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A new species of *Oeonosia* from Indonesian New Guinea (Lepidoptera: Arctiidae, Lithosiinae)

Rob de VOS

Abstract

A new species of the genus *Oeonosia* HAMPSON, 1914 is described and the only yet known species of the genus is redescribed, the genitalia are depicted and distribution maps are given. *Oeonosia pectinata* **sp.nov.** is from the Indonesian part of New Guinea.

Zusammenfassung

Eine neue Art der Gattung *Oeonosia* HAMPSON, 1914 wird beschrieben und die bisher einzige bekannte Art der Gattung wird neu dargestellt, die Genitalien werden abgebildet und Verbreitungskarten gegeben. *Oeonosia pectinata* **sp.nov.** stammt aus dem indonesischen Teil Neu Guineas.

Introduction

The genus *Oeonosia* HAMPSON, 1914 at the moment comprises two species which are apparently both endemic to (Indonesian) New Guinea. Their close relation with the genus *Oeonistis* HÜBNER, [1819] is clear by the similar wing pattern and similarities in the genitalia. However, the genitalia also show some significant differences (fig. 12-13) to justify the separation of the two genera. *Oeonistis* has the cucullus mostly sclerotized, while in *Oeonosia* it is for the greater part unsclerotized. The cornuti in the male aedeagus show the most distinct differences between the two genera (fig. 9, 13).

The second species of *Oeonosia* was discovered by coincidence noticing the difference in pectination of the male antennae between both species. This was confirmed by checking the genitalia which are indeed different. Moreover, the distribution areas seem not overlapping; the first described *O. aurifera* (ROTHSCHILD, 1912) is found in mountainous areas (Map 1, squares) while *O. pectinata* **sp.nov.** is found at low altitudes.

Used abbreviations:

FwlForewing length (from base to apex)
 BMNHNatural History Museum (formerly British Museum for Natural History), London, UK
 KSPKoleksi Serangga Papua (Private collection Henk van Mastrigt), Jayapura, Papua, Indonesia
 RMNHNaturalis (Nationaal Natuurhistorisch Museum) (formerly Rijksmuseum voor Natuurlijke Historie), Leyden, The Netherlands
 ZMANZoölogisch Museum Amsterdam, University of Amsterdam, The Netherlands

Oeonosia aurifera (ROTHSCHILD, 1912) (Figs 1-3, 6, 8-9, 14-15; Map 1 - dots)

Oeonistis aurifera ROTHSCCHILD, 1912: 225; DRAUDT, 1914: 201.

Oeonosia aurifera: HAMPSON, 1914: 513; STRAND, 1922: 599; WATSON et. al, 1980: 132.

Material examined: Holotype ♂: Type [red circle], nr. Oetakwa R., Snow Mts., Dutch N. G., up to 3500 ft., x. xii. 1910 (Meek), *Oeonistis aurifera* Type Rothschild, Rothschild Bequest, B.M. 1939-1. [BMNH]. Furthermore: 2 ♀ ♀, Dutch New Guinea, Mt. Kunupi, Menoo Valley, Weyland Mts., xi-xii.1920 & xii.1920-i.1921, 6000 ft, C.F. & J. Pratt [BMNH]; 2 ♂ ♂, Indonesia, Papua, Star Mountains, Mabilabol (Oksibil), 1340 m, 21-25.ii.2005, UNCEN-ZMAN Expedition 2005 [ZMAN]; 1 ♂, Indonesia, Irian Jaya, Peg. Bintang, Mabilabol, 1450 m, 25-30.iii.2000, Henk van Mastrigt [KSP]; 1 ♂, Indonesia, Irian Jaya, Central Mountain Range, Walmak (Nipsan), 1700 m, 30.v-4.vi.2000, Henk van Mastrigt [KSP]; 1 ♂, Indonesia, Papua, Sarimi, Foja Mountains, 2°34.5'S - 138°42.9'E, 1650 m, 23.xi-7.xii.2005, CI-RAP [KSP]; 1 ♀, Nederlands Nieuw Guinea, Sterrengeberge, Ok Sibil, 1260 m, v.1959, Sterrengeberge Expeditie [RMNH].

External characters: Fwl male 16 mm, female 24-25 mm. Antenna black, in male bipectinate with rather short pectination (fig. 6), in female filiform with short cilia. Head golden yellow, clypeus and palpal black. Patagia and tegulae in male pale yellow with golden yellow edges, rest of thorax bone-white, in female patagia and base of tegulae golden yellow, distally pale yellow. Abdomen dorsally covered with hairs, pale grey-yellow, in male with a golden yellow anal tuft, in female lateral with golden yellow anal

brushes. Legs with femur pale yellow, tibia at outside blackish brown and innerside pale yellow, tarsi blackish brown.

Forewing with ground colour pale yellow, in submarginal field slightly suffused with grey. In male basal two-third of costa of forewing black with metal blue shimmering, distal third of costa narrowly edged black, termen with black fringes. In female only the basal one-third broadly black with blue shimmering, the distal two-third not edged black but termen like in male with black fringes. A small blackish longitudinal patch in the basal field near the dorsum. In the centre of the forewing, below the cell, a large conspicuous blackish brown patch with a slight blue shimmering which is in males more or less round and in females drop-shaped (as far as presently known from two female specimens).

Hindwing pale amber yellow (darker than forewing) without any pattern.

Male genitalia (fig. 8-9): Uncus finger-shaped, bend down with sharp apex. Saccus conspicuous extended, spoon-shaped with a sclerotized rim. Valva widely oval-shaped with apical (unsclerotized) part circle round. Sacculus extended with a blunt process and with a thorn on the apex. Between sacculus and process a blunt angle of about 150° (see arrow in fig. 8). Aedeagus short and simple with a sclerotized distal ring. Several cornuti present, triangle shaped and compared to the following species rather large.

Female genitalia (fig. 14-15): Antrum widely oval-shaped and heavy sclerotized with some lobes. Ductus bursae broad with first part slightly sclerotized. Second part of (unsclerotized) ductus bursae gradually transforming into rather small and narrow bursa copulatrix. No signum present.

***Oeonosia pectinata* sp. nov. (Figs 4-5, 7, 10-11, 16-17; Map 1 - squares)**

Material: Holotype ♂, Nederlands Nieuw Guinea, Waris district, Waris, 28.x.1938, W. Stüber, coll. J.M.A. van Groenendael, [ZMAN]. Paratypes (2♂♂, 2♀♀) 1♂, 1♀, Ned. Nieuw Guinea, Araucaria Kamp, 19.iii.1939, Toxopeus, [RMNH]; 1♂, Nederlands Nieuw Guinea, Waris district, Ampas, 5.i.1938, W. Stüber, coll. J.M.A. van Groenendael, [ZMAN]; 1♀, Nederlands Nieuw Guinea, Jafi district, Keerom rivier, 30.x.1938, W. Stüber, coll. J.M.A. van Groenendael, [ZMAN].

External characters: Fwl male 19-20 mm, female 25 mm. Characters basically similar as in *O. aurifera* but with some important differences. Male antenna bipectinate with distinctly longer pectination than in *aurifera* (fig. 7). Head, thorax, legs and abdomen like in *O. aurifera* but tegulae in male with less extended golden yellow colouration.

Forewing pale yellow with black costal rim gradually narrowing towards apex (in female until half of wing length) and with blue shimmering. Termen with black fringes. Small patch in basal field near dorsum like in *aurifera*. Large central patch not round but in male and female variable drop shaped (in *O. aurifera* in male round) with slightly blue shimmering.

Hindwing of same pale colour as forewing (in *O. aurifera* the hindwing is darker).

Male genitalia (fig. 10-11): Very similar to *O. aurifera* but with some differences: Valva more narrow than in *O. aurifera*, apical part of valva more stretched, not circle round. Sacculus with apical extension longer than in *O. aurifera*, without angle. Thorn on apex

of apical extension larger than in *O. aurifera*. Aedeagus like in *O. aurifera* but cornuti much smaller.

Female genitalia (fig. 16-17): Antrum rather small, nut-shaped, not heavy sclerotized and gradually confluent with the ductus bursae. Ductus bursae very long and curled in “S”-shape, the first half of it broad and slightly sclerotized, the second half more narrow, unsclerotized and gradually transformed in a rather small bursa copulatrix. No signum present.

Etymology: The name refers to the longer pectination of the male antenna compared with those of *O. aurifera*.

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Address of the author:

Drs. Rob de VOS

Zoölogisch Museum Amsterdam, dept. Entomology

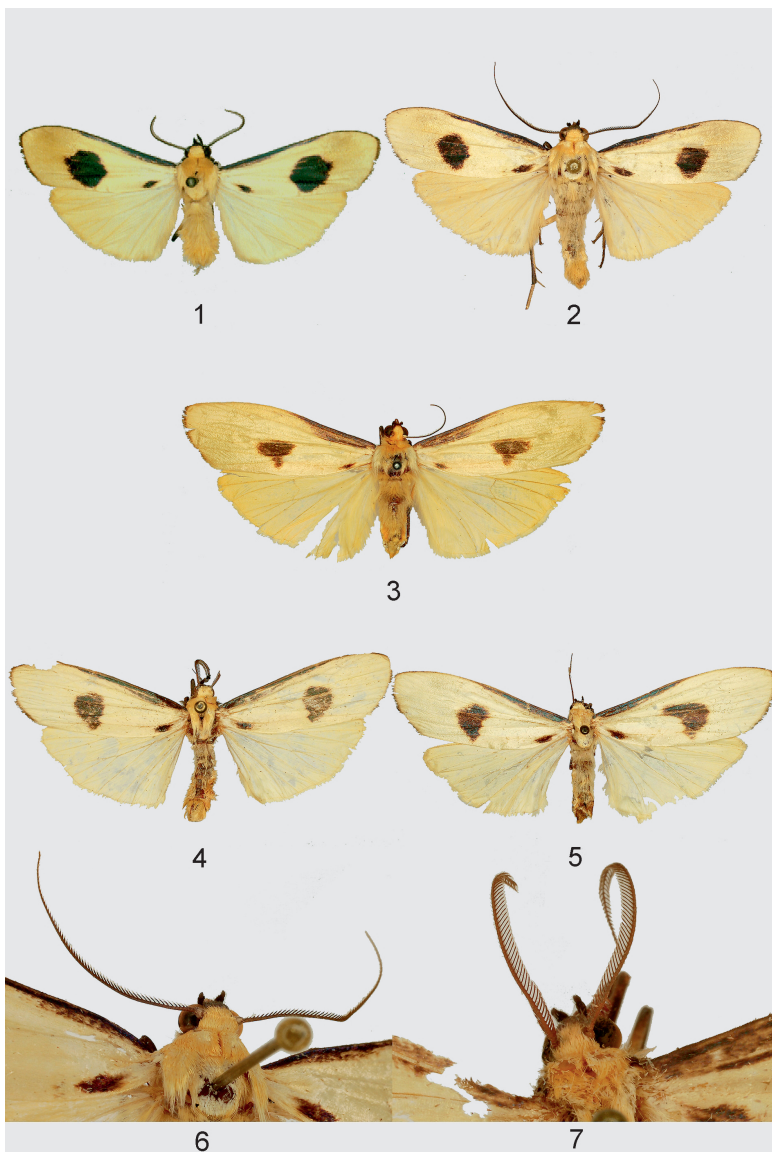
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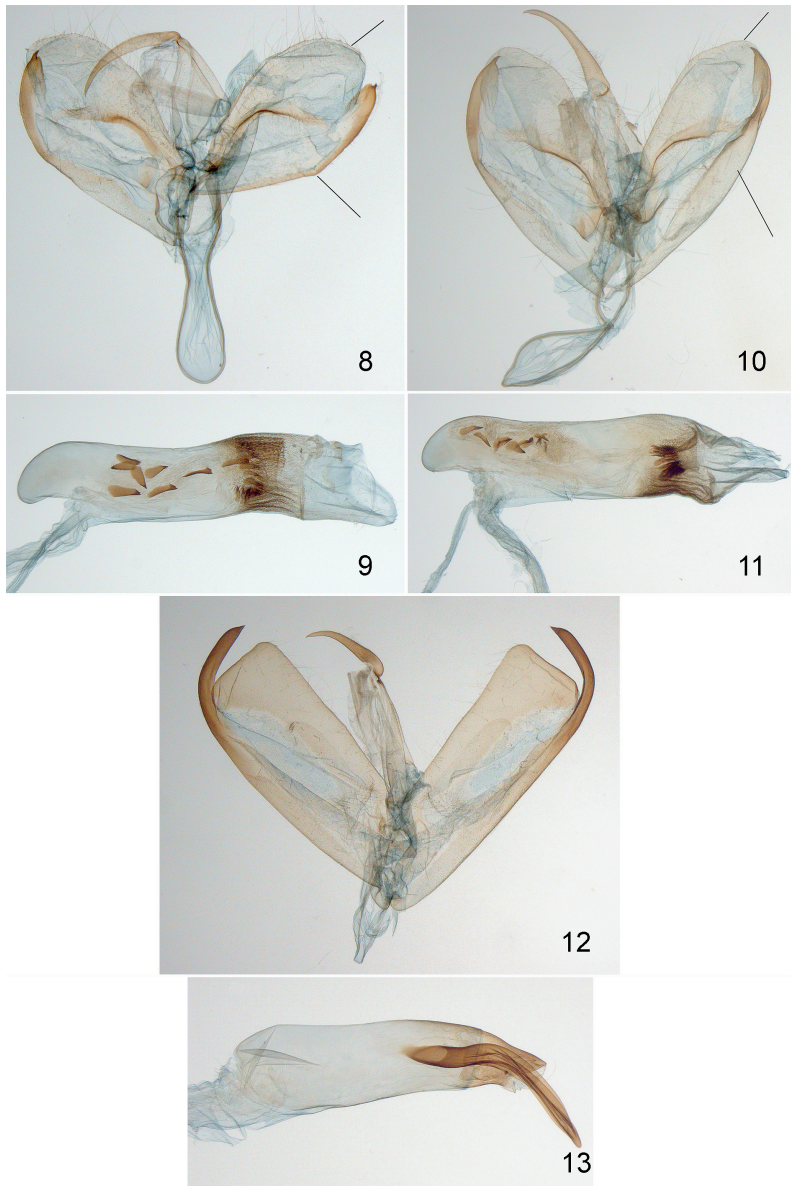
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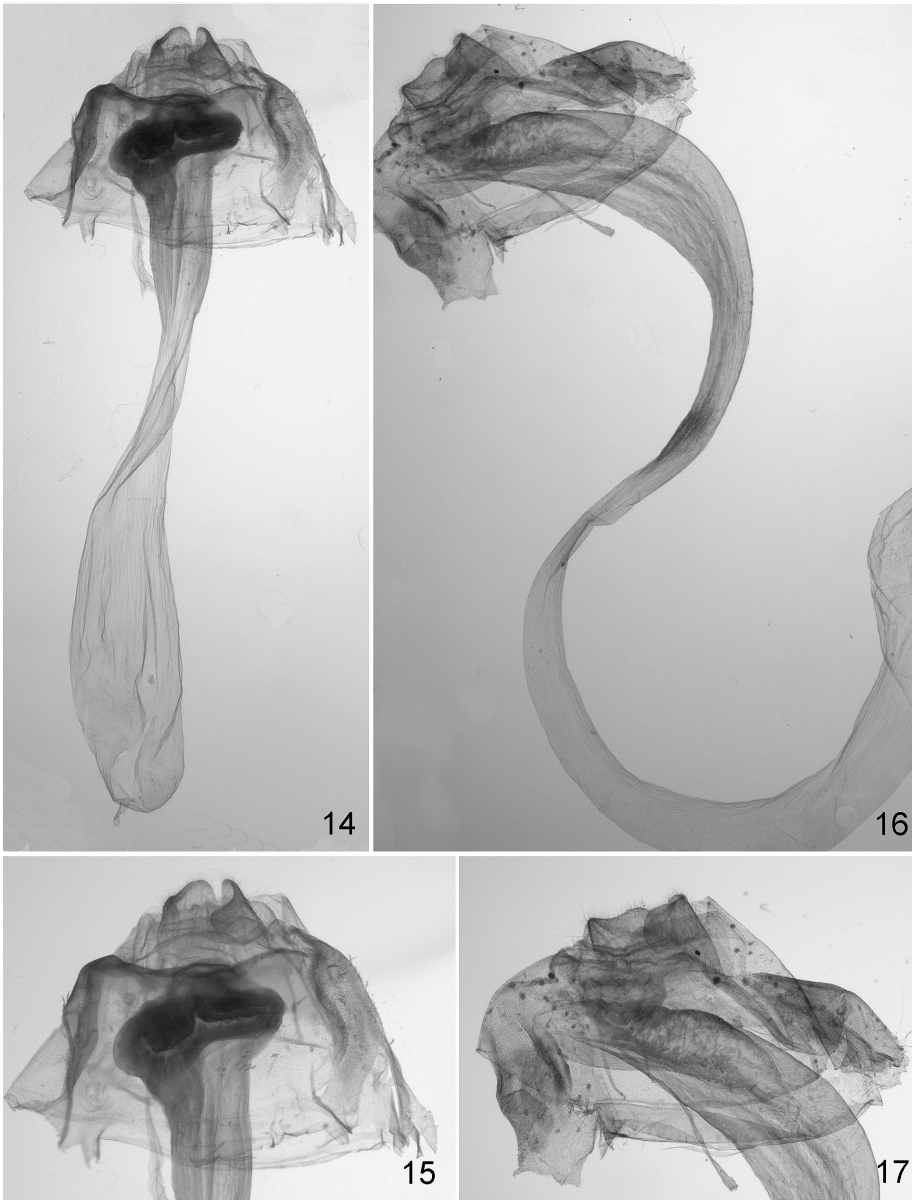
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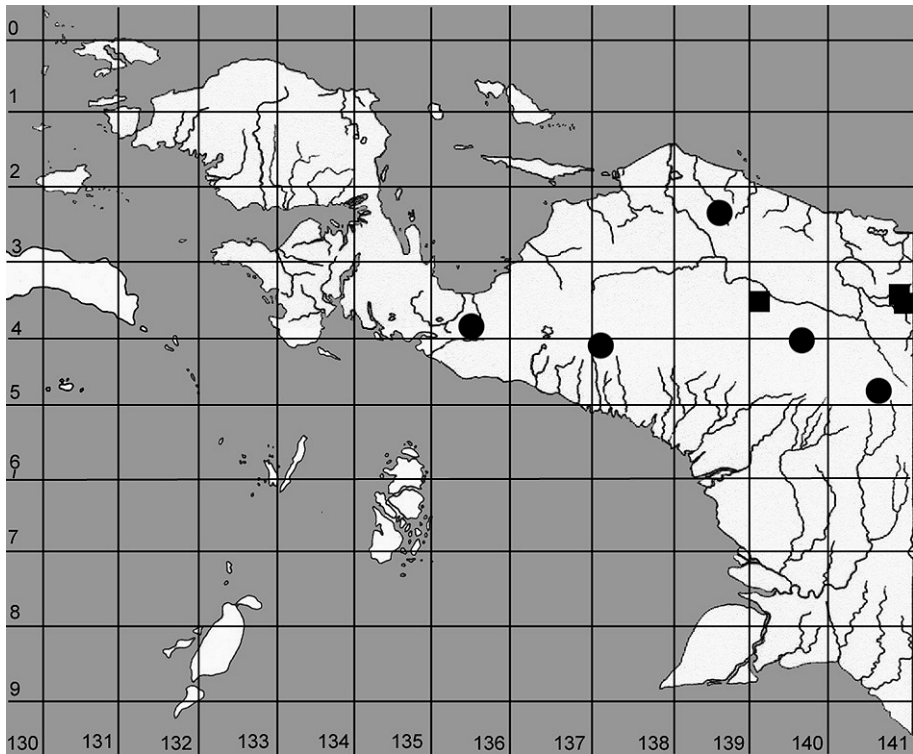
Figs 1-7: Adults of *Oeonosia*. (1) *Oeonosia aurifera* (ROTHSCHILD, 1912), holotype (male, BMNH). (2) *Oeonosia aurifera* (male), Indonesia, Papua, Mabilabol, 1340 m, 21-25.ii.2005, UNCEN-ZMAN Expedition 2005 (ZMAN). (3) *Oeonosia aurifera* (female), Dutch New Guinea, Mt. Kunupi, Menoo Valley, Weyland Mts., 6000 ft, xi-xii.1920, C.F. & J. Pratt (BMNH). (4) *Oeonosia pectinata* sp.nov., holotype (male, ZMAN). (5) *Oeonosia pectinata* (female), paratype, Nederlands Nieuw Guinea, Jafi district, Keerom rivier, 30.x.1938, W. Stüber, coll. J.M.A. van Groenendael (ZMAN). (6) *Oeonosia aurifera* (male), antenna. (7) *Oeonosia pectinata* (male), antenna.



Figs 8-13: Male genitalia of *Oeonosia* and *Oeonistis bicolora*. (8) *Oeonosia aurifera*, male genitalia (prep. RV1234), arrows showing the rounded apical part of the valva and the blunt angle at the sacculus. (9) *Oeonosia aurifera*, aedeagus (prep. RV1234). (10) *Oeonosia pectinata*, male genitalia (prep. RV1235), arrows showing the stretched apical part of the valva and the sacculus without angle. (11) *Oeonosia pectinata*, aedeagus (prep. 1235). (12) *Oeonistis bicolora*, male genitalia (prep. RV1237). (13) *Oeonistis bicolora*, aedeagus (prep. RV1237).



Figs 14-17: Female genitalia of *Oeonosia*. (14) *Oeonosia aurifera*, female genitalia (prep. BM6007). (15) *Oeonosia aurifera*, antrum (prep. BM6007). (16) *Oeonosia pectinata*, female genitalia (prep. RV1236). (17) *Oeonosia pectinata*, antrum (prep. RV1236).



Map 1: Distribution of *Oeonosia* in New Guinea: circles: *aurifera*; squares: *pectinata*.

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Adresse: Entomofauna, Redaktion und Schriftentausch c/o Museum Witt, Tengstr. 33, 80796 München, Deutschland, E-Mail: thomas@witt-thomas.com; Entomofauna, Redaktion c/o Fritz Gusenleitner, Lungitzerstr. 51, 4222 St. Georgen/Gusen, Austria, E-Mail: f.gusenleitner@landesmuseum.at

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