Ductus bursae long and rather broad. Ductus seminalis broad, anterior and originating from corpus bursae. Corpus bursae large, ovate. Signum absent.

Etymology: The genus name *Nipwalmasa* (a combination of Nip(san) and Walm(ak)) refers to the type locality of the type species of the genus.

Type locality: Kecamatan Nipsan, Walmak, Papua Province, Indonesia.

Remarks: *Nipwalmasa* **gen. nov.** is a monotypic genus endemic to New Guinea, belonging to an informal group with *Trophocosta* in the Tortricini. The latter is characterized by some reduced structures in the male genitalia, i.e. the reduction of the basal part of costa of valva, absence of brachiola, which are well developed in other Tortricini, and the presence of an expanding subterminal part ending in a slender process. The new genus is most allied to *Trophocosta* as some external and genital characters show. The below listed autapomorphies support a distinct, separate position of the new genus:

- Presence of a row of slender scales along upperside of the hindwing vein A3
- Presence of a scent organ, an area on the hindwing anal field
- Shape of the valva, oval, uniformly convex ventrally
- Presence of a thread-like process from sacculus
- Presence of a large mushroom-shaped structure situated above the postbasal part of the sacculus
- Presence of two spines on the disc of the valva beneath mid-costa

***Nipwalmasa boletusana* spec. nov.** (figs 1-4)

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Holotype: RMNH.INS.1283186: ♂, Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 4°07'S – 138°36'E, 31.i-16.ii.2005, leg. UNCEN-ZMA expedition Papua Indonesia 2005, slide FG4050.

Paratypes: RMNH.INS.1283187: 1 ♀, Indonesia, Papua, Jayawijaya Mts, Kab. Yahukimo, Nipsan District, Walmak, 1710 m, 4°07' S – 139°38' E, 31.i-9.ii.2005, at light, leg. R. de Vos & P.J. Zumkehr, slide FG4049; RMNH.INS.1283188: 1 ♀, Indonesia, Papua, Kecamatan Nipsan, Walmak, 4°07'S – 139°36'E, 1710 m, 24-29.x.2008, leg. R. de Vos & P.J. Zumkehr.

Diagnosis: Externally similar to *Reptilisocia tarica* Razowski, 2013 and *R. baratana* Groenen, 2021, but is distinguished by the wing venation. In the male genitalia the mushroom-shaped structure and a sharp, hardly to discern thin projection of the sacculus, are characteristic. In the female genitalia this species closely resembles *Throphocosta* but can be separated by the large eighth sternite, the spined origin of the ductus and the absence of a sclerotization in the ductus and signum.

Description: Male: 14 mm. Head golden yellow. Labial palpi straight, about two times diameter eye, second segment strongly widened in distal half, golden yellow. Terminal segment straight, yellow. Antennal basal third yellow, remaining part fuscous and finely ciliate. Thorax and tegulae brown with a yellow band close to the head.

Forewings broad, costa convex, dorsum and termen straight, apex protruding. Costal fold running to about a quarter of wing length. Dots of black raised scales present. Bands

indicated by numerous silver dots, dark brown, except for golden-yellow costa and termen. Costa interrupted at one quarter and at middle by dark brown bands. In middle of cell a distinct yellow spot. Fringes golden-yellow. Abdomen cream-coloured, at tergite 2 and 3 a puppet-shaped brown coloration.

Hindwings broad. A row of short cream-coloured modified scales on upper side of vein A3. In anal fold white modified scales. Brownish, somewhat darker in distal area. Fringe cream-coloured except for long, brown scales at anal fold.

Female: 12 mm. Hindwings darker fuscous. Fringes fuscous, along termen yellow with a fuscous basal band, at apex yellow.

Male genitalia: Tegumen with top flattened, square. Uncus absent. Socii triangular, hairy. Tuba analis membranous. Valva fairly broad, tapering distad with two spines beneath mid-costa, a peculiar postbasal mushroom-shaped structure originating above basal part, that may be folded upward or downward, top conical shaped, haired ventrally, dorsally sparsely haired. Sacculus broad, a sclerotized rim, a long sharp and thin projection originating from about middle of sclerotized rim. Aedeagus pistol shaped; two short cornuti in vesica, apex of cornuti with upturned projections. Bulbus ejaculatorius long and slender with an ovate sclerite in its sack.

Female genitalia: Papillae anales moderate. Apophyses posteriores about as long as papillae anales. Apophyses anteriores about two-third length of apophyses posteriores. Sterigma broad, spined posteriorly. Ostium urn-shaped. Lamella antevaginalis a slender rim. Eighth sternite a large plate. Arms of eighth tergite short, laterally ending in blunt and rounded projections. Ductus bursae and ostium of equal width, entrance spined. Ductus seminalis broad, originating close to entrance of ductus bursae in distal part of corpus bursae. Corpus bursae ovate, signum absent.

Distribution: The type specimens have been collected in Walmak, Jayawijaya Mountains, Papua, Indonesia, at an altitude of 1710 meter.

Etymology: The name *boletusana* (Latin: boletus = mushroom) refers to the mushroom-shaped structure at the base of the valve.

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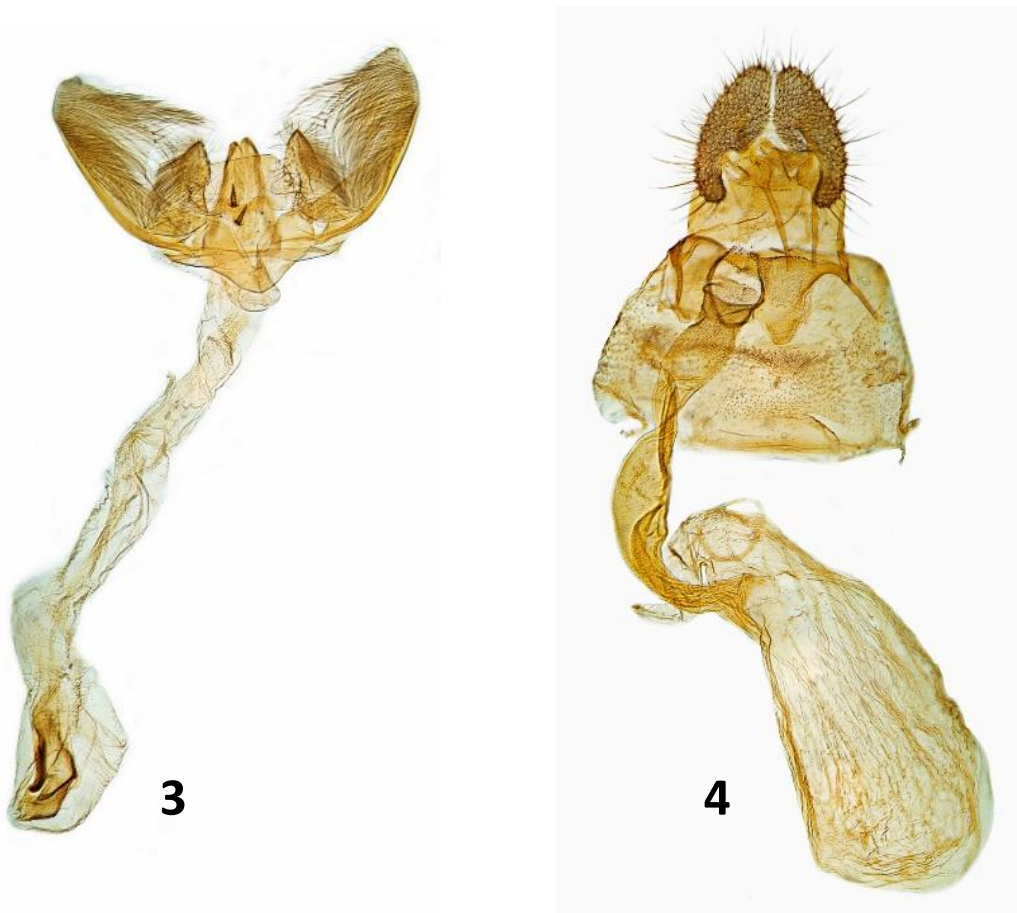
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Figs 1-2. Adults of *Nipwalmasa boletusana* spec. nov.: 1. ♂ holotype, RMNH.INS.1283186; 2. ♀ paratype, RMNH.INS.1283187.



Figs 3-4. Genitalia of *Nipwalmasa boletusana* spec. nov.: 3. ♂ genitalia, slide FG4050; 2. ♀ genitalia, slide FG4049.