

ADDITIONS TO THE ALUCITIDAE OF PAPUA, INDONESIA (LEPIDOPTERA)

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Abstract: The Alucitidae of New Guinea are studied. A checklist is given and 17 new species are described and illustrated: *Alucita abenahoensis* sp. n., *A. aramsolkiensis* sp. n., *A. deboeri* sp. n., *A. dejongi* sp. n., *A. devosi* sp. n., *A. lackneri* sp. n., *A. mabilabolensis* sp. n., *A. manningi* sp. n., *A. nipsana* sp. n., *A. papuaensis* sp. n., *A. rutteni* sp. n., *A. vanmastrigti* sp. n., *A. walmakensis* sp. n., *A. wamenaensis* sp. n., *A. withaari* sp. n., *A. zumkehri* sp. n. and *A. zwieri* sp. n.

Key words: Lepidoptera, Alucitidae, new species, Papua New Guinea.

Nuevos Alucitidae de Papúa, Indonesia (Lepidoptera)

Resumen: Se estudian los Alucitidae de New Guinea. Se aporta una lista de especies, y se describen e ilustran 17 especies nuevas: *Alucita abenahoensis* sp. n., *A. aramsolkiensis* sp. n., *A. deboeri* sp. n., *A. dejongi* sp. n., *A. devosi* sp. n., *A. lackneri* sp. n., *A. mabilabolensis* sp. n., *A. manningi* sp. n., *A. nipsana* sp. n., *A. papuaensis* sp. n., *A. rutteni* sp. n., *A. vanmastrigti* sp. n., *A. walmakensis* sp. n., *A. wamenaensis* sp. n., *A. withaari* sp. n., *A. zumkehri* sp. n. y *A. zwieri* sp. n.

Palabras clave: Lepidoptera, Alucitidae, nuevas especies, Papúa Nueva Guinea.

Taxonomy/Taxonomía:

Alucita abenahoensis sp. n.

A. dejongi sp. n.

A. mabilabolensis sp. n.

A. papuaensis sp. n.

A. walmakensis sp. n.

A. zumkehri sp. n.

A. aramsolkiensis sp. n.

A. devosi sp. n.

A. manningi sp. n.

A. rutteni sp. n.

A. wamenaensis sp. n.

A. zwieri sp. n.

A. deboeri sp. n.

A. lackneri sp. n.

A. nipsana sp. n.

A. vanmastrigti sp. n.

A. withaari sp. n.

Introduction

In the last two decades Drs. Rob de Vos (ZMA) and colleagues made several entomological expeditions to the Indonesian part of the island New Guinea. Although the primary objective was not the collecting of Alucitidae, a number of these moths were encountered and collected. The local representative for these expeditions, Br. Henk van Mastrigt (KEP-UNCEN), had been collecting during an even longer period, and also met these moths.

The combined results showed an impressive number of specimens from this so poorly known fauna. De Vos and Van Mastrigt asked me to identify these specimens, a task I have gladly performed.

The Alucitidae are moths with morphologically unique characteristics: their wings are cleft into six or seven lobes. Approximately 210 species in 9 genera (Gielis, 2003) have been recorded so far. They occur in all faunistic regions of the world. The largest genus is *Alucita* Linnaeus, 1758, with approximately 190 species.

Taxonomic studies on the Alucitidae are few. In most publications only a description of species is given, without any notes on the relations between the species in the genera. Two exceptions can be found, a review of the palaearctic species by Hofmann (1898), now an out dated publication, and, a review of the west palaearctic species by Scholz and Jächk (1994). In the latter a firm bases on the taxonomical approach of this family is given. They also conclude that the wing pattern in the species is rather stable within the species, and usable for identification.

Upto now only four publications are present on the Alucitidae from New Guinea. The first species to be described from the region is *Triscaedecia septemdactyla* (Pagenstecher, 1900). In this publication the moth is illustrated in a line drawing. The characteristic wing pattern and the shape and the seven wing lobes are well recognizable. In 1917 Hering followed with also a single species: *Alucita brachyophimus*, only to be described in a short fashion. In 1929 Meyrick published in the series: Exotic Microlepidoptera, nine species from Papua New Guinea. The species have been mainly collected in the north-east parts of the island. Meyricks cryptic descriptions, but after examining the types in the British Museum of Natural History (BMNH), give a good picture of their status. In 1954 followed the publications on the results of the third Archbold Expedition by Diakonoff. The material was mainly collected in the mountains of Dutch New Guinea, resulting in another five species. These specimens are deposited in the National Natural History Museum, Naturalis (RMNH).

In listing the data of the species recorded so far, a picture arises of collecting in a few areas, whereas the main parts of this large island remained unexplored. This finding true in many families, De Vos initiate his surveys because of the limited knowledge in the Arctiidae he studied, and the author had a similar experience with Pterophoridae, is one of the reasons for the surveys as mentioned above. Van Mastrigt worked on New Guinea for decades, and the numerous places on the island he has visited created a wide

view of this fauna. The material he collected is a source of many recent publications on the insect fauna of this island. It is expected many publications will follow in the near future. Sadly enough Van Mastrigt only works on the western half of the island, the now Indonesian part: Papua.

Although it seems possible to split the representatives of the genus *Alucita* into species groups, no phylogenetic studies have been performed so far to support this idea. A study of that kind is out of the scope of this publication, and for this reason I will treat the species in an alphabetic order. The newly available species are illustrated in colour, and line drawings of the genital structures are reproduced.

Abbreviations

BMNH – British Museum of Natural History, London, Great Britain.

CG – Dr. Cees Gielis, Lexmond, The Netherlands.

ITZ – ZMAN (ZMA)

Kec. – Kecamatan (district)

KEP – Kelompok Entomologi Papua (Workgroup Papua Insects)

RMNH – Nationaal Natuurhistorisch Museum, "Naturalis", Leiden, The Netherlands.

UNCEN – Cenderawasih University, Waena, Papua, Indonesia.

ZMAN – Zoological Museum, University of Amsterdam, The Netherlands.

Systematic part

Alucita Linnaeus, 1758

Alucita Linnaeus, 1758: 542. Type species: *Alucita hexadactyla* Linnaeus, 1758, by subsequent designation, by Tutt, 1906.

Orneodes Latreille, 1796: 148. Type species *Orneodes hexadactyla* Linnaeus, 1758, by subsequent designation, by Latreille, 1802.

Euchiradia Hübner, [1826]: 431. Type species *Orneodes hexadactyla* Linnaeus, 1758, by original designation.

Orneodus Meyrick, 1909: 4. Misspelling.

Alucita abenahoensis Gielis, spec. n.

Fig. 1, 41.

MATERIAL. Holotype ♀: (Indonesia), Irian Jaya, Kec. Abenaho, Pass Valley, 1850 m, 13-20.V.1999 (H. van Mastrigt), gent. CG 5894 (ZMAN). Paratype: 1 ♀: Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 138° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp), gent. CG 5893 (CG).

DIAGNOSIS. The species belongs to the group of species with an ochreous-white to orange-yellow colour. The markings are pale to dark brown, but blackish-grey in one species. In general the species are 15 – 21 mm. Also present in this group are: *Alucita baliochlora* (Meyrick, 1929), *A. devosi* Gielis, *A. eteoxantha* (Meyrick, 1929), *A. eudasys* (Diakonoff, 1954), *A. eurynephala* (Meyrick, 1929), *A. manneringi* Gielis, *A. microdesma* (Meyrick, 1929), *A. nipsana* Gielis, *A. papuaensis* Gielis, *A. vanmastrigti* Gielis, *A. xanthozona* (Diakonoff, 1954), and *A. zwieri* Gielis.

A. In *A. microdesma* the first fore wing lobe shows seven small white spots.

B. In *A. abenahoensis* the fore and hind wing has five transverse bands, almost straight margined in particularly the basal and submedian band and the basal margin of the median band. The basal and median bands are pale brown, and the submedian, the subterminal and the terminal are pale brown-orange.

C. In *A. eteoxantha* also with five transverse bands, but the submedian band shows terminal extension on lobes 2, 3 and 5. On the hind wing the bands are reduced to narrow orange lines, with terminal displacement in lobes 3 to 5.

D. In *A. xanthozona* five bands are present, only distinct on fore wing lobes 1 to 3, on the other lobes reduced to two dots which indicate the basal and terminal position of the margin of the bands.

E. In *A. eudasys* on fore wing four dark brown band are present: basal; submedian on lobes 1, 2, 5 and 6; and a terminal. On hind wing reduced to narrow dark brown bands: basal, median, subterminal and terminal.

F. In *A. baliochlora* on fore wing four bands are present: basal, with terminal extension in lobe 3 to 5; submedian, terminally displaced and slightly reduced on lobes 3 and 5, absent on lobe 4; median; and terminal. On hind wing five narrow brown bands, terminally displaced in lobes 3, 4, and 5.

G. In *A. nipsana*, and *A. zwieri* on fore wing three bands. In *A. nipsana* are well present on lobes 1 and 2, and reduced on lobes 3 to 6. The basal band on the hind wing is also poorly indicated. In contrast, the markings on *A. zwieri* are heavy, dark brown, and well recognizable on all lobes.

H. In *A. manneringi*, *A. papuaensis* and *A. vanmastrigti* on fore wing two bands: submedian and subterminal. The markings are developed best in *A. manneringi*: a submedian band, well marked on lobe 1 and poorly on lobes 2 to 6; a bright subterminal band with a small spot on lobe 1, a wide spot on lobe 2, and from lobe three to 6 the spot increasingly reduces. On the hind wings the markings are clear. The valves in the male genitalia are acute, triangular. In *A. papuaensis* the markings on the wings are identical to the previous species, but less expressed. The valves in the male genitalia are narrow, longitudinal. In *A. vanmastrigti* the markings are further reduced to faint spots. The valves in the males genitalis are large triangular, almost bilobed.

I. In *A. devosi* The bands on the wings are reduced to a diffuse pale brown darkening on lobes 1 to 4. The darkening is more intense in lobe 3 and 4.

J. In *A. eurynephala* transverse basal, median, subterminal band and terminal spots indicated by blackish-grey spots.

DESCRIPTION. Wingspan 21 mm. Head ferruginous-orange, with erect scales at the collar, vertex and frons. Palps protruding, four times eye-diameter, first segment short, second and third segment approximately of equal length; second segment thickened by numerous scales, basally brown-orange and terminally pale orange; third segment slender, pale ferruginous with a brown subterminal ring. Antennae pale ferruginous, shortly ciliated. Thorax, tegulae and abdomen pale ferruginous; ventrally pale ferruginous-white. Legs pale ferruginous; tibia of fore legs dark grey.

Fore wings pale ferruginous. Lobe 1 at base with minimal costal fold. Markings on lobe 1 white, oblique lines; on other lobes in bands: a basal band of brown scales; an almost straight, orange submedian band; a brown medial band, slightly terminally extended on lobes 3 and 5, and smaller on lobe 6; a subterminal band in the ground colour, terminally margined straight; a terminal band in the ground colour.

Hind wings: a basal brown band on lobes 3 to 6, but orange on 6; a submedial orange band on lobes 1 to 6, brown on lobe 6; a brown medial band on lobes 1 to 6, terminally extended on lobes 2, 3 and 5, and small on lobe 6; an orange subterminal band on lobes 1 to 6, extended terminally on lobes 2 to 6; and an orange terminal band.

Male genitalia. Unknown.

Female genitalia. Ostium slightly excavated. Antrum rounded, with excavated ostium. Ductus bursae slender, gradually widening. Ductus seminalis from tip of bursa copulatrix. Bursa copulatrix vesicular, with an arched sclerite on which a dentate extension. Signum in a pair, mildly arched. Apophyses anteriores three and a half times the papillae anales. Apophyses posteriores three times the papillae anales.

ECOLOGY. The moth flies in February and May. The hostplant is unknown.

DISTRIBUTION. Indonesia: Papua: Abenaho and Nipsan district.

ETYMOLOGY. The species is named after the collecting district of the holotype: Abenaho.

Alucita anticoma (Meyrick, 1929)

Orneodes anticoma Meyrick, 1929: 536.

MATERIAL. Holotype ♀: Dutch New Guinea, Snow Mts, Oetakwa River, up to 3500 ft, X-XII.1910 (BMNH). [Examined]

DIAGNOSIS. The present species belongs to the group with white fore wing colour: *Alucita argyrospodia* (Diakonoff), *A. cymographa* (Meyrick), *A. niphadosema* (Diakonoff), *A. deboeri* Gielis, *A. dejongi* Gielis, *A. ochraspis* (Meyrick), and *A. wamenaensis* Gielis. The species are separated by:

- A. Fore wing lobe 1 with 5 white spots in *A. anticoma* and *A. cymographa*. In *A. anticoma* wings with five whitish-ochreous, dark grey edged fasciae, and in *A. cymographa* four of such fasciae. In *A. anticoma* on lobe 1 a dark brown spot at 1/4th; in *A. cymographa* a small dark spot near base.
- B. Fore wing lobe 1 three extensive white spots in *A. niphadosema* and *A. ochraspis*. *A. ochraspis* is an almost entirely white species with only a narrow brown basal band, a partial subterminal band on lobes 1 to 3, and a median spot on lobe 6. In *A. niphadosema* four brown-grey bands on all lobes are present.
- C. Fore wing lobe 1 with six small white spots in *A. deboeri*, *A. dejongi* and *A. wamenaensis*. *A. deboeri* has a basal band basally shortened in lobes 5 and 6, and in *A. dejongi* / *A. wamenaensis* the basal band has a terminal extension in lobe 4. In addition *A. dejongi* / *A. wamenaensis* are small species of only 8 - 9 mm; the other species in this group measure 15-17 mm. *A. dejongi* and *A. wamenaensis* can only be separated by the genital structure. *A. dejongi* has a complex structure of the ostium and antrum, in the ductus bursae a large dentate sclerite, and the bursa copulatrix holds a large and extensive, comb-like, signum. In *A. wamenaensis* the ostium/antrum is heart shaped, and neither a sclerite, nor a signum is present.
- D. Fore wing lobe 1 diffuse white, dark based, in *A. argyrospodia*. The transverse bands distinct in lobes 1 to 3

and indicated by margening dot on lobes 4 to 6. A distinct median dark spot on lobe 6.

ORIGINAL DESCRIPTION: “♀. 17 mm. Face and forehead white, crown grey, a black bar behind forehead. Palpi moderate, obliquely ascending, cylindrical, second joint grey, internally white, terminal joint about half second, obtuse, white with dark grey median band. Thorax white irregularly mixed dark fuscous, a dark spot on shoulder. Abdomen yellowish irrorated fuscous, segmental margins white. Forewings whitish; basal area irregularly mixed dark grey, an elongated dark fuscous spot on costa at 1/4th; five irregular whitish-ochreous fasciae edged dark grey. First moderate, antemedian, second median, narrow, suddenly dilated on segment 3, third and fourth moderate, fifth apical: cilia whitish, grey on dark markings, and on first, third, and fourth fasciae. Hindwings whitish, with first and last three whitish-ochreous fasciae edged dark grey as in forewings; cilia whitish, grey on fasciae as in forewings”.

Alucita aramsolkiensis Gielis, spec. n.

Fig. 2, 24.

MATERIAL. Holotype ♂: (Indonesia), (Papua), Aramsolki, 5.XI.1975 (no collector), gent. CG 5873 (ZMAN).

DIAGNOSIS. These species have on the fore wing a medial and subterminal brown band with on all lobes basally of these bands an orange spot. The wing pattern groups the species with *A. lackneri* Gielis, *A. mabilabolensis* Gielis, *A. rutteni* Gielis, *A. walmakensis* Gielis, and *A. zumkehri* Gielis.

- A. In *A. lackneri* median and subterminal band reduced to a double brown dot, except on lobe 6 which shows two dark brown longitudinal dots.
- B. In *A. mabilabolensis* median and subterminal bands poorly developed, and contrasting to the orange parts that precede them.
- C. In *A. aramsolkiensis*, *A. rutteni*, *A. walmakensis* and *A. zumkehri* bands are well developed and contrasting. In *A. walmakensis* on lobe 6, median and subterminal band strongly basally displaced, placing the brown spots completely basal to the brown spots on lobe 5; in *A. aramsolkiensis* and *A. rutteni* on lobe 6 terminal margins of orange spot opposite basal margin of orange spots on lobe 5. *A. aramsolkiensis* on hind wing orange spots of median band in straight line, in *A. rutteni* orange spots on hind wing lobes 5 and 6 basally displaced. In addition to these species differ in the male genitalia by the wider semicircular shape of the valve and six-tipped uncus in *A. aramsolkiensis*, and the narrow valves and three tipped uncus in *A. rutteni*. In *A. zumkehri* basal band as a black spot on lobes 2 to 5; median band black on lobes 2 to 6, basally displaced on lobe 6; the black markings extend into the fringes.

DESCRIPTION. Wingspan 15 mm. Head with curled-up scales on the vertex; collar dark ferruginous, vertex brown, between antennae white, and frons white (almost descaled). Palps protruding; pale brown; as long as eye-diameter. Antennae white, rather thick, ciliate. Cranial half of thorax and tegulae brown, rostral half pale ferruginous. First abdominal segment brown. Ventral parts of thorax and the legs pale ferruginous-white. Fore legs with pale brown femur and tibia.

Fore wings with pale ferruginous-white colour. Lobe 1 at base with minimal costal fold. Lobe 1 with five basal dark brown spots, an indistinct grey colour at the place of the middle band and a smaller at the subterminal band. Markings: a basal band brown, poorly indicated on lobe 2, terminally displaced in lobes 3, 4 and 5; the submedial band pale orange, with parallel margins, following the basal band; medial band brown, on lobes 2 to 6, in total shifted terminally, with parallel margins; subterminal band orange, on lobes 2 to 6, length on the lobes so that the terminal margin is almost parallel to the termen, but for lobe 6, which is basally displaced; a dark brown terminal band on lobes 2 to 6.

Hind wings with bands as a continuation of those on the fore wings, but margins almost parallel on all lobes.

Male genitalia. Symmetrical. Valve slender, semicircular, basally widened and with setose bulge. Uncus half the tegumen length, indented forming six tips. Tegumen simple. Socius stout, 2/3rd of tegumen length. Saccus arched, basally rectangularly extended. Anellus arms slender, 2/3rd of the saccus length. Aedeagus minimally curved, 2/3rd of the genital length, with some minute spiculae and a small sclerotized cornutal plate.

Female genitalia. Unknown.

ECOLOGY. The moth flies in November. The hostplant is unknown.

DISTRIBUTION. Indonesia: Papua: Aramsolki.

ETYMOLOGY. The species is named after the collecting locality: Aramsolki.

***Alucita argyrosodia* (Diakonoff, 1954)**

Fig. 3, 25.

Orneodes argyrosodia Diakonoff, 1954.

MATERIAL. Holotype ♂: Nieuw Guinea, Iebèlè Camp, 2250 m, 17.XI.1938 (L.J. Toxopeus, Neth. Ind. - American New Guinea Exped.), gent. RMNH 917D (RMNH). [Examined]. 1 ♂, Irian Jaya, Kec. Borne, Borne, 900 m, 17-24.IX.1998 (H. van Mastrigt), gent. CG 5872 (ZMA).

DIAGNOSIS. See *A. anticoma* (Meyrick).

REDESCRIPTION partly after Diakonoff (1954) (abstracted): ♂. 19 mm. Head white. Palpi ascending, white; median blakish at base; terminal 2½, faintly tinged greyish. Thorax anteriorly white, posteriorly fuscous-grey; two white transverse bands at apex and ⅔. Abdomen white, strongly scaled blackish-fuscous, creating transverse bands at the tergites; ventrally white. Fore wings white. Markings brownish-grey: A basal darkening at lobes 1 and 2; diffusely scattered dark scales on the lobes; five poorly defined bands on lobes 2 to 6, with regular spacing and almost in a straight line across the lobes.

***Alucita baliochlora* (Meyrick, 1929)**

Orneodes baliochlora Meyrick, 1929: 535.

MATERIAL. Lectotype ♂: British New Guinea, Biagi, Mambare River, 5000 feet, I-IV (A.S. Meek) (BMNH). [Examined].

DIAGNOSIS. See *A. abenahoensis* Gielis.

Original description: “♂. 21 mm. Head ochreous-whitish

mixed dark grey, a white frontal bar. Palpi ascending, evenly thickened with scales, second joint grey, white anteriorly, terminal joint half second, obtuse, white with dark grey median band. Antennae whitish, ciliations 1. Thorax whitish suffusedly irrorated dark grey, a white posterior spot. Abdomen whitish suffusedly irrorated dark fuscous, two basal segments suffused orange-fulvous, praeapical segment suffused ochreous-orange, anal segment ochreous-whitish, genital tufts white. Forewings ochreous-whitish, costal edge white; markings grey irrorated dark grey; some irregular basal marking; a moderate curved fascia at 1/3, forming two bars on costa; a moderate irregular postmedian fascia, becoming broader and double on segments 1–3, each portion forming two bars on costa; beyond this a narrow fascia indicated by dark grey marginal dots and grey cilia; a submarginal line formed by dark dots and grey cilia; an apical series of dark grey dots: cilia ochreous-whitish, grey on markings. Hindwings ochreous-whitish; a moderate irregular straight dark grey fascia at ¼; obsolete on segment 6; three slender fasciae on posterior half of wing indicated by dark grey marginal dots and grey cilia, partly obsolete on segment 6; a praeapical series of dark grey dots; cilia ochreous-whitish, grey on markings”.

***Alucita brachyophimus* (Hering, 1917)**

Orneodes brachyophimus M. Hering, 1917: 191.

MATERIAL. Holotype ♂: New Guinea, Stephansort, no date (Royal Zoological Museum Berlin). [Not examined].

DIAGNOSIS. A wing pattern as mentioned above has not been noticed in any of the species mentioned in this manuscript.

ORIGINAL DESCRIPTION (abstracted and translated): “Wingspan 17-18 mm. Type specimen with possible heavy descaling of the wings. Fore wing yellow-white, with indistinct brownish scaling at 1/3rd and 2/3rd. Hind wing yellow-white, basally with irregular brown scaling; in terminal half, from middle of wing on, all segments four brown bands, best seen in the fringes, on the lobes densely brown scaled”.

***Alucita cymographa* (Meyrick, 1929)**

Orneodes cymographa Meyrick, 1929: 536.

DIAGNOSIS. See *A. anticoma* (Meyrick).

MATERIAL. Holotype ♀: N.E. British New Guinea, Kumusi River, low elevation, V-IX.1907 (A.S. Meek) (BMNH). [Not examined].

ORIGINAL DESCRIPTION: “♀. 19 mm. Head grey (partly rubbed), face white. Palpi ascending, evenly thickened with scales, grey, terminal joint half second, obtuse, tip white. Thorax white, irregularly mixed grey posteriorly, a grey spot on shoulder. Abdomen white, irrorated dark grey except segmental margins and s dorsal stripe. Forewings white; some dark grey irroration at base, and a small spot on costa near base; four whitish-ochreous fasciae edged dark grey, first well-marked, antemedian, irregular, angulated in middle, second narrow, little marked, third well-marked, broader, irregular, broadest on segment 3, fourth narrower; a praemarginal series of dark grey bars: cilia whitish, on markings greyish, on first and fasciae darker grey. Hindwings white, base mixed darkgrey; remainder of wing with

about eight series of equidistant bars of dark grey irroration, on segments 1 and 6 confluent into four broader bars; cilia whitish, tinged grey on markings”.

***Alucita deboeri* Gielis, spec. n.**

Fig. 4, 26.

MATERIAL. Holotype ♂: Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 138° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp), gent. CG 5878 (ZMAN). Paratypes: 1 ♂, same date and locality gent. CG 5877 (CG). In addition to the type specimens a gynandromorphic specimen has been noticed. A short description of the genital structures is given in the remarks.

DIAGNOSIS. See *A. anticoma* (Meyrick). In the male genitalia the present species is characterized by the minimally developed valves, not noticed in any other species examined.

DESCRIPTION. Wingspan 15 mm. Head white with curled, erect scales at collar, vertex and between the eyes. Palps slender, curved up, one and a half times eye-diameter, white, on second segment a lateral distinct longitudinal brown-grey line and an indistinct terminal ring. Antennae white, pectinate. Thorax cranially scaled brown-grey, rostrally white. Underside pale ferruginous-white, except fore leg, which is greyish.

Fore wings white. Lobe 1 with basally a small fold enveloping androconial scales. Markings pale grey-brown: a basal band, basally shortened on lobes 5 and 6; medial band basally shortened on lobes 4, 5 and reduced on lobe 6; a subterminal band, beginning on lobe 1 with three spots, mildly displaced basally on lobes 4 and 5, and on lobe 6 reduced to a dot; a terminal band on lobes 1 to 5.

Hind wings with bands as in fore wings, but width reduced.

Male genitalia. Symmetrical. Valves shaped like a plate along the saccus, and a rounded patch, with a small saccular bulge. Uncus two and a half times tegumen, mildly forked. Tegumen small, arched. Socius as long as uncus, rather blunt. Saccus long and slender. Anellus arms 1/3rd of the saccus length. Aedeagus 3/4th the genital length, straight, tube-like. Cornuti in shape of a basal plate and numerous sclerotized spines.

Female genitalia. Unknown.

ECOLOGY. The moth flies in February. The hostplant is unknown.

DISTRIBUTION. Indonesia, Papua, Nipsan district.

ETYMOLOGY. The species is named after Dr. Arnold J. de Boer, a participant of the ZMAN expeditions.

REMARKS. The specimen with genital examination CG 5874 shows a gynandromorphic structure, in which can be recognized: two papillae anales, the apophyses posteriores, ductus bursae connected to a vesicular structure which holds the cornuti and sclerotized plate as in the aedeagus, the saccus (right side partly) and the juxta with anellus arms (one arm deformed), the socius, and a part of the strongly deformed tegumen and valve with two groups of strong developed setae. Finally a sclerotized structure which is not to be named.

***Alucita dejongi* Gielis, spec. n.**

Fig. 5, 42.

MATERIAL. Holotype ♀: Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 4° 07' S 139° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp.), gent. CG 5880 (ZMAN). Paratypes: 2 ♀♀, same date and locality (ZMAN, CG).

DIAGNOSIS. See *Alucita anticoma* (Meyrick). Female genitalia with a complex structure of the ostium and antrum with large dentate sclerite, and the large and extensive, comb-like, signum.

DESCRIPTION. Wingspan 9 mm. Head with erect grey-white scales on the vertex; between the base of the antennae a narrow transverse band of brown scales; frons shining white. Thorax cranially brown-grey, followed by a white transverse band and rostrally pale brown. Tegulae cranially brown-grey, followed by a narrow white band, a central brown-grey spot and rostrally white again. Mesothorax with a mix of white and brown-grey scales. Abdomen : segment 1 brown, rostrally white; segment 2 with two lateral brown-grey spots on white; segment 3 brown, rostrally white; segment 4 white; segments 5, 6 and 8 brown, rostrally white. Total underside white. Fore legs brown-grey.

Fore wings creamy-white. Apparently without costal fold in lobe 1. Markings grey-brown: a basal band a little extended terminally on lobe 4; a submedial band terminally extended on lobes 3 and 6; a medial band extended terminally on lobes 2 and 3, and shortened basally on lobe 6; a subterminal band extended terminally on lobe 3 and shortened basally on lobe 6; and a terminal band.

Hind wings with bands as on fore wing.

Male genitalia. Unknown.

Female genitalia. Ostium deeply excavated into the antrum. Antrum “heart” shaped, with small lateral angulation and a peripheral small longitudinal sclerotisation. Ductus bursae short. Bursa copulatrix vesicular in three compartments: tip section with a sclerite with three large rostral spines and one cranial spine; the middle section with 13 large hooked spines and a basal poorly sclerotized plate; basal section with a large comb-like signum. Apophyses anteriores six times papillae anales. Apophyses posteriores six and a half times papillae anales.

ECOLOGY. The moth flies in February. The hostplant is unknown.

DISTRIBUTION. Indonesia, Papua, Nipsan district.

ETYMOLOGY. The species is named after Dr. Herman de Jong, a participant of the ZMAN expeditions.

***Alucita devosi* Gielis, spec. n.**

Fig. 6, 27.

MATERIAL. Holotype ♂: Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 4° 07' S 139° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp.), gent. CG 5869 (ZMAN). Paratype: 1 ♂, (Indonesia), Irian Jaya, Kec. Wasior, Gn. (Mt) Wondiboy, 1750 m, 24-25.II.1997 (H. van Mastrigt), gent. CG 5870 (CG).

DIAGNOSIS. See *A. abenahoensis* Gielis.

DESCRIPTION. Wingspan 18-20 mm. Head pale ferruginous, vertex with curled up scales. Palps pale ferruginous, slender, slightly curved up, one and a half times the eye-diameter. Antennae pale ferruginous, densely ciliated. Thorax, tegulae, abdomen and legs pale ferruginous. Fore legs on basal part of tibia with a pale brown bristle.

Fore wings pale ferruginous, lobes 1, 5 and 6 paler. Lobe 1 basally with costal fold, enveloping white androconial scales. Markings brown: a subterminal band on lobes 2 to 6, gradually narrowing, on lobe three terminally extended, and on lobe 6 basally displaced and wider again. Between the subterminal band and the termen in lobes 3 to 6 a small dot.

Hind wings pale ferruginous, lobe 1 paler. On lobe 1 six small dark brown dots, and on lobes 2 to 5 three of these dots lobe 6 not examined (broken off in all wings). Lobes 3 to 5 with pale orange-ferruginous slightly enlarged scales, without distinct pattern.

Male genitalia. Symmetrical. Valve very narrow, as long as tegumen; basally with a small cucullar process. Uncus just over tegumen length, club-like. Tegumen arched. Socius just over tegumen length. Saccus arched and slender. Anellus arms 3/4th of saccus length. Aedeagus 2/3rd of genital length; club-like. Cornuti in shape of numerous minute spiculae.

Female genitalia. Unknown.

ECOLOGY. The moth flies in February. The hostplant is unknown.

DISTRIBUTION. Indonesia: Papua: Wasior and Nipsan district.

ETYMOLOGY. The species is named after Drs. Rob de Vos, the driving power behind the present entomological interest in the island of New Guinea, and initiator of several ZMAN expeditions.

Alucita eteoxantha (Meyrick, 1929)

Orneodes eteoxantha Meyrick, 1929: 533.

MATERIAL. Lectotype ♀: British New Guinea, Owgarra (Meek), no date (BMNH). [Examined].

DIAGNOSIS. See *A. abenahoensis* Gielis.

ORIGINAL DESCRIPTION: ♀. 18 - 20 mm. Crown yellow. Face whitish-yellow, deep orange bars before and behind forehead. Palpi second joint long, porrected, clothed with dense scales roughened above towards base, fuscous speckled pale yellowish, rough scales yellowish, tip whitish, terminal joint less than half second, obliquely ascending, pointed, whitish with dark grey median band. Thorax yellow with two deep orange transverse bands. Abdomen deep orange, segmental margins yellowish-white. Forewings deep orange; segment 1 irregularly dotted whitish-yellow, sometimes with dark grey marks at 1/6 and 1/3; segments 2 - 6 with six series of whitish-yellow bars, more or less variable dark grey irroration on edges of ground colour between these, increased at 1/3, 2/3, and apex to form more or less developed grey fasciae: cilia yellow-whitish, barred greyish or pale orange on markings. Hindwings whitish, with about six orange bands crossing all segments, edged with some irregular blackish scales, or in one example almost obliterated blackish scales; cilia as in forewing.

Alucita eudasys (Diakonoff, 1954)

Orneodes eudasys Diakonoff, 1954: 177.

MATERIAL. Holotype ♂: Nieuw Guinea, Iebèlè Camp, 2250 m, 20.XI.1938 (L.J. Toxopeus, Neth. Ind. - American New Guinea Exped.), gent. RMNH 915D (RMNH). [Examined].

DIAGNOSIS. See *A. abenahoensis* Gielis.

REDESCRIPTION partly after Diakonoff (1954) (abstracted):

“♂. 18 mm. Head yellow, on vertex mixed dark brown; frons forming a strong projecting cone. Palps moderately long, mildly curved; median segment with a strong tuft of scales along terminal segment; terminal segment slender, pale yellow. Thorax dark brown. Abdomen dark brown, along posterior margins of tergites and ventrally yellow. Fore wings ochreous-yellow. Markings dark brown: a basal, median and terminal band. Basal band gradually widening towards lobe 6; median band almost straight, but for a basal displacement on lobe 3; terminal band basally widened on lobe 3”.

Alucita eurynephala (Meyrick, 1929)

Orneodes eurynephala Meyrick, 1929: 534.

MATERIAL. Holotype ♀: British New Guinea, Owgarra (Meek), no date (BMNH). [Not examined].

DIAGNOSIS. See *A. abenahoensis* Gielis.

ORIGINAL DESCRIPTION: “♂. 20 mm. Head dark grey, frontal bar cream-white, face whitish mixed grey. Palpi moderate, slender, ascending, grey, terminal joint short, whitish with grey median bar. Antennae cream-white. Thorax blackish-grey, posterior half ochreous-yellow, with two blackish-grey dorsal spots. Abdomen blackish-grey, three basal segments mixed ochreous-yellow, anal tuft and ventral surface ochreous-whitish. Forewings ochreous-whitish (mostly reduced to slender bars between markings); base mixed blackish-grey; a moderate curved blackish-grey fascia at 1/3, preceded in middle by orange suffusion, and a broad curved blackish-grey post-median fascia, between these a narrow orange and grey fascia edged blackish, obsolete on segment 1; a similar narrow fascia beyond post-median, followed by a series of blackish-grey bars, both partially obsolete on segment 1: cilia grey, with indistinct whitish bars. Hindwings as segments 2 - 6 of forewings, but basal third more yellowish-tinged, first dark fascia much narrowed on upper half and partially filled yellow”.

Alucita lackneri Gielis, *spec. n.*

Fig. 7, 28, 43.

MATERIAL. Holotype ♂: Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 138° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp), gent. CG 5883 (ZMAN). Paratypes: 7 ♀♀, 1 without abdomen, same locality and date, gent. CG 5882 (ZMAN, CG).

DIAGNOSIS. See *A. aramsolkensis* Gielis.

DESCRIPTION. Wingspan 9 - 10 (♀), 12 (♂) mm. Head shining white, with curled scales on vertex. Palps straight, shining white with laterally on second segment pale brown, twice eye-diameter. Antennae white, shortly ciliated; thicker in the male. Thorax, tegulae and abdomen white. Dorsally on abdomen a pair of brown spots on segment 2 and 7, and

dorsum of segment 8 brown. Legs white; fore legs with lateral black-brown patches on femur and tibia.

Fore wings white. Lobe 1 basally with costal fold, enveloping white androconial scales. Pale brown markings: a basal band indicated by some scales on the lobes; a median band, slightly arched, equal width in lobes 1 to 3, reduced in lobe 4, absent in lobe 5, and heavily marked in lobe 6; a subterminal band indicated on lobes 1 and 2, less visible in lobes 3 and 4, reduced in lobe 5 and well developed in lobe 6; a terminal band indicated by some scales.

Hind wings with regular lobes as a continuation of the bands in the fore wings.

Male genitalia. Symmetrical. Valve triangular, with a small saccular process medially. Uncus as long as tegumen, acutely ending in tip. Tegumen arched, simple. Socius as uncus. Saccus long, slender. Anellus arms poorly developed, almost plate-like. Aedeagus as long as genitalia, tube-like. Cornuti in shape of extensive groups of spiculae.

Female genitalia. Ostium a little oblique, flat. Antrum twice longer than wide; near ductus bursae with a rosette of spiny sclerites. Ductus bursae very short. Bursa copulatrix vesicular, with signum in shape of numerous spiculae. Apophyses anteriores three and a half times papillae anales. Apophyses posteriores three times papillae anales.

ECOLOGY. The moth flies in February. The hostplant is unknown.

DISTRIBUTION. Indonesia, Papua, Nipsan district.

ETYMOLOGY. The species is named after Mr. Tomas Lackner, a participant of the ZMAN expeditions.

***Alucita mabilabolensis* Gielis, spec. n.**

Fig. 8, 44.

MATERIAL. Holotype ♀: Indonesia, Papua, Kec. Oksibil, Mabilabol, 1340 m, 4° 54' S 140° 37' E, 21-25.II.2005 (UNCEN-ZMA Exp.), gent. CG 5879 (ZMAN).

DIAGNOSIS. See *A. aramsolkiensis* Gielis.

DESCRIPTION. Wingspan 15 mm. Head appressedly scaled, brown; ventrally white; frons pale ferruginous-white. Palps curved up, first segment short, second and third segment of equal length; second segment laterally brown, third segment with brown ring at 2/3rd; three and a half times eye-diameter.

Fore wings pale ferruginous. Lobe 1 without noticeable costal fold. Markings pale brown: a narrow basal band; a medial band with straight terminal margin and basal extension on lobes 4 and 5; subterminal band with basal extension on lobes 3 and 4, and a basal displacement on lobe 6.

Hind wings a submedial band and a subterminal band, which is best defined on lobes 4 to 6, and eye striking at 6.

Male genitalia. Unknown.

Female genitalia. Ostium wide and flattened. Antrum one and a half times longer than width of ostium. Basally in antrum a sclerotized ring. Ductus bursae very short. Bursa copulatrix vesicular. Ductus seminalis as long as bursa copulatrix, and ending in a small vesicular bursa seminalis. Apophyses anteriores and apophyses posteriores one and a half times papillae anales.

ECOLOGY. The moth flies in February. The hostplant is unknown.

DISTRIBUTION. Indonesia: Papua: Oksibil district.

ETYMOLOGY. The species is named after the place of collecting: Mabilabol.

***Alucita manneringi* Gielis, spec. n.**

Fig. 9, 29.

MATERIAL. Holotype ♂, Indonesia, Papua, Kecamatan Abenaho, Pass Valley, 1950 m, 3° 51' S 139° 05' E, 11-17.II.2005 (UNCEN-ZMA Exp.), gent. CG 5884 (ZMAN).

DIAGNOSIS. See *A. abenahoensis* Gielis.

DESCRIPTION. Wingspan 16 mm. Head white, collar and vertex with curled and erect scales, frons smooth. Palps white; second segment thickened with scales; third segment slender; twice eye-diameter. Antennae shortly ciliated. Thorax, tegula and legs white. Fore legs with lateral patches of brown-grey scales on the femur, tibia and first tarsal segment.

Fore wings creamy-white, markings pale brown. The first lobe: in basal half with costal margin folded back, and enveloping a white bristle of androconial scales; basally pale brown. A basal band poorly indicated on lobes 2 to 5 and on lobe 6 with two pale brown spots. A terminally displaced medial band: on lobe 1 a small spot; a wide spot on lobe 2, gradually smaller on lobes 3 to 6. subterminally only a single spot on lobe 1.

Hind wings with a basal band consisting of a pair of well separated spots on lobes 1 to 6; a medial band, well developed on lobes 1 and 2, poorly developed double spots on lobes 3 to 5, and a distinct small spot on lobe 6. Subterminally a row of well developed small brown spots.

Male genitalia. Symmetrical. Valve triangular, with a small, basal saccular process. Uncus longer than tegumen, slender, with an indentation on the tip. Tegumen arched, simple. Socius as long as uncus, acute. Saccus arched, slender, basally thickened. Anellus arms 2/3rd of saccus, slender. Aedeagus fusiformly thickened towards 2/3rd, and acutely ending at the tip. Cornuti in entire middle segment of aedeagus, consisting of minute spiculae.

Female genitalia. Unknown.

ECOLOGY. The moth flies in February. The hostplant is unknown.

DISTRIBUTION. Indonesia, Papua, Abenaho district.

ETYMOLOGY. The species is named after Mr. David Manner, a participant of the ZMAN expeditions.

***Alucita microdesma* (Meyrick, 1929)**

Orneodes microdesma Meyrick, 1929: 534.

MATERIAL. Holotype ♀: British New Guinea, Biagi, Mambare River, 5000 feet, I-IV (A.S. Meek) (BMNH). [Not examined].

DIAGNOSIS. See *A. abenahoensis* Gielis.

ORIGINAL DESCRIPTION: "♀. 18 mm. Head whitish, crown spotted dark grey. Palpi rather short, slender, ascending, grey, terminal joint short, whitish with grey median ring. Antennae whitish. Thorax whitish irrorated dark grey. Abdomen ochreous-whitish irrorated dark grey. Forewings whitish-ochreous, basal area suffusedly irrorated dark grey;

segment 1 suffused grey, with seven fine white bars, a white costal dot between second and third; segments 2 – 6 with four series of slender white bars rather broadly edged dark grey: cilia grey, mixed white on bars, mostly dark grey at base between bars, at apex grey with whitish tips. Hindwings whitish, base suffused grey; segment 1 with four dark grey bands, third whitish-ochreous except ends; segments 2 – 5 with about ten series of dark grey slender bars; segment 6 as segment 1, but fourth band reduced to a narrow bar; cilia whitish, somewhat mixed dark grey on broader markings”.

***Alucita micrographa* (Diakonoff, 1954)**

Fig. 10, 30.

Orneodes micrographa Diakonoff, 1954: 181

MATERIAL. Holotype ♀: Nieuw Guinea, Top Camp, 2100 m, 25.I.1939 (L.J. Toxopeus, Neth. Ind. - American New Guinea Exped.), gent. RMNH 914D (RMNH). [Examined]. 1 ♂, Irian Jaya, Lembah Kamu, Moanemani, 1645 m, 27-28.II.1995 (H. van Mastrigt), gent. CG 5887 (ZMAN); 1 ♂, Irian Jaya, Kec. Abenaho, Pass Valley, 1850 m, 13-20.V.1999 (H. van Mastrigt), gent. CG 5888 (CG).

DIAGNOSIS. The species belongs to the group characterized by orange to brown-orange spots margined dark brown, creating a checkered pattern. In *A. withaari* this feature is less dominant, and is best seen in the hind wings. On the fore wings of *A. withaari* the basal and median bands are well developed, hardly showing the brown margined orange spots.

REDESCRIPTION partly after Diakonoff (1954) (abstracted): “♀. 20 mm. Head and palps whitish-yellow. Palps moderately long, ascending, terminal segment 2½. Thorax bright orange-yellow, mixed with brown scales. Abdomen pale ochreous, mixed yellow-orange. Fore wings pale yellowish-ochreous. Markings brown-orange spots encircled by dark brown ciliae, in shape of five irregular outlined bands”.

***Alucita niphadosema* (Diakonoff, 1954)**

Orneodes niphadosema Diakonoff, 1954: 182.

MATERIAL. Holotype ♀: Nieuw Guinea, Moss Forest Camp, 5 km NE Lake Habbema, 2200 m, 27.X.1938 (L.J. Toxopeus, Neth. Ind. - American New Guinea Exped.), gent. RMNH 918D (RMNH). [Examined].

DIAGNOSIS. See *A. anticoma* (Meyrick).

REDESCRIPTION after Diakonoff (1954) (abstracted): “♀. 15 mm. Head white, vertex suffused light fuscous. Palps moderately long, curved; median segment white, dark grey laterally; terminal segment 2/3, white. Thorax whitish, heavily irrorated fuscous. Abdomen whitish, terminal margin of tergites and laterally ochreous. Fore wing white. Markings greyish-fuscous. Fore wing lobe 1 three extensive white spots and four brown-grey bands are present on all lobes”.

***Alucita nipsana* Gielis, spec. n.**

Fig. 12, 45.

MATERIAL. Holotype ♀: Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 138° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp), gent. CG 5891 (ZMAN).

DIAGNOSIS. See *A. abenahoensis* Gielis.

DESCRIPTION. Wingspan 22 mm. Head: collar and vertex a mix of brown and pale ferruginous scales; between base of antennae and the frons white. Palps drooping, white, one and a third times eye-diameter. Antennae grey-white, shortly ciliated. Thorax and tegulae a mix of brown and pale ferruginous scales. Underside white. Fore legs with grey patch on the first tarsal segment.

Fore wings pale ferruginous. First lobe with 9 small pale brown spots; at the basal half the costa folded to envelop androconial scales. Basal and medial band poorly developed.

Hind wings with bands as in fore wing.

Male genitalia. Unknown.

Female genitalia. Ostium flat and wide. Antrum wide, funnel-shaped, one and a half times wider than long; centrally a small sclerotized ribbon-shaped sclerite. Ductus bursae very short. Bursa copulatrix vesicular, with a signum covered by hooked and curved spines. Bursa seminalis slender, shorter than bursa copulatrix. Apophyses anteriores stout, three times the papillae anales. Apophyses posteriores stout, three and a half times papillae anales.

ECOLOGY. The moth flies in February. The hostplant is unknown.

DISTRIBUTION. Indonesia, Papua, Nipsan region.

ETYMOLOGY. The species is named after the district of its occurrence: Nipsan.

***Alucita ochraspis* (Meyrick, 1929)**

Orneodes ochraspis Meyrick, 1929: 535.

MATERIAL. Holotype ♂: British New Guinea, Biagi, Mambare River, 5000 feet, I-IV (A.S. Meek) (BMNH). [Examined].

DIAGNOSIS. See *A. anticoma* (Meyrick).

ORIGINAL description: “♂. 16 mm. Head, antennae, thorax white. Palpi white, second joint obliquely ascending, shortly rough-scaled, a grey lateral streak, terminal joint half second, loosely scaled, pointed, erect, a grey median ring. Abdomen white, a dark fuscous-median dorsal spot. Forewings white, some greyish suffusion on costa near base; a moderate angulated fascia at 2/5 indicated by dark fuscous marginal dots, filled grey on costal half; a narrow slightly curved post-median fascia indicated by dark fuscous marginal dots except on segment 1, on segment 6 united into a blackish spot; a slightly angulated narrow fascia at about 3/4 indicated by dark fuscous marginal dots except on segment 1, on segments 1 – 3 forming an ochreous transverse blotch gradually expanding upwards, on segment 3 marked with a black spot; praeapical and minute apical dark fuscous dots except on segment 1; cilia white, on ochreous blotch concolorous, round termen and dorsum barred whitish-ochreous. Hindwings white; dark fuscous dots on angles of cell, a single series at 1/3 except on segment 6, a double series about middle (single on segment 6), two large dots beyond middle on segment 1 and a longitudinal mark on segment 2, a double series about 3/4 except on segment 6, and praeapical and apical dots on all segments, strongest on 6; cilia white, on costa barred pale ochreous, round apex of segments whitish-ochreous”.

***Alucita papuaensis* Gielis, spec. n.**

Fig. 13, 32.

MATERIAL. Holotype ♂: Indonesia, Papua, Kec. Abenaho, Pass Valley, 1850 m, 13-20.V.1999 (H. van Mastrigt), gent. CG 5868 (ZMA).

DIAGNOSIS. See *A. abenahoensis* Gielis.

DESCRIPTION. Wingspan 14 mm. See under description *A. vanmastrigti*, but differing in: the palps which are twice eye-diameter, and the front legs with lateral dark grey scaling on the tibiae and first tarsal segment.

Male genitalia. Symmetrical. Valve slender. Uncus longer than tegumen, forked. Tegumen arched. Socius longer than tegumen, sharp tipped, moderately blunt. Saccus arched, slender. Anellus arms 2/3rd of saccus length. Aedeagus 2/3rd of length of genitalia; club-like; with numerous spiculae as a cornutus.

Female genitalia. Unknown.

ECOLOGY. The moth flies in May. The hostplant is unknown.

DISTRIBUTION. Indonesia: Papua: Abenaho district.

ETYMOLOGY. The species is named after the province of Papua.

***Alucita rutteni* Gielis, spec. n.**

Fig. 14, 33.

MATERIAL. Holotype ♂: Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 138° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp), gent. CG 5895 (ZMAN). Paratype: 1 ♂, same date and locality (CG).

DIAGNOSIS. See *A. aramsolkiensis* Gielis.

DESCRIPTION. Wingspan 21 - 22 mm. Head: collar and vertex a mix of ochreous and dark brown curled up scales; between the base of the antennae ochreous; frons smooth, with a mix of mainly pale ochreous and some dark brown scales. Antennae ochreous, pectinate. Cranial half of thorax and tegulae dark brown, rostral half and mesothorax ochreous. Abdomen dark brown, with on segments 2, 3 and 4 a dorsal ochreous patch. Underside ochreous-white; dark grey patches on femur, tibia and first tarsal segment of fore leg, and on tibia of mid legs.

Fore wings with minimal indication of a costal fold at the base. Colour ochreous, markings dark brown: a small spot at the base; a basal band with two spot on lobe 1, and almost parallel on the other lobes; a medial band with smaller spot on lobe 1, gradually extending terminally on lobes 2 and 3, slightly extended basally in lobes 4 and 5 but parallel, and well extended basally on lobe 6; a terminal band on lobe 1 well before spots on remaining lobes.

Hind wings basal band smaller than in fore wing. Medial band well developed, but broken up in several smaller spot on all lobes.

Male genitalia. Symmetrical. Valve semicircular, gradually tapering towards the acute tip; with a small basal saccular knob. Uncus as long as tegumen; tip deeply cleft, and in the cleft a globular extension. Tegumen arched. Socius as long as uncus, broad, spatula-shaped. Saccus extended, arched with a single indentation and thickening at bottom. Anellus arms half the saccus length, slender. Aedeagus 2/3rd of genital length, tube-like; with a small surface spine at 1/3rd of the length. Cornuti, in distal half, a large plate of minute spiculae.

Female genitalia. Unknown.

ECOLOGY. The moth flies in February. The hostplant is unknown.

DISTRIBUTION. Indonesia, Papua, Nipsan district.

ETYMOLOGY. The species is named after Dr. Twan Rutten, a participant of the ZMAN expeditions.

***Alucita semophantis* (Meyrick, 1929)**

Fig. 15, 34.

Orneodes semophantis Meyrick, 1929: 537.

MATERIAL. Holotype ♂: British New Guinea, Biagi, Mambare River, 5000 feet, I-IV (A.S. Meek) (BMNH). [Examined]. 1 ♂, Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 138° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp), gent. CG 5876 (ZMAN).

DIAGNOSIS. The species is characterized by the contrasting white hind wings with the brownish-orange spots at the base, median on lobes 5 and 6, and subterminal on lobe 5.

ORIGINAL DESCRIPTION: "♂. 20 mm. Head fuscous, face white. Palpi moderate, ascending, white, second joint loosely scaled, fuscous externally except tip, terminal joint half second, a grey median ring. Thorax fuscous, tegulae white except shoulder and some irroration at tip. Abdomen light ochreous, segments 1-3 and 6 more or less suffused dark brown, apex white. Forewings greyish-ochreous; segment 1 fuscous with white blackish-edged postmedian bar and broader one at 4/5 closely followed by a narrow one, apex beyond this blackish; a blackish dash before base of first cleft; segments 2 and 3 with three whitish-grey blackish-edged bars and a posterior slender white blackish-edged bar, space between second and third bars suffused blackish-grey; segment 4 similar, but second and third bars confluent into a broad grey blackish-edged bar; segment 5 similar to 4, but broad bar whitish; segment 6 pale greyish-ochreous with four whitish blackish-edged bars, space between second and third forming a small blackish spot: cilia light greyish-ochreous, on segment 1 white on bars, on segments 2 and 3 partly grey or blackish on markings, on segments 5 and 6 mostly whitish. Hindwings white, with five pairs of blackish-grey dots on each segment, last apical; a brownish-orange spot on base of fourth cleft, and a larger one on middle of segment 5, extended into cilia; segments 1-3 tinged greyish-ochreous towards apex; cilia whitish".

***Alucita vanmastrigti* Gielis, spec. n.**

Fig. 16, 35.

MATERIAL. Holotype ♂: Indonesia, Papua, Kec. Borme, Borme, 900 m, 17-24.IX.1998 (H. van Mastrigt), gent. CG 5867 (ZMAN).

DIAGNOSIS. See *A. abenahoensis* Gielis.

DESCRIPTION. Wingspan 15 mm. Head creamy-white, with curly scales on vertex. Palps white, slender, curved up, one and a half times eye diameter. Antennae white, heavily ciliated, 2/3rd of wing length. Thorax, tegulae and abdomen creamy-white. Legs creamy-white.

Fore wings creamy-white with slight ferruginous gloss. Markings pale ferruginous: lobes 1 and 2 basally pale ferruginous; medial band terminally straight, poorly developed; subterminal band on lobes 2, 3 and 4 gradually narrowing; tips of lobes with dark dot. Underside as above.

Hind wings lobe 1 with dark dots at 1/3rd and 2/3rd; some dark scales at 1/3rd of lobes 3, 4 and 5; and some dark scales subterminally at lobe 4. Underside as above.

Male genitalia. Symmetrical. Valve "Y" shaped, with a small basal saccular extension. Uncus as long as tegumen. Tegumen arched. Socius sharp-pointed, as long as tegumen. Saccus narrow. Anellus arms rather stout, half the saccus length. Aedeagus stout, and longer than the genitalia; with a small "Y" shaped cornutus.

Female genitalia. Unknown.

ECOLOGY. The moth flies in September. The hostplant is unknown.

DISTRIBUTION. Indonesia: Papua: Borne region.

ETYMOLOGY. The species is named after Br. Henk van Mastrigt, who combines his missionary work with his passion for Lepidoptera, collector of insects on the island of New Guinea.

***Alucita walmakiensis* Gielis, spec. n.**

Fig. 17, 46.

MATERIAL. Holotype ♀: Indonesia, Papua, Kecamatan. Nipsan, Walmak, 1710 m, 04° 07' S 139° 38' E, 31.II.2005 (UNCEN-ZMA Exp.), gent. CG 5871 (ZMAN). Paratype: 1 ♀: Indonesia, Papua, Kecamatan Abenaho, Pass Valley, 1950 m, 3° 51' S 139° 05' E, 11-17.II.2005 (UNCEN-ZMA Exp.) (CG).

DIAGNOSIS. See *A. aramsolkiensis* Gielis.

DESCRIPTION. Wingspan 11 mm. Head appressedly scaled; collar brown with tip of scales creamy-white; vertex creamy-white; between the base of the antennae brown and frons creamy-white. Palps broadly flattened; curved up; creamy-white, with brown scales at terminal 1/3rd of first segment and terminally on second segment; one and a half times eye-diameter. Thorax, tegulae, and abdomen brown, speckled with creamy-white scales; and a small double spot on the dorsum of the third segment; ventrally white. Legs creamy-white; first legs brown-speckled on femur and tibia.

Fore wings basal band brown; followed by a small band of orange spots which are margined basally and terminally with smaller white spots. The submedial band brown, displaced and enlarged in lobe 2, 4 and 5; and basally displaced and enlarged in lobe 6. The medial band is only present by a brown segment on lobe 1. The subterminal band is extended basally in lobes 2 and 5, and in an even greater distance in lobe 3 and 6. Between all brown parts are small orange spots.

Hind wings with an almost regular pattern of dark scales, in shape of 7 to 8 spots on each lobe.

Male genitalia. Unknown.

Female genitalia. Ostium wide, flattened. Antrum 2/3rd of ostium width; with a ring of spiculae. Ductus bursae short. Bursa copulatrix vesicular, elongate, with in terminal half numerous spiculae, and in the basal half a sclerite. Bursa seminalis long, slender. Apophyses anteriores one and a half times papillae anales. Apophyses posteriores dito.

ECOLOGY. The moth flies in February. The hostplant is unknown.

DISTRIBUTION. Indonesia, Papua, Nipsan and Abenaho districts.

ETYMOLOGY. The species is named after the locality of its collecting: Walmak.

***Alucita wamenaensis* Gielis, spec. n.**

Fig. 18, 47.

MATERIAL. Holotype ♀: Indonesia, Irian Jaya, Baliem Valley, Wamena, 1500 m, 22.X.1993 (A.J. de Boer, ao), gent. CG 5881 (ZMAN).

DIAGNOSIS. See *A. anticoma* (Meyrick).

DESCRIPTION. Wingspan 8 mm. External characteristics as in *A. dejongi*.

Male genitalia. Unknown.

Female genitalia. Ostium minimally excavated. Antrum funnel-shaped, as long as wide. Ductus bursae slender and short. Bursa copulatrix vesicular. Lamina antevaginalis heart-shaped. Apophyses anteriores four times papillae anales. Apophyses posteriores four and a half times papillae anales.

ECOLOGY. The moth flies in October. The hostplant is unknown.

DISTRIBUTION. Indonesia, Papua, Baliem Valley.

ETYMOLOGY. The species is named after the collecting locality: Wamena.

***Alucita withaari* Gielis, spec. n.**

Fig. 19, 36.

MATERIAL. Holotype ♂: (Indonesia), Papua, Mamberamo-Tengah, Marina Valen, Gn. Acaua, 540 m, 17-20.VII.2004 (H. van Mastrigt), gent. CG 5892 (ZMAN). Paratype: 1 ♂, same date and locality (CG).

DIAGNOSIS. See *A. micrographa* (Diakonoff).

DESCRIPTION. Wingspan 21 - 23 mm. Head: collar, vertex and frons pale brown, collar and vertex with curled up scales; between the base of the antennae ochreous. Palps pale brown, curved up, one and a half times the eye-diameter, third segment with darker ring. Antennae shortly ciliated. Thorax, tegulae and abdomen pale brown; mesothorax and dorsal on segments 3, 4 and 5 dark brown. Underside brown-white. Fore legs with greyish patches on femur, tibia and first tarsal segment.

Fore wings ochreous; basally at costa a small fold enveloping some ochreous-white androconial scales. First lobe almost unmarked. Markings: a basal band extending terminally on lobe 4, and displaced basally on lobe 5 and more so on lobe 6; a medial band displaced basally on lobes 4, 5 and 6; the terminal and subterminal bands are only indicated by small scale groups, not showing a distinct structure.

Hind wings with a basal band, gradually widening on lobes 1 to 5, and ending small on lobe 6; medial, subterminal and terminal band broken into very small scale groups without distinct pattern.

Male genitalia. Symmetrical. Valve large and triangular, ending into an acute tip. Basally from valve a small

saccular process. Uncus long and slender, twice the tegumen length, with forked tip. Tegumen simple, arched. Socius almost as long as uncus, slender and with acute tip. Saccus arched, and long; bottom part widened. Anellus arms slender, half the saccus length. Aedeagus very broad, gradually widening towards tip, 6/10th of genital length. Cornuti in shape of a ribbon-like spicular plate and a large area with less dense spiculation.

Female genitalia. Unknown.

ECOLOGY. The moth flies in July. The hostplant is unknown.

DISTRIBUTION. Indonesia, Papua, Mamberamo Tengah.

ETYMOLOGY. The species is named after Mr. Gerrit Wirthaar, a participant of the ZMAN expeditions.

***Alucita xanthozona* (Diakonoff, 1954)**

Orneodes xanthozona Diakonoff, 1954: 179.

MATERIAL. Holotype ♂: Nieuw Guinea, Iebèlè Camp, 2250 m, 17.XI.1938 (L.J. Toxopeus, Neth. Ind. - American New Guinea Exped.), gent. RMNH 916D (RMNH). [Examined].

DIAGNOSIS. See *A. abenahoensis* Gielis.

REDESCRIPTION after Diakonoff (1954) (abstracted): "♂. 19 mm. Head pale whitish-ochreous, vertex some what brighter. Palps long, ascending, moderately curved, whitish-ochreous; basal segment brown, except apex; median with a small dark brown longitudinal streak in middle; terminal segment under 3, with dark brown subapical ring. Thorax bright ochreous-yellow, and a brown transverse band at $\frac{2}{3}$. Abdomen bright orange-yellow, markings brown: some spots on tergite 1; brown on second and third tergite; tergites 5 to 7 irrorated dark brown. Fore wings deep yellow-ochreous. Markings brownish-fuscous: five bands, only distinct on fore wing lobes 1 to 3, on the other lobes reduced to two dots which indicate the basal and terminal position of the margin of the bands".

***Alucita zumkehreri* Gielis, spec. n.**

Figs. 20, 37.

MATERIAL. Holotype ♂: (Indonesia), Papua, Mamberamo Tengah, Marina Valen, Gn. Acaua, 540 m, 17-20.VII.2004 (H. van Mastrigt), gent. CG 5885 (ZMAN).

DIAGNOSIS. See *A. aramsolkiensis* Gielis.

DESCRIPTION. Wingspan 17 mm. Head ochreous-white, mixed with some dark brown-grey scales at the vertex and frons. Palps curved up, twice the eye-diameter, second segment ochreous-white with laterally a brown-grey patch from base to 3/4th, third segment ochreous-white with in middle a brown-grey ring. Antennae shortly ciliated. Thorax and tegulae ochreous-white with lateral patches of black-brown scales. Underside pale ferruginous. Fore legs with pale large patches on the femur, tibia and first tarsal segment.

Fore wings creamy-white. First lobe with nine grey spots, and a costal fold reaching up to the middle; wing base blackish-grey. Markings: a basal band on the stalk of lobe 3 and 4 orange and lobes 5 and 6 blackish; a submedial band black on lobes 2 to 5; a medial band orange, on lobes 2 to 6, terminally extended on lobes 3 to 5, and basally displaced on lobe 6; a subterminal band on lobes 2 to 6, a little dis-

placed terminally on lobe 3 and 5, reduced on lobe 4; a terminal band, beginning on lobe 1 with two spots, well developed on lobe 2, and hardly visible on lobes 3 to 6.

Hind wings with orange and black patches on base. The basal band reduced; submedial band black, extended terminally on lobes 3 and 4, absent on lobe 6; a medial band orange, terminally displaced on lobes 3 to 6, on lobe 5 heavily margined with black scales, and on lobe 6 completely black; subterminal band black on lobes 1 to 4, spot on lobe 1 small, on lobes 2 and 4 larger and extended and displaced terminally, on lobe 3 smaller and extended and displaced terminally; terminal band as in fore wing.

Male genitalia. Symmetrical. Valve triangular, with a basal small saccular process. Uncus a little longer than tegumen, stout and with indented tip. Tegumen arched, simple. Socius as long as uncus, slender with acute tip. Saccus slender, arched, broadened at the base. Anellus arms slender, 2/3rd of the saccus length. Aedeagus 6/10th of genital length, club-like. Cornuti in shape of a large trapezoid plate and a group of spiculae near the tip.

Female genitalia. Unknown.

ECOLOGY. The moth flies in July. The hostplant is unknown.

DISTRIBUTION. Indonesia, Papua, Mamberamo district.

ETYMOLOGY. The species is named after Ir. Piet J. Zumkehr, a participant of the ZMAN expeditions.

***Alucita zwieri* Gielis, spec. n.**

Fig. 11, 21, 31, 38.

MATERIAL. Holotype ♂: Indonesia, Papua, Kab. Sarimi, Peg. Foya, 1650 m, 2° 34,5' S 138° 42,9' E, 23.XI-7.XII.2005 (H. van Mastrigt), gent. CG 5886 (ZMAN). Paratypes: 1 ♂, same data, gent. CG 5889 (ZMA); 1 ♂: (Indonesia, Papua), Modio, 1340 m, 25.V.(19)84 (no collector), gent. CG5890 (CG).

DIAGNOSIS. See *A. abenahoensis* Gielis.

DESCRIPTION. Wingspan 21 mm. Head dark grey-brown, between the base of the antennae pale ferruginous; at the collar and vertex with curled up scales. Palps almost straight, one and one third times eye-diameter, second segment brown, third segment pale ferruginous. Antennae ciliated. Thorax and tegulae mixed pale ferruginous and brown. Underside pale ferruginous; fore legs with dark grey patches on the tibia and first tarsal segment, poorly marked on the femur.

Fore wings ochreous-ferruginous. First lobe with a large costal fold of 2/5th of the length, enveloping ochreous-white androconial scales. Markings: a submedial band, brown, with two small dots on lobe 1, and mildly displaced basally on lobe 6; a medial band, brown, terminally extended on lobe 3.

Hind wing bands as an extension of the fore wings.

Male genitalia. Symmetrical. Valve triangular with acute tip. Saccular process small, at the base of the valve. Uncus one and a half times tegumen, spatula-like with cleft tip. Tegumen arched, simple. Socius as long as uncus, slender and with acute tip. Saccus arched, slender and with broadened base. Anellus arms rather stout, half the saccus length. Aedeagus half the genital length, with hooked tip. Cornuti in shape of a small patch of spiculae.

Female genitalia. Unknown.

ECOLOGY. The moth flies in November and December. The hostplant is unknown.

DISTRIBUTION. Indonesia, Papua, Sarimi region.

ETYMOLOGY. The species is named after Drs. Jaap H.H. Zwier, a participant of the ZMAN expeditions.

***Hebdomactis* Meyrick, 1929**

Hebdomactis Meyrick, 1929: 539. Type species: *Hebdomactis crystallodes* Meyrick, 1929: 539, by monotypy.

***Hebdomactis crystallodes* Meyrick, 1929**

Fig. 22, 39.

Hebdomactis crystallodes Meyrick, 1929: 539.

MATERIAL. Holotype ♂: British New Guinea, Biagi, Mambare River, 5000 feet, I-IV (A.S. Meek) (BMNH). [Examined]. 1 ♂: Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 139° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp.), gent. CG 5896 (ZMAN).

DIAGNOSIS. The species is characterized by the short clefts of the fore and hind wings. Each wing holds six lobes.

***Triscaedecia* Hampson, 1905**

Triscaedecia Hampson, 1905: 247. Type species: *T. dactyloptera* Hampson, 1905, by original designation.

=*Hofmannia* Pagenstecher, 1900: 241. Type species: *H. septemdactyla* Pagenstecher. - Praeocc. *Hofmannia* Wocke, 1877.

***Triscaedecia septemdactyla* (Pagenstecher, 1900)**

Fig. 23, 40.

Hofmannia septemdactyla Pagenstecher, 1900: 241.

MATERIAL. 1 ♂, Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 139° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp.)(ZMAN); 2 ♂♂: Indonesia, Papua, Kecamatan Abenaho, Pass Valley, 1950 m, 3° 51' S 139° 05' E, 11-17.II.2005 (UNCEN-ZMA Exp.), gent. CG 5897 (ZMAN, CG).

Type specimen not examined.

DIAGNOSIS. The species is characterized by the short clefts of the fore and hind wings. Each wing holds seven lobes.

Checklist of Alucitidae species from New Guinea

Species are recorded in groups. The groups are formed according to the resemblance of species, and bears no scientific arguments. The grouping has neither a scientific nor phylogenetic based origin. In the checklist the groups are separated by a blank line.

Species names are preceded by an E. or W.: E = recorded from the eastern half of the island (Papua New Guinea), and W = recorded from the western half of the island (Papua, Indonesia).

E	<i>Alucita brachyophimus</i> (Hering, 1917)
W	<i>A. anticoma</i> (Meyrick, 1929)
W	<i>A. argyrospecta</i> (Diakonoff, 1954)
E	<i>A. cymographa</i> (Meyrick, 1929)
W	<i>A. deboeri</i> Gielis, spec. n.
W	<i>A. dejongi</i> Gielis, spec. n.
W	<i>A. niphadosema</i> (Diakonoff, 1954)
E	<i>A. ochraspis</i> (Meyrick, 1929)
W	<i>A. wamenaensis</i> Gielis, spec. n.
W	<i>A. aramsolkiensis</i> Gielis, spec. n.
W	<i>A. lackneri</i> Gielis, spec. n.
W	<i>A. mabilabolensis</i> Gielis, spec. n.
W	<i>A. ruttleri</i> Gielis, spec. n.
W	<i>A. walmakensis</i> Gielis, spec. n.
W	<i>A. zumkehreri</i> Gielis, spec. n.
W	<i>A. micrographa</i> (Diakonoff, 1954)
W	<i>A. withaari</i> Gielis, spec. n.
EW	<i>A. semophantis</i> (Meyrick, 1929)
W	<i>A. abenahoensis</i> Gielis, spec. n.
E	<i>A. baliochlora</i> (Meyrick, 1929)
W	<i>A. devosi</i> Gielis, spec. n.
E	<i>A. eteoxantha</i> (Meyrick, 1929)
W	<i>A. eudasya</i> (Diakonoff, 1954)
E	<i>A. eurynephala</i> (Meyrick, 1929)
W	<i>A. manningi</i> Gielis, spec. n.
E	<i>A. microdesma</i> (Meyrick, 1929)
W	<i>A. nipsana</i> Gielis, spec. n.
W	<i>A. papuaensis</i> Gielis, spec. n.
W	<i>A. vanmastrigti</i> Gielis, spec. n.
W	<i>A. xanthozona</i> (Diakonoff, 1954)
W	<i>A. zwieri</i> Gielis, spec. n.
EW	<i>Hebdomactis crystallodes</i> Meyrick, 1929
EW	<i>Triscaedecia septemdactyla</i> (Pagenstecher, 1900)

► **Fig. 1 - 12.** Imago. **1.** *Alucita abenahoensis* Gielis, **spec. n.** Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 138° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp), gent. CG 5893 (CG). **2.** *A. aramsolkiensis* Gielis, **spec. n.** (Indonesia), (Papua), Aramsolki, 5.XI.(19)75 (no collector), gent. CG 5873 (ZMAN). **3.** *A. argyrospecta* (Diakonoff, 1954). Irian Jaya, Kec. Borme, Borme, 900 m, 17-24.IX.1998 (H. van Mastrigt), gent. CG 5872 (ZMAN). **4.** *A. deboeri* Gielis, **spec. n.** Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 138° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp), gent. CG 5878 (ZMAN). **5.** *A. dejongi* Gielis, **spec. n.** Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 4° 07' S 139° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp.), gent. CG 5880 (ZMAN). **6.** *A. devosi* Gielis, **spec. n.** Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 4° 07' S 139° 38' E, 31.I-9.II.2005(UNCEN-ZMA Exp.), gent. CG 5869 (ZMAN). **7.** *A. lackneri* Gielis, **spec. n.** Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 138° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp) (ZMAN). **8.** *A. mabilabolensis* Gielis, **spec. n.** Indonesia, Papua, Kec. Oksibil, Mabilabol, 1340 m, 4° 54' S 140° 37' E, 21-25.II.2005 (UNCEN-ZMA Exp.), gent. CG 5879 (ZMAN). **9.** *A. manningi* Gielis, **spec. n.** Indonesia, Papua, Kecamatan Abenaho, Pass Valley, 1950 m, 3° 51' S 139° 05' E, 11-17.II.2005 (UNCEN-ZMA Exp.), gent. CG 5884 (ZMAN). **10.** *A. micrographa* (Diakonoff, 1954). Irian Jaya, Lembah Kamu, Moanemani, 1645 m, 27-28.II.1995 (H. van Mastrigt), gent. CG 5887 (ZMAN). **11.** *A. zwieri* Gielis, **spec. n.** Indonesia, Papua, Kab. Sarimi, Peg. Foya, 1650 m, 2° 34,5' S 138° 42,9' E, 23.XI-7.XII.2005 (H. van Mastrigt), gent. CG 5889 (ZMAN). **12.** *A. nipsana* Gielis, **spec. n.** Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 138° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp), gent. CG 5891 (ZMAN).



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► **Fig. 13 - 23.** Imago. **13.** *A. papuaensis* Gielis, **spec. n.** Indonesia, Papua, Kec. Abenaho, Pass Valley, 1850 m, 13-20.V.1999 (H. van Mastrigt), gent. CG 5868 (ZMAN). **14.** *A. rutteni* Gielis, **spec. n.** Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 138° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp), gent. CG 5895 (ZMAN). **15.** *A. semophantis* (Meyrick, 1929). Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 138° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp), gent. CG 5876 (ZMAN). **16.** *A. vanmastrigti* Gielis, **spec. n.** Indonesia, Papua, Kec. Borne, Borne, 900 m, 17-24.IX.1998 (H. van Mastrigt), gent. CG 5867 (ZMAN). **17.** *A. walmakensis* Gielis, **spec. n.** Indonesia, Papua, Kecamatan. Nipsan, Walmak, 1710 m, 04° 07' S 139° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp.), gent. CG 5871 (ZMAN). **18.** *A. wamenaensis* Gielis, **spec. n.** Indonesia, Irian Jaya, Baliem Valley, Wamena, 1500 m, 22.X.1993 (A.J. de Boer, ao), gent. CG 5881 (ZMAN). **19.** *A. withaari* Gielis, **spec. n.** (Indonesia), Papua, MamberamoTengah, Marina Valen, Gn. Acaua, 540 m, 17-20.VII.2004 (H. van Mastrigt) (CG). **20.** *A. zumkehri* Gielis, **spec. n.** (Indonesia), Papua, MamberamoTengah, Marina Valen, Gn. Acaua, 540 m, 17-20.VII.2004 (H. van Mastrigt), gent. CG 5885 (ZMAN). **21.** *A. zwieri* Gielis, **spec. n.** Indonesia, Papua, Kab. Sarmi, Peg. Foya, 1650 m, 2° 34,5' S 138° 42,9' E, 23.XI-7.XII.2005 (H. van Mastrigt), gent. CG 5886 (ZMAN). **22.** *Hebdomactis crystallodes* Meyrick, 1929. Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 139° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp.), gent. CG 5896 (ZMAN). **23.** *Triscaedecia septemdactyla* (Pagenstecher, 1900). Indonesia, Papua, Kecamatan. Nipsan, Walmak, 1710 m, 04° 07' S 139° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp.)(ZMAN).



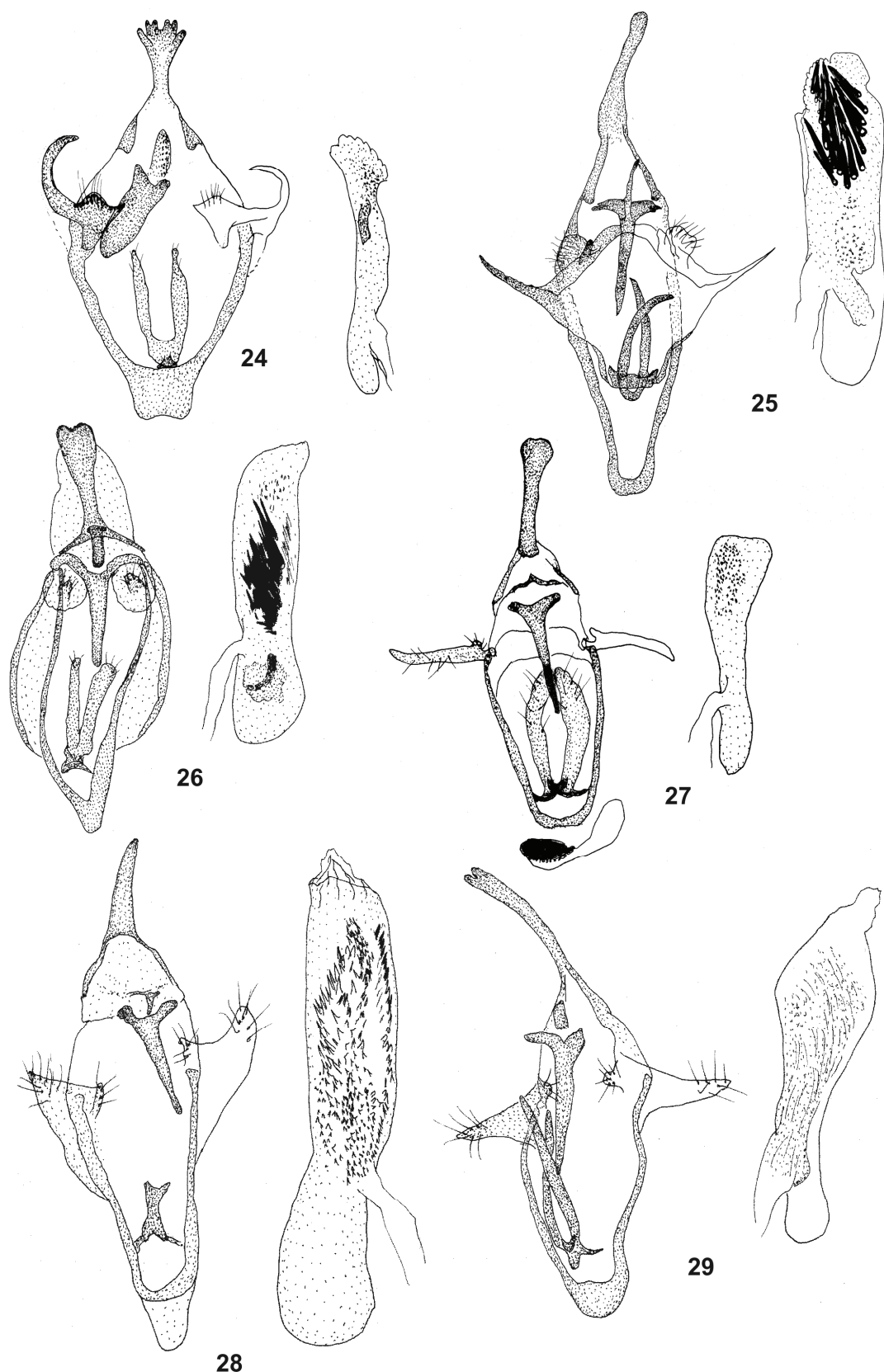


Fig. 24 - 29. Male genitalia. **24.** *A. aramsolkensis* Gielis, **spec. n.** (Indonesia), (Papua), Aramsolki, 5.XI.(19)75 (no collector), gent. CG 5873 (ZMAN). **25.** *A. argyrosodia* (Diakonoff, 1954). Irian Jaya, Kec. Borme, Borme, 900 m, 17-24.IX.1998 (H. van Mastrigt), gent. CG 5872 (ZMAN). **26.** *A. deboeri* Gielis, **spec. n.** Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 138° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp), gent. CG 5878 (ZMAN). **27.** *A. devosi* Gielis, **spec. n.** (Indonesia), Irian Jaya, Kec. Wasior, Gn. (Mt) Wondiboy, 1750 m, 24-25.II.1997 (H. van Mastrigt), gent. CG 5870 (CG). **28.** *A. lackneri* Gielis, **spec. n.** Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 138° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp), gent. CG 5883 (ZMAN). **29.** *A. manneringi* Gielis, **spec. n.** Indonesia, Papua, Kecamatan Abenaho, Pass Valley, 1950 m, 3° 51' S 139° 05' E, 11-17.II.2005 (UNCEN-ZMA Exp.), gent. CG 5884 (ZMAN).

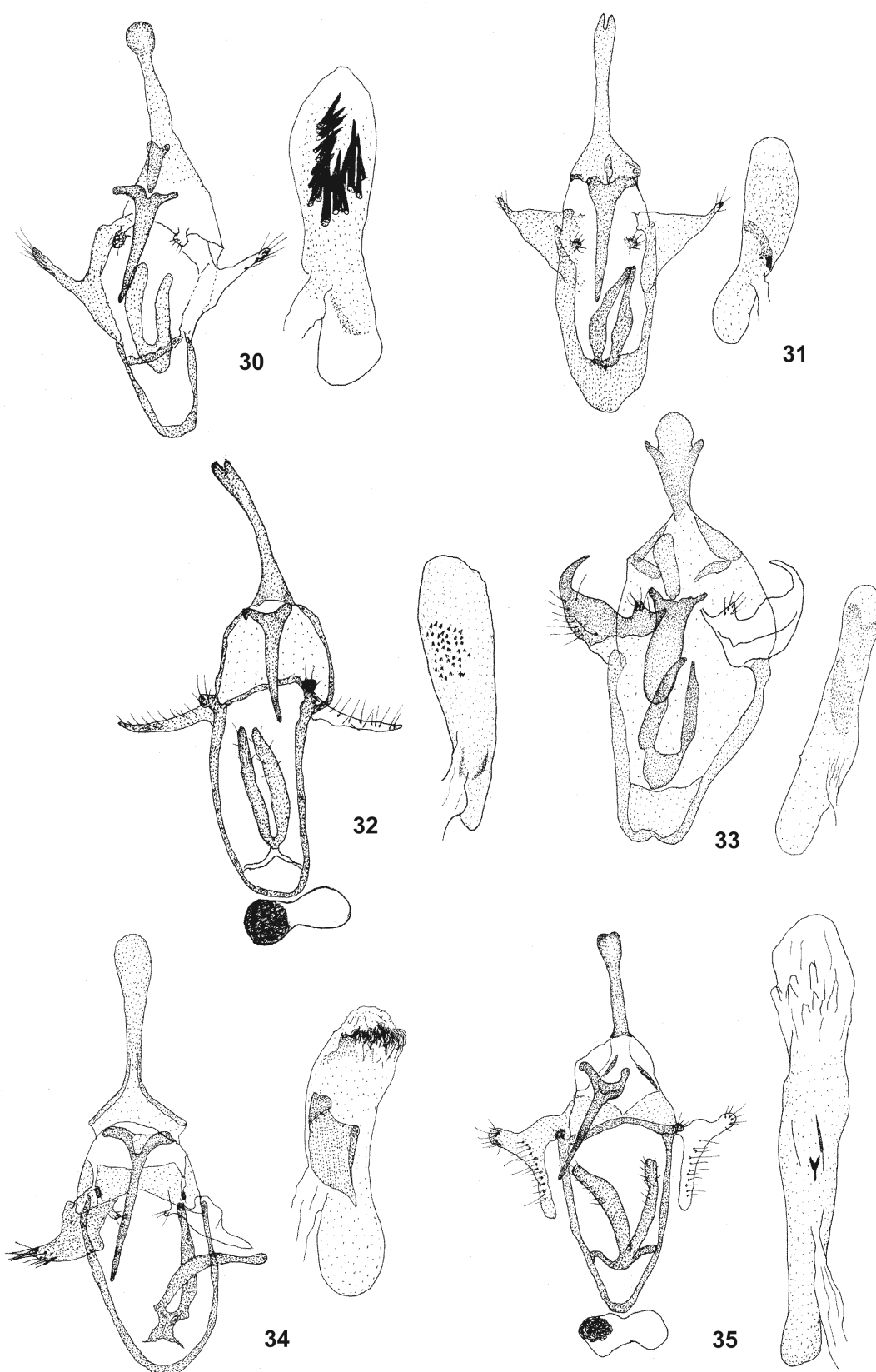


Fig. 30 - 35. Male genitalia. **30.** *A. micrographa* (Diakonoff, 1954). Irian Jaya, Lembah Kamu, Moanemani, 1645 m, 27-28.II.1995 (H. van Mastrigt), gent. CG 5887 (ZMAN). **31.** *A. zwieri* Gielis, **spec. n.** Indonesia, Papua, Kab. Sarmi, Peg. Foya, 1650 m, 2° 34,5' S 138° 42,9' E, 23.XI-7.XII.2005 (H. van Mastrigt), gent. CG 5889 (ZMAN). **32.** *A. papuaensis* Gielis, **spec. n.** Indonesia, Papua, Kec. Abenaho, Pass Valley, 1850 m, 13-20.V.1999 (H. van Mastrigt), gent. CG 5868 (ZMAN). **33.** *A. rutteni* Gielis, **spec. n.** Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 138° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp), gent. CG 5895 (ZMAN). **34.** *A. semophantis* (Meyrick, 1929). Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 138° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp), gent. CG 5876 (ZMAN). **35.** *A. vanmastrigti* Gielis, **spec. n.** Indonesia, Papua, Kec. Borme, Borme, 900 m, 17-24.IX.1998 (H. van Mastrigt), gent. CG 5867 (ZMAN).

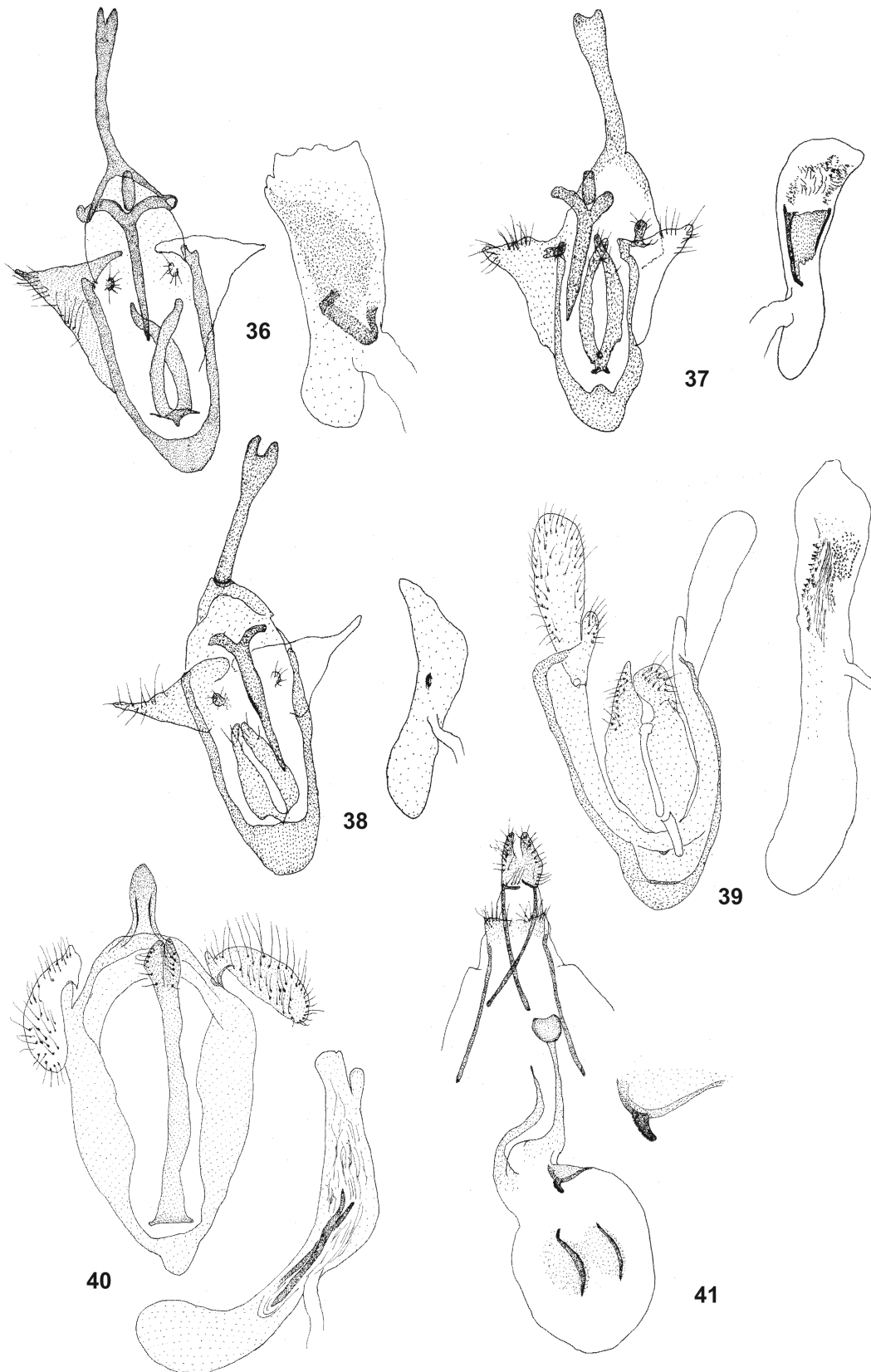


Fig. 36 - 40. Male genitalia. **36.** *A. withaari* Gielis, **spec. n.** (Indonesia), Papua, MamberamoTengah, Marina Valen, Gn. Acaua, 540 m, 17-20.VII.2004 (H. van Mastrigt), gent. CG 5892 (ZMAN). **37.** *A. zumkehri* Gielis, **spec. n.** (Indonesia), Papua, MamberamoTengah, Marina Valen, Gn. Acaua, 540 m, 17-20.VII.2004 (H. van Mastrigt), gent. CG 5885 (ZMAN). **38.** *A. zwieri* Gielis, **spec. n.** Indonesia, Papua, Kab. Sarmi, Peg. Foya, 1650 m, 2° 34,5' S 138° 42,9' E, 23.XI-7.XII.2005 (H. van Mastrigt), gent. CG 5886 (ZMAN). **39.** *Hebdomactis crystallodes* Meyrick, 1929. Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 139° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp.), gent. CG 5896 (ZMAN). **40.** *Triscaedecia septemdactyla* (Pagenstecher, 1900). Indonesia, Papua, Kec. Abenaho, Pass Valley, 1850 m, 13-20.V.1999 (H. van Mastrigt), gent. CG 5897 (ZMAN). **Fig. 41.** Female genitalia. **41.** *Alucita abenahoensis* Gielis, **spec. n.** (Indonesia), Irian Jaya, Kec. Abenaho, Pass Valley, 1850 m, 13-20.V.1999 (H. van Mastrigt), gent. CG 5894 (ZMAN).

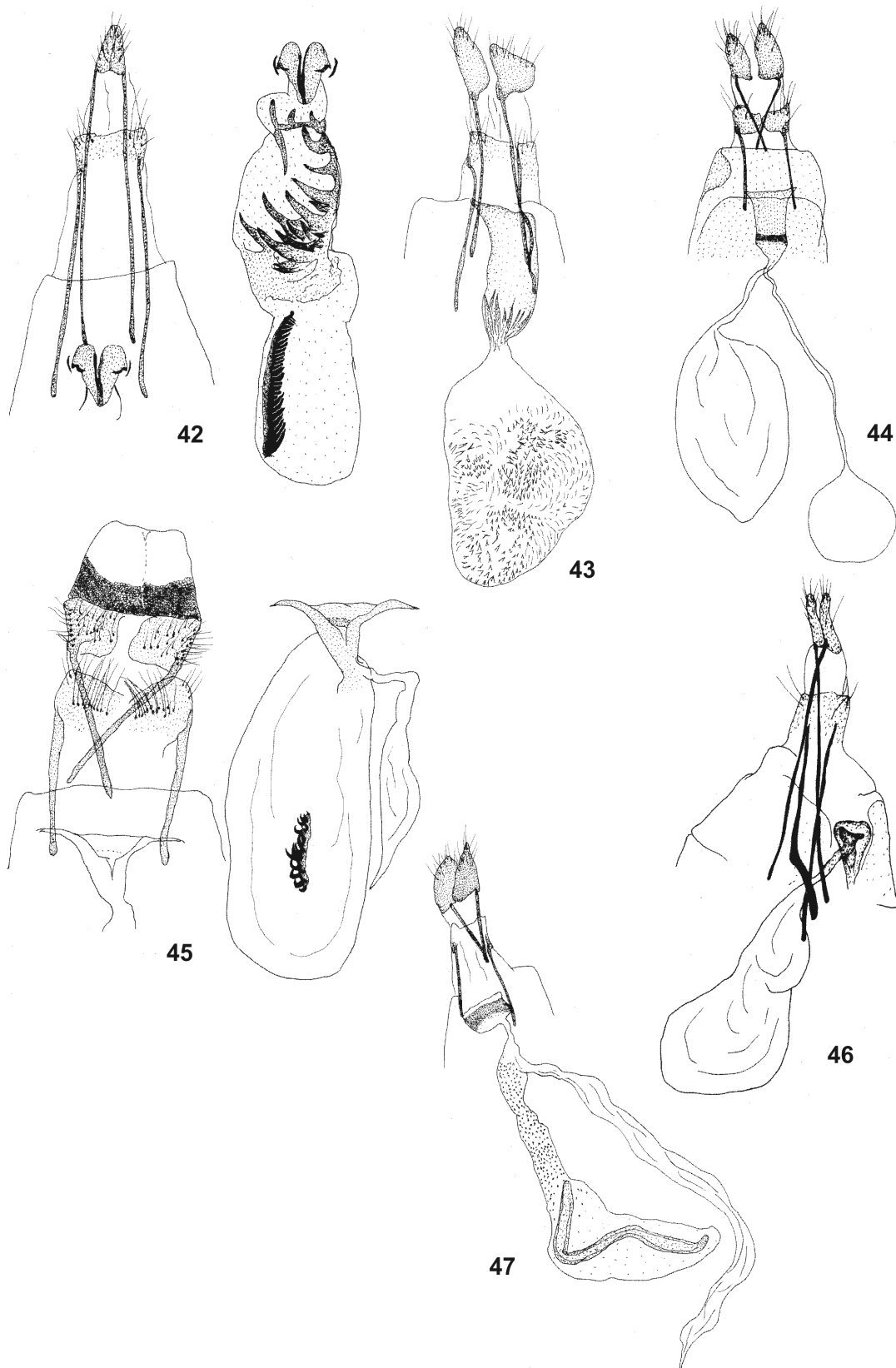


Fig. 42 - 47. Female genitalia. **42.** *A. dejongi* Gielis, **spec. n.** Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 4° 07' S 139° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp.), gent. CG 5880 (ZMAN). **43.** *A. lackneri* Gielis, **spec. n.** Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 138° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp.), gent. CG 5882 (ZMAN). **44.** *A. mabilabolensis* Gielis, **spec. n.** Indonesia, Papua, Kec. Oksibil, Mabilabol, 1340 m, 4° 54' S 140° 37' E, 21-25.II.2005 (UNCEN-ZMA Exp.), gent. CG 5879 (ZMAN). **45.** *A. nipsana* Gielis, **spec. n.** Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 138° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp.), gent. CG 5891 (ZMAN). **46.** *A. walmakensis* Gielis, **spec. n.** Indonesia, Papua, Kecamatan Nipsan, Walmak, 1710 m, 04° 07' S 139° 38' E, 31.I-9.II.2005 (UNCEN-ZMA Exp.), gent. CG 5871 (ZMAN). **47.** *A. wamenaensis* Gielis, **spec. n.** Indonesia, Irian Jaya, Baliem Valley, Wamena, 1500 m, 22.X.1993 (A.J. de Boer, ao), gent. CG 5881 (ZMAN).