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Studies on the Crambinae (Lepidoptera). Part 43. Further Taxonomic Notes on Some Tropical Species

[Pls. XL - XLI and 55 text-figs.]

Materiały do znajomości Crambinae (Lepidoptera). Część 43. Dalsze taksonomiczne uwagi o tropikalnych gatunkach

Материали для ознакомления с Crambinae (Lepidoptera). Часть 43. Дальнейшие таксономические заметки о тропикальных видах

The present paper contains decriptions of further new genera and species of the tropical *Crambinae*, found during my study in 1964 at the British Museum (N. H.), London, then in 1965 at the Entomology Research Institute of the Department of Agriculture in Ottawa, as well as in the loaned material of the Rijksmuseum van Natuurlijke Historie in Leiden and of the Naturhistorisches Museum in Vienna. Moreover, I give some newly found synonymy and new combinations, and a list of genera and species which are to be removed from the subfamily *Crambinae*, or which had been removed by some authors, but were incorporated by mistake in the Catalogue of the *Crambinae* by BLE-SZYŃSKI & COLLINS (1962). I want to express my thanks to Dr. E. MUNROE, the Chief of the Taxonomy Section, who kindly gave me much important advice in generic placement of several *Crambinae* which I moved to other subfamilies.

Microcausta Hampson, 1895

Microcausta Hampson, 1895, Ann. Mag. nat. Hist. 16: 340. Type species: Microcausta ignifimbrialis Hampson, by monotypy.

¹ National Research Council postdoctorate fellow at the Entomology Research Institute, Research Branch, Canada Department of Agriculture, Ottawa, 1964—65.

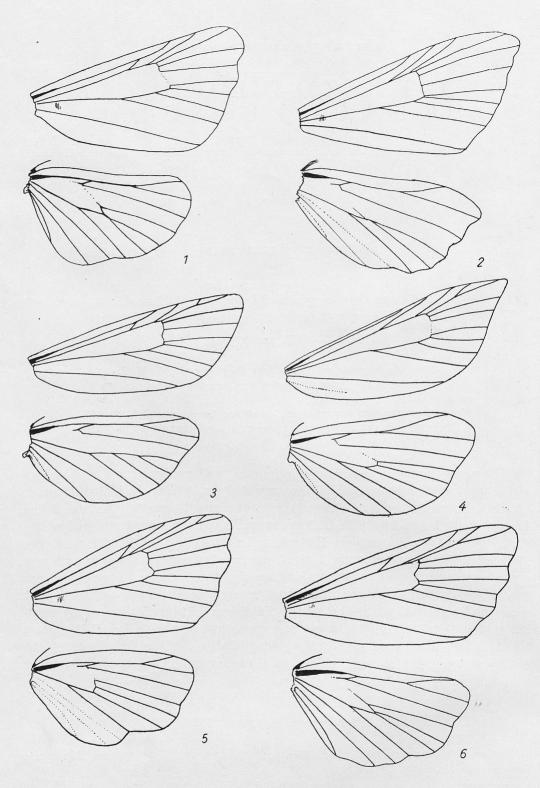


Fig. 1—6. Neuration of wings. 1 — Scissolia harlequinalis Barnes & McDunn. 2 — Microcausta flavipunctalis Barnes & McDunn. 3 — Microchilo inouei Okano. 4 — Tamsica sp. 5 — Pareromene exsectella (Christ.). 6 — P. metallifera (Butler)

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Redescription: Ocellus well developed. Face, labial palpus generally as in the species of the genus Pareromene Osthelder. Forewing with apex decidedly pointed, termen only slightly concave below apex, not incised as in the most species of Pareromene Osth.; two transverse lines present. Frenulum in female triple. In forewing r_1 , r_2 and r_5 free, r_3 reduced, m_2 from cell. In hindwing m_1 as in Scissolia Barnes & McDunnough, m_2 absent, m_3 connate with cu_1 (fig. 2). In male genitalia uncus and gnathos well developed, pars basalis distinct, sacculus not differentiated, saccus present, pseudosaccus absent, vinculum with an ovate window. In female genitalia signum absent, other characters rather similar to those of Pareromene Osth. and allied genera.

Distribution: Florida; West Indies; British Guiana.

Comments: This genus was decribed in the *Pyraustinae*. It is very close to *Scissolia* Barnes & McDunnough and *Pareromene* Osth. being distinct by the absence of m₂ from the hindwing and the presence of peculiar window in the vinculum. Because not enough material is available for study, I am unable to give full specific characters of the members of this genus.

Microcausta ignifimbrialis HAMPSON, 1895

Microcausta ignifimbrialis Hampson, 1895, Ann. Mag. nat. Hist. 16: 340. Locus typicus: St. Vincent, Grenada, West Indies. Holotype &: coll. British Museum (N. H.), London.

So far I have examined only the male genitalia (Fig. 8). They appear to be similar to those in M. cnemoptila (Meyr.), however, in the aedoeagus of M. ignifimbrialis Hmps. cornuti are more numerous and valva is much narrower. Unfortunately the position on the slide of the genitalia of the holotype of M. ignifimbrialis Hmps. is different from that of other related species, and therefore it is difficult to compare it adequately with the other species.

Microcausta cnemoptila (MEYRICK) n. comb.

Diptychophora cnemoptila Meyrick, 1931, Exot. Micr. 4: 110. Locus typicus: British Guiana. Holotypus 3: "Bartica British Guiana P. I. 13", GS-7680-BM-Pyral, coll. British Museum (N. H.), London.

The genitalia of this species are very close to those of M. ignifimbrialis Hmps. (Fig. 7) (see comments under the preceding species). I have not examined the type of M. ignifimbrialis Hmps. and I cannot give the external differences between the two species. M. cnemoptila (Meyr.) is very close externally to M. argenticilia (Hmps.) from Jamaica, however, the unique type specimen of M. argenticilia (Hmps.) has the abdomen missing. In M. cnemoptila (Meyr.) the forewing shows two distinct transverse lines, which are missing from the other species, moreover, the forewing fringes in M. cnemoptila (Meyr.) are white with a distinct brown patch in the middle, whereas, in M. argenticilia (Hmps.) the fringes are uniformly white. The apical speck in the forewing

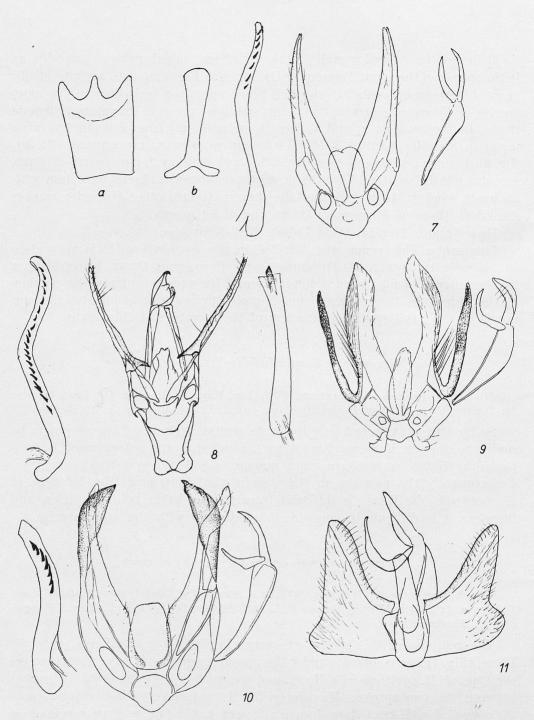


Fig. 7—11. Male genital armatures. 7— Microcausta cnemoptila (MEYR.). Holotype. GS-7680-BM. Pyral. British Guiana: Bartica. a—sclerite of 8th abdominal tergite, b—sclerite of 8th abdominal sternite; 8— Microcausta ignifimbrialis Hmps. Holotype. West Indies: St. Vincent. 9— Microcausta flavipunctalis Barnes & McDunn. GS-4386-SB, Florida: Paradise Key. 10— Microcausta bipunctalis Barnes & McDunn. Holotype. GS-3818—R. W. Hodges. Arizona: Redington. 11— Scissolia harlequinalis Barnes & McDunn. GS-1744-EGM. Arizona: Sta Catharina Mts.: Madera Canyon

in M. cnemoptila (Meyr.) is lemon-yellow, but it is ochreous-red in the second species. Judging by the above mentioned differences in the facies, M. cnemoptila (Meyr.) and M. argenticilia (Hmps.) seem to be distinct.

Microcausta argenticilia (HAMPSON, 1919) n. comb.

Diptychophora argenticilia Hampson, 1919, Ann. Mag. nat. Hist. (9) 3: 445. Locus typicus: Jamaica. Holotype (abdomen missing): "Runaway Bay Jamaica 24. III. 1905. Wlsm.", coll. British Museum (N. H.), London.

Externally very close to the preceding species, but, most likely specifically distinct. For more details see: comments under *M. cnemoptila* (MEYR.).

Microcausta flavipunctalis BARNES & McDunnough, 1913

Microcausta flavipunctalis Barnes & McDunnough, 1913, Contr. nat. Hist. Lep. N. A. 2: 174, Pl. 1, Fig. 4. Locus typicus: Florida: Ft. Myers. Holotype 3: 1—7. IV, coll. United States National Museum, Washington, D. C.

Redescription (examined 233 19): Labial palpus two and one half times as long as the diameter of an eye, brown, mixed with lighter brown. Face rounded, grey-brown. Thorax and scapula grey-brown. Forewing dull chocolate-brown with two transverse lines which are ill-defined, parallel to each other, angled below costa, running obliquely. Fringes slightly glossy brown. Hindwing brownish, with a yellow patch in male.

Male genitalia (Fig. 9): Uncus decidedly bowed with apex slightly pointed, gnathos pointed, bowed. Pars basalis detached from valva at base, heavily sclerotized, nearly straight, decidedly shorter than valva, clothed with scales from tip to about two-thirds. Costa with several very long hairs in basal portion. Aedoeagus nearly straight; a single apical sclerite present.

Female genitalia (Fig. 15): Ostium pouch moderately sclerotized, weakly demarcated from ductus bursae; the latter lightly sclerotized throughout, with one coil near bursa copulatrix. The latter with no signum.

Microcausta bipunctalis BARNES & McDunnough, 1914

Microcausta bipunctalis Barnes & McDunnough, 1914, Contr. nat. Hist. Lep. N. A. 2: 237, Pl. 1, Fig. 16. Locus typicus: Arizona: Redington. Holotype: Redington Arizona, slide 3818-R. W. Hodges, coll. United States National Museum, Washington, D. C.

Close to the preceding species externally, but perfectly distinct on genitalia. Male genitalia (Fig. 10): Uneus proportionately shorter than in *M. flavipunctalis* Barnes & McDunnough, pars basalis broader, with terminal half free, about as long as cucullus. Aedoeagus with a row of about 8 rather strong cornuti.

Scissolia BARNES & McDUNNOUGH, 1914

Scissolia Barnes & McDunnough, 1914, Cont. nat. Hist. N. A. 2: 245. Type species: Scissolia harlequinalis Barnes & McDunnough, by monotypy.

Colimea Dyar, 1925, Insec. inscit. menstr. 13: 9. Type species: Colimea incisalis Dyar,

by monotypy. N. Syn.

Redescription: Ocellus absent. Labial palpus, face and general appearance as in *Pareromene* OSTH. Forewing with apex broadly rounded, termen distinctly concave below apex and in the middle. R_1 coincident with sc, r_2 free, r_3 reduced, r_5 free, m_1 , m_2 and m_3 free. Hindwing in female with frenulum triple. M_1 arising free from upper angle of cell, m_2 free, m_3 and cu_1 short stalked (Fig. 1). Pattern of forewing as in the members of the genus *Pereromene* OSTH.

Male genitalia (Fig. 11): Uncus and gnathos strong. Valva with pars basalis

not detached, no processes on valva.

Female genitalia (Fig. 17): In general, similar to those in *Pareromene* Osth. Signum present.

Distribution: Arizona.

Comments: This genus is extremely close to Pareromene Osth., differring in the stalked m_3 and cu_1 in the hindwing and very strong gnathos. In addition, in the species of Pareromene Osth. (known to me) the pars basalis is better demarcated and detached from the valva. Because of the strong gnathos the genus seems to be close to Diptychophora Z., however, still not enough material of Diptychophora Z. is available for my study to say anything definitely. In general, very many species of Pareromene Osth. remain to be studied in detail and the problems of generic arrangement of this complex are rather obscure. Both Scissolia Barnes & McDunnough and Colimea Dyar were described in the Pyraustinae.

Scissolia harlequinalis Barnes & McDunnough, 1914

Scissolia harlequinalis Barnes & McDunnough, 1914, Cont. nat. Hist. N. A. 2: 246, Pl. 1, Fig. 28. Locus typicus: Arizona: Palmerlee. Holotype: coll. United States National Museum, Washington, D. C.

Redescription (examined 1 3 3 \$\pi\$): Chaetosemata moderate. Antenna uniform yellowish to brownish. Labial palpus proportionately very short, slightly less than one and one half times as long as the diameter of an eye, yellow. Maxillary palpus and face yellow. Scapula yellow with black base. Thorax brown, mixed with yellow. Forewing lemon-yellow, dull. Pattern black-brown. A white bar in the apical area. Subterminal line a double delicate line linked to median line by a dark bar. A dark patch at costa in middle of wing. Median line excurved. A basal transverse fascia present. Fringes metalically shiny, brown, cut by a white streak below apex. Hindwing dark grey-brown with slightly lighter fringes (Pl. XL, Fig. 1).

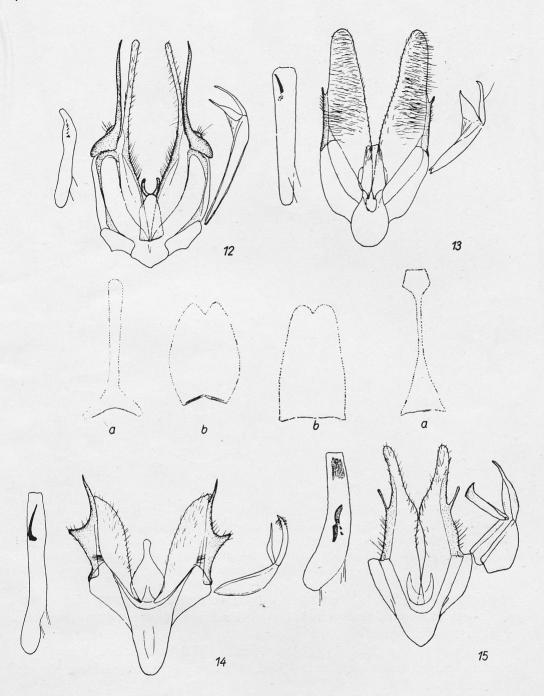


Fig. 12—15. Male genital armatures. 12 — Pareromene lathonia n. sp. Paratype, GS-4536-SB. New Britain. a — sclerite of 8th abdominal tergite, b — sclerite of 8th abdominal sternite. 13 — Pareromene morobella n. sp. Holotype. GS-4542-SB. New Guinea: Morobe Distr. a — sclerite of 8th abdominal tergite, b — sclerite of 8th abdominal sternite. 14 — Pareromene ajaxella n. sp. Holotype. GS-4535-SB. New Guinea: Okapa. 15 — Pareromene paradisella n. sp. Holotype. GS-4499-SB. Congo: Elisabethville.

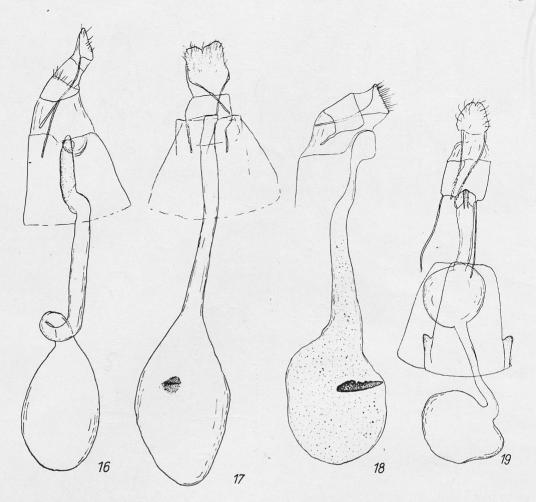


Fig. 16—19. Female genital armatures. 16— Microcausta flavipunctalis Barnes & McDunn. GS-4384-SB. Florida: Siesta Key. 17— Scissolia harlequinalis Barnes & McDunn. GS-4593-SB. Arizona: Sta. Catharina Mts.: Madera Canyon. 18— Scissolia incisalis (Dyar). Lectotype. GS-3823— R. W. Hodges. Mexico: Colima. 19— Pareromene lathonia n. sp. Paratype. GS-4910-SB. Moluccas: Obi.

Male genitalia (Fig. 11) Aedoeagus with no cornuti. Valva broad with costalapical part much produced, rounded. Apical margin concave. Other characters as given for the genus.

Female genitalia (Fig. 17): Ostium pouch lightly sclerotized throughout, about as long as bursa copulatrix; the latter elongate with one large signum with a median ridge.

Distribution: Arizona: Palmerlee; Santa Rita Mts.: Madera Canyon.

Comments: The species is on the wing from end of July to the beginning of August as shown by the material studied. The slide of the genitalia of the only male seen was poorly prepared, so I can not give full details of the armature.

Scissolia incisalis (Dyar, 1925) n. comb.

Colimea incisalis Dyar, 1925, Insec. inscit. menstr. 13: 9. Locus typicus: Mexico: Colima. Lectotype (present designation): "Colima Mex.", "Aug. 1923", "R. Miller collector", "14612", coll. United States National Museum, Washington, D. C.

Extremely close to the preceding species, but perfectly distinct by the female genitalia (male unknown). Signum more than twice as long as in *S. harlequinalis* Barnes & McDunnough, ostium pouch well demarcated from ductus bursae (Fig. 18).

Pareromene clytia n. sp.

Type material: Holotype \mathfrak{P} : "Fort de Kock (Sumatra) 920 mm. December 1922 leg. E. Jacobson", GS-4409-SB, coll. Museum van Natuurlijke Historie, Leiden. Paratypes: \mathfrak{P} with same data as holotype, but taken in II, III, V and IX. 1920—1921, coll. Museum van Natuurlijke Historie, Leiden; Entomology Research Institute of the Dept. of Agriculture, Ottawa and author's collection.

Diagnosis: Ocellus absent. Chaetosemata very weak. Forewing with r₁ coincident with sc. Neuration of the hindwing typical of the genus. Forewing with shape and pattern typical of the genus, incision below apex rather strong. Length of forewing 5.5 mm. maximal width about 2.5 mm. Frenulum triple. Labial palpus two and one half times the length of the eye diameter, lemonyellow with a broad brown band on middle segment; apical segment black, mixed with white. Face white mixed with yellow. Vertex white. Tegula ochreousyellow mixed with brown. Thorax yellow mixed with white. Forewing ochreousyellow sprinkled with brown scales. Apical spot steely, connected to costa. Submarginal line steely, edged at either side by brown scales. A brown shade between termen and submarginal line. Discal dot present. Median line zigzagshaped, white, edged with brown. Fringe shiny yellowish-brown, basal line dark golden-steely. Hindwing grey-brown with creamy fringes; a submarginal light fascia is present (Pl. XL, Fig. 3).

Female genitalia (Fig. 20): Ostium pouch armed with two heavily sclerotized, long spines; ductus bursae narrow, lightly sclerotized throughout slightly swollen near ostium bursae. Bursa copulatrix rounded, with a single rounded signum. — Male unknown.

Pareromene lathonia n. sp.

Type material: Holotype \mathbb{Q} "Moluccas 1953 W. Obi vii-xi Obi Lake 160—260 m AMR Wagner", GS-4004-SB, coll. Museum van Natuurlijke Historie, Leiden; paratypes $1\mathbb{Z}$ and $12\mathbb{Q}$ with same data as holotype, \mathbb{Q} GS-4300-SB and 4910-SB, coll. Museum van Natuurlijke Historie Leiden, Entomology

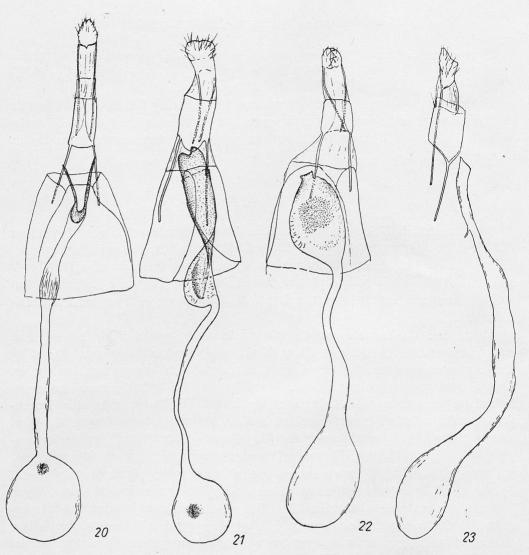


Fig. 20—23. Female genital armatures. 20— Pareromene clytia n. sp. Holotype. GS-4409-SB. Sumatra: Fort de Kock. 21— Pareromene ajaxella n. sp. Paratype. GS-4541-SB. New Guinea: Komya. 22— Pareromene morobella n. sp. Paratype. GS-4543-SB. New Guinea: Morobe Distr. 23— Tamsica sp. GS-4407-SB. Hawaii: Oahu

Research Institute, Dept. of Agriculture, Ottawa and author's collection, 233, Rain Forest nr. Karavat New Britain Nov. 7, 1957 MUNROE & HOLLAND"; GS-4536-SB, coll. Entomology Research Institute of the Dept. of Agriculture, Ottawa.

Diagnosis: Ocellus absent. Chaetosemata very poor. Labial palpus, face and vertex similar to those in $P.\ elytia$ n. sp. Antenna whitish with dark rings. Scapula and thorax whitish, mixed with yellow-brownish. In forewing r_1 coincident with sc. Shape of forewing typical of the genus, incisions of the termen

normal. Forewing with apical speck white, connected with costa. Subterminal line white edged with grey-brown. Ground colour of the forewing yellow, sprinkled with brown scales. Median line angled below costa, then slightly zigzag-shaped. Fringes shiny golden-brown, basal line distinctly darker. Hindwing glossy silky creamy, with fringe white, darkened basally at apex. (Pl. XL, Fig. 2).

Male genitalia (Fig. 12): Uncus slightly arched, rather pointed, gnathos nearly as long as uncus, tapering to a point. Pars basalis well demarcated from valva, in form of a very long, narrow spine with a broad base. Vinculum large, with a heavily sclerotized, somewhat rounded stripe. Saccus small. Juxta plate rather short with a half-moon-shaped apical part. Cucullus very narrow, rounded at apex, slightly shorter than pars basalis. Aedoeagus slightly shorter than pars basalis, with apical portion moderately bent. A row of very small cornuti.

Female genitalia (Fig. 19): Ostium pouch moderately sclerotized, elongate, r arrow. Ductus bursae lightly sclerotized throughout. Bursa copulatrix about r s long as ductus bursae, pear-shaped; signum absent.

Pareromene morobella n. sp.

Type material: Holotype & "Edie Cr. nr. Wau Morobe District, New Guinea 6800, Sept. 21—22 1957 Munroe & Holland", type no. 9043, GS-4542-SB, coll. Entomology Research Institute of the Department of Agriculture, Ottawa, and author's collection. In addition one & with abdomen missing: "Okapa E. Hlds. New Guinea 6000 1. X. 1957 Munroe & Holland", coll. Entomology Research Institute of the Department of Agriculture, Ottawa (not designated as a paratype).

Diagnosis: Ocellus absent. Labial palpus two and one half times as long as the diameter of an eye, whitish mixed withy ellowish, with two brown patches. Face normal in shape, whitish with brownish centre. Thorax brownish, scapula whitish. Fore wing: r_1 coincident with sc; length 6·5—7 mm., maximal width 2·4—2·5 mm.; ground colour dull white, pattern brown: subterminal line broadly excurved, dentate, decidedly oblique, median line a brown shade, discal dot present, fringes glossy brownish; termen incised only once below apex. Hindwing silky whitish, semitransparent, fringes glossy white (Pl. XL, Fig. 4).

Male genitalia (Fig. 13): Uncus nearly straight with tip pointed, slightly bent; pars basalis extending to half of costa, with a distinct, finger-shaped, narrow tip. Cucullus proportionately very broad with apex rounded. Aedoeagus slightly broadening apicad; one moderate, nearly straight, tapering cornutus and several very minute spikes are present.

Female genitalia (Fig. 22): Papilla analis and subgenital plate typical of the genus. Ostium pouch abnormally large with mouth small, rather heavily sclerotized caudal portion, middle area with numerous minute spikes; duetus bursae lightly sclerotized throughout, with cephalic half dilated; bursa copulatrix about half length of ductus bursae, signum absent.

Pareromene paradisella n. sp.

Type material: Holotype & "Elisabethville, Belgian Congo 20. II. 53 Ch. Seydel", type no. 8972, GS-4499-SB, coll. Entomology Research Institute of the Department of Agriculture, Ottawa.

Diagnosis: Ocellus absent. Chaetosemata present (a few setae). Antenna, labial palpus and scaling on thorax and scapulae damaged. Forewing with \mathbf{r}_1 coincident with sc; length 5 mm, maximal width 2 mm, termen very deeply incised below apex, second incision distinct; scaling rather rubbed, brown;

a distinct, much elongate white apical spot. Hindwing whitish.

Male genitalia (Fig. 15): Uncus with apical portion much narrowed, pointed, gnathos straight, with apex produced dorsally as a tapering tooth. Pars basalis distinct with a finger-shaped very thin, oblique rounded apically, free tip. Cucullus narrowed with apex rounded. Aedoeagus slightly bowed, much shorter than the total armature, with two distinct sclerites, two small cornuti and several rows of apical scobinations.

Pareromene ajaxella n. sp.

Type material: Holotype &: "Okapa E. Hlds, New Guinea 6000 1. X. 1957 Munroe & Holland", GS-4535-SB, type No. 9041, coll. Entomology Research Institute of the Department of Agriculture, Ottawa. Paratypes: 19 with same data as holotype, same coll.; 1439: "Komya W. Side Mt. Giluwe S. Hlds. Papua 7400 6 & 7 Oct. 1957 Munroe & Holland", coll. Entomology Research Institute of the Department of Agriculture and in author's collection.

Diagnosis: Ocellus well developed. Labial palpus about three times as long as diameter of an eye, brown, second segment with apical portion white. Face rounded, white. Patagia and scapula in most specimens rubbed. Forewing: Length 6·5—7·5 mm, maximal width 2·3—2·5 mm; r₁ coincident with sc; costa straight, apex rounded, termen decidedly oblique, concave below apex, and below middle; ground colour dull light brownish sprinkled with dark brown scales, apical pattern typical of many species of the genus *Pareromene* OSTH. absent. I am not able to give the definite description of the forewing pattern as most of the specimens are rubbed. Fringe of forewing decidedly shiny with basal line slightly darker; brownish. Hindwing glossy yellowish-creamy with concolorous fringe.

Male genitalia (Fig. 14): Uncus arched, slender with tip pointed, hair rather short, only in the apical portion; gnathos rather shorter than uncus, apical half very thin, pointed. Tegumen normal. Valva with a very strong and well demarcated pars basalis which is bilobed: basal lobe oblique, in form of a slightly pointed spine, terminal lobe nearly perpendicular to costa, extending beyond end of valva, in form of a thin, sharp spine; no other processes of valva. Saccus large, rounded. Aedoeagus nearly straight, slightly shorter than the whole genital armature. A single long, sightly arched, tapering cornutus present.

Female genitalia (Fig. 21): Ostium pouch large, elongate, rather heavily sclerotized; ductus bursae at the ostium pouch with a bulbous projection containing numerous tiny spikes, further on thin, long, lightly sclerotized; bursa copulatrix rounded with a large signum with indistinct edges.

Microchilo Okano, 1962

Microchilo Окано, 1962, Ann. Rep. Gak. Fac. Iwate Uniw. 20: 129. Type species: Microchilo inouei Окано, by monotypy.

This genus appears to be very close to the *Pareromene* complex and to the genus *Tamsica* Zimmerman. In fact, *Microchilo* Okano is distinct from *Tamsica* Zimmerman mainly by the hindwing neuration, where m_2 is distinctly stalked, whereas in *Tamsica* Zimmerman m_2 runs freely from the cell. In the species of *Microchilo* Okano that I have examined, m_1 in the forewing is coincident with sc, but in *Tamsica* Zimmerman the vein is free (Figs 3—4). However, this character is of no generic importance in most of the *Crambinae*. The genitalia of both sexes are rather similar in the members of the two genera, for comparison I figure male and female genitalia and the wings neuration of one species of *Tamsica* Zimmerman. So far *Tamsica* Zimmerman is known as a Hawaiian endemic.

Microchilo Okano seems to be very wide spread in the Oriental Region, being also known from Japan and China. The genus needs thorough revision. Some species have been described in the genus Scoparia Curt., others in Argyria Hbn. or Platytes Gn.

Microchilo fulvosignalis (SNELLEN, 1880) n. comb.

Scoparia fulvosignalis SNELLEN, 1880, Tijd. Ent. 23: 204. Locus typicus: Celebes: Makassar. Type material: Holotype \mathfrak{P} : "Celebes Makassar", GS-4911-SB, coll. Rijksmuseum van Natuurlijke Historie, Leiden.

Redescription: Ocellus well developed. Antenna dirty whitish with brownish rings. Labial palpus twice as long as the diameter of an eye, grey-brownish. Face rounded, very slightly protruding beyond eye, grey-brown, mixed with whitish-cream. Vertex, thorax and scapula concolorous with face. In forewing \mathbf{r}_1 free, in hindwing \mathbf{m}_2 on a relatively short stalk. Length of forewing 4.5 mm, maximal width 1.6 mm Costa slightly arched, apex narrowly rounded, termen decidedly oblique, slightly bowed. Ground colour dull dark grey-brown. Subterminal line rather well defined, dirty whitish, excurved, with a slight tooth above dorsum. Median line oblique, dirty whitish, broadly edged with yellow exteriorly. Some yellow patches in terminal half of wing. Discal dot large, edged with whitish inwardly. Fringes rubbed. Hindwing dark grey-brown with lighter fringes.

Female genitalia (Fig. 31): Ostium pouch not demarcated from ductus bursae, rather lightly sclerotized with mouth slightly inbent; as wide as the adjacent portion of the ductus bursae. The latter lightly sclerotized throughout, in middle moderately swollen, with many minute spikes. Bursa copulatrix longer than ductus bursae, with a rounded area of concentrated minute spikes; in large part armed with tiny spikes.

Comments: So far only the unique female holotype is known. The species resembles M. javaiensis n. sp., being smaller and darker. The presence of the ocelli is an important character.

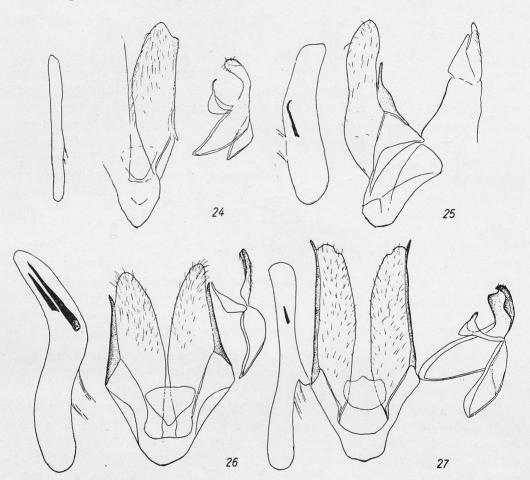


Fig. 24—27. Male genital armatures. 24 — Microchilo javaiensis n. sp. Holotype. GS-4374-SB
 Java. 25 — Microchilo nugalis (SNELLEN). Lectoparatype. GS-1269-Md'A. Celebes: Maros 26 — Microchilo snelleni n. sp. Paratype. GS-4372-SB. Sumatra: Fort de Kock. 27 — Microchilo elgrecoi n. sp. Holotype. GS-4378-SB. Sumatra: Fort de Kock

Microchilo elgrecoi n. sp.

Type material: Holotype ♂: "Fort de Kock (Sumatra) 920 m. Juni 1922 leg. E. Jacobson", GS-4378-SB, coll. Rijksmuseum van Natuurlijke Historie, Leiden; paratypes: 10♂♀ with same data as holotype, taken in January, June, July, September, October and November 1920—1922, one ♀ GS-4385-SB, coll.

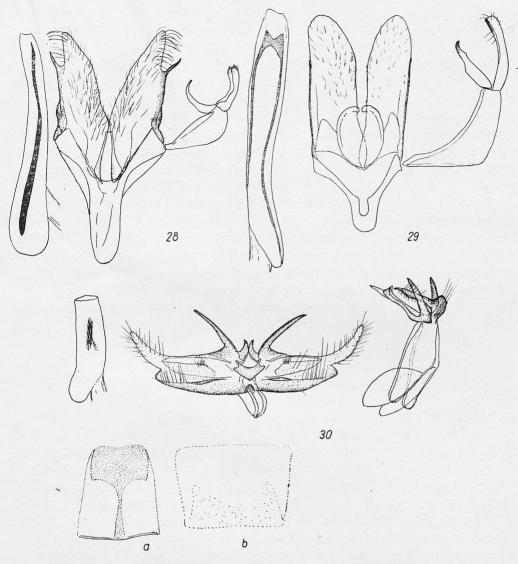


Fig. 28—30. Male genital armatures. 28— *Microchilo murilloi* n. sp. Paratype. GS-4377-SB. New Guinea: Komya. 29— *Tamsica* sp. GS-4398-SB. Hawaii: Kanai. 30— *Euchromius matador* n. sp. Holotype. GS-4342-SB. Congo: Elisabethville. a— sclerite of 8th abdominal tergite, b— sclerite of 8th abdominal sternite

Rijksmuseum van Natuurlijke Historie, Leiden, Entomology Research Institute of the Department of Agriculture, Ottawa and author's collection.

Diagnosis: Ocellus vestigial. Antenna whitish with brownish rings. Labial palpus, thorax and scapula brownish mixed with whitish. Face whitish. Forewing in shape as in allied species; dull, ground colour dirty whitish, densely dusted with brownish scales; subterminal line well defined, whitish, arched; median line also distinct, whitish, decidedly angled below costa; discal dot distinct,

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terminal speck well defined; fringes slightly glossy brownish with whitish lines. Length of forewing 5—6,5 mm, maximal width 1,6—1.8 mm. Hindwing greywhitish with whitish fringes (Pl. XL, Fig. 8).

Male genitalia (Fig. 15): Uncus very broad with apical part decidedly narrowed, pointed, hair sparse and short. Gnathos with terminal portion narrow, slightly pointed. Pars basalis very well demarcated from valva, very narrow, with a spine-shaped free tip, decidedly protruding beyond sacculus. Sacculus at apical portion with a small notch. Juxta-plate broad. Saccus short. Aedoeagus about as long as the total armature, nearly straight, narrow, with a finger-like projection near middle at dorsal side. A small, tapering, straight cornutus is present.

Female genitalia (Fig. 36): Ostium pouch rather well demarcated from ductus bursae, much broader than it with two longitudinal ribs, tapering cephalad, moderately sclerotized. Ductus bursae about as long as ostium pouch, delicately wrinkled. Bursa copulatrix longer than ostium pouch plus ductus bursae with one elongate signum and a small group of tiny spikes.

Comments: This species externally is rather similar to the Japanese M. inouei Okano, from which it is perfectly distinct on the genitalia of both sexes.

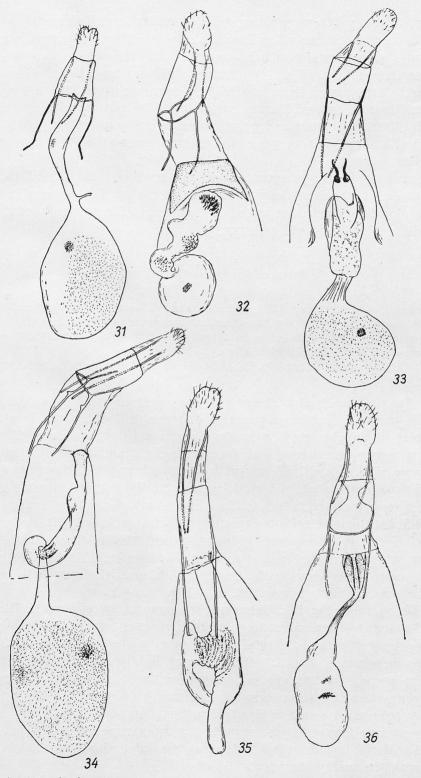
Microchilo javaiensis n. sp.

Type material: Holotype &: "Java Pekolongan v. Deventer", GS-4374-SB; paratype 19: "Java Tegal Simpar 3000 vt Lucas sen.", GS-4375-SB, both in coll. Rijksmuseum van Natuurlijke Historie, Leiden.

Diagnosis: Ocellus well developed. Antenna light creamy with brownish rings. Labial palpus two and one half times as long as diameter of an eye, greybrownish mixed with whitish. Face, thorax and scapula brownish mixed with whitish. Forewing in shape similar to that of allied species of the genus, dull grey-brown mixed with whitish. Subterminal line rather well-defined whitish, rather weakly dentate in costal part. Discal speck large. Some scattered patches of dark brown scales. Fringes brownish, cut by whitish streaks, slightly glossy. Length of forewing 4 mm (holotype) and 5.5 mm (paratype), maximal width 1.3 mm (holotype) and 1.7 mm (paratype). Hindwing dull light grey-brown fringes whitish with brownish lines (Pl. XL, Fig. 6).

Male genitalia (Fig. 24): Uncus broadened and rounded at apex, hair poor. Gnathos with apical portion spine-like, curved. Pars basalis moderately de-

Fig. 31—36. Female genital armatures. 31 — Microchilo fulvosignalis (Snellen). Holotype-GS-4911-SB. Celebes. 32 — Microchilo nugalis (Snellen). GS-4373-SB. Lectoparatype. Celebes: Maros. 33 — Microchilo snelleni n. sp. Paratype. GS-4370-SB. Java. 34 — Microchilo javaiensis n. sp. Paratype. GS-4375-SB. Java. 35 — Microchilo murilloi n. sp. Paratype. GS-4379-SB. New Guinea: Komya. 36 — Microchilo elgrecoi n. sp. Paratype. GS-4385-SB. Sumatra: Fort de Kock.



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marcated from valva, very narrow with ill-defined, rounded free tip well before apex of cucullus. Saccus rather long. Aedoeagus decidedly shorter than the total armature, thin, straight with no cornuti.

Female genitalia (Fig. 34): Ostium pouch rather lightly sclerotized, indistinctly demarcated from and slightly narrower than ductus bursae, with terminal margin convex. Ductus bursae lightly sclerotized with one coil in the middle. Bursa copulatrix as long as ductus bursae plus ostium pouch, in whole armed with numerous tiny spikes; an indistinct signum formed by concentrations of spikes.

Comments: Both type specimens are rather rubbed and it is difficult to give the detailed diagnosis of the pattern of the forewing. It is impossible to detect the median line which is supposed to be present. The species is similar to the

preceding M. fulvosignalis (SNELLEN).

Microchilo nugalis (SNELLEN, 1880)

Scoparia nugalis Snellen, 1880, Tijd. Ent. 23: 205. Locus typicus: Celebes: Maros. Type material: Lectotypus \mathcal{J} : "Celebes Maros", coll. Rijksmuseum van Natuurlijke Historie, Leiden. Lectoparatypes: 1 \mathcal{J} 2 \mathcal{L} labelled as lectotype, \mathcal{J} GS-1269-Md'A, \mathcal{L} GS-4373-SB, coll. Rijksmuseum van Natuurlijke Historie, Leiden.

Microchilo nugalis: Bleszyński, 1965, Crambinae [in] Amsel & Reisser & Gregor Micr. Pal. 1: 459 (n. comb.).

Redescription: Ocellus absent. Antenna uniformly light or dark, grey or greyish-brownish. Labial palpus two and one half times the length of the diameter of an eye, grey-brownish. Face rounded concolorous. Thorax and scapula nearly concolorous with face, with slight admixture of lighter scales. Forewing with r₁ free, hindwing with m₂ on a long stalk. Forewing dull greybrown with costa slightly bowed, apex narrowly rounded, termen decidedly oblique, nearly straight. Subterminal line nearly parallel to termen, whitish, in costal half dentate (in some specimens dentation ill-defined), inwardly more or less distinctly edged with yellowish-brown. Median line whitish, oblique, angled below costa, and again angled above dorsum. Fringes slightly glossy, dark, nearly concolorous with the ground colour. Hindwing dull dark greybrownish with lighter fringes (Pl. XL, Fig. 5).

Male genitalia (Fig. 25): Uncus rather narrow at apical portion. Pars basalis well demarcated from valva, terminal half free, very narrow with tip rounded. Aedoeagus shorter than the total armature; with one moderate-sized cornutus.

Female genitalia (Fig. 32): Ostium pouch lightly sclerotized with numerous small spines; ductus bursae also lightly sclerotized, swollen in two places, with two groups of small spines; bursa copulatrix with a group of small spines; a large heavily sclerotized shield in front of ostium bursae.

Comments: I have had no opportunity to examine the lectotype; the examined material includes three lectoparatypes only, which may not be conspecific with the male lectotype.

Microchilo snelleni n. sp.

Type material: Holotype &: "W. Java Buitenz [org] 1894", coll. Museum van Natuurlijke Historie, Leiden; paratypes: 3&& 4\paper from Java: Buitzen, & GS-4369-SB, \paper GS-4370-SB, 1& "Java Pekalongan v. Deventer", 1& "Fort de Kock (Sumatra) 920 m. Juni 1928 leg. E. Jacobson", GS-4372-SB, 5\paper also from Fort de Kock taken in January, February and May, coll. Rijksmuseum van Natuurlijke Historie, Leiden, Entomology Research Institute of the Dept. of Agriculture, Ottawa and author's collection.

Diagnosis: Externally strikingly similar to M. nugalis (Snellen) (Pl. XL, Fig. 7).

Male genitalia (Fig. 26): Uncus slightly bowed, broad at apex, hair short, scattered over greater part of uncus. Gnathos broad at basal part, strongly tapering to a point at apical portion. Pars basalis well demarcated from valva, heavily sclerotized, narrow, with a rather short, free, spine-shaped tip well before apex of cucullus. Juxta-plate broad. Saccus relatively very short. Aedoeagus decidedly longer than total armature, twice bent; two strong, tapering, straight cornuti, one decidedly longer than the other.

Female genitalia (Fig. 33): Ostium pouch lightly sclerotized with two distinct twisted spines at mouth. Ductus bursae lightly sclerotized, broad except at bursa copulatrix, there much narrower, bursa copulatrix about as long as ductus bursae; numerous tiny spikes and a distinct rounded signum present.

Comments: As well as the type specimens, three additional specimens from Sumatra: Fort de Cock were examined; these specimens have abdomens missing. Both *M. snelleni* n. sp. and *M. nugalis* (Snellen) are very distinct on the genitalia of both sexes. In *M. nugalis* (Snellen) the aedoeagus is very short with a single rather small cornutus, and the pars basalis is shorter with a relatively longer free tip, in the female genitalia the ostium pouch consists of many small spines; such spines occur also in two groups in the ductus bursae; the bursa copulatrix is armed only with a signum, the scattered small spines are absent.

Microchilo murilloi n. sp.

Type material: Holotype &: "Komya W. Side Mt. Giluwe S. Hlds. Papua 7400′ Oct. 6 & 7, 1957 Munroe & Holland", Type No. 8937, GS-4537-SB, coll. Entomology Research Institute of the Department of Agriculture, Ottawa; paratypes: 30 &\$\gamma\$ with same data as holotype, 1 & GS-4377-SB, 2 \$\sigma\$ GS-4379-SB, GS-4380-SB, other 4 specimens with genitalia examined (in capsules), coll. Entomology Research Institute of the Department of Agriculture, Ottawa and author's collection, 4 &\$\delta\$, 1 \$\gamma\$, "Mendi S. Hlds. Papua 5500′ 9. X. 1957 Munroe & Holland", two of these with genitalia examined, in capsules, coll. Entomology Research Institute of the Department of Agriculture, Ottawa.

Diagnosis: Ocellus absent. Face rounded. In forewing r_1 free, in hindwing m_2 on a long stalk. Forewing with costa slightly bowed, apex narrowly rounded, termen decidedly oblique and slightly bowed; length 6.5-7.5 mm, maximal width 2.3-2.6 mm; ground colour dull brownish to greyish, sprinkled with darker scales; subterminal line whitish, dentate; terminal dots well defined. Hindwing greyish with lighter fringes.

Male genitalia (Fig. 28): Uncus slightly bowed, broad at apex, with short hair. Gnathos strongly curved with apex pointed. Pars basalis rather indistinctly demarcated from valva, heavily sclerotized, ending in a thin, free, oblique, spine at about two-thirds of costa. Juxta-plate elongate, tapering to a truncate apex. Saccus long. Aedoeagus slightly shorter than the total armature, nearly straight, at base slightly broadened; a single cornutus nearly as long as aedoeagus.

Female genitalia (Fig. 35): Ostium pouch lightly sclerotized, not demarcated from ductus bursae. The latter lightly sclerotized, slightly broader than ostium pouch, with a large side projection. Bursa copulatrix narrow, small, with no signa.

Comments: All the specimens examined are in poor condition, so it is impossible to give the detailed diagnosis of the species. In addition to the type specimens, four specimens from Komya and two specimens from Mendi with abdomens missing were examined.

Euchromius matador n. sp.

Type material: Holotype 3: "Elisabethville Belgian Congo 4. V. 1947 Ch. Seydel", GS-4342-SB, type no. 8921; paratypes: 2 33, one GS-4312-SB, same labels as holotype, but one taken on 6. V. 1947; holotype and one paratype in coll. Entomology Research Institute of the Dept. of Agriculture, Ottawa, one paratype in author's collection.

Diagnosis: Ocellus fully developed. Face strongly conical with a distinct corneous point. Labial palpi three times as long as the diameter of an eye, brown. Forewing: length 9.5—11 mm, maximal width 2—5 mm; dull light brown, terminal area dusted with black scales; median fascia double as in *E. ocelleus* (HAW.), yellow, slightly bowed. Nine terminal dots. Hindwing light grey-beige with fringes whitish, dull (Pl. XLI, Fig. 2).

Male genitalia (Fig. 30); Uncus with large basal-dorsal, dagger-shaped, pointed projection. Gnathos with a dagger-shaped process at either side at base, apex thorn-shaped. Valva with sacculus projecting, cucullus much narrowed, well demarcated; pars basalis very distinct, in form of a long spine at base of costa, another bowed process at base of valva. A distinct, narrow, heavily sclerotized fold in sacculus. Juxta-plate with two finger-shaped arms. Aedoeagus straight but with basal portion slightly bent. A patch of numerous, very thin cornuti present. 8th abdominal tergite with a well defined sclerite, 8th sternite with a rather ill-defined plate as shown in the figures. Female unknown.

Comments: The species is superficially rather similar to *E. ocelleus* (HAW.) but has proportionately broader forewings. However, the species are radically different on the genitalia. This is the first species of *Euchromius* GN. known from the Congo.

Calamotropha papuella n. sp.

Type material: Holotype &: "Mendi S. Hlds. New Guinea 5. VIII. 1957 Munroe & Holland", Type No. 8919, coll. Entomology Research Institute, Dept, of Agriculture, Ottawa; paratypes: 1 & "Komya W. Side Mt. Giluwe S. Hlds. Papua 7400′ Oct. 6 & 7 Munroe & Holland", GS-4332-SB, 1 \(\phi \) also from Komya, 7. VIII. 1957, GS-4337-SB, 1 \(\phi \) "Okapa E. Hlds. New Guinea 6000′ 1. X. 1957 Munroe & Holland", coll. Entomology Research Institute, Dept. of Agriculture and author's collection; 1 \(\phi \) "Museum Leiden Nieuw. Guinea Exp. K. N. A. Ct. 1939 Paniai 14. IX. 1939", 1 \(\phi \) with same label but taken on 25. IX. 1939, both coll. Rijksmuseum van Natuurlijke Historie, Leiden.

Diagnosis: Ocellus absent. Antenna unicolorous light beige. Labial palpus four times as long as the diameter of an eye, light beige. Face rounded, slightly protruding forward beyond eye, white, vertex concolorous. Thorax and scapula light beige. Forewing with r_1 free. Frenulum in female triple. Costa slightly arched, apex acute, termen rather oblique and slightly arched; length 14 mm, maximal width slightly less than 5 mm; ground colour rather dull light brown; a longitudinal whitish stripe below costa running from base near apex, there diffused; discal and median dots both well defined; subterminal line a row of brown dots. Median line reduced. Terminal dots present. Fringes rather dull, nearly concolorous with the ground colour. Hindwing nearly dull greyish with fringes slightly glossy, creamy (Pl. XLI, Fig. 3).

Male genitalia (Fig. 37): Uncus bowed, pointed, slender, slightly longer than valva, with basal very long hairs. Gnathos much longer than uncus, with apex broadened and rounded. Valva with costa concave before apex; apex rounded, a small, spine-shaped, subapical, ventral process; costa glabrous, ventral portion and apex with rather long hair; subbasal-central area clothed with very short fine bristles. Vinculum large. Aedoeagus decidedly bent, distinctly shorter than valva plus vinculum. One tapering, moderate, pointed cornutus present.

Female genitalia (Fig. 40): Papillae anales typical of the genus. Anterior apophyses shorter than the posterior ones. Ostium pouch rather well demarcated from ductus bursae, heavily sclerotized, simple, with broad mouth. Ductus bursae lightly sclerotized throughout, about as long as bursa copulatrix. The latter with no signum.

Comments: The new species is very distinctive on the genitalia and can hardly be compared with any other member of the genus.

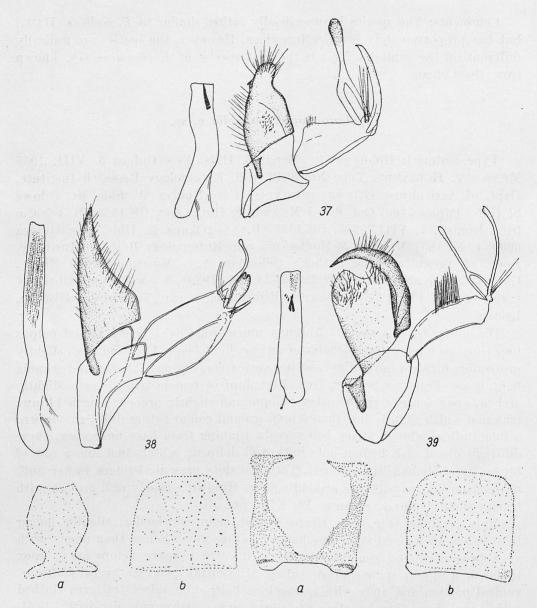


Fig. 37—39. Male genital armatures. 37 — Calamotropha papuella n. sp. Paratype. GS-4332-SB. New Guinea: Komya. 38 — Calamotropha sybilla n. sp. Holotype. GS-4388-SB. Riouw Arch. a — sclerite of 8th abdominal tergite, b — sclerite of 8th abdominal sternite. 39 — Calamotropha virra n. sp. Holotype. GS-4483-SB. Congo: Elisabethtville. a — sclerite of 8th abdominal tergite, b — sclerite of 8th abdominal sternite

Calamotropha sybilla n. sp.

Type material: Holotype & "Dammermann Doerian Riouw Arch. XI. 1923", GS-4388-SB, 1 & paratype with same label, holotype in coll. Rijksmuseum van Natuurlijke Historie, Leiden, paratype in author's collection.

Diagnosis: Ocellus present. Antenna unicolorous creamy-beige. Labial palpus two and one half times as long as the diameter of an eye, light creamy-beige. Face rounded, slightly protruding forward beyond eye, whitish. Vertex concolorous. Thorax scales rubbed. Scapula whitish. Patagium whitish with sides

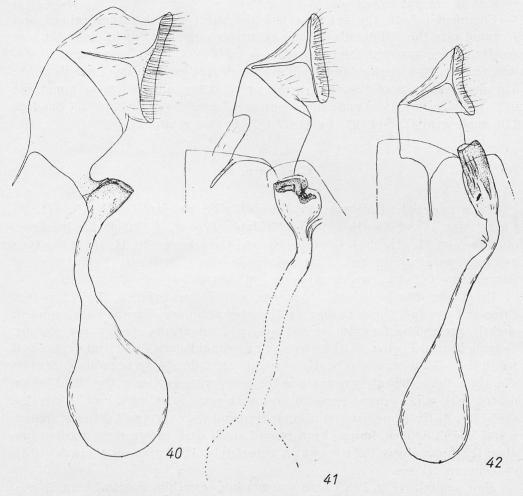


Fig. 40—42. Female genital armatures. 40 — Calamotropha papuella n. sp. Paratype. GS-4337-SB. New Guinea: Komya. 41 — Calamotropha camilla n. sp. Holotype. GS-4437-SB. Congo: Elisabethville. 42 — Calamotropha euphrosyne n. sp. Holotype. GS-4591-SB. Congo: Elisabethville

yellowish. R_1 in forewing free. Forewing: length 8·5 mm., maximal width 3·3 mm., dull ochreous-yellow with terminal portion whitened; subterminal line with subdorsal tooth very slight; median line present, well defined, with a distinct tooth in middle; terminal dots present. Hindwing yellowish (fringes rubbed) (Pl. XLI, Fig. 4).

Male genitalia (Fig. 38): Uncus much shorter than gnathos, with tip well bifurcated. Gnathos very thin, bowed, with tip rounded, only slightly broadened.

Valva with no processes, rather heavily sclerotized, costa broadely concave except basal part, thickened; cucullus tapering to a point; hair moderate. Vinculum long, its ventral edge longer than half of valva. Aedoeagus about as long as valva plus vinculum, nearly straight, narrow; numerous scobinations present in several rows.

Comments: Both the holotype and the paratype are rather rubbed and I cannot give the full details of their external characters. Superficially the new species comes very near the group of *C. oculalis* (Snellen), however, in *C. oculalis* (Snellen) and allies the ocelli are much smaller than in *C. sybilla* n. sp. The male genitalia of the new species are diametrically different from those in *C. oculalis* (Snellen) and allies (compare: Bleszyński 1961, pl. 46, figs 109, 110, male genitalia, pl. 61, figs 181, 182, female genitalia).

C. virra n. sp.

Type material: Holotype 3 "Elisabethville Belgian Congo 10. III. 53 CH. SEYDEL", GS-4483-SB, Type No. 8970; paratypes: 2 33 labelled as holotype, one taken on 11. III. 1953, GS-4492-SB, and the other on 20. II. 1953; holotype and one paratype in coll. Entomology Research Institute, Department of Agriculture, Ottawa, one paratype in author's collection.

Diagnosis: Ocellus absent. Antenna unicolorous whitish. Labial palpus three and one half times as long as diameter of an eye, brown. Face rounded, slightly protruding forward beyond eye, whitish-creamy, vertex concolorous. Scapula brown. Thorax whitish-creamy. Forewing: length 10—11 mm., maximal width 3·3—3·7 mm.; costa nearly straight, apex decidedly acuminate, termen slightly oblique, delicately concave below apex; ground colour glossy, light brown dusted with white scales; terminal area with some longitudinal white streaks; discal dot distinct, median dot absent; terminal dots very well defined; subterminal line ill-defined, formed by a row of small dark brown dots; median line absent; fringes glossy light brown; r_1 runs freely. Hindwing dirty creamy with concolorous fringes.

Male genitalia (Fig. 39): Uncus and gnathos very thin, about of same length, uncus with tip pointed, gnathos rounded apically; valva with costa much thickened, very heavily sclerotized, bowed, projecting terminally as a large, tapering spine, protruding far beyond cucullus. Hair on cucullus short, basal portion of valva glabrose. Pseudosaccus relatively very large, vinculum shorter than valva. Aedoeagus nearly straight, rather narrow, longer than valva, much shorter than valva plus vinculum. Two moderate-sized and three tiny, tapering, straight cornuti and some apical scobinations. Female unknown.

Comments: The new species has the genitalia unlike those in any other species of the genus *Calamotropha* Zell. Externally it resembles somewhat *C. anticella* (Walk.), from which it is less brown and more grey-brown, and being much smaller.

Calamotropha camilla n. sp.

Type material: Holotype \circ "Elisabethville Belgian Congo 4. V. 1947 Ch. Seydel", GS-4437-SB, Type No. 9042, coll. Entomology Research Institute, Department of Agriculture, Ottawa.

Diagnosis: Ocelli absent. Antennae unicolorous brown. Labial palpi more than four times as long as diameter of an eye, dark brown, mixed with some white. Thorax and scapulae rubbed. Patagia dark brown. Forewing: length 12·5 mm., maximal width 4 mm., r₁ free; slightly glossy chocolate-brown with a longitudinal, rather ill-defined darker shade running in the middle from base to about four-fifths, there becoming diffused; subterminal line poorly defined; no median line, discal dot and median dots both absent; terminal dots present; costa delicately bowed, apex decidedly acuminate, termen very slightly oblique, gently concave below apex, fringes glossy, concolorous with ground colour. Hindwing slightly glossy, dirty creamyw ith fringes concolorous (Pl. XLI, Fig. 5),

Female genitalia (Fig. 41): Papillae anales and eighth tergite typical of the genus: ostium pouch much broader than ductus bursae, bowl-shaped, with a heavily sclerotized, irregular-shaped sclerite near mouth; ductus seminalis distinct, from behind ostium pouch; ductus bursae lightly sclerotized throughout, bursa copulatrix with no signum.

Comments: The new species superficially somewhat resembles *C. fusci-vittalis* (HMPS.) from Rhodesia, which has, however, relatively much more elongate forewings. The species are very distinct in genitialia (compare BŁE-SZYŃSKI 1961, Pl. 66, Fig. 201, female genitalia, Pl. 35, Fig. 63, imago).

Calamotropha euphrosyne n. sp.

Type material: Holotype \circ "Elisabethville Belgian Congo 7. IV. 1947 CH. SEYDEL", GS-4591-SB, Type No. 9114, coll. Entomology Research Institute Dept. of Agriculture, Ottawa.

Diagnosis: Ocelli absent. Antennae in the single examined specimen missing; labial palpi also missing. Face rounded, slightly protruding forward beyond eye, scales rubbed. Thorax, patagia and scapula ochreous-brown. Forewing: r_1 free; length 12.5 mm., maximal width 4 mm., ground colour dull ochreous brown, pattern reduced; terminal dots very poorly defined; fringes concolorous with the ground colour, cut by some indistinct whitish streaks; apex acuminate, termen very slightly oblique, costa nearly straight. Hindwing slightly glossy snow-white with fringes concolorous. Frenulum triple. (Pl. XLI, Fig. 6).

Female genitalia (Fig. 42): Papillae anales and eight tergite typical of the genus. Ostium pouch tubular, decidedly broader than ductus bursae, the greater part heavily sclerotized, with some wrinkles. Ductus seminalis from behind ostium pouch, very distinct. Ductus bursae lightly sclerotized throughout, bursa copulatrix with no signum.

Comments: The new species resembles somewhat in genitalia *C. xanthypa* Blesz. from Natal, but is very distinct externally, as *C. xanthypa* Blesz. has decidedly shiny golden-brown forewings (compare Bleszyński 1961, Pl. 65, Fig. 198, female genitalia, Pl. 42, Fig. 90, imago).

Pseudometachilo irrectellus (MÖSCHLER, 1882) n. comb.

Chilo irrectellus Möschler, 1882, Verh. zool.-bot. Ges. Wien 31: 436, Pl. 18, Fig. 43. Locus typicus: Surinam. Type material: Holotypus ♀ (not ♂ as stated in the original description): "Surinam L. 75", "Type Z. B. G. 1881 t. XVIII/43 p. 436", GS-4228-SB, coll. Institut f. Spezielle Zoologie d. Humboldt Universität, Berlin.

Crambus diatraeellus Hampson, 1896, Proc. zool. Soc. Lond. 1895: 931. Locus typicus: British Guiana: Cayenne. Lectotypus (present designation) ♀ "Cayenne Saunders Coll. 94—68", GS-5500-BM-Pyral., coll. British Museum (N. H.). N. Syn.

Crambus distictellus Hampson, 1896, Proc. zool. Soc. Lond. 1895: 938. Locus typicus: Brazil: Castro Parana, Lectotype (present designation) ♀ "Castro, Parana E. D. Jones", GS-5502-B. M. Pyral., coll. British Museum (N. H.), London. N. Syn.

The problem of this species is very confused and needs further thorough study. However, it seems to be obvious that the three species listed above are synonymous. Chilo irrectellus Möschler was described from a unique female specimen, but MÖSCHLER cited it as male. This specimen has the genitalia strikingly similar to those in the lectotype of both diatraeellus and distictellus. One of the syntypes of diatracellus from Argentine: Goya also has such genitalia. It seems that the species is very widely spread from Guiana to the Argentine and that its range overlaps, at least in part (Castro, Parana), that of P. delius n. sp. described below. However, the two species are strikingly similar to each other in facies, and it is doubtful whether the males (genitalia figured: Ble-SZYŃSKI 1962, Pl. 1, Fig. 3), identified as conspecific with the three types, are really those of the species in question, or whether they perhaps belong to P. delius n. sp. The latter is described from two females from Brazil: Castro, Parana. So far I have not been able to trace any male from the Guianas, which might throw some light on the problem. The only male from British Guiana found in the collection of the British Museum (N. H.) in London unfortunately has the abdomen missing.

It is of importance to note that P. irrectellus (Möschler) and P. delius n. sp. have m_2 and m_3 in the forewing distinctly stalked. This could be a generic character of the genus Pseudometachilo Blesz. Probably some additional species will have to be moved to Pseudometachilo Blesz. (maybe Crambus faunellus Schaus and Crambus delineatellus HMPs.). However, still not enough material is available for study to solve the problem definitely.

Pseudometachilo delius n. sp.

Type material: Holotype φ : "Castro, Parana 905 m. E. D. Jones", GS-7925-BM-Pyral., one φ paratype with same label, GS-5008-BM-Pyral. (689-SB), both in coll. British Museum (N. H.), London.

Diagnosis: Externally strikingly similar to P. irrectellus (MÖSCHLER).

Female genitalia (Fig. 55): Papilla analis without heavily sclerotized strengthened base such as is found in the preceding species. Ostium pouch much larger than that of the preceding species, rather lightly sclerotized. Ductus bursae swollen behind ostium pouch. Bursa copulatrix with a very distinct half-moon-shaped signum, absent from *P. irrectellus* (MÖSCHLER).

Comments: For full details on the problem of the male of this species see: Comments under *P. irrectellus* (MÖSCHLER).

Chilo — complex

The generic group Chilo ZCK. is a rather compact one in the subfamily Crambinae. It contains the following nominal genera: Chilo ZCK., Proceras Walk., Nephalia Turner, Zacatecas Blesz., Diatraea Guild., Zeadiatraea Box, Crambidiatraea Box & Capps, Myelobia H.-S., Protaphomia Meyr., and Eschata Moore. However, some of these represent only groups of species rather than genera. The whole group is sharply defined by the closed cell in the hindwing, free r₅ in the forewing, (except in Zacatecas Blesz.) triple frenulum of the female, variation of the degree of the development of the ocelli and the shape of face, by the presence of saccus and pseudosaccus in the male genitalia, and in the female by the broad, coalescent, papillae anales with undilated apophyses. The ostium pouch in the female genitalia is not linked by a bridge to the subgenital plate as in the members of very close Acigona complex. In the Acigona complex the cell in the hindwing is open, and the saccus and pseudosaccus are both absent. Several of the above mentioned genera are to be sunk as synonyms. Nephalia Turner was described from Part Darwin, Queensland for a single species, N. crypsimetalla Turner, which is a typical member of the genus Chilo ZCK. It is of interest to note that TURNER in his original diagnosis of Nephalia, mentioned that the tongue is lacking. However, my study of the type of Nephalia crypsimetalla Turner has shown the tongue is present in that species. The genus Proceras Walk. has hitherto been separated from Chilo Zck. by the absence of the ocelli. However, study of the World species of the genus Chilo ZCK. proved that several otherwise typical species have the ocelli missing or partly reduced. Other characters of Proceras Walk., including the armature of the genitalia of both sexes, are typical of Chilo Zck.

The proposed synonymy of the genus Chilo Zck. is as follows:

Chilo Zincken, 1817, Mag. Ent. 2: 34. Type-species: Tinea phragmitella Hbn. Proceras Bojer, 1856, Report of the Committee on the "Cane Borer", Mauritius, 4 pls. Type species: Proceras sacchariphagus Bojer. N. Syn.

Borer Guenee [in] Maillard, 1862, Notes sur l'Île de la Reunion par L. Maillard. Lépidoptères. G. 70. Type-species: Borer saccharellus Guén. N. Syn.

Diphryx Grote, 1882. Bull. U. S. Geol. Surv. 6: 273. Type-species: Diphryx prolatella Grote.

Néphalia Turner, 1911, Ann. Queensland Mus. 10: 113. Type-species: Nephalia crypsimetalla Turner. N. Syn.

Hypiesta Hampson, 1919, Ann. Mag. nat. Hist. (9) 3: 538. Type-species: $Hypiesta\ argyrogramma\$ Hampson.

Silveria Dyar, 1925, Insec. inscit. Menstr. 13: 10. Type-species: Silveria hexhex Dyar.

Chilotraea Kapur, 1950, Trans. R. ent. Soc. Lond. 101: 402. Type-species: Chilo infuscatellus Snellen.

The genus Diatraea Guild. was split into four genera by Box and Capps. In his Eodiatraea, Box placed four species: centrella Möschler, amnemonella DYAR, amazonica Box and rufescens Box. The characters of these species considered by Box to be generic, appear to me to have only specific value. In the diagnosis of the genus *Eodiatraea*, Box are mentioned such chracters as: pinkish forewings, prominent and pointed face, hair tufts on the second abdominal segment, absence of the tufts of hair-like scales from the male hind tibia. presence of a rod-like projection of costa of the valva in the male genitalia, narrow tegumen with no lobes, anellus with arms long and slender, flattened, not divided at or near apex, and sharply pointed, female genitalia with a strongly sclerotized rim and without heavily sclerotized papillose-setose lobes in front of the genital opening, short ductus bursae, bursa copulatrix not elongate. Box did not cite differences between Diatraea Guild, and Eodiatraea Box, except the "rod-like projection from the upper (inner) margin of the harpes, quite different from the rounded knob-like basal projection present in many species of Diatraea". None of these characters is of generic value. The costal projection of the valva in amnemonella Dyar is more knob-like than rod-like. Many Diatraea-species show some projection near the base of the costa of the valva and such projections have divergent shapes. According to the shapes of these projections, one could erect many genera, the value of which would be nil. Several species of Diatraea Guild. have the face prominent and pointed. this character is even variable within some individual species. Hair-tufts on the second abdominal segment are absent not only from the species referred to Eodiatraea by Box, but also from such others as D. lineolata (WALK.), D. muellerella Dyar & Heinrich, D. strigipennella Dyar and D. cayenella DYAR & HEINRICH. Hair tufts on the male hind tibia are absent also from D. impersonatella (WALK.) and D. postlineella Schaus. The lack of the tegumen lobes is typical of many species of Diatraea Guild. Moreover, all the cited female genitalia characters of Eodiatraea Box are also of only specific value. In fact, the genus Diatraea Guild. is one of the most compact among the subfamily Crambinae. It can even hardly be separated from Chilo ZCK. The species of the genus Chilo ZCK. for the most part have well-developed ocelli and a short and stout uncus and gnathos, while representatives of the genus Diatraea Guild. always have the ocelli missing, and often the uncus and gnathos long. These characters can hardly be considered as generic ones in the Chilo

complex. For example, the degree of the development of the ocelli is a rather variable feature in all stem-boring groups of the *Crambinae*, as shown also in the *Acigona* complex and the *Myelobia* complex. Sometimes even in an individual population one can observe specimens with ocelli distinct or vestigial.

Zeadiatraea Box was erected for Diatraea lineolata (WALK.), D. grandic-sella DYAR, D. schausella DYAR & HEINRICH and D. muellerella DYAR & HEINRICH, which represent only a complex of species within Diatraea, mainly characterized by long arms of the juxta-plate. Study of the world fauna of stem-borers shows that the length of the arms of the juxta-plate has no generic value. Other characters mentioned by Box are of little importance, and of not more than specific value.

Crambidiatraea Box & Capps was erected for Diatraea cayenella Dyar & Heinrich, D. strigipennella Dyar and D. entreriana Dyar. The main character of these species is the serrate, somewhat spatulate projection of the costa in the male genitalia. Such a projection, however, occurs also in D. bellifactella Dyar. As was mentioned above, the projection of the costa has only specific value.

Acceptance of these genera would require us to erect many other genera for individual species of *Diatraea* Guild. that show somewhat peculiar genitalia, e. g. *D. andina* Box, *D. balboana* Box, *D. fuscella* Box or *D. bellifactella* Dyar, which have very different shapes of uncus and gnathos. Another group of species has no tegumen lobes, and it could be also considered as a distinct genus. Moreover, we could consider as distinct the genus *Iesta* Dyar, which has r₂ in the forewing stalked, but even Box has sunk this under *Diatraea* Guild. The actual synonymy of the genus *Diatraea* Guild. should be as follows.

Diatraea Guilding, 1828, Trans. Soc. Encour. Arts, etc. 46: 148. Typespecies: Phalaena saccharalis Fabricius.

Diatraerupa Schaus, 1913, Ann. Mag. nat. Hist. (8) 11: 240. Type-species: Diatraerupa guapilella Schaus.

Iesta Dyar, 1909, Proc. ent. Soc. Wash. 11: 29. Type-species: Iesta lisetta Dyar.

Trinidadia Dyar & Heinrich, 1927, Proc. U.S. nat. Mus. 71 (19): 5. Type-species: Diatraea minimifacta Dyar.

Eodiatraea Box, Proc. R. ent. Soc. Lond. (B) 22: 178. Type-species: Chilo centrellus Möschler. N. Syn.

Crambidiatraea Box & Capps, 1955, Proc. R. ent. Soc. Lond. (B) 24: 175. Type-species: Diatraea cayenella Dyar & Heinrich. N. Syn.

Zeadiatraea Box, 1955, Proc. R. ent. Soc. Lond. (B) 24: 197. Type-species: Leucania lineolata WALKER. N. Syn.

The third genus of the *Chilo* complex is *Myelobia* H.-S. It occurs only in the Neotropical Region. In most respects the genitalia of the species of *Myelobia* H.-S. are very much like those of *Diatraea* Guild. and *Chilo* Zck., but they differ in having very peculiar shapes of the uncus. In the female genitalia the

ostium pouch is usually not demarcated from the ductus bursae. The species of Myelobia H.-S. have an appearance very different from those of Diatraea Guild, and Chilo Zck. often being very large; they sometimes resemble Sphingidae, but one can find also species very similar to Diatraea Guild. Further study of Myelobia H.-S. will be needed to find its detailed characters. The genus Protaphomia Meyr., described for a single species, P. haplodoxa Meyr., is an obvious synonym of Myelobia H.-S. as the study of the type has shown. The present synonymy of Myelobia H.-S. is as follows:

Morpheis HÜBNER, [1820], Verz. bek. Schmett.: 196 (preoccupied). Type

species: Morpheis smerintha HÜBNER.

Myelobia Herrich-Schäffer, 1858, Samml. aussereurop. Schmett.: 79. Type-species: Myelobia paleacea Herrich-Schäffer.

Doratoperas Hampson, 1896, Proc. zool. Soc. Lond. 1895: 961. Type-species: Crambus atrosparsellus Walker.

Chilopsis Hampson, 1919, Ann. Mag. nat. Hist. (9) 4: 56. Type-species: Chilopsis squamata Hampson.

Xanthopherne Dyar & Heinrich, 1927, Proc. U. S. nat. Mus. 71 (19): 29. Type-species: Doratoperas biumbrata Schaus.

Protaphomia MEYRICK, 1936, Arb. morph. taxon. Ent. 3: 97. Type-species: Protaphomia haplodoxa MEYRICK. N. Syn.

The remaining genera of the Chilo group are Eschata Walk. and Zacatecas Blesz. The former genus is almost confined to the Oriental Region, with a weak incursion into the Palaearctic Region. Genitalically, Eschata Walk. is very close to Myelobia H.-S.; however, it is very distinct in external appearance. The species of Eschata Walk. are silvery-white and have in most cases the chaetosemata reduced or even absent. The aedoeagus is often armed with numerous cornuti, whereas cornuti are always absent except one apical ill-defined cornutus from the species of the genus Myelobia H.-S.

The genus Zacatecas Blesz. was erected for a single species Crambus ankasokellus Viette from Madagascar. It is characterized by having r₅ in the forewing stalked as in the Crambus complex and allies, a very unusual character in the Chilo-complex. Such a character appears in Calamotropha Zell. and allies., and is a rather advanced feature.

Haploplatytes n. gen.

Type-species: Haploplatytes moluccellus n. sp. Moluccas.

Diagnosis: Ocelli very small, but distinct. Chaetosemata absent. Antenna in male serrate as in normal species of the *Crambus* complex, in female flatly serrate. Labial palpus porrect, typical of the *Crambus* complex. Venation: in forewing r_1 and r_2 free, r_3 reduced, r_5 stalked, m_2 present, from cell; in hindwing venation similar to that in *Platytes* Guen., m_2 absent. Frenulum in female double.

Forewing with two transverse lines, basal stripe absent, apex of forewing rounded. In female genitalia papillae anales not coalescent with each other, ostium pouch separate from eighths tergite, bursa copulatrix with one signum. In male genital armature similar to that of the genus *Platytes* Guen., pars basalis closer to the base of the valva, much narrower than in *Platytes* Guen.

Distribution: Moluceas.

Comments: The new genus is distinct from Platytes Guen. in the smaller ocelli, absence of chaetosemata, stalked r_5 in the forewing, and in the less pointed apex of the forewing (which in Platytes Guen. has more pointed apex). The absence of the chaetosemata is a very striking character not met with in any other genus of the Crambus complex. Another genus which appears to be close to Platytes is Aphrophantis Meyr. from Fiji, with a single species, $A.\ velifera$ Meyr.; however, Haploplatytes n. gen. seems to be closer to Platytes Guen., than to Aphrophantis Meyr. The absence of the chaetosemata and the stalking of r_5 in the forewing seem to show that Haploplatytes n. gen. is a derivative of Platytes Guen. However, this thesis needs some confirmation as there are no other related forms in the large gap between the Moluccas and the nearest occurrence of Platytes Guen. in Japan and Sikiang.

Haploplatytes moluccellus n. sp.

Type material: Holotype β : "Moluccas 1953 W. Obi VII—XI Obi Lake 160—260 m. AMR WAGNER", paratypes: 1 β GS-4913-SB, labelled as holotype, Venation slide No. 77-SB, 1 φ , GS-4914-SB, with same data as holotype, holotype and φ paratype in the coll. Rijksmuseum van Natuurlijke Historie, Leiden, one β paratype in author's collection.

Diagnosis: Antenna whitish, distinctly ringed with brown. Labial palpus about two and one-half times as long as the diameter of an eye, whitish. Face rounded, slightly protruding forward beyond eye, white. Vertex and scapula white. Thorax white mixed with yellow. Forewing: length 5.5 mm, maximal width 2 mm, costa nearly straight, apex rounded, termen oblique delicately concave below apex; dull whitish, dusted with brown scales; subterminal line brown, delicate, excurved, with a distinct subdorsal tooth; median line distinct, brown, oblique, angled below costa; several distinct longitudinal, yellow lines from wing base to subterminal line; terminal dots present, fringes brown with an indistinct yellowish line, basal stripe glossy steely, interrupted below apex by a whitish streak. Hindwing light greyish with whitish fringes.

Male genitalia (Fig. 45): Uncus and gnathos slender, gnathos with a distinct subapical dorsal projection as in *Platytes*. Pars basalis long, thin, detached from valva at its base; no other processes on valva. Aedoeagus with no cornuti. Pseudosaccus small. Saccus absent. Juxta plate a somewhat rounded plate.

Female genitalia (Fig. 46): Ostium pouch rather lightly sclerotized, not demarcated from ductus bursae. The latter lightly sclerotized throughout.

Bursa copulatrix very large, with one rounded signum similar in shape to that of *Platytes Guen*.

Other characters of facies and the genitalia as given for the genus.

Pediasia bizonella (HAMPSON, 1896) n. comb.

Crambus bizonellus Hampson, 1896, Proc. zool. Soc. Lond. 1895: 929. Locus typicus: Chile: Valparaiso. Holotype 3, with abdomen missing, coll. British Museum (N. H.), London.

Redescription: Antenna unicolorous brownish, in male distinctly serrate as in most species of the genus *Pediasia* Hbn. Face rounded, very slightly

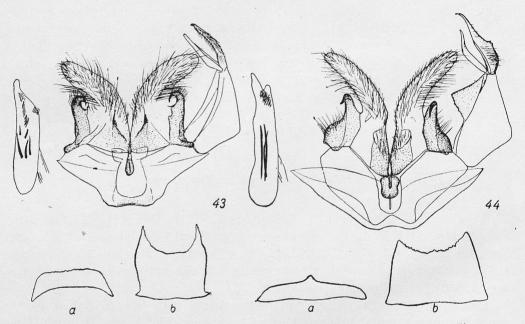


Fig. 43—44. Male genital armatures. 43— Pediasia bizonella (HMPS.). GS-4343-SB. Chile: Polos Nigros. a— sclerite of 8th abdominal tergite, b— sclerite of 8th abdominal sternite. 44— Pediasia bizonelloides n. sp. Paratype. GS-4357-SB. Chile: Rio Teno. a— sclerite of 8th abdominal tergite, b— sclerite of 8th abdominal tergite

protruding forward beyond eye, with no corneous point, brownish. Chaetosemata distinct. Ocellus moderate. Frenulum in female single. Labial palpus four times as long as the diameter of an eye, light brown. Vertax, thorax and scapula concolorous with labial palpus. Forewing: length 9.5 mm - 11.5 mm, maximal width 2.5-3 mm; costa nearly straight in male, in female more arched, apex rounded in male, slightly pointed in female, termen in male more oblique than in female. Ground colour dull light brown with slight ochreous tint, dorsum dusted with brown scales; two transverse lines present, oblique, terminal dots present, female darker than male, with pattern rather reduced; fringes greybrown, nearly dull. M_2 stalked with M_3 . Hindwing light to dark greyish to greybrownish, in some specimens semitransparent. (Pl. XLI, Fig. 7).

3

Male genitalia (Fig. 43): Uncus and gnathos slender, the former slightly arched with apex pointed, the latter with apex narrowly rounded. Pons absent. Pars basalis distinct, well demarcated from valva, reaching nearly half length of costa, apical part free, spine-shaped, strongly curved, with tip pointed.

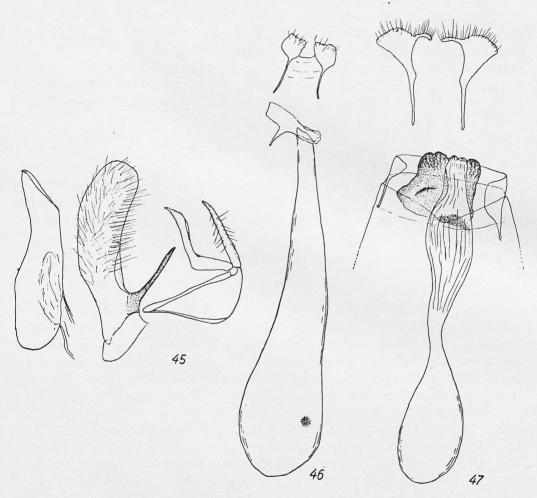


Fig. 45-47. 45 - Haploplatytes moluccellus n. sp. Holotype. GS-4913-SB. Moluccas: Obi. Male genital armature. Female genital armature. 46 — Haploplatytes moluccellus n. sp. Paratype. GS-4914-SB. Moluccas: Obi. Female genital armature. 45 — Parapediasia bizonella (HMPS.). GS-4368-SB. Chile: Rio Blanco

Sacculus not differentiated, represented by a slight sub-ventral fold. Aedoeagus about as long as valva, armed with several groups of cornuti of various lengths.

Female genitalia (Fig. 47): Papillae anales typical of the genus, ostium pouch accompanied by heavily sclerotized shields; anterior apophyses distinct; subgenital plate not accreted to ostium pouch. Ductus bursae slightly swollen, Acta Zoologica Cracoviensia nr 15

with delicate longitudinal wrinkles, much narrowed near bursa copulatrix. The latter with no signum.

Distribution: Chile.

Comments: The generic position of this and subsequent species is not entirely clear. Externally, they much resemble $P.\ bolivarella$ (Schmidt) from Spain; however, the latter has nothing to do with $P.\ bizonella$ (Hmps.) and $P.\ bizonelloides$ n. sp. The genitalia of both sexes of $P.\ bizonella$ (Hmps.) are typical of the genus Pediasia Hbn. It is of importance to note that these are first members of Pediasia Hbn. known from the Neotropical Region. The specimens examined from Chile: Rio Blanco, Malleco, 1300 m, and Palos Nigros 1300 m, agree well with the holotype, which unfortunately has the abdomen missing.

Pediasia bizonelloides n. sp.

Type material: Holotype 3: "Rio Teno 2400 m Cord. Curico 7. III. 62 L. E. Pena", type No. 8926, GS-4356-SB, and 1 3 paratype with same data as holotype, but taken on 7. III. 1962, coll. Entomology Research Institute of the Department of Agriculture, Ottawa.

Diagnosis: Generally very similar to the preceding species, but with the forewing pattern reduced; larger, length of forewing 12 mm, maximal width 3.7 mm (Pl. XLI, Fig. 8).

Male genitalia (Fig. 44): Different from those in *P. bizonella* (HMPS.) as follows: Uncus longer with two small dorsal teeth, apical portion much narrowed, tapering to a point, bowed, gnathos much shorter than uncus; pons present, triangular; two groups of cornuti in aedoeagus: three very long ones and an apical group of tiny ones. Plates of the 8th tergite and sternite also different from those in *P. bizonella* (HMPS.) as shown in the figures.

Comments: Both the holotype and paratype of the new species show m₂ and ma in the forewing connate, not stalked as in the predecing species. However, I am not sure if we can consider this a constant specific character. First, in P. bizonella (HMPS.) the stalk of m₂ and m₃ is rather variable in length, secondly, the material examined includes a male from Rio Teno, GS-4357-SB, which has the genitalia strikingly similar to those in the holotype of P. bizonelloides n. sp., but which has a distinct stalk of m₂ and m₃ in the forewing. However, it is of much importance to note that this doubtful specimen has a much brighter ground colour of the forewing, and it has two distinct ochreous-red transverse lines on the forewing; moreover it is smaller (forewing length 10 mm, width 3.5 mm). Either this specimen belongs to a distinct species which is identical or nearly identical in male genitalia with P. bizonelloides n. sp., or P. bizonelloides n. sp. is variable in size, coloration, pattern and neuration of the forewing. It is also of interest to note that some species of the genus Crambus FBR. occurring in Chile have the stalk of m, and m, present or absent, and, if present, then distinctly variable in length. Maybe this phenomenon has nothing to do with the problem of *Pediasia bizonelloides* n. sp., however, such a coincidence is peculiar and very interesting. The doubtful male described above is not disignated as a paratype of *P. bizonelloides* n. sp.

Epichilo irroralis (HAMPSON, 1919) n. comb.

Culladia irroralis Hampson, 1919, Ann. Mag. nat. Hist. (9) 3: 276. Locus typicus: Kenya: Kikuyu. Holotype &: "Roromo Flat Kikuyu B. E. Africa R. Crawshay 1900—151. 21-I. 1903", GS-5506-BM-Pyral., coll. British Museum (N. H.), London.

A typical member of *Epichilo* RAG., externally and genitalically extremely close to *E. parvellus* RAG. from India.

Epichilo obscurefasciellus (J. DE JOANNIS, 1922) n. comb.

Crambus obscurefasciellus J. de Joannis, 1922, Bull. Soc. lep. Gen. 5: 192. Locus typicus: Mozambique. Holotype: ♂ "Makulane", GS-2752-SB, coll. Museum Zoologique, Geneva.

This species is very close to the preceding, perhaps even conspecific. Further study will clarify the problem.

Parapediasia Błeszyński, 1963

The selection of the type species of this species was overlooked in the original description. I designate hereby *Crambus tenuistrigatus* Zeller, 1881, as the type species of the genus *Parapediasia* Bleszyński.

Parapediasia detomatella (MÖSCHLER, 1890) n. comb.

Crambus detomatellus Möschler, 1890, Abh. Senck. Ges. 16: 322. Locus typicus: Puerto Rico. Lectotype (present designation)♀"Porto Rico Mo. Krug. 87", GS-4185-SB, paralectotypes 1 ♂ and 2 ♀♀ with same data as lectotype, coll. Institut f. Spezielle Zoologie d. Humboldt Universität, Berlin.

Parapediasia zerkowitzella Bleszyński, 1963, Acta zool. cracov. 8: 143, Fig. 10 (3 genit.) Fig. 13 (2 genit.). Locus typicus: Puerto Rico. Holotype 3 "Puerto Rico San Juan Jan. 8. 1959. A. Zerkowitz", GS-2973-SB, coll. British Museum (N. H.), London. N. Syn.

A study of the syntypes of *Crambus detomatellus* Möschler has shown that it is conspecific with *Parapediasia zerkowitzella* Blesz. Möschler in the original description mentioned 6 33, however, three of the syntypes proved to be females. The location of two syntypes is unknown.

Fissicrambus fissiradiellus (WALKER, 1863)

Crambus fissiradiellus Walker, 1863, List Spec. lep. Ins. B. M. 27: 160. Locus typicus: Santo Domingo, West Indies. Lectotype &, GS-1952/86-BM (slide still missing from the collection), coll. British Museum (N. H.), London.

Crambus gestatellus Möschler, 1890, Abh. Senck. Ges. 16: 323. Locus typicus: Puerto Rico. Lectotype (present designation) ♀ "Porto Rico Mo. Krug. 87", GS-4218-SB, coll. Institut f. Spezielle Zoologie d. Humboldt Universität, Berlin. N. Syn.

Crambus gestatellus Möschler was described from two 33 and 19 as cited in the original description. The location of the two remaining syntypes is unknown to me. They are probably lost. The species is an obvious synonym of F. fissiradiellus (Walk.).

Microcrambus discludellus (MÖSCHLER, 1890) n. comb.

Crambus discludellus Möschler, 1890, Abh. Senck. Ges. 16: 323. Locus typicus: Puerto Rico. Holotypus ♀ "Puerto Rico Mo. Krug. 87", GS-4219-SB, coll. Institut f. Spezielle Zoologie d. Humboldt Universität, Berlin. N. Syn.

Microcrambus discobolus Błeszyński, 1963, Acta zool. cracov. 8: 168, Fig. 48 (β genit.), Fig. 53 (β genit.). Holotype β Puerto Rico Barranquitas 2300 feet Jan. 10, 1959. A. Zerkowitz", GS-2987-SB, coll. British Museum (N. H.), London. N. Syn.

The holotype of M. discludellus (Möschler) is a female, not a male as stated in the original description.

Conocrambus wollastoni (ROTHSCHILD, 1916) n. comb.

Epischnia wollastoni Rothschild, 1916, Rep. Brit. Orn. Un. Exp. 2 (15) 147. Locus typicus: New Guinea. Type material ♂♀ in Coll. British Museum (N. H.), London.

Crambus cinereus Hampson, 1919, Ann. Mag. nat. Hist. (9) 3: 282. Locus typicus: New Guinea. Holotype ♀ coll. British Museum (N. H.), London. N. Syn.

These two nominal species are obviously conspecific as the study of their types has shown. The first of them was decribed in the *Phycitinae*. Genitalically, *C. wollastoni* (RTHSCH.) is extremely close to other members of *Conocrambus* HMPS.

Culladia cuneiferella (WALKER, 1863) n. comb.

Crambus cuneiferellus Walker, 1863, List Spec. lep. Ins. B. M. 27: 175. Locus typicus: Sydney. Lectotype & "Sidney 47/73" (present designation), abdomen missing. coll. British Museum (N. H.), London.

This species has hitherto been placed in the genus Ptochostola MEYR.

Novocrambus propygmaeus Bleszyński, 1963

Crambus pygmaeus Zeller, 1881, Horae Soc. ent. ross. 16: 173, Pl. 11, Fig. 10. Locus typicus: Colombia. Lektotype &: "Crambus pygmaeus Z. Honda Pet". GS-5508-B.M. Pyral. (present designation), coll. British Museum (N. H.), London. Praeoccupied by Crambus pygmaeus Stephens, 1834.

Crambus minimellus Hampson, 1919, Ann. Mag. nat. Hist. (9) 3: 284. Locus typicus: British Guiana. Lectotype &: "Bartica Br Guiana, 10. V. 1901, Parish, Wlsm coll,, GS-5516-B.M. Pyral. (present designation). Coll. British Museum (N. H.), London. Preoccupied by Crambus minimellus Robinson, 1891. N. Syn.

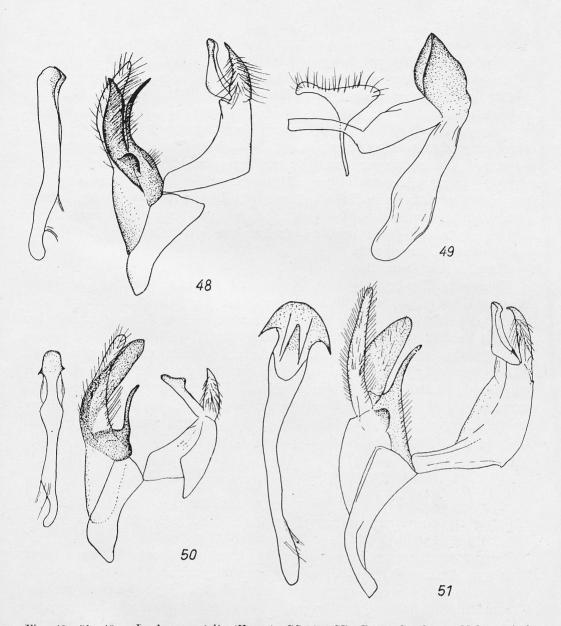


Fig. 48—51. 48—La benepunctalis (HMPS.). GS-1054-SB. Peru: Carabaya. Male genital armature. 49—La benepunctalis (HMPS.). Holotype. GS-7150-SB. Peru: Carabaya. Female genital armature. 50—La cucaracha n. sp. Holotype. GS-1968-SB. Bolivia. Male genital armature. 51—La paloma n. sp. Holotype. GS-1887-SB. Colombia Male genital armature

 $Crambus\ violettae\ Bleszyński,\ 1962,\ Act\ zool.\ cracov.\ 7:\ 124\ (n.\ name\ pro\ Crambus\ minimellus\ Hmps.).$ N. Syn.

Novocrambus propygmaeus Bleszyński, 1962, Acta zool. cracov. 7: 125 (n. name pro Crambus pygmaeus Zell.).

La n. gen.

Type species: Neerupa benepunctalis Hampson, 1919.

Diagnosis: Ocellus well developed. Chaetosemata present. Face rounded, slightly produced forward. Frenulum in female double. In forewing r_1 coincident with sc, r_2 stalked with r_3 and r_4 , r_5 stalked, m_2 from cell; in hindwing m_1 from upper angle of cell, cell open, m_2 stalked. Forewing with two transverse lines; basal stripe absent; colour brownish. Male genitalia with uncus and gnathos well developed, pars basalis very strong, bilobed, sacculus with no process, vinculum elongate, saccus absent, aedoeagus with no cornuti. In female genitalia papillae anales similar to those in *Pediasia* Hbn. and allies, anterior apophyses absent, eights tergite accreted to ostium pouch; the latter rather well demarcated from eights tergite, heavily sclerotized; ductus bursae lightly sclerotized, bursae copulatrix with no signum.

Distribution: Peru; Bolivia.

Comments: The type species of this genus has nothing to do with the genus Neerupa Hmps., the type species of which is Neerupa argyrosticta Hmps. a member of the genus Erupa Walker, belonging to Schoenobiinae. La n. gen. is rather close to the Pediasia complex, being distinct in the stalked r₂ in the forewing and strongly bilobed bars basalis in the male genitalia. The genus needs a thorough study, as there are several undescribed species. Because of a great superficial similarity of individual species, it is rather difficult to match the sexes. The male genitalia figured for La benepunctalis (Hmps.) may belong to another species, in spite of the fact that the figured specimen comes from Carabaya, the type locality of benepunctalis.

La benepunctalis (HAMPSON, 1919) n. comb.

Neerupa benepunctalis Hampson, 1919, Ann. Mag. nat. Hist. (9) 3: 279. Holotype φ: "Oconeque Carabaya Peru 7000 ft. II. 1905. G. O. Ockenden", GS-7150-BM. Pyral., coll. British Museum (N. H.), London.

Comments: The species was described from one female (holotype) from Carabaya, Peru and one male paratype coming from Colombia. The male paratype probably belongs to an undescribed species. I figure here the genitalia of a male taken in Carabaya, however, I am not quite sure if this specimen is conspecific with the holotype. Only further study of extensive material from Peru would solve this obscure question. Male genitalia Fig. 48, female genitalia Fig. 49.

La cucaracha n. sp.

Type material: Holotype & "Bolivia" GS-1988-SB, coll. author. Diagnosis: Superficially very similar to the preceding species.

Male genitalia (Fig. 50): Gnathos with a subapical-dorsal swelling absent from L. benepunctalis (HMPs.), the spine-shaped lobe of the pars basalis less

bowed and much shorter than the broad lobe; a sub-basal, rounded projection of pars basalis typical of *L. benepunctalis* (HMPS.) absent in the new species. Uncus with apex flattened with a distinct spine-shaped projection at either side.

La paloma n. sp.

Type material: Holotype: "Columb. Centr. Cord. Mnt. Tolima XII. 3800 m", GS-1867-SB, coll. Naturhistorisches Museum, Vienna, paratypes: 6 33 labelled as holotype, taken in X, coll. Naturhistorisches Museum Vienna and author's collection.

Diagnosis: Superficially very similar to both preceding species. Larger. Length of ferewing 13,0 mm, maximum wiceth 6,0 mm.

Male genitalia (Fig. 51): Gnathos more like that in *L. benepunctalis* (HMPS.), narrow lobe of pars basalis slightly bowed, rather shorter than the broad lobe, the latter much broader than in the two preceding species; subbasal rounded projection of pars basalis present. Aedoeagus very long and slender, with apical portion much broadened into a flat plate with a spine-shaped projection at either side; the spines much larger and longer than in *L. cucaracha* n. sp. and the apex of the aedoeagus much broader.

Cervicrambus n. gen.

Type-species: Chilo eximiellus ZINCKEN, 1821.

Diagnosis: Ocellus fully developed. Chaetosemata present. Face rounded, slightly protruding forward beyond eye, with no corneous point. Frenulum in female double. In forewing r_1 and r_2 free, r_5 stalked, m_2 from cell. In hindwing cell open, m_1 from upper angle of cell, m_2 stalked. Forewing with several light longitudinal streaks, no median line. In male genitalia uncus and gnathos fully developed, pars basalis very long, in shape of a strongly bowed spine; sacculus not differentiated, pseudosaccus present, saccus absent. In female genitalia papillae anales coalescent with each other, anterior apophyses absent, ostium pouch heavily sclerotized, very well demarcated from subgenital plate; bursa copulatrix with no signum (Fig. 52, 53).

Distribution: Brazil; Venezuela.

Comments: This new genus occupies a very isolated position amongst Crambinae, being more close to Crambus or the Pediasia complex than to Chilo ZCK. From the Chilo complex it is differentiated by the stalked r_5 in the forewing, absence of saccus and the very unusual shape of the pars basalis.

Cervicrambus eximiellus (ZINCKEN, 1821) n. comb.

Chilo eximiellus ZINCKEN, 1821, Germ. Mag. Ent. 4: 251. Type material lost. Neotype ♀: "Castro Parana E. D. Jones", GS-2225-BM-Pyral., holotype of Crambus argentilineellus HMPS. Present designation.

Crambus argentilineellus Hampson, 1896, Proc. zool. Soc. Lond. 1895: 959. Holotype ♀: "Castro Parana E. D. Jones", GS-2225-BM-Pyral., coll. British Museum (N. H.), London N. Syn.

Comments: Chilo eximiellus ZCK. has for a long time been forgotten and has not been mentioned in any catalogue or paper. In 1963, while studying Zeller's personal copy of his "Chilonidarum et Crambidarum Genera et species", I found

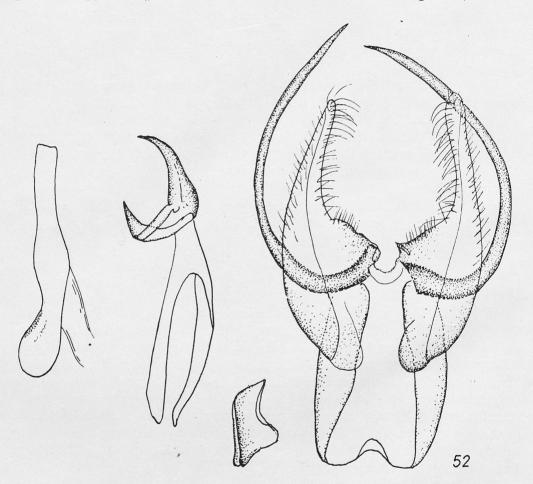


Fig. 52. Male genital armature. Cervierambus eximiellus (Zck.). GS-1466-SB. Brazil: Castro Parana

a colour picture of a moth with a note "Chilo eximiellus", written by Zeller. The picture was stuck to one page of the book. The figured moth was undoubtedly same as Hampson's Crambus argentilineellus that convinced me about the identity of the two species. The species is so striking in colour and pattern that there is no chance of confusing it with any other species. A study of the genitalia of a series of C. eximiellus (ZCK.) did not show any other genitalically distinct species.

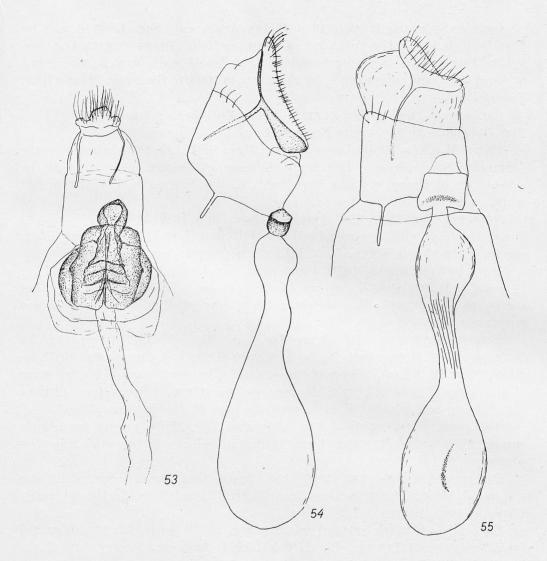


Fig. 53—55. Female genital armatures. 53 — Cervicrambus eximiellus Zck. GS-2747-SB. Brazil: Castro, Parana. 54 — Pseudometachilo irrectellus (MÖSCHLER). Lectotype of Crambus distictellus Hmps. GS-5502-BM-Pyral. Brazil: Castro Parana. 55 — Pseudometachilo delius n. sp. Holotype. GS-7925-SB. Brazil: Castro Parana

The following Crambinae are to be moved to other subfamilies

Ancalidia J. DE JOANNIS, 1932, Soc. ent. Fr. Livre centen.: 446, erected for A. nivea J. DE JOANNIS, from Mauritius, belongs to the subfamily Pyraustinae.

Chilo bostralis (Hampson, 1919), Ann. Mag. nat. Hist. (9) 3: 455 (described originally in Argyria Hbn.) belongs to Pyraustinae, ? genus Pyrausta Schr.

Crambus offectalis Hulst, 1886, Trans Amer. ent. Soc. 13: 166 was by mistake included in the Catalogue of the Crambinae (Bleszyński & Collins, 1962). This species was transferred in 1895 by Walsingham to the genus Semasia Hbn., and subsequently by Fernald, in 1903, to the genus Thiodia Hbn. Eucosmidae.

Crambus pulverulentellus Zeller, 1872, Ent. Ztg. Stett. 33: 473, Pl. 2, Fig. 7, belongs to the genus Scoparia Curt.

Erupa Walker, 1864, List Spec. lep. Ins. B. M. 30: 980, belongs to the subfamily Schoenobiinae. The genus Gabalanca Walker considered to be a synonym of Erupa Walker is probably distinct from Erupa Walker, but is also a member of the Schoenobiinae.

Hoploscopa Meyrick, 1886, Trans. ent. Soc. Lond. 1886: 267, is closely related if not identical with Syncrotaula Meyr. (Munroe i. l.). Erected for a single species H. astrapias Meyr. from Fiji, in the Scopariinae.

Leucargyra Hampson, 1896, Proc. zool. Soc. Lond. 1895: 960, erected for L. puralis Hmps., Brazil, belongs to the subfamily Schoenobiinae. Another species of this genus is L. xanthoceps Hmps., described from Peru. Both are congeneric.

Neerupa Hampson, 1919, Ann. Mag. nat. Hist. (9) 3: 278, type species N. argyrosticta Hmps. (not N. benepunctalis Hmps. as incorrectly cited by Bleszyński 1963: 114), belongs to the subfamily Schoenobiinae and is a synonym of the genus Erupa Walker. N. benepunctalis Hmps. belongs to a distinct genus La n. gen., described on a previous page in the present paper.

Notocrambus Turner, 1922, Proc. Roy. Soc. Vict. 35: 46, erected for a single species N. holomelas Turner, from Tasmania, belongs to the subfamily Scopariinae.

Pachymorphus Möschler, 1890, Abh. Senck. Ges. 16: 324, erected for one species, P. subductellus Möschler, from Puerto Rico, belongs to the subfamily Chrysauginae (MUNROE i. l.).

Phanerobela Turner, 1932, Trans. roy Soc. South Austr. 56: 189, described for Ph. niphospila Turner, from Dunk Island, Australia, is very close if not identical with Syncrotaula Meyr. (Munroe i. l.).

Phanomorpha Turner, 1937, Proc. roy. Soc. Queensland 48: 65, erected for one species, Ph. leucoxantha Turner, from Queensland, Australia, belongs to the subfamily Scopariinae.

Polyterpnes Turner, 1932, Trans. roy. Soc. South Austr. 56: 188, erected for one species, P. polyrrhoda Turner from North-western Australia, belongs to the subfamily Pyraustinae (or some allied group).

Platytes arimathaeella Schaus, 1922, Proc. ent. Soc. Wash. 24: 133, described from Nicaragua, belong to the genus Schoenobius and is close to S. endochalybella (HMPS.).

Uinta Hulst, 1888, Ent. Amer. 4: 116, described for one species, U. oreadella Hulst, from Colorado, North America, belongs to the subfamily Anerastiinae.

INDEX OF NEW NAMES, SYNONYMS AND COMBINATIONS

New genera:

Haploplatytes n. gen., type-species: H. moluccellus n. sp., p. 480. La n. gen., type-species: La benepunctalis (Hampson, 1919), described in Neerupa Hampson, 1919, p. 488

Cervicrambus n. gen., type-species: Chilo eximiellus Zincken, 1821, p. 489

New species:

Pareromene clytia n. sp. from Sumatra, p. 459 Pareromene lathonia n. sp. from Moluccas and New Britain, p. 459 Pareromene morobella n. sp. from New Guinea, p. 461 Pareromene ajaxella n. sp. from New Guinea, p. 462 Pareromene paradisella n. sp. from Congo, p. 462 Microchilo elgrecoi n. sp. from Sumatra, p. 464 Microchilo javaiensis n. sp. from Java, p. 466 Microchilo snelleni n. sp. from Java and Sumatra, p. 469 Microchilo murilloi n. sp. from New Guinea, p. 469 Euchromius matador n. sp. from Congo, p. 470 Calamotropha papuella n. sp. from New Guinea, p. 471 Calamotropha sybilla n. sp. from Riouw Archipelago, p. 472 Calamotropha virra n. sp. from Congo, p. 474 Calamotropha camilla n. sp. from Congo, p. 475 Calamotropha euphrosyne n. sp. from Congo, p. 475 Pseudometachilo delius n. sp. from Brazil, p. 476 Haploplatytes moluccellus n. sp. from Moluccas, p. 481 Pediasia bizonelloides n. sp. from Chile, p. 484 La cucaracha n. sp. from Bolivia, p. 488 La paloma n. sp. from Bolivia, p. 489

New combinations:

Microcausta enemoptila (MEYRICK) n. comb. (from Diptychophora Zell.) Microcausta argenticilia (HAMPSON) n. comb. (from Diptychophora ZELL.) Scissolia incisalis (DYAR) n. comb. (from Colimea DYAR) Microchilo nugalis (SNELLEN) n. comb. (from Scoparia Curt.) Microchilo fulvosignalis (SNELLEN) n. comb. (from Scoparia Curt.) Pseudometachilo irrectellus (MÖSCHLER) n. comb. (from Chilo ZCK). Chilo sacchariphagus (Bojer) n. comb. (from Proceras Bojer) Chilo indicus (KAPUR) n. comb. (from Proceras BOJER) Chilo crypsimetallus (Turner) n. comb. (from Nephalia Turner) Myelobia haplodoxa (MEYRICK) n. comb. (from Protaphomia MEYR.) Pediasia bizonella (HAMPSON) n. comb. (from Crambus F.) Conocrambus wollastoni (ROTHSCHILD) n. comb. (from Epischnia) Culladia cuneiferella (WALKER) n. comb. (from Ptochostola MEYR.) Epichilo irroralis (HAMPSON) n. comb. (from Culladia MOORE) Epichilo obscurefasciellus (J. DE JOANNIS) n. comb. (from Crambus F.) Parapediasia detomatella (MÖSCHLER) n. comb. (from Crambus F.) Microcrambus discludellus (Möschler) n. comb. (from Crambus F.) La benepunctalis (Hampson) n. comb. (from Neerupa Hmps.) Cervicrambus eximiellus (ZINCKEN) n. comb. (from Chilo ZCK.)

Pyrausta bostralis (Hampson) n. comb. (from Chilo Zck.) Scoparia pulverulentella (Zeller) n. comb. (from Crambus F.) Schoenobius arimathaeellus (Schaus) n. comb. (from Platytes Gn.)

Revived combinations:

Chilo venosatus Walker (from Proceras Bojer)

Diatraea castrensis Dyar & Heinrich (from Crambidiatraea Box & Capps)

Diatraea cayennella Dyar & Heinrich (from Crambidiatraea Box & Capps)

Diatraea entreriana Box (from Crambidiatraea Box & Capps)

Diatraea strigipennella Dyar (from Crambidiatraea Box & Capps)

Diatraea amazonica Box (from Ediatraea Box)

Diatraea amnemonella Dyar (from Ediatraea Box)

Diatraea centralla (Möschler) (from Ediatraea Box)

Diatraea rufescens Box (from Ediatraea Box)

Diatraea grandiosella Dyar (from Zeadiatraea Box)

Diatraea lineolata (Walker) (from Zeadiatraea Box)

Diatraea muellerella Dyar & Heinrich (from Zeadiatraea Box)

Diatraea schausella Dyar & Heinrich (from Zeadiatraea Box)

Thiodia offectalis (Hulst) (from Crambus F.) (Eucosmidae)

Dioryctria brucei Hulst (from Diatraea Guild) (Phycitinae)

New synonymy:

Colimea Dyar = Scissolia Barnes & McDunnough Process Bojer = Chilo Zck. Nephalia Turner = Chilo Zck.Crambidiatraea Box & Capps = Diatraea Guilding Eodiatraea Box = Diatraea Guilding Zeadiatraea Box = Diatraea Guilding Protaphomia Meyrick = Myelobia Herrich-Schäffer Neerupa Hampson = Erupa Walker (Schoenobiinae) $Pseudometachilo\ diatraeellus\ (Hampson) = Pseudometachilo\ irrectellus\ (Möschler)$ $Pseudometachilo\ distictellus\ (Hampson) = Pseudometachilo\ irrectellus\ (Möschler)$ Crambus cinereus Hampson = Conocrambus wollastoni (Rothschild) Crambus minimellus Hampson = Novocrambus propygmaeus Błeszyński $Parapediasia\ zerkowitzella\ Bleszyński = Parapediasia\ detomatella\ (Möschler)$ Microcrambus discobolus Bleszyński = Microcrambus discludellus (Möschler) $Crambus \ gestatellus \ Möschler = Fissicrambus \ fissiradiellus \ (Walker)$ Crambus argentilineellus Hampson = Cervicrambus eximiellus (Zincken)

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STRESZCZENIE

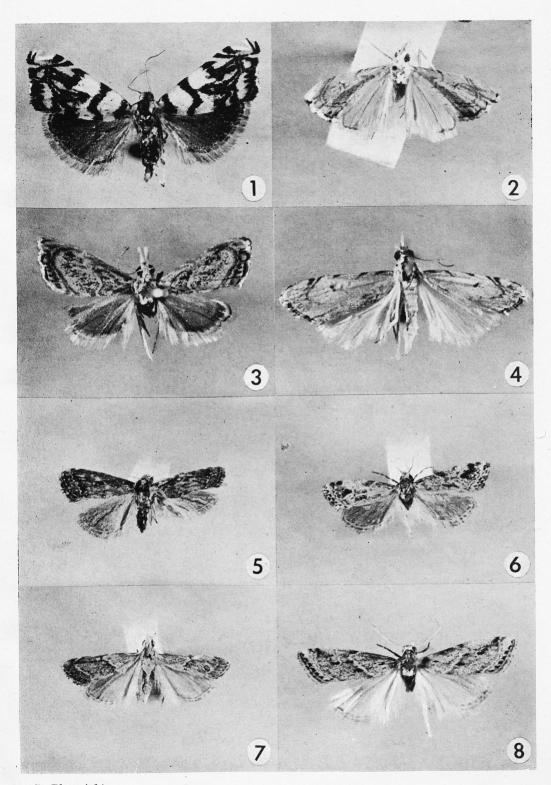
Praca jest kontynuacją badań nad tropikalną fauną Crambinae. Zostało opisanych jako nowe dla nauki: trzy rodzaje, oraz dwadzieścia gatunków. Dziewięć rodzajów oraz siedem gatunków zostało uznanych za synonimy. Nadto szereg rodzajów oraz gatunków dotychczas uważanych za należace do Crambinae przeniesiono do innych grup systematycznych. 20 gatunków Crambinae zostało przeniesionych do innych rodzajów. Została szczegółowo omówiona grupa rodzajowa Chilo Zck., która wymagała zrewidowania z powodu błędnego podziału na rodzaje. W wyniku rodzaje Nephalia Turner oraz Proceras Bojer zostały uznane za synonimy rodzaju Chilo Zck. Uznanie rodzaju Proceras Bojer za synonim Chilo Zck. jest ważną wiadomością dla studiujących literaturę odnoszącą się do szkodników trzciny cukrowej. Również ważne dla rolnictwa rodzaje Crambidiatraea Box & CAPPS, Eodiatraea Box i Zeadiatraea Box, zostały uznane za synonimy rodzaju Diatraea Guilding. Rodzaje Chilo Zck. oraz Diatraea Guilding są jednymi z najbardziej zwartych w obrebie Crambinae i nawet ich odrębność może być dyskutowana. Najważnieisza cechą odróżniającą oba te rodzaje jest brak przyoczek u gatunków rodzaju Diatraea Guilding oraz ich obecność u wiekszości gatunków rodzaju Chilo Zck. Jednakże niektóre australijskie, orientalne i etiopskie gatunki Chilo Zck. wykazują mniejszą lub większą redukcję przyoczek, a nawet zupelny ich brak.

РЕЗЮМЕ

Настоящая работа является продолжением исследований тропикальной фауны Стать родов, а также семь видов определены как синонимы. Кроме того, целый ряд родов и видов, которые, как до сих пор считалось, принадлежали к Crambinae, перенесены к другим систематическим группам. 20 видов Crambinae перенесены к инным родам. Очень подробно описана родовая группа Chilo Zck., ревизия которой была необходима, так как деление на роды было в ней ошибочным. В результате, роды Nephalia Turner a также Proceras Волек были определены как синонимы рода Chilo Zck. Определение рода Proceras Bojer как синоним Chilo Zck. является важной новостью для тех, кто изучает литературу, касающуюся вредителей сахарного тростника. Важные для сельского хозяйства роды Crambidiatraea Box & Capps, Eodiatraea Box и Zeadiatraea Box, также определены как синонимы рода Diatraea Guilding. Роды Chilo Zck., а также Diatraea GUILDING являются единственными наиболее замкнутыми в границах Crambinae и даже их одособленность подлежит дискуссии. Самой важной чертой, отличающей оба эти рода является отсутствие ocelli у видов рода Diatraea GUILDING, а также их наличие у большенства видов рода *Chilo* Zck. Однако, некоторые австралийские, ориентальные и европейские виды Chilo Zck. обнаруживают большую либо меньшую редукцию ocelli и даже полнейшее их отсутствие.

Plate XL

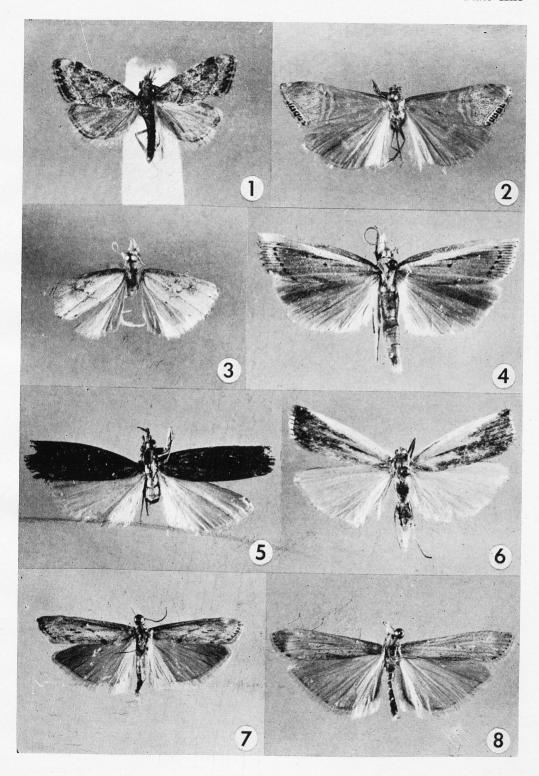
- Fig. 1. Scissolia harlequinalis BARNES & McDunn. Arizona.
- Fig. 2. Pareromene lathonia n. sp. Holotype. Moluccas.
- Fig. 3. Pareromene clytia n. sp. Holotype. Sumatra.
- Fig. 4. Pareromene morobella n. sp. Paratype. New Guinea.
- Fig. 5. Microchilo nugalis (Snellen). Lectoparatype. Celebes.
- Fig. 6. Microchilo javaiensis n. sp. Holotype. Java.
- Fig. 7. Microchilo snelleni n. sp. Holotype. Java.
- Fig. 8. Microchilo elgrecoi n. sp. Holotype. Sumatra.



S. Bleszyński

Plate XLI

- Fig. 1. Microchilo inexpectellus Blesz. Paratype. Japan.
- Fig. 2. Euchromius matador n. sp. Holotype. Congo.
- Fig. 3. Calamotropha papuella n. sp. Holotype. New Guinea.
- Fig. 4. Calamotropha sybilla n. sp. Holotype. Riouw Arch.
- Fig. 5. Calamotropha camilla n. sp. Holotype. Congo.
- Fig. 6. Calamotropha euphrosyne n. sp. Holotype. Congo.
- Fig. 7. Pediasia bizonella (HMPS.). Chile.
- Fig. 8. Pediasia bizonelloides n. sp. Holotype. Chile.



S. Bleszyński

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 $\begin{array}{l} \textbf{PA NSTWOWE} & \textbf{WYDAWNICTWO} & \textbf{NAUKOWE} - \textbf{ODDZIAŁ} & \textbf{WKRAKOWIE} - \textbf{1966} \\ \hline \textbf{Nakład} & \textbf{1100+100} & \textbf{egz.} - \textbf{Ark.} & \textbf{wyd.} & \textbf{4} - \textbf{Ark.} & \textbf{druk.} & \textbf{3+2 wkładki} - \textbf{Papier ilustr. kl. III, 80 g, 70 × 100} \\ \hline \textbf{Zam.} & \textbf{296/66} & \textbf{Cena zł 20.} - \\ \hline \textbf{DRUKARNIA} & \textbf{UNIWERSYTETU} & \textbf{JAGIELLOŃSKIEGO} & \textbf{WKRAKOWIE} \\ \end{array}$