

Three new species of *Orvasca* (Lepidoptera: Lymantriinae) from Papua Indonesia.

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Abstract: Three new species of the genus *Orvasca* Walker, 1865 are described and the genitalia figured. *Orvasca yende* spec. nov., *O. aureomaculata* spec. nov., and *O. nigericorpus* spec. nov. are the only members of the genus recorded from New Guinea.

Rangkuman: Tiga spesies baru dari genus *Orvasca* Walker, 1865 dipertelakan dan gambar genitalianya disajikan. Hanya *Orvasca yende* spec. nov., *O. aureomaculata* spec. nov., dan *O. nigericorpus* spec. nov. merupakan anggota genus tersebut yang ditangkap di New Guinea.

Keywords: Papua, West Papua, New Guinea, Erebidae.

Introduction

The genus *Orvasca* Walker has a widespread distribution from the Palearctic Region, through the Oriental tropics to New Guinea and Australia. The genus is not currently recorded from New Guinea and its associated islands but it is likely to be well represented since several undescribed species are known and there are probably several described species that have not yet been formally transferred to the genus. This paper describes three hitherto unknown species of *Orvasca* from Papua Indonesia.

Systematics

In general fascies, the adults of *Orvasca* are small, unicolourous Lymantriines, often white, cream, or yellow. The genus was revived by Holloway (1999) in his review

of the Bornean members of *Euproctis*. The genus has vein M2 missing in the hindwing, but more particularly he defined the genus on the basis of the male genitalia. Two characters were considered to be diagnostic: the presence of a rugose patch ventral to the uncus and the presence of an elongate, but variably shaped process between the bases of the sacculi which may represent part of the juxta. More generally, the valves are often deeply divided and the uncus and aedeagus are both short. The form of the female genitalia is variable, but a bicornute signum is generally present (Hollaway 1999).

Abbreviation

RMNH - Naturalis Biodiversity, Leiden, The Netherlands.

Orvasca yende spec. nov.
(figs 1-8)

Holotype ♂: Roon Island, Yende, 60 m. at light, 7.xi.1993. Indonesia, Irian Jaya. A.J. de Boer, A.L.M Rutten, R. de Vos [RMNH].

Additional material examined: 1 ♀: Roon Island, Yende, 60 m. at light, 7.xi.1993. Indonesia, Irian Jaya. A.J. de Boer, A.L.M Rutten, R. de Vos [RMNH].

Diagnosis

Distinguished from *O. aureomaculata* and *O. nigericorpus* by colouration and patterning on the wings. In *O. yende* in the male genitalia the rugose patch is wider than in *O. nigericorpus* and the valves are more deeply divided and there is a small but broad spine on the ventral edge of the valvula. In the female *O. yende* is distinguished by a more massive sterigma compared to the entirety of segment VIII, a less tight reflection of the ductus bursae and a signum with the bases of the cornua not widely separated.

Description

Male (fig. 1). Antennal shaft whitish, pectinations pale cream; head pale cream, palpi porrect, whitish cream. Thorax pale cream, fore-, mid- and hind-legs whitish cream. Abdomen yellowish cream, anal tuft pale yellow. Forewing: length 11 mm., whitish cream with a slight irroration of dark brown scales. Hindwing: whitish cream. The underside of both wings is whitish cream except for the forewing costa which is a pale yellow brown.

Genitalia (figs 2-4): Well sclerotised; tegumen and vinculum united, tegumen hood-like with anterior latero-dorsal margin produced to form a slight angle, vinculum

a narrow U-shape, saccus strongly developed, wide between the valve bases tapering to a narrow rounded point; uncus a well sclerotised short, narrow beak with with a small, downturned point, densely covered with minute punctures and short fine setae, and towards the tegumen swelling into a broad shouldered base, ventral to the uncus is a broadly oval rugose patch; juxta a rectangular plate and also may be represented by a large, bluntly oval process arising from between the bases of the sacculi; valves deeply divided, the cucullus bluntly digitate with the distal half covered with long fine setae, valvula digitate, downwardly and inwardly pointing, bluntly tapering to a fine point and with the dorsal margin carinate, and finely setose, midway along the ventral edge is a small swelling bearing a short spine, sacculi weakly developed; anellus moderately sclerotised dorsal to the insertion of the aedeagus; aedeagus long, slender, caecum slightly swollen and downturned, carina penis with a well developed spine, vesica a simple sac, armature a well developed spine.

Female (fig. 5). Similar to the male except that the abdomen is more stout, the yellowish cream scales are more heavily interspersed with umber coloured scales and the anal tuft is more well developed. The forewings (length 16 mm) are more elongate and less heavily irrorated with dark brown scales. On the undersurface the forewing costa is less well defined in colouration.

Genitalia (figs 6-8): Papillae anales short and wide, densely covered with fine setae, ventral margin rounded, dorsal margin bluntly pointed; pseudopapillae (setose pads ventral to the papillae anales) well developed, elongate; apophyses posteriores long, straight, narrow, extending well into segment VIII; segment VIII strongly sclerotised, sub-rectangular in ventral view and tapering rapidly to the anterior to about half its maximum width, with a short, shallow medial groove arising from the ventral, posterior margin; apophyses anteriores long, straight, narrow, as long as apophyses posteriores, extending the length of segment VIII; segment VII expanded, membraneous with anterior margin narrowly sclerotised to form a ring; sterigma massive and well sclerotised, axe-shaped with the blade caudad and having a rectangular, medial notch and the heels of the blade finely and narrowly pointed and strongly recurving anteriorly, the butt of the axe relatively long; ductus bursae long, distal third broad, strongly sclerotised, walls with broad horizontal corrugations, anterior half reflexed at right angles to the right, the proximal two thirds of the ductus membraneous, narrow but gradually widening towards corpus bursae; corpus bursae pyriform, signum bicornute with the cornua widely diverging from the base and arising from a lightly sclerotised sub-circular plate.

Etymology: *yende* referring to the type locality.

Orvasca aureomaculata spec. nov.
(figs 9-12)

Holotype ♀: Ned. Nieuw Guinea, Kota Nica, Res. Hollandia, 10.xi.1960, Leg. R.T. Simon Thomas. alt.: 75m., host *S. punctata*, loc.: Kweek (bred). [RMNH].

Diagnosis

Distinguished by colouration and patterning and from the female of *O. yende* by a less massive sterigma compared to the entirety of segment VIII, a tighter reflection of the ductus bursae and a signum with the bases of the cornua widely separated.

Description

Female (fig. 9). Antennal shaft white, pectinations cream; head pale cream, palpi porrect, pale cream with terminal segment yellowish-cream. Thorax white, tegula with a sparse covering of long golden-yellow scales; fore-, mid-, and hind-legs cream with long golden-yellow hair scales on the tarsus forming an external fringe. Abdominal segments white with a fringe of golden-yellow scales on the posterior edge, anal tuft golden-yellow. Forewing: length 16 mm., ground colour white with a thick irroration of golden-yellow scales, becoming more sparse and mixed with a few dark brown scales towards the termen and costa; white antemedial and postmedial lines arise at right angles from the costa and at about midway bend gently towards the inner margin; the apical parts of all the branches of R, M2 and Cu2a are covered with golden-yellow scales to form an interrupted terminal line; basal part of fringe white giving the appearance of a white marginal line, distal part golden-yellow; dorsum with a sparse covering of long, fine golden-yellow scales. Hindwing: a very pale cream throughout, fringe long. The underside of both wings very pale cream.

Genitalia (figs 10-12): Papillae anales short and wide, covered with long fine setae; pseudopapillae small, pyramidal lobes densely covered with long rather robust setae; apopyphyses posteriores long, straight extending well into segment VIII; segment VIII strongly sclerotised, sub-rectangular in ventral view and slightly tapering anteriorly with a short, moderately wide medial groove arising from the ventral, posterior margin; apopyphyses anteriores long, straight, as long as the apopyphyses posteriores and extending the length of segment VIII; segment VII expanded, membraneous with anterior margin narrowly sclerotised to form a ring; sterigma massive and well sclerotised, axe-shaped with the blade caudad and having a U-shaped, medial notch and groove, and the heels of the blade finely and narrowly pointed and strongly recurved anteriorly, the butt of the axe head relatively short and broad; ductus bursae long, distal third broad, strongly sclerotised, walls with slight horizontal corrugations, anterior half strongly reflexed to the right giving a reniform appearance to the whole, the proximal two thirds of the ductus membraneous, narrow but gradually widening towards

corpus bursae; corpus bursae pyriform and strongly pleated, signum bicornute with the cornua arising from a lightly sclerotised sub-circular plate, cornua broadly separated at their base and then widely diverging.

Known only from the female holotype.

Etymology: *aureomaculata* referring to the golden-yellow speckles on the forewing.

Orvasca nigericorpus spec. nov.
(figs 13-17)

Holotype ♂: Baliem Valley, Wamena, 1500m., at light 22.x.1993. Indonesia, Irian Jaya, A.J. de Boer, A.L.M. Rutten & R. de Vos. [RMNH].

Diagnosis

Distinguished by colouration and patterning and from the male of *O. yende* by the narrow rugose patch, the rather shallow division of the valve and the lack of a spine on the mid ventral margin of the valvula.

Description

Male (fig. 13). Antennal shaft white, pectinations white; head white, palpi white, porrect. Thorax and legs white. Abdomen: dorsum black except for white basal segment; remainder white including anal tuft which has a slight orange tinge. Forewing: length 13 mm., white with a slight irroration of umber scales medially between the inner margin and vein 1A+2A. Hindwing: white. The underside of both wings white.

Genitalia (figs 14-16): Well sclerotised; tegumen and vinculum united, tegumen hood-like, vinculum a very narrow U-shape, saccus strongly developed, wide between the valve bases tapering to a narrow rounded point; uncus a well sclerotised a very short, narrow beak with with a small, downturned point, densely covered with minute punctures and short fine setae, and towards the tegumen swelling into a broad shouldered base, ventral to the uncus is a narrow rugose patch; juxta may be represented in part by a broadly rectangular plate and a large, narrow bluntly pointed digitate process arising from between the bases of the sacculi; valves shallowly and widely divided, the cucullus bluntly triangular, covered with long fine setae, valvula more elongately triangular, suddenly tapering to a fine point, the whole covered with long fine setae, sacculi weakly developed; anellus moderately sclerotised dorsal to the insertion of the aedeagus to form a triangularly shaped transtilla; aedeagus long, slender, caecum slightly swollen and downturned, vesica with a well developed spine.

Known only from the male holotype.

Etymology: *nigericorpus* referring to the black dorsum of the body.

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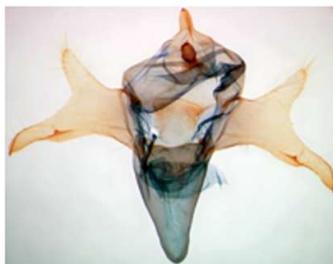
Plate 1



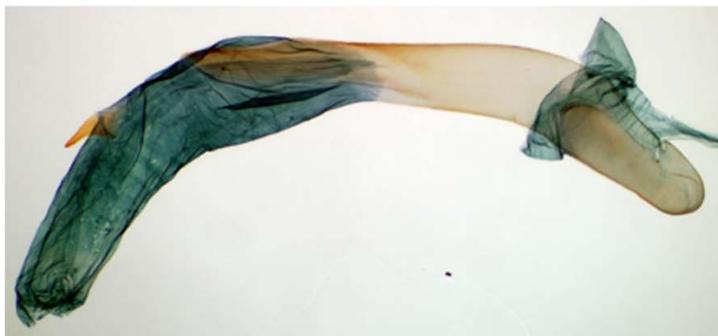
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Figs 1-4. *Orvasca yende* spec. nov. ♂ HT [RMNH]: 1. Upperside; 2-4. Male genitalia: 2. Lateral view; 3. Ventral view; 4. Aedeagus.

Plate 2



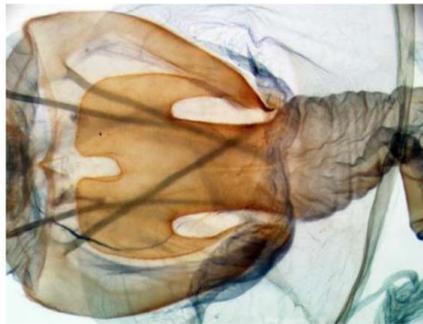
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Figs 5-8. *Orvasca yende* spec. nov. ♀ PT [RMNH]: 5. Upperside; 6. Female genitalia; 7. Signum; 8. Sterigma.

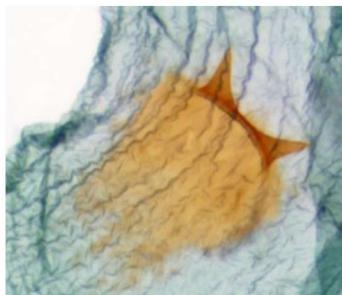
Plate 3



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Figs 9-12. *Orvasca aureomaculata* spec. nov. ♀ HT [RMNH]: 9. Upperside; 10. Female genitalia; 11. Signum; 12. Sterigma.

Plate 4



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Figs 13-16. *Orvasca nigericorpus* spec. nov. ♂ HT [RMNH]: 13. Upperside; 14-15. Male genitalia: 14. Lateral view; 15. Ventral view; 16. Aedeagus.