

Two new species of *Hyalaethea* Butler from Indonesian New Guinea (Lepidoptera: Arctiidae, Syntominiinae)

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Abstract: Two new remarkable and conspicuous syntomine species have been discovered in the western part of New Guinea. They appear to belong to *Hyalaethea* Butler, 1887. Both species are described and depicted here. Besides that, a checklist is given of the Syntominiinae of Indonesian New Guinea as presently known, with pictures of the various species.

Ikhtisar: Dua spesies baru yang menoljol dari subfamili Syntominiinae ditemukan di bagian barat New Guinea. Ternyata termasuk dalam *Hyalaethea* Butler, 1887. Kedua spesies diletakan di sini. Di samping itu checklist diberikan dari Syntominiinae di bagian Indonesia dari New Guinea, sesuai dengan pengetahuan sekarang, yang disertahui dengan gambar-gambarnya.

Key words: *obraztsovi*, *attemae*, *Lobuliceryx novaeguineensis*, Baliem Valley, Paniai.

Introduction

The Syntominiinae are represented in New Guinea by about 27 species of which 14 species (including the two new species) have been found in Papua, the Indonesian western half of the Island. Six of those species have exclusively been found in the Indonesian part of New Guinea. The subfamily is not yet thoroughly revised and this may result in some synonymies or new discovered species in the future. The Syntominiinae are most easily recognized by the transparent patches between the veins on fore- and hindwings, the very often banded abdomen and the hindwings which may have been extremely reduced in size. This is even more pronounced in the species of the genus *Hyalaethea* Butler, 1887 in which the forewings are much higher than in other genera.

The two new discovered species belong to the latter. In the NCB-RMNH collection (Leiden) fourteen specimens of one of these species was identified and (type) labelled with "*Lobuliceryx novaeguineensis* *Obratzsov*, 1953", but a thorough literature research did not reveal the publication of *Obratzsov*. It must therefore be considered

to be a manuscript name. Consequently, it is also not mentioned in the Generic names of the Moths of the World (Watson et al., 1980).

Study of the genitalia and the wing venation shows that the two species must belong to the genus *Hyalaethea* Butler, 1887.

Some species of the Zygaenidae mimic Syntominae but can be distinguished at first glance by the different antenna and the oblique transconnected veins between the costal and subcostal vein on the forewing. Both, the Syntominae and mimic Zygaenidae, obviously mimic Hymenoptera.

Used abbreviations:

BMNH	- Natural History Museum (formerly British Museum for Natural History, London), United Kingdom
KSP	- Koleksi Serangga Papua (Papua Insect Collection, Br. Henk van Mastrigt, Jayapura), Papua, Indonesia
NCB-RMNH	- Nederlands Centrum voor Biodiversiteit (Dutch Centre for Biodiversity, formerly Nationaal Natuurhistorisch Museum Naturalis, Leiden), The Netherlands
NCB-ZMAN	- Nederlands Centrum voor Biodiversiteit (Dutch Centre for Biodiversity, formerly Zoolögisch Museum, Amsterdam), The Netherlands
Fwl.	- Forewing length

New species

Hyalaethea attema spec. nov.
(figs 1, 4-6)

Holotype: ♀, INDONESIA, Irian Jaya, Baliem Valley, Jiwika, 1600 m, 19.x.1993, A.J. de Boer, A.L.M. Rutten & R. de Vos [NCB-ZMAN].

Diagnosis: Abdomen metallic dark blue and laterally bright red coloured.

Description: ♀ (male unknown) forewing length 13.7 mm. Female antenna simple, rather thick and filiform, black. Head, thorax and abdomen (also the underside) metallic dark blue. Legs very dark brown. Patagia black, tegulae with extremely long ochreous coloured bristles reaching the tornus of the hindwing. Abdomen laterally red coloured.

Forewing very high with the costa more than twice as long as the dorsum. Forewing almost completely transparent, but the veins narrowly black, the costal and

subcostal vein broadly black, black fringes and the space between the anal vein and dorsum almost completely filled with black (except in the tornus where a small patch is without scales). Space between M1 and M2 completely filled with black, showing a peculiar black bar in the forewing.

Hindwing very small, more or less triangular shaped. Apex, termen and dorsum with a broad black margin, the centre of the hindwing transparent crossed by the black veins. Basal half of costa and wingbase bone-white. Underside of the hindwing with the pattern black, no white.

Female genitalia: Lamella vaginalis very broad and strongly arched around the ostium. Ostium wide but somewhat squeezed (fig. 5). Antrum funnel-shaped, caudally extended in a rather long waved ribbon which is gradually tapering. Cervix bursae with a distal lobe on which the ductus seminalis. The cervix bursae immediately running into the globular bursa copulatrix. Left side of bursa copulatrix wrinkled and sclerotized with a wide central band of tiny scobination (fig. 6).

Distribution: The only specimen known is found in Jiwika in the Baliem Valley, Jayawijaya Mountains, Papua, Indonesia, at an altitude of 1600 meter.

Etymology: The species is named after Mrs. Anny Attema, who has dedicated her career as alderman at the council board of the city of Vlaardingen (The Netherlands) to improve and extend the nature and greenness in her town. For her outstanding work the municipal officers of Vlaardingen, who implemented her green policy, requested the Papua Insects Foundation to honour her at her farewell with this species name, as described in this paper.

Hyalathea obratzovi spec. nov.

(figs 2-3, 7-11)

Lobuliceryx novaeguineensis Obratzov, 1953 (manuscript name)

Holotype: ♂, [INDONESIA], "Nieuw Guinea Exp, K.N.A.G. 1939, Paniai, 21.viii.1939, Holotype *Lobuliceryx novaeguineensis* ♂ f n. sp., N. Obratzov det. 1953", [NCB-RMNH].

Paratypes: 5 ♂♂, 5 ♀♀, [INDONESIA], "Nieuw Guinea Exp, K.N.A.G. 1939, Paniai, 25.viii.-16.xi.1939 [9.xi.1939, ♂ allotype; 25.viii.1939, ♀ paratype; 13.ix.1939, ♂ paratype; 18.ix.1939, ♂ paratype; 22.ix.1939, ♂ paratype; 27.ix.1939, ♂ paratype, praep.no. ct. 16; 30.ix.1939, ♂ & ♀ paratype; 1.x.1939, ♀ paratype; 16.xi.1939, ♀ paratype, praep.no. ct.17] *Lobuliceryx novaeguineensis* n.sp., N. Obratzov det. 1953", [NCB-RMNH]; 1 ♂, 1 ♀, [INDONESIA], "Nieuw Guinea Exp, K.N.A.G. 1939, Araboebivak, 29.x.1939 [♂] & 2.xi.1939 [♀]", [NCB-RMNH].

Diagnosis: Abdomen black and dark metallic green and laterally yellow coloured.

Description: ♂ fwl. 12.7-13.0 mm, ♀ fwl. 12.8-13.5 mm. Antenna simple in both sexes, rather thick and filiform, black. Head, thorax and abdomen black with anal segment metallic dark green in both sexes. Legs greybrown. Patagia black, tegulae with extremely long golden yellow coloured bristles reaching much further than the tornus of the hindwing. Abdomen laterally broadly yellow coloured, in male holotype leaving only a black longitudinal dorsal stripe.

Male (fig. 2) with forewing costa three times longer than dorsum making the forewing very high but not unusual broad. Like in *attemae* the forewing almost completely transparent, the veins narrowly black, the costal and subcostal vein broadly black and with black fringes at the termen. The veins are at a wider distance than in female, space between M1 and M2 not completely filled with black, leaving a small triangular transparent patch at the termen. The anal vein is strongly arched, the space between this vein and the dorsum is completely filled with black. At the underside of this wing area a modified patch of ochreous short bristles is present, probably with a scent function.

Hindwing of male small and almost round, the centre of the hindwing bone-white with a pale greybrown margin. The costa with short bristles corresponding with those on the underside of the forewing.

Female (fig. 3) forewings similar is in male but broader, the veins at closer distance than in male and with the anal vein more straight and therefore consequently the space between anal vein and dorsum much more narrow, completely filled with black and without a modified patch of bristles.

Hindwing of female as in *attemae*, transparent with black veins and with a broad black margin around the wing.

Genitalia: Male genitalia (fig. 7) with uncus finger-shaped with a thorn on the apex. Saccus well defined and "V"-shaped and gradually tapering into a blunt tip. Juxta divided into two rounded lobes which are distally connected. Tegumen arched in half a circle. Valve broad in the middle, at connection with vinculum and distally tapering and therefore resembling a French role or croissant, distal apex with small sharp thorn. Aedeagus (fig. 8) cylindrical, rather straight and of moderate shape and length. Vesica in everted situation with three large lobes, of which the upper lobe is scobinated, and one trunc-shaped lobe on which a large thorn-like cornutum. Female genitalia (fig. 9) with lamella vaginalis very broad and strongly arched around the wide ostium. Antrum wide and beaker-shaped and extended into a flat tongue (resembling a "chain-saw", fig. 10) with rounded caudal end. Cervix bursae not sclerotized but wrinkled with a distal lobe on which the ductus seminalis. Cervix broadly defined and immediately running to the globular bursa copulatrix, without clearly defined ductus bursae. At the right side of the first part of the bursa (fig. 11) only slightly sclerotized and with a scarcely scobinated field.

Etymology: The species is named in honour of Dr. Nikolaus Sergeyeovich Obraztsov (1905-1966), who recognized this species in the collection of NCB-RMNH to be a new species. He proposed to name the species *Lobuliceryx novaeguineensis* and even attached type labels to a series of specimens but unfortunately never published his findings in spite of the year "1953" which was mentioned on the labels.

Checklist of the Syntominiæ of Indonesian New Guinea as presently known

Amata Fabricius, 1807

alberti Rothschild, 1911 [fig. 12]

aurofasciata (Swinhoe, 1892) [fig. 13]

arfakensis Rothschild, 1911

micantala Hulstaert, 1923

huebneri (Boisduval, 1829) [fig. 14]

Ceryx Wallengren, 1863

ampla (Walker, [1865]) [fig. 15]

formicina (Swinhoe, 1892) [fig. 16]

puncta (Druce, 1898) [fig. 17]

swinhoei Bethune-Baker, 1904 [fig. 18]

Eressa Walker, 1854

ypleta (Swinhoe, 1892) [no picture available]

Hyalæthea Butler, 1887

Lobuliceryx Obraztsov (manuscript name)

attemae spec. nov. [fig. 1]

dohertyi Rothschild, 1910 [fig. 19]

obraztsovi spec. nov. [figs 2, 3]

novaeguineensis Obraztsov (manuscript name)

Paralaethia Hampson, 1907

subformicina (Bethune-Baker, 1904) [fig. 20]

Pseudoceryx Rothschild, 1910

dohertyi Rothschild, 1910 [fig. 21]

Trichaeta Swinhoe, 1892

aurantiobasis (Rothschild, 1910) [fig. 22]

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Literature

Watson, A., D.S. Fletcher & I.W.B. Nye. 1980. The Generic Names of Moths of the World, Volume 2. Noctuoidea (part): Arctiidae, Cocytiidae, Ctenuchidae, Dilobidae, Diopitidae, Lymantriidae, Notodontidae, Strepsimanidae, Thaumetopoeidae, Thyretidae: 228 pp., Trustees of the British Museum (Natural History), London.



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Figs 1-3. *Hyalaethea* species, imagines: 1. *Hyalaethea attemae* spec. nov. Holotype, ♀. Jiwika, Baliem Valley, Irian Jaya, Indonesia (NCB-ZMAN); 2. *Hyalaethea obratzovi* spec. nov. Holotype, ♂. Paniai, Ned. Nw. Guinea [Indonesia], (NCB-RMNH); 3. *Hyalaethea obratzovi* spec. nov. Paratype, ♀. Paniai, Ned. Nw. Guinea [Indonesia], (NCB-RMNH).



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Figs 4-6. *Hyalaethea attemae* spec. nov, female genitalia: 4. habitus, 5. ostium and antrum, 6. bursa copulatrix;



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Figs 7-8: *Hyalaethea obratzovi* spec. nov., male genitalia: 7. habitus, 8. aedeagus;
Figs 9-11: *H. obratzovi* spec. nov., female genitalia: 9. habitus,
10. ostium and antrum, 11. close up of right side of bursa copulatrix.



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Figs 12-17. Syntominiæ species occurring in Papua: 12. *Amata alberti* Rothschild, 1911. ♂, Aroa River (PNG), (BMNH); 13. *Amata aurofasciata* (Swinhoe, 1892). ♀, Ransiki, Birdshead Peninsula, (NCB- ZMAN); 14. *Amata huebneri* (Boisduval, 1829). ♀, Foja Mts, (KSP); 15. *Ceryx ampla* (Walker, [1865]). ♀, Utakwa River, Snow Mts, (BMNH); 16. *Ceryx formicina* (Swinhoe, 1892). ♀, Kapaur [Fakfak], (BMNH); 17. *Ceryx puncta* (Druce, 1898). ♂ Jembatan Dua, Cyclop Mts, (ZMAN).



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Figs 18-22. Syntominiinae species occurring in Papua: 18. *Ceryx swinhoei* Bethune-Baker, 1904. ♂, Wataikwa River, Snow Mts, (BMNH); 19. *Hyalaethea dohertyi* Rothschild, 1910. ♂, Kota Nica, Hollandia [Jayapura], (ZMAN); 20. *Paralaethia subformicina* (Bethune-Baker, 1904). ♀, Mabilabol, Star Mts, (ZMAN); 21. *Pseudoceryx dohertyi* Rothschild, 1910. ♂, Biak Island, (RMNH); 22. *Trichaeta aurantiobasis* (Rothschild, 1910). Holotype ♂, Kapaur [Fakfak], (BMNH).