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# Wissenschaftliche Ergebnisse der Sumba-Expedition des Museums für Völkerkunde und des Naturhistorischen Museums in Basel, 1949. Microlepidoptera. Part 3

by **A. Diakonoff**

Abstract: The third and last part of the survey of the Tortricidae (Lepidoptera) of the Expedition, containing records on subfamilies Olethreutinae, Tortricinae, and Chlidanotinae, with a single record on the Phricanthini. 32 species are recorded, belonging to 24 genera; of these, 5 genera, 1 subgenus and 20 species are described as new (cf. List of treated taxa, p. 374).

The present paper forms the third, rather delayed, part of the survey of the so-called Microlepidoptera of the Expedition. The two former parts have appeared in 1952 and 1956, respectively. The first contains an Introduction (p. 137) and treats the families Cochylidae (= «Phalonidae», p. 139), Tortricidae, Tortricinae (p. 143) and Schoenotenini (=«Schoenotenidae», p. 152), while the second part reports on the genera *Lobesia* Guenée and *Bactra* Stephens (Tortricidae, Olethreutinae).

For general information and itinerary of this Expedition may be referred to A. Buhler & E. Sutter (1951). All Insects have been collected by Dr. E. Sutter (Basle Museum) and Mr. A. M. R. Wegner (Bogor Museum). Consequently their joined names are not repeated under every species in the text.

The third part is dedicated to the remaining material of the Tortricidae of the Expedition, viz., the subfamily Olethreutinae, represented by three tribes and the subfamilies Tortricinae and Chlidanotinae, with one tribe each. A single record of a species of the Phricanthini is added at the end.

The delay of the third part has been caused chiefly by numerous problems around the systematics of the subfamily that has been little studied, with regard to the fauna of the South Asiatic Tropics. The experience of these 37 years appeared necessary for a satisfactory tackling of the concerned genera and species.

The surprising aspect of the study was the prevalence of the species of small and very small size, over the medium-sized Tortricidae. This must be due to the fervent activity of collectors, specially trained to watch out for the smallest forms that so often are being overlooked. At

this place the author wishes to bring tribute to the memory of his lamented friend, the late A. M. R. Wegner, his zealous collaborator in collecting tropical Microlepidoptera for many years, who had joined the Expedition on behalf of the Museum Zoologicum Bogoriense and was entrusted with the supervision of the native collectors of that museum. This material of the smallest species provided a considerable number of novelties. On the other hand the great mass of these minute specimens, prevented, in the conditions of the Expedition camps, their proper mounting, which now often hampered the identification and drawing.

We do not think that the great number of small species simply is the characteristic of that insular fauna; that was not evident with the subfamily Tortricinae, in the first part of this survey. Neither is this the case with the not yet identified representatives of the family Choreutidae. A great number of middle-sized species of this almost exclusively diurnal group also has been collected.

The type specimens will be deposited in the Basle Museum, the duplicates divided between Basle and Leiden Museums.

## List of treated taxa

### Tortricidae

Olethreutinae, Grapholitini

*Microsarotis palamedes* (Meyrick)
*Grapholita (Grapholita) macrodrilus* n. sp.
*G. (Aspila) argyrotorna* n. sp.
*Titanotoca pagerostoma* n. gen., n. sp.
*Chretienia diplosperma* n. sp.
*Herpystis tinctoria* Meyrick
*Loboschiza koenigiana* (Fabricius)
*Cryptophlebia cartarica* n. sp.

Eucosmini

*Crocidosema iris* n. sp.
*Tetramoera isogramma* (Meyrick)
*Epinotia (Ceriodes) aethopa* n. gen., n. sp.
*Microclita niphada* n. gen., n. sp.
*M. hylica* n. sp.
*Herpystostena sicaria* (Diakonoff)

*Rhopobota metastena* n. sp.
*Ancylis (Anchylopera) oestobola* n. sp.
*A. (A.) rostrifera* Meyrick
*A. (A.) convergens* n. sp.
*A. (A.) monochroa* n. sp.
*Gephyroneura bathysema* n. sp.
*G. hemidoxa* (Meyrick)
*Zomariana carnicolor* n. gen., n. sp.

Olethreutini

*Lepidunca empidomorpha* n. gen., n. sp.
*Rhectogonia dyschima* n. sp.
*Cyclacanthina episema* Diakonoff
*Synthozyga psammetalla* Lower
*Endothenia citharistis* (Meyrick)
*E. engone* n. sp.
*Gatesclarkeana erotias* (Meyrick)

Tortricinae, Polyorthini

*Polylopha sichnostola* n. sp.

Chlidanotinae

*Thaumatoptila verrucosa* n. gen., n. sp.

Phricanthini

*Copromorpha hyphantria* n. sp.

## Systematics

### Tortricidae
Olethreutinae
Grapholitini

**Microsarotis palamedes** (Meyrick) Fig. 1.

*Laspeyresia palamedes* Meyrick, 1916, Exotic Microlep. 1: 564. – Fletcher, 1932, Counc. Agric. Res., Sci. Mon., 2: 35. – Clarke, 1958, Meyrick's Types 3: 400, pl. 199 figs 1–1b. – Diakonoff, 1982, Zoöl. Verh., 193: 12, fig. 3, pl. 2 figs 4–5, pl. 4 fig. 9.

Material studied: East Sumba, Melolo, 0–25 m, V.–VI.1949 (2 ♂, GS 2695; 1 ♀, GS 2696).

Host plants: *Tamarindus indica, Bauhinia purpurea, Lantana.*
Distribution. S India, Java ?, E Sumba.

**Grapholita (Grapholita) macrodrilus** n. sp. Fig. 3.

♂. 12 mm. Head white, collar tinged ochreous. Palpus curved, ascending, pressed to face, terminal segment pointed; white. Antenna dark fuscous-grey, scape white. Thorax glossy fuscous-grey. Abdomen light purple-bronze, with strong gloss, venter glossy-white, bases of segments dark grey.

Fore wing subtriangular, strongly dilated, costa moderately curved anteriorly, more so before apex, apex rounded, termen long, convex. Basal field to before middle, suffusedly edged with purplish-brown, edge subconvex above, top rounded, just above middle of disc, lower edge concave; this field light purplish-grey, with strong white-bluish or greenish opalescence in certain lights; remainder of wing purplish-brown, costa with nine white streaks, becoming bluish-metallic on lower half, and getting less oblique posterad; first narrow, double, second narrow, single, third more distant, broad, five following slightly narrower, more wedge-shaped, sixth and seventh almost confluent; a horizontal dull blackish-brown streak, limiting preceding markings, finely edged glossy purplish, broadly interrupted in middle by paler brown-purple, and ending with a silvery marginal dot exceeding over cilia; dorsum with a large white patch, occupying its central third, but shifted rather far posterad; patch cut by three regular dark lines into four almost equally broad parts, three of these with tops moderately curving posterad, last straight, all gently becoming shorter; this patch separated by three parallel, vertical dark purple-black lines from ocelloid spot; this broad, oblong, top truncate, to above middle of disc;

spot shining purple in certain lights; apex and termen with a black marginal line, cut by silvery dot. Cilia fuscous, paler on apex.

Hind wing pale grey and semipellucent on basal half, opaque and deep purplish on apical, with a white-bluish or greenish opalescence throughout in certain lights. Cilia light fuscous with white tips around apex and along upper part of termen, white along termen with a fuscous basal band, glossy silvery-white along dorsum.

Male genitalia (Fig. 3). Of the *G. delineana* group of species, with a high tegumen, on upper half beset with bristles with broad bases. Valva with a moderate, rounded sacculus, with a basal small patch of spines, thin marginal hairs and a few short hairs in disc, a wide excision and a rather oblong sub-semioval cucullus, densely bristled throughout. Aedeagus very characteristic: large and broad, apex strongly narrowed. Cornuti, two apically converging rows of strong, long and straight spines.

Derivatio nominis: μακρός = broad, δρῖλος = aedeagus

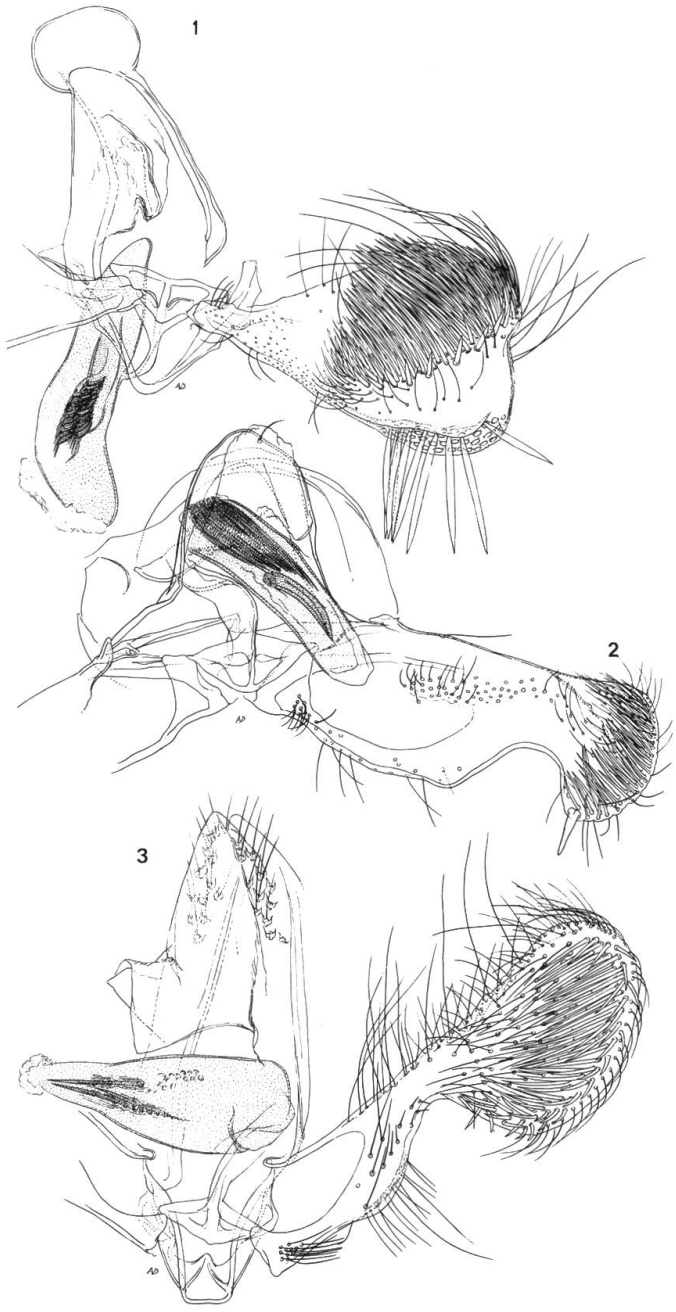
Types: Central Sumba, Loko Jengo, 0–600 m, IX.1949 (Holotype ♂, GS 2694; 1 paratype ♂).

Externally the species resembles *G. (G.) delineana* Walker, from China, closely, but differs by the shape and size of the aedeagus, the shape of the valva and further, by minor differences. The characteristic aedeagus is rather similar to that in the South European *G. (G.) nebritana* Treitschke, except that there the huge aedeagus is obliquely truncate, not narrowed, and the cornuti are quite different.

**Grapholita (Aspila) argyrotorna** n. sp. Fig. 4.

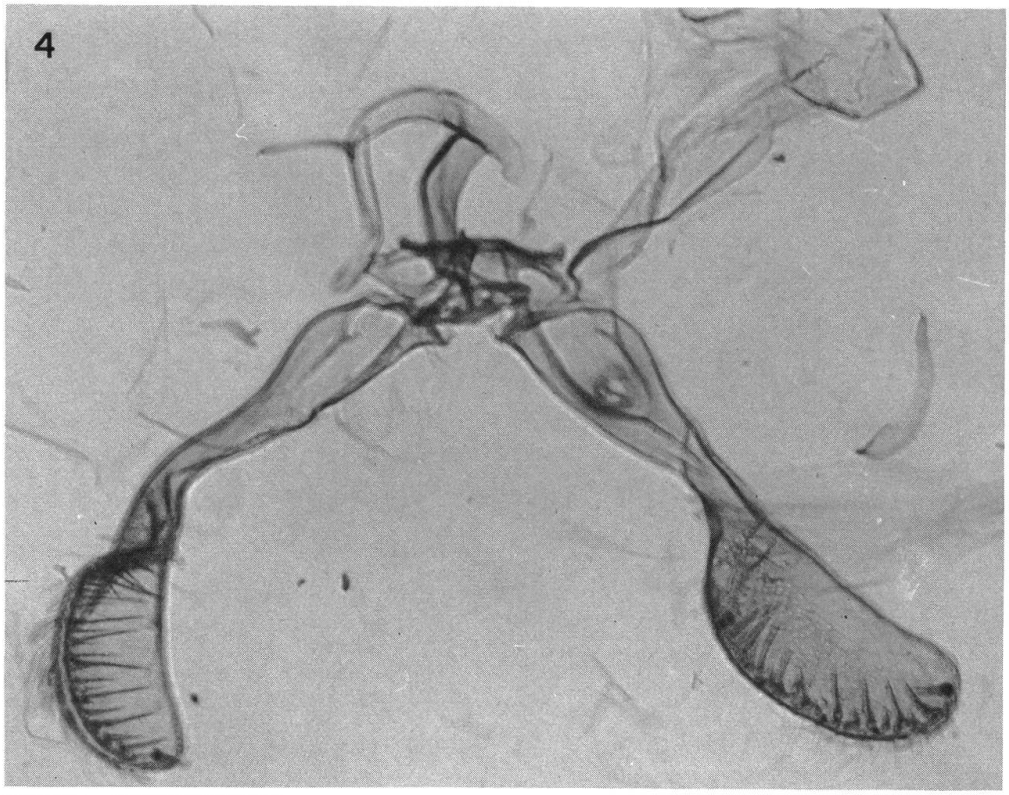
♂. 10 mm. Head and thorax grey-fuscous. Palpus grey, paler at base, rather abruptly dilated at apex, paler towards base, terminal segment short. Abdomen

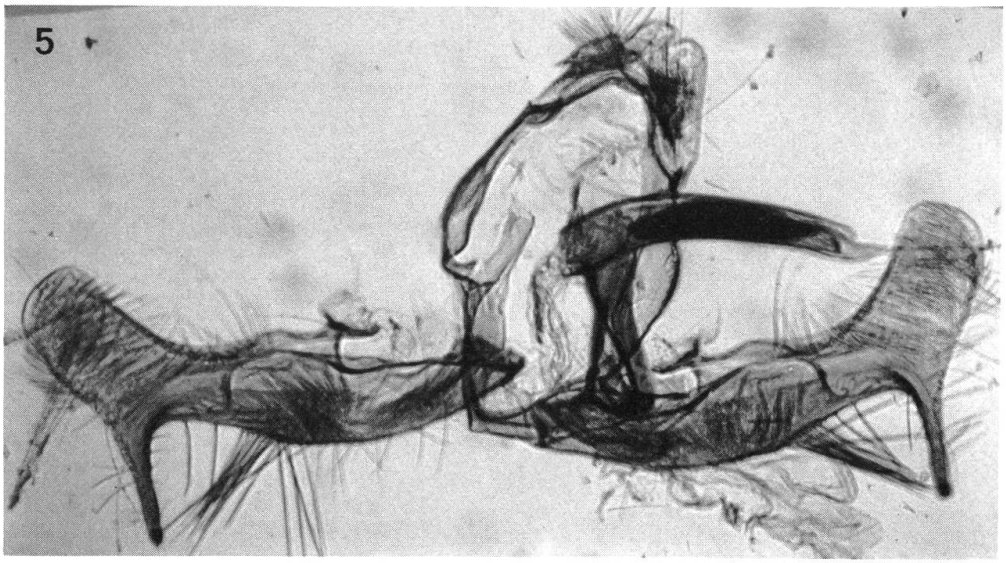
Fore wing rather broad, oblong-oval, little dilated, costa gently curved throughout, apex subobtuse, termen hardly convex above, rounded below, little oblique. Light grey, rather densely marbled with fuscous. Costa with numerous slender greyish-white marks, very short and ill-defined along anterior fourth, before middle with one, beyond with two rather broad double pairs, followed by more distant, single, rather irregular marks, posterior more distant, almost vertical, before apex; a narrow short white mark on termen below apex, continued on cilia; irregular and faint leaden-grey patches below white costal marks, posteriorly becoming fasciate and continuing the marks obliquely across less than costal fourth of wing; a darker fuscous transverse fas-




Figs 1–3: Male genitalia of Grapholitini: 1, *Macrosarotis palamedes* (Meyrick), GS 2695. 2, *Chretienia diplosperma* n. sp., holotype. 3, *Grapholita (G.) macrodrilus* n. sp., holotype.

cia, from middle of costa, obliquely to upper half of cell, moderate, vertical to lower edge of cell, thence shifted posterad and forming a broader triangular spot on end of dorsum; dorsum from base to fascia paler, less clouded with fuscous, marbling tending to form a series of rather irregular, inwards-oblique striae and a darker suffused spot at 2/5; a faint




Figs 4–5: Male genitalia of Grapholitini and Eucosmini: 4, *Grapholita (Aspila) argyrotorna* n. sp., holotype. 5, *Loboschiza koenigiana* (Fabricius), GS 10268.

leaden-grey large spot filling out tornus and wing to middle of disc, visible in certain lights. Cilia pale fuscous with a dark fuscous basal band with a light basal line.

Hind wing purplish, with basal half almost transparent, dorsum and tornus about as far as vein A2 smoothly short-scaled, glossy

greyish-silvery, between this vein and cell, deep purple. Cilia pale grey, with a purplish subbasal band, from end of vein 3 to tornus, deep purple.

Male genitalia (Fig. 4). Tegumen weak, submembraneous. Valva long and slender, strongly constricted just before middle, sacculus simple, cucullus oblong-semioval, with an irregular thin row of small spines along lower edge; otherwise valva naked. Aedeagus long and slender, deeply bowed, upon a long caulis, attached to base.

Derivatio nominis: ἄργυρος = silver, *tornus* = part of wing.

Type: Central Sumba, Loko Jengo, 400–600 m, X.1949 (holotype ♂, GS 10634).

A greyish, rather broad-winged species, with distinctly silvery-coloured glossy dorsum in the hind wings. The peculiar dense coremata with broadly oval modified scales assign it to the subgenus *Aspila* Stephens.

## **Titanotoca** n. gen.

Type species: *Titanotoca pagerostoma* n. sp.

Head with appressed scales, thick on vertex. Antenna moderately thickened throughout in male. Ocellus posterior, subinferior. Proboscis developed. Labial palpus rather long, strongly curved and ascending close to face, reaching above base of antenna, median segment long, exceeding top of eye, lower edge throughout slightly flattened in front and with distinct loose fringe of scales, terminal segment moderate, about 1/5 of median, rising, smooth, acutely pointed. Posterior leg smoothly scaled.

Fore wing oblong, moderately dilated, costa gently curved throughout, apex rounded, termen short-notched below apex, rounded, moderately oblique. All veins separate and present, vein 2 from before 1/4, 3 from angle, 3–5 equidistant, 6–8 equidistant but slightly more separated, 7 free, to termen, 4 halfway between 8 and 10, 11 from before middle, chorda developed.

Hind wing without cubital pecten, vein 2 from beyond middle of cell, 3 and 4 stalked from angle, 5 parallel, supramedian, 6 and 7 separate, slightly converging towards base, 7 to apex, 8 long.

Male genitalia. Tegumen moderate, conical, with a broad base. Vinculum robust. Valva rather narrow and simple, little curved, costa rather straight, sacculus under 1/2, narrow, top pointed, cucullus throughout with dense strong spines. Aedeagus peculiar, very large, strongly scle-

rotic, broadly conical, scobinate except below, with a strong apical spike, cornuti not perceptible.

Derivatio nominis: Τιτᾶν = giant, τόκος = progeny.

A small insect with a general facies of a *Cydia*, except for the unusual, curved and rising, long palpi and absence of a cubital pecten. The genitalia are peculiar because of the very large and sclerotic, scobinate aedeagus.

**Titanotoca pagerostoma** n. sp. Fig. 6.

♂. 9 mm. Head light fuscous-bronze with a pinkish gloss, frons and face silvery white. Antenna light fuscous-bronze, scape silvery-white in certain lights. Palpus rather long, strongly curved, end vertically rising (as described with the genus), silvery-white, flattened in front, apical segment acutely pointed. Thorax light fuscous-bronze, with a pinkish or silvery-grey opalescence in certain lights. Abdomen glossy light grey, venter whitish. Posterior tibia smoothly scaled, a moderate pointed tuft at apex above.

Fore wing without costal fold, oblong, moderately dilated, costa moderately curved, more so along posterior half, apex rounded, termen rounded, with a slight notch below apex, oblique. Light fuscous with a pinkish-bronze gloss, stronger in certain lights; rather indistinctly marbled by darker fuscous-bronze, pinkish-tinged; narrow, slightly undulating lines, abruptly curving just below middle of disc and recurving to dorsum, from middle of costa to ⅓ of dorsum, absent on basal third of wing which is palely opalescent and less distinct on termen. Costa throughout suffused darker fuscous-pinkish-bronze, with some eight bright white transverse marks, as follows: a marginal short line along base of costa, followed by three very oblique, almost marginal marks, then three larger, less oblique, thicker marks along about ¾ of costa, finally a pair of shorter, vertical, more approximated wedge-shaped marks halfway between preceding and apex; white marks emitting very indistinct whitish-blue lines obliquely across wing, visible only in certain lights, obliterate on lower half of wing; ocelloid spot indicated only by a vertical row of three dull black dots, upper transverse and largest, lower circular, smallest; apex and termen throughout with a conspicuous black marginal streak. Cilia glossy fuscous-golden.

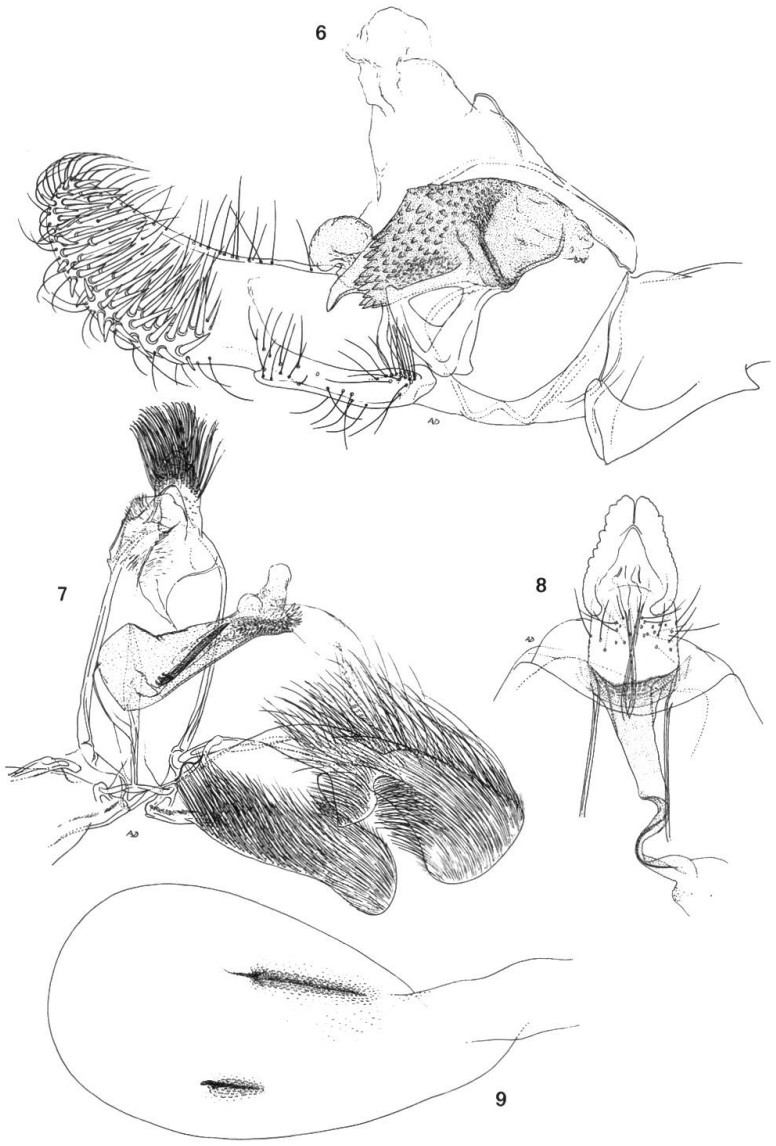
Hind wing appearing dull fuscous-tawny, paler towards base, with a strong entirely whitish-grey opalescence in certain lights. Cilia pale fuscous with a golden gloss, a darker fuscous basal band and a narrow pale basal line.

Male genitalia (Fig. 6). As described with the genus above.

Derivatio nominis: παγερός = ice-like, στόμα = mouth

Type: Central Sumba, Lindi Watju, 400–500 m, 27.IX.–15.X.1949 (holotype ♂, GS 2697).

A peculiar small species with snow-white, vertically rising curved palpi, a conspicuous dark terminal line and characteristic male genitalia.




Figs 6–9: Genitalia of Eucosminae and Olethreutinae: 6, *Titanotoca pagerostoma* n. sp., holotype, male. 7, *Tetramoera isogramma* (Meyrick), male, GS 2701. 8, *Ancylis (Anchylopera) convergens* n. sp., holotype, female. 9, the same, bursa copulatrix.

## **Chretienia** Obraztsov

*Chretienia* Obraztsov, 1968, J. New York Ent. Soc. 76: 224, type species: *Grapholitha rhezelana* Chrétien, by original designation.
*Selenia* sectio *capparidanae*, *Danilevsky & Kuznetsov, 1968, Fauna U.R.S.S. 5(1):* 445.

The genus *Selania* Stephens has been extensively revised by Danilevsky & Kuztnetsov (1968). They separated the genus in two sections: leplastrianae, with only the type species of the genus (*leplastriana* Curtis), and capparidanae, with five Palaearctic species: *Grapholitha planifrontana* Rebel, 1912, *Laspeyresia detrita* Meyrick, 1928, *Selania resedana* Obraztsov, 1959, *Grapholitha capparidana* Zeller, 1857, and *Selania friganosa* Vl. Kuznetsov, 1968.

Independently a posthumous paper of Obraztsov has been published in the same year, 1968. Also that author had recognised the dual character of *Selania* Stephens; but he proposed a new generic name, *Chretienia* (with the type *Laspeyresia rhezelana* Chrétien), for what agreed well with the section capparidanae Danilevsky & Kuznetsov (l. c.), except that they regarded *rhezelana* a synonym of *capparidana* which seems to be a delusion. At the other hand the acceptance by Obraztsov (l. c.) of *«Grapholitha decoratana»* Chrétien apparently is due to a misidentification.

The separation of *Selania* from *Chretienia* is correct, judging from the genital characters, while wing venation and scaling of head, used by Obraztsov for that purpose, in our opinion are not realistic. But the shape and bristling of the valva and especially, the shape and number of cornuti, are quite decisive. While in *Selania* there is a large basal bunch of thin, deciduous bristle-shaped cornuti and a more distal group of one or two not deciduous spikes, in *Chretienia* one or more cornuti are peculiarly shaped and specifically diverse: a short single cone *(capparidana)*, three groups of a few blunt spines *(planifrontana)*, a pair of long pointed tubes *(resedana)*, etc. Even more conspicuous are the differences of the female genitalia. Has *Selania* a double corpus bursae (the base of the ductus bullae being strongly enlarged), with a strong parietal oblong sclerite, in *Chretienia* the corpus bursae is single, the small parietal sclerite is ring-shaped and is situated in the slightly dilated base of the ductus bullae (or absent altogether).

The more surprising appear the male genitalia of the new species, described below. The male possesses a set of cornuti that are intermediate. However, in other respects it is a true *Chretienia*. Unfortunately no females are available. Pending their discovery, we assign this new species to the last mentioned genus.

Finally, we are satisfied that the species from Saudi Arabia, identified recently as *Selania resedana*, should be termed *Chretienia resedana* Obraztsov (Diakonoff, 1983).

**Chretienia diplosperma** n. sp. Fig. 2.

♂. 8.5 mm. Head pale greyish-white, forehead with a transverse grey tuft, face white. Palpus whitish, towards top of median segment dusted with grey, terminal segment greyish. Thorax pale grey, smooth, with a slight pinkish tinge. Abdomen grey-fuscous.

Fore wing oblong-truncate, broadest at ⅔, costa slightly and obtusely angulate at ⅔, straight before and beyond this, apex obtusely pointed, termen gently sinuate, moderately oblique. Whitish, with a faint pinkish tinge, distinct in certain lights, markings finely deep fuscous, tending to be formed by transverse striations. Costa with seven slender oblique fuscous lines, rather straight, attenuated and reaching to upper edge of cell, third and fourth dilated on costa, fifth to seventh stronger dilated by black costal wedge-shaped marks, last of these in apex; third to seventh dark streaks edged posteriorly by white marks, becoming wider posterad and filling out interspaces, so becoming white wedges, the last one longer, vertical; base of dorsum with a light fuscous lower half of basal patch; a large basal white patch, oblong-triangular, somewhat irregularly curving posterad, top pointing towards apex of wing; this patch parted by three parallel bronze lines, median strongest, patch preceded and followed and accentuated by a fuscous-bronze streak anteriorly and a subtriangular spot posteriorly; posterior fifth of wing deep fuscous-bronze, finely transversely striated (tips of scales), including on lower half ocelloid spot, with a white vertical streak along anterior edge, containing two strong black dashes; posterior edge absent, a slender white mark on termen below apex, extending over cilia. Cilia pale fuscous, with a blackish subbasal streak and snow white basal streak, cilia on end of dorsum white.

Hind wing pale tawny pinkish-golden, greyish on basal half, fuscous on dorsum. Cilia concolorous.

Male genitalia (Fig. 2). Tegumen rather short, simple, with a single apical bristle. Transtella, a simple straight rod. Valva robust, rather broad, sacculus excised at ¼, thinly haired, cucullus denser spined, projecting and with a single strong spine below. Aedeagus strong, large. Cornuti, a basal large sheaf of dense long spines and a single median thick spike.

Derivatio nominis: διπλοῦς = double, δπέρμα = a seed.

Types: East Sumba, Melolo, 0–25 m, VI.1949 (holotype ♀, GS 2702; 2 paratypes ♂, one without abdomen).

An elegant species, with a pale wing, adorned with more or less converging in middle, oblique costal and dorsal rows of dark lines and a bronze termen.

Apparently this is the first record of the Southern European, chiefly Mediterranean genus, form tropical Asia. The species of *Selania* are discriminated most easily by the armature of the aedeagus. The nervature of the present species is rather similar to that of the type species; that of the fore wing entirely alike: vein 2 from about middle of cell, 3 from angle. Hind wing with vein 2 from ¾ or ⅔, 3 and 4 connate from angle, 5 approximated at base, 6 and 7 closely approximated towards base.

**Herpystis tinctoria** Meyrick Figs 10,11.

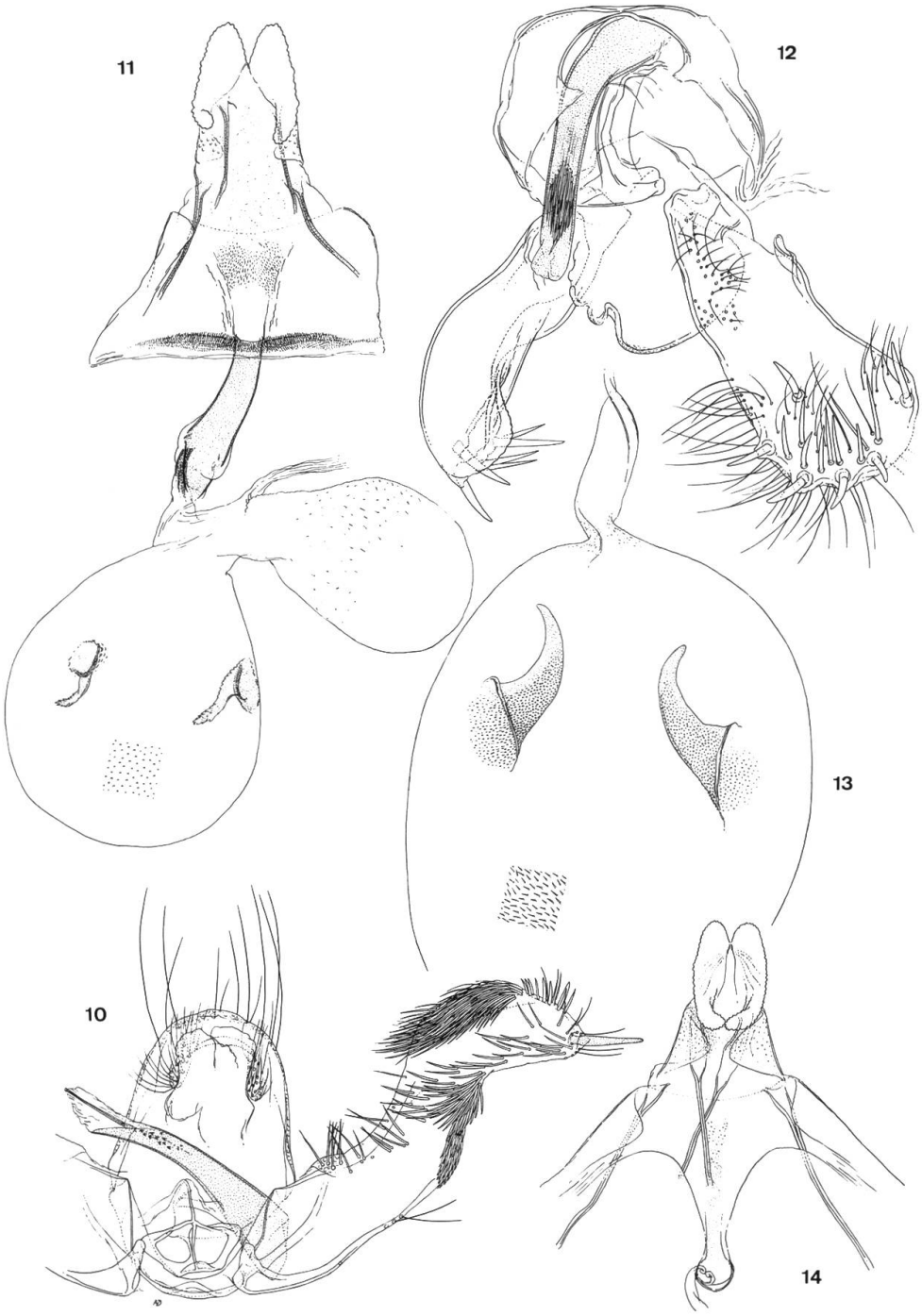
*Herpystis tinctoria* Meyrick, 1916, Exotic Microlep. 2: 16 (Coorg, ♂). – Clarke, 1958, Meyrick's Types 3: 428, pl. 213 figs 3–3a (type, wings & genit. illustrated).

Material studied: West Sumba, Waimangura, 450 m, VIII.1949 (3 ♂, GS 10617 and 1 ♀, GS 10620). Pogobina, 500 m, IX.1949 (1 ♂). East Sumba, Langgai, 700 m, VII.1949 (30 ♂, GS 2700, 10614, 10624 and 1 ♀). Baing, VI.1949 (1 ♂). Central Sumba, Lindi Watju, 400–500 m, 27.IX.–15.X.1949 (3 ♂, GS 10619, 10637 and 1 ♀, GS 10621). Loko Jengo, 400–600 m, IX.1949 (1 ♂).

Metallotype, ♀, 12 mm, W Sumba, Waimangura, 450 m, VIII.1949, GS 10620. In all respects similar to the male, but with the fore wing broader, costa with a broader marginal blackish streak, with about six pairs of costal lines, silvery-white, longer than in male.

Male genitalia (Fig. 11). Tegumen broad, top rounded. Socius oblong-oval, pending, partly parietal. Valva sinuate, cucullus birdhead-shaped, with a patch of dense bristles on costa, sparse bristles around margin of top and two bunches of dense dark bristles on end of sacculus below cucullus, a large apical spine. Aedeagus broad at base, slender beyond. Cornuti, a series of small spines and a long apical needle. (GS figured: 2700).

Female genitalia (Fig. 10). Eighth + ninth segment elongate, subsclerotic. Sterigma subsclerotic, transversely erected-triangular, with a submedian, transverse tumescence, clothed with stiff hairs, depressed-triangular, lateral angles extended and narrow, top emarginate, flanked with slender vertical ridges, lower edge with a median triangular prominence. Ostium, a sclerotic cup with transparent and erect lamella postvaginalis, colliculum moderate. Ductus bursae




Figs 10–14: Genitalia of Grapholitini: 10–11. *Herpystis tinctoria* Meyrick: 10, female, GS 10620; 11, male, GS 2700. 12–14, *Cryptophlebia cartarica* n. sp.: 12, male, holotype; 13, female, allotype, bursa copulàtrix; 14, the same, sterigma.

spindle-shaped, at end furcate, emitting ductus bullae, corpus bursae double, each half ovoidal, left with a single irregular suboval signum, sometimes with a second, small signum; right half of corpus bursae simple.

A small pale grey species, when unrubbed, recognisable by the oblique darker costal spot and another, pointed, plical one. This genus of small, narrow-winged species is heteromorphous and badly needs a revision.

Distribution: India (Coorg), Sumba.

**Loboschiza koenigiana** (Frabricius) Fig. 5.

*Pyralis koenigiana* Fabricius, 1775, Syst. Ent.: 653. – Fabricius, 1781, Species Ins. 2: 286.

*Pyralis koenigana* Fabricius, 1787, Mant. Ins. 2: 237. – Fabricius, 1780, Entom. Synt., 3(2): 279.

*Hemerosia aurantiana,* Pryer, 1877, Deser. Lep. North China, Cist. Ent. 2: 235, pl. 4 fig. 12.

*Coptoloma aurantiana,* Swinhoe & Cotes, 1889, Catal. Moths India: 699.

*Laspeyresia aurantiana,* Meyrick, 1911, Proc. Linn. Soc. N. S. Wales 36: 292. – 1929, Meyrick, in de Joannis, Ann. Soc. ent. France 98: 781. – Meyrick, 1935, in Caradja & Meyrick, Lep. chin. Prov.: 64.

*Laspeyresia koenigana,* Fletcher, 1914, S Indian Insects: 450, fig. 328. – Fletcher, 1921, Mem. Agr. Ind., Ent. 6: 62. – Issiki, in Esaki, 1932, Iconogr. Ins. Japon.: 1467, textfig., pl. 11. – Issiki, 1958, ibidem, ed. 2: 478, textfig. – Obraztsov, 1959, Tijdschr. Ent. 102: 193. – Okano, 1959, Iconogr. Ins. Jap. Col. Natur. Edita 1: 259, pl. 174 fig. 16.

*Laspeyresia aurana* Matsumura, 1931 (nec Fabricius, 1775), 6000 Ill. Ins. Jap.-Emp.: 1971, no. 2150, text fig.

*Eucosma koenigiana,* Diakonoff, 1941, Treubia, *18:* 405.

*Enarmonia keonigiana,* Fletcher, 1932, Imp. Counc. Agric. Res., Sci. Mon. 2: 33, pl. 21. – Diakonoff, 1948, Bull. Mus. Nat. Hist. Nat. 20: 348. – Diakonoff, 1953, Verh. Kon. Ned. Ak. Wet., Nat. *(2)49(3):* 161.

*Enarmonia koenigana,* Diakonoff, 1949, Bijdr. Dierk., *28:* 348. – Inoue, 1954, Check List Lep. Japan: 91. – Issiki, 1957, Icon. Het. Jap. Col. Nat. 1: 57, pl. 8 fig. 254.

*Rhodinoscolops koenigianus,* Obraztsov, 1968, J. New York Ent. Soc. 76: 160, figs 14–17.

*Loboschiza koenigiana,* Diakonoff, 1982, Zool. Verh. 193: 40.

Material studied: Sumba, Waimangura, 450 m, VIII.1949 (1 ♂). Rua, 0–100 m, XI.1949 (1 ♂). E Sumba, Mau Marru, 500 m, VII.1949 (3 ♂). Langgai, 700 m, VII.1949 (2 ♂). Prai Jawang, 50–150 m, VI.1949 (4 ♂ and 6 ♀; GS ♂ 10268). Central Sumba, Loko Djengo, 400–600 m, IX.1949 (1 ♂). Lindi Watju, 400–500 m, 27.IX.1949 (1 ♀).

The species would belong to a group of brightly orange-red, bright red or elegantly crimson species of moderate size, that actually are not at all closely related; closer study reveals that several distinct genera are

concerned (as e. g., *Lomaschiza* Diakonoff and *Gephyroneura* Obraztsov). We intend to treat this «red group» elsewhere.

Food plants: *Jasminum sambac, Melia azedarach.*

Distribution: Ceylon, India, Burma, Thailand, E China, Japan, Malay Archipelago, Sumba, New Guinea, E Australia.

**Cryptophlebia cartarica** n. sp. Figs 12–14.

♂. 15 mm. Head and antenna fulvous. Palpus very smooth, long, first obliquely ascending and appressed to face, exceeding bases of antennae, thence porrected, terminal segment pointed; light fulvous-greyish. Thorax fulvous-fuscous. Abdomen rather long-haired in male, greyish-fuscous, venter purplish posteriorly, anal tuft pale purple.

Fore wing moderately oblong, truncate, apex rounded, termen slightly concave, little oblique. Fulvous, faintly transversely striated, apical fifth slightly suffused with deeper purplish, centre of disc with reddish-fulvous. Costa throughout with short thick, rather indistinct purplish oblique marks, each of two-three narrow strigulae; median part below costa faintly paler, tinged greyish (only right wing); terminal part of wing from beyond cell with some 5–6 rather irregularly curving rows of purplish dots, faint and minute anteriorly, on posterior half of terminal area larger and distinct, especially the more regular row halfway between cell and termen; a rounded-trapezoidal moderate spot on dorsum well before tornus. Cilia vinaceous-grey, dusted with purplish, a fine creamy basal line.

Hind wing rather dull purplish-fuscous, with some bronze gloss towards apex. Cilia fuscous, with whitish tips and a narrow creamy basal band.

♀. 18 mm. Head and body as in male, slightly brighter orange-fulvous, palpus lighter. Abdomen dark brown, venter pale ochreous, posteriorly dusted with purplish.

Fore wing broader, slightly more dilated, apex and termen similar. Pale pinkish-fulvous, regularly but faintly marbled with deeper fulvous tinged lilac, strewn throughout with deeper irregular grey dots of diverse size, except over tornal third; darker grey-fulvous suffusion: a basal patch to ⅓, posterior edge of patch excavate above fold. This edge of patch darker and concave on dorsum, followed by a regular slender crescentic dorsal spot, concave posteriorly; a broad median transverse band, paler than basal patch, connected with that above fold; posterior edge of band irregularly rounded and suffused; apical third of wing with an almost equilateral apical patch, evenly fulvous-reddish, paler

fulvous-grey on casta, edge of patch well-defined, gently sinuate; a small reddish-purple dorsal spot along end of fold, rather outwards-oblique, top rounded.

Hind wing light golden-fuscous with a silky gloss, base thinly scaled, edge greyish-golden. Cilia light ochreous-grey.

Male genitalia (Fig. 12). Tegumen subquadrate, with slightly impressed sides. Valva clavate, with rather long spines, five of these marginal and one discal, with some 8–10 much smaller, slender spines, arranged in a submarginal group, with a few long hairs between them. Aedeagus rather long, moderately gradually curved, with transversely distended base. Cornuti, on oval sheaf of very dense slender spines.

Female genitalia (Figs 13, 14). Sterigma with posterior edge straight, in middle deeply incised, this median incision abruptly dilated at end in a round opening (ostium). Colliculum slightly tortuous, with a slender, dark semicircular edge. Signa, a pair of large, hollow horns.

Derivatio nominis: καρτερικός = patient

Types: West Sumba, Rua, 700 m, VIII–IX.1949 (holotype ♂, GS 1693). Waikarudi, 150 m, IX.1949 (allotype ♀, GS 1694).

The species is nearest to *C. farraginea* (Meyrick), from Java and Celebes, differing by the shape of tegumen, simply rounded in *farraginea*, and by the sterigma, as also by the wing markings of the male.

## Eucosmini

**Crocidosema iris** n. sp. Figs 15–17.

♂♀. 10–11 mm. Head light fuscous, only face whitish. Palpus whitish, along edges and towards apex of median segment with a few horizontal dark fuscous strigulae, apex of segment roughish, terminal segment pale fuscous. Thorax pale fuscous, mixed with creamy, in female fuscous-bronze. Abdomen pale fuscous, in female light bronze; anal tuft and venter paler.

Fore wing oblong-suboval, costa curved throughout, stronger curved along basal third, apex obtuse, termen sinuate above, obliquely convex below, moderately oblique. Light grey-fuscous, densely suffused with vinaceous-brown. Costa purplish, with numerous oblique pairs of minute whitish or light grey oblique lines along anterior 3/5; remaining 2/5 of costa with three distant pairs of whitish wedge-shaped marks becoming more distant and larger posteriorly, continued below by whitish, glossy convergent lines to termen below apex; a creamy-white,

glossy large patch occupying posterior 3/5 of dorsum, with anterior edge well-defined, slightly inwards-oblique, broadly suffused with deeper purplish, posterior edge of creamy patch concave almost to middle of its breadth; this patch along dorsum with some five black-purple dots and a well-defined deep purple triangular spot on dorsum before tornus, with anterior side longer than posterior; ocelloid spot round, edged with silvery containing three dark streaks. Cilia white, with a subbasal band of blackish dusting and purplish-fuscous apical third.

Hind wing with a sexually dimorphous cubital pecten: in male a long and dense light tawny glossy flat pecten along lower side of the cubital vein base, appressed to upper surface of wing, with a smaller thin row of upright hairs along frontal side of cubital vein (often these absent, probably rubbed); in female pecten of unusual shape, a thin row of strong and long hair-scales along lower edge of vein, more or less appressed to wing surface. Light leaden-tawny, with a strong gloss, apex suffused with dull purple-fuscous. Cilia creamy, with a pale fuscous subbasal band.

Male genitalia (Fig. 15). Resembling those of the type-species, but differing as follows. Socii longer: longer than uncus, as long as distance from the base to that of the valva. Valva different: sacculus less broad, «neck» considerably narrower. Cucullus less densely spined, also narrower. Aedeagus longer and more slender.

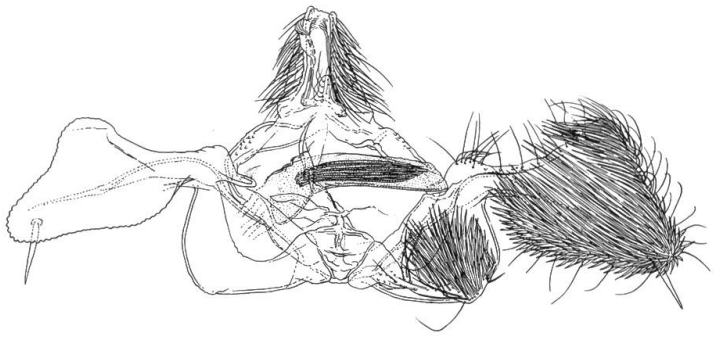


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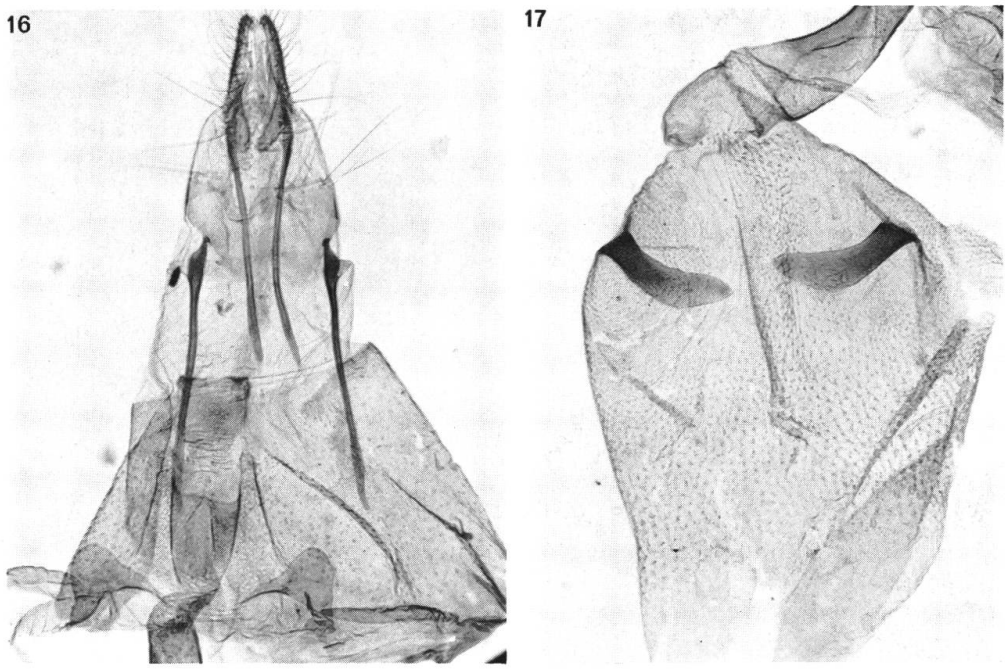
Fig. 15: Male genitalia of *Crocidosema* iris n. sp., holotype.

Female genitalia (Figs 16, 17). More differing from *plebejana* than those of the male. Ovipositor narrower, apophyses longer. Sterigma less sclerotic. Ostium with colliculum, a large, wide and simple tube, colliculum longer and more narrowed at end. Remainder of sterigma, a higher, narrower rising triangle, basal plate narrow laterally, indistinct in middle, submedian processes larger, regular, weak. Signa longer.




Figs 16–17: Female genitalia of *Crocidosema iris* n. sp., allotype: 16, sterigma; 17, bursa copulatrix.

Derivatio nominis: Ἶρις = messenger.

Types: West Sumba, Rua, 0–100 m, VIII–IX.1949 (holotype ♂, GS 10642); Wakarudi, 150 m, IX.1949 (2 paratypes ♂♀); Waimangura, 450 m, VIII.1949 (2 paratypes ♂♀). Central Sumba, Loko Jenko, IX.1949 (2 paratypes ♂♀). East Sumba, Langgai, VII.1949 (allotype ♀, GS 10643; 9 paratypes, 4 ♂ and 5 ♀); Laluku, 300 m, VII.1949 (1 paratype ♀).

The type-species, *C. plebejana* Zeller was said to be widely distributed and almost ubiquist. There have been established no less than eight surmised synonyms. Whether these are all conspecific is an open question. For some time there was no doubt as to the wide distribution of *plebejana* that is characteristically marked and superficially easily recognizable.

The recent statement of E. C. Zimmerman (1978) and his elaborate figures show that three of the four Hawaiian species, described formerly in different genera, but attributed by him to *Crocidosema*, are valid species, distinct from *plebejana*. Zimmerman advocates a thorough critical re-investigation of the entire *«plebejana»* complex.

The present distinct species, superficially very similar to *plebejana*, is different not only by the ♂♀ genitalia but especially by the neuration, which is a new feature of the *plebejana* complex.

Although the difference in the neuration is considerable, the character of the genitalia is the same, so that *plebejana* and *iris* are congeneric beyond doubt. The diagnosis of the genus should be extended accordingly. Superficially *iris* is smaller, with the suffused first dorsal dot often ill-defined. The stalked veins 7 and 8 in the fore wing disclose the identity of *iris* at one glance.

Nearest to *C. liprara* Wals. from Hawaii (lowland and coast regions) but differing by sexually dimorphous cubital pecten (sexually uniform in *liprara*), pointed, more or less spindle-shaped signa (in *liprara* club-shaped) and the presence of 1–2 subapical spines on outer side of cucullus.

**Tetramoera isogramma** (Meyrick) Fig. 7.

*Cydia isogramma* Meyrick, 1908, Proc. Zool. Soc. London 1908: 720 (Transvaal, ♂♀).
*Eucosma isogramma,* Clarke, 1953, Meyrick's Types 3: 268, pl. 183 figs 1–1a (lectotype design., wings, genit. ♂ fig.).
*Tetramoera isogramma,* Diakonoff, 1968, U.S. Nat. Mus. Bull. 257: 69 (n. g.). – Diakonoff, 1982, Zool. Verh. 193:52.

Material studied: Central Sumba, Lindi Watju, 400–500 m, 27.IX.–15.X.1949 (1 ♂, 65 2701). West Sumba, Waimangura, 450 m, VIII.1949 (1 ♂).

Distribution: Ceylon, Sumba, S Africa.

**Epinotia (Ceriodes) aethopa** n. sp. Fig. 25.

♂. 12 mm. Head and palpus light tawny, palpus moderate, rather smoothly scaled, moderately dilated, terminal segment short. Thorax ligth tawny. Abdomen tawny-fuscous with a golden gloss.

Fore wing without a costal fold, broad, truncate, moderately dilated, costa gently curved anteriorly, straight posteriorly, apex obtuse, hardly prominent, termen hardly sinuate, little oblique. Bright orangeish-tawny. Costa suffused with blackish-brown to before apex; blackish-brown suffusion extending over costal third of wing, its lower edge well-defined and forming a semicircular patch from beyond base to before middle of disc and a larger triangular well defined, almost equilateral patch, with posterior edge slightly longer, to costa before apex; these two patches turning tawny on lower half, triangular patch also tawny along the entire posterior edge; tops of both patches reaching to lower ⅓ of wing breadth; apex with a brownish-ferruginous spot; out of this spot originates a purple-blackish terminal fasciate blotch to above tornus, gradually dilated downwards, well-defined. Cilia glossy tawny-orangeish, lighter than ground colour, with pale submedian and

basal line, tips on posterior half slightly mixed with fuscous.

Hind wing rather dark dull fuscous, apical and terminal edge glossy. Cilia dullish creamy with two narrow fuscous bands, posterior third of cilia faintly dusted with fuscous.

Male genitalia (Fig. 25). Tegumen with rolled sides, ovoidal, shoulder truncate. Uncus conical at base; top flat, inverted-trapezoidal, deeply notched. Socius moderate, oblong-suboval, thinly haired. Vinculum small. Valva with a large, oblong-oval cucullus, on a narrow neck, ventral angle strongly and obliquely prominent. Aedeagus moderate, broad apical half apparently bifid. Cornutus, one spine, surrounded by scars of several smaller spines.

Derivatio nominis: αἶθοψ = scorched.

Types: West Sumba, Pogobina, 500 m, IX.1949, (holotype ♂, GS 10630; 1 paratype ♂).

The species is closely allied to the type of the subgenus, *E. (C.) ceriodes* (Meyrick), differing by more slender uncus, longer socii and much shorter cucullus part of the valva, viz. less than half of the entire valva, while in *ceriodes* it is half valva and narrower.

## **Microclita** n. gen.

Type species: *Microclita niphada* n. sp.

Head with roughly appressed scales, a small transverse tuft on face. Ocellus posterior. Haustellum developed. Antenna moderately thickened in male, simple. Labial palpus moderate, subascending, median segment triangularly dilated with roughish short scales, terminal segment moderate, smooth, pointed. Thorax smooth. Abdomen normal.

Fore wing oblong, narrow, with a slender costal fold, costa gently curved throughout, apex long-prominent, pointed, termen deeply sinuate above, broadly and obliquely rounded below, strongly oblique. Vein 1b not furcate at base, vein 2 from beyond ⅔ of cell, 3 and 4 closely approximated, almost parallel throughout, slightly diverging in middle, contiguous and soldered posteriorly, curving upwards; 5 remote and straight, 5 and 6 straight, distant, gently converging posterad, 7 and 8 stalked, 7 to termen, 9 close to their stalk, 9–11 equidistant, 11 from before middle, basal part of upper edge of cell thickened, chorda and median branch in cell absent, cell strongly narrowed towards base, triangular, origin of lower edge above middle of wing.

Hind wing oblong-subtrapezoidal, with a long, slender, produced angle, without a cubital pecten. Veins A2 and A3 distinct, A1 absent, 2

from ⅔ of cell, 3 from angle, 4 absent (or coincident), 5 closely approximated at base, discoidal absent (would be strongly inwards-oblique), 6 and 7 soldered along basal ⅓, 6 to termen, median branch in cell fold-like.

Male genitalia. Semi-submembraneous. Tegumen high and rather narrow, with apparently a pair of obtuse rostrad-directed processes. Uncus, a small, longitudinally folded process. Socii absent. Subscaphium, a transverse flat bar. Transtilla filiform. Valva large, strongly clavate, basal half moderate; sacculus indistinct, with a small subapical tooth and apical rounded-triangular prominence, centred with a patch of short bristles; cucullus-part broadly elliptical, end of costa with a series of weak hairs. Aedeagus short, conical. Cornuti not perceptible.

Derivatio nominis: μικρός = small, κλιτός = curved.

An interesting small form with the general characters of neuration approaching those of *Acroclita* Lederer, but strongly simplified, so much, in fact, that separation seems desirable. The differences are the not furcate vein 1b, the approximated, partly converging upcurved veins 3 and 4 and the absence of veins within cell in the fore wing; the hind wing lacks the first anal vein, a cubital pecten and the discoidal vein, while 6 and 7 are soldered along their basal third, originating far before the lower angle of cell. Also the genitalia are characteristic.

Male genitalia, as described with the genus above.

Apparently nearest to *Acroclita*, but with apomorphic atrophies, possibly due to the relatively narrow wings.

**Microclita niphada** n. sp. Figs 18, 20.

♂. 10 mm. Head and palpus white. Antenna creamy, glossy. Thorax smooth, silvery-white. Abdomen whitish.

Fore (Fig. 18) wing oblong, rather narrow, with a slender costal fold to before middle, costa gently curved throughout, apex produced, pointed, termen deeply sinuate above, obliquely rounded below, strongly oblique. Silvery-white, with a silky gloss, speckled irregularly with a few bronze-black scales. Fold with very narrow black costal line; posterior half of costa with small bronze-black marks: an oblong, subsuffused larger one, followed by three minute, equidistant costal points, apex suffesed with bronze-black; an irregular sparse bronze dusting in middle of disc at ⅗, a small marginal mark on end of wing fold; an irregular transverse slightly outwards-oblique band before termen with a black horizontal mark at ⅓; a narrow terminal line, dilated above tornus. Cilia white, dusted with blackish-bronze.

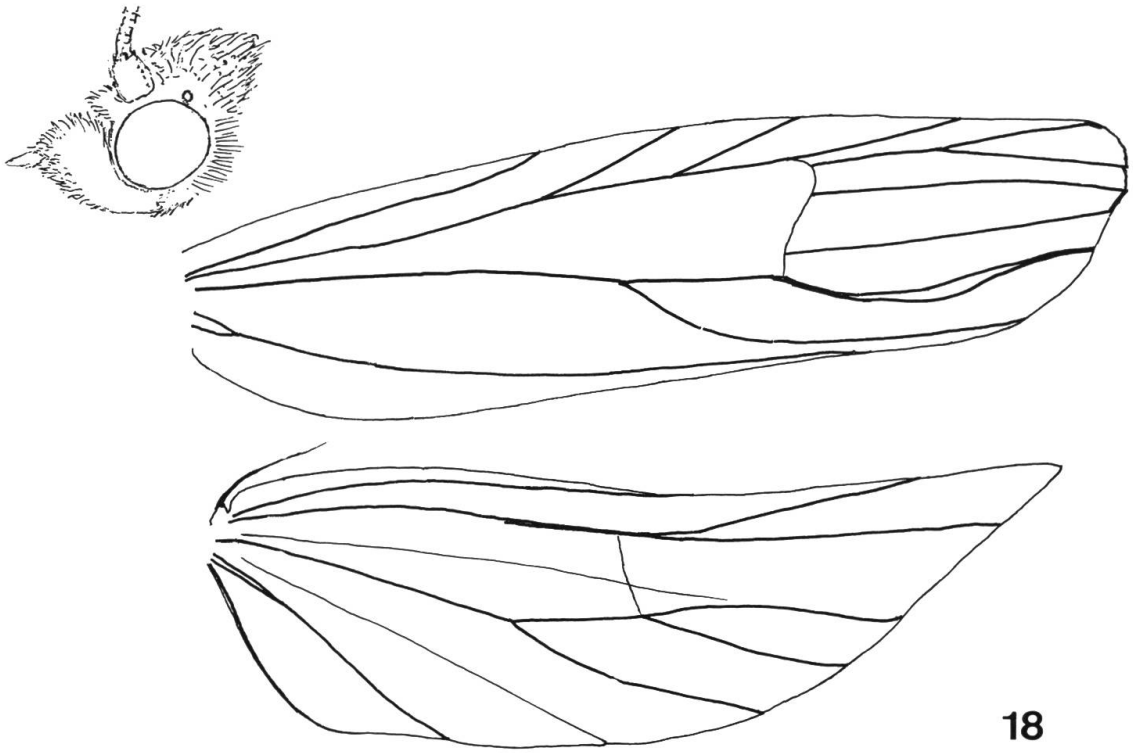



Fig. 18, *Microclita niphada* n. sp., holotype, male, sketch of head and wing venation.

Hind wing very pale greyish with slight bronze gloss. Cilia whitish, around apex pale grey.

Male genitalia (Fig. 20), as described with the genus above.

Derivatio nominis: νιφάς = snowflake.

Type: Central Sumba, Lindi Watju, 400–500 m, 27.IX.–15.X.1949 (holotype ♂, GS 10622).

A small, narrow-winged white species, sparsely marked with blackish-bronze.

**Microclita hylica** n. sp. Figs 19, 21.

♂. 8 mm. Head dark brownish-fuscous, turning deep bluish-cinereous in certain lights, face silvery-white, receding, vertex with a dense flat tuft between antennae. Antenna moderately dilated and subserrulate, fuscous, scape dark fuscous. Palpus moderately long, porrected, median segment abruptly dilated by roughish scales above and beneath, dark brown, a pale ochreous wedge-shaped spot from upper edge before apex, directed obliquely to base of apical segment; this light ochreous, moderate, porrected and obtuse. Thorax dark bronze-fuscous. Abdomen dark bronze-fuscous.

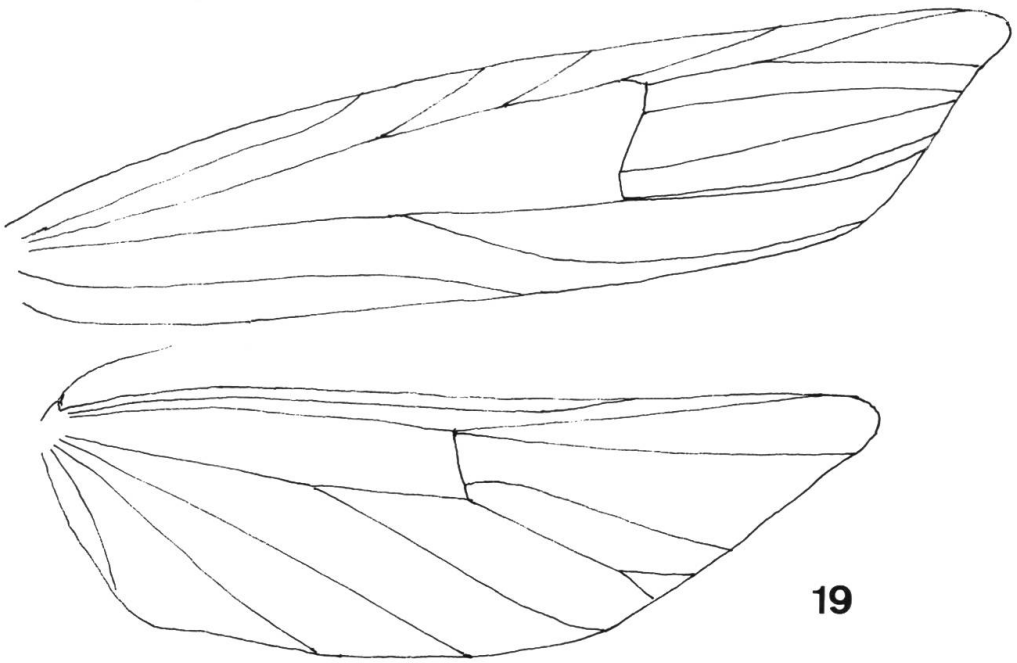
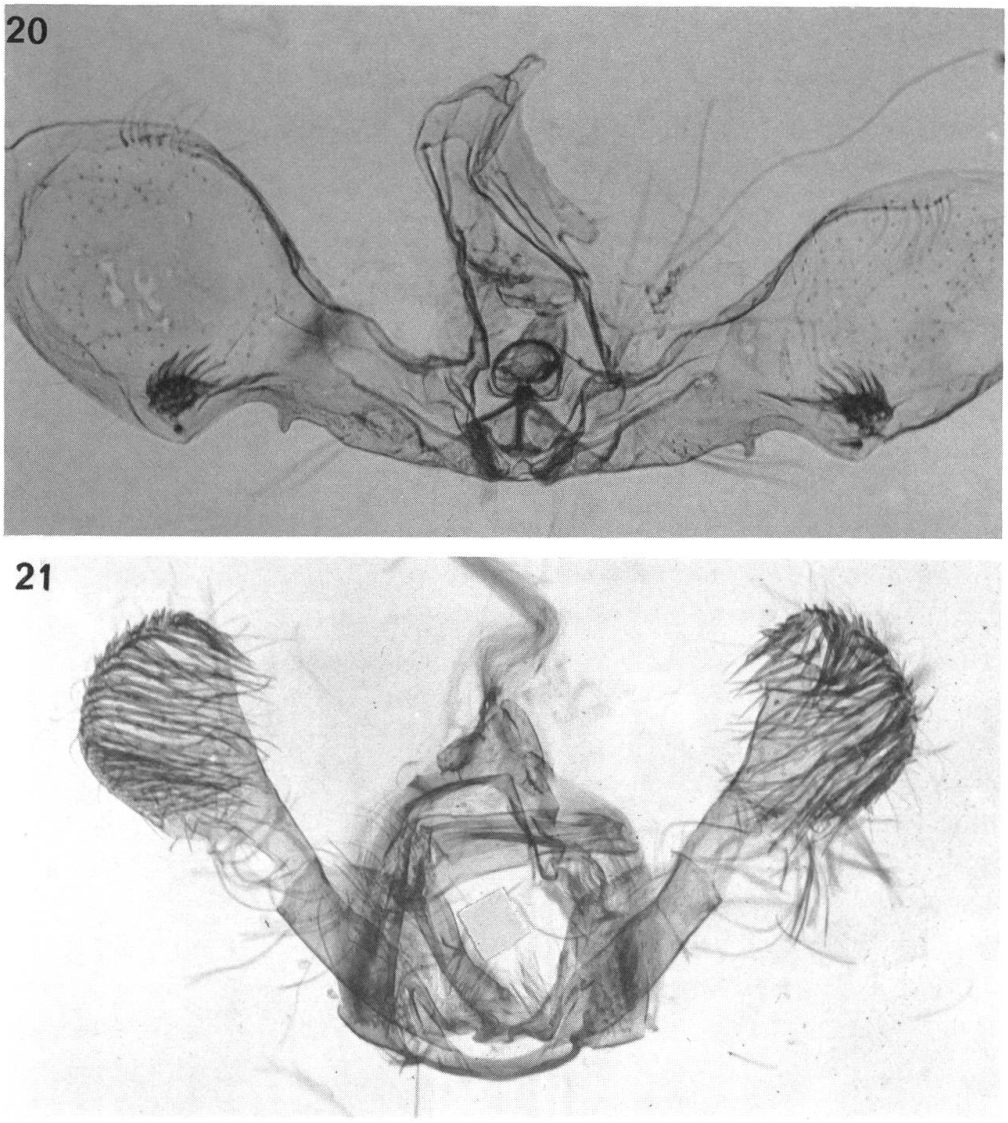



Fig. 19: *Microclita hylica* n. sp., male, holotype, sketch of wing venation.

Fore wing narrow (Fig. 19), oblong-sublanceolate, broadest at 2/3, costa gently curved anteriorly, less so posteriorly, apex subobtuse, termen hardly sinuate above, convex, little oblique. Ground colour little exposed, rather dull light grey, towards costa anteriorly becoming darker bluish-anthracite, densely striated throughout by dull dark brown slender transverse striae (lower half of scales dark brown); costa dotted anteriorly and suffused posteriorly with black; extreme costal edge from before middle to before apex glossy snow-white, forming some five minute wedges with rounded tops, forming two pairs and one single mark, rather distant, pale edge obliterate between them; an apical and a subapical ochreous-reddish dot partly mixed with dark brown; termen with a darker brown blotch, traversed and edged with light ochreous, terminal edge pale ochreous. Cilia pale orange-ochreous, with a strong gloss, slightly infuscated opposite apex, basal third of cilia from below apex to above tornus glossy leaden-silvery.

Hind wing semipellucent light bronze, on basal half becoming almost transparent, with fuscous veins. Cilia light fuscous, with a hyaline basal band.

Male genitalia (Fig. 21). Tegumen almost spherical, top moderately triangular. Appressed to this oblong naked socii, ending in oval, subsclerotic thinly short-haired pads. Valva long, strongly clavate, base




Figs 20–21: Male genitalia of Eucosmini: 20, *Microclita niphada* n. sp., holotype. 21, *M. hylica* n. sp., holotype.

narrow, costa towards base dilated and with an edge of dense hairs, a pecten of longer hairs at base; cucullus rounded and bristled, incision beyond middle of valva, asymmetrical. Vinculum flat and strong. Caulis slender. Aedeagus large, base dilated. Cornuti, 2–3 long, slender blades.

Derivatio nominis: υλικός = wooden.

Type: West Sumba, Pogobina, 500 m, IX.1949 (holotype ♂, GS 10633).

*M. hylica* n. sp., as to the colouring, is an opposite of the type-species. That made me doubt its congeneric status, especially because

the hind wing venation is deviating: vein 1A is strong, 3 and 4 short and long-stalked and 5 is median (from the middle of discoidal). But veins 2, 6 and 7 are situated exactly similarly, while the fore wing venation, not less characteristic, is almost congruent in both *hylica* and *niphada*. Therefore I assign both to *Microclita* n. gen.

The small, narrow-winged species is, judging from the genitalia, related to *«Herpystis» jejuna* Meyrick. I presume that this may be the third species of *Microclita*.

## **Herpystostena** n. gen.

Type species: *Acroclita sicaria* Diakonoff, 1982.

Head with appressed scales. Ocellus inferior, pigmentless. Haustellum rather short. Labial palpus porrect, moderate, triangularly dilated towards apex, apex roughish above, terminal segment moderate, drooping, subobtuse. Antenna simple, thickened in male.

Fore wing oblong, oval, rather narrow, costa gently curved throughout, apex moderately prominent, rounded, termen gently sinuate above, obliquely rounded below. Cell long and narrow, chorda and median branch absent. Vein 1b furcate at base, 2 from ⅔, 3 from angle, strongly sinuate, at margin approximated to 4, 4 and 5 straight, 6 and 7 long-stalked, 7 to termen, 8 to costa just before apex, 9, 10, 11 distant, 11 from middle.

Hind wing oblong-subtrapezoidal, pointed, about 1, 2 from beyond middle of cell, 2–4 parallel, 3 well before angle, 4 from angle, 5 closely approximated at base, 6 and 7 coincident along basal half, embracing apex, 8 short (to middle of costa).

Male genitalia. Tegumen with a bifid uncus, and pending, hairy socii. Gnathos slender, bow-like. Valva straight, oblong, cucullus bristly, sacculus with two large sclerotic spikes. Aedeagus curved and narrowed. Cornuti, two long needles.

Derivatio nominis: *Herpystis*=nomen generis, στενός = narrow.

Originally the type species has been assigned to *Acroclita*, but the present additional material, allowing further study, reveals features so peculiar, that I am compelled to erect this genus for the reception of *sicaria*. The neuration of the fore wing is quite unusual, while that of the hind wing is rather similar to that of *Herpystis* Meyrick. However, the developed, furcate uncus assigns this form to a considerably more progressed place in the system, approaching *Acroclita* Lederer.

**Herpystostena sicaria** (Diakonoff) n. comb. Figs 22, 24.

*Acroclita sicaria* Diakonoff, 1982, Zool. Verhand., 193: 54, 55, pl. 12 fig. 24 (Ceylon, ♂).

Material studied: East Sumba, Mau Marru, 500 m, VII.1949 (1 ♂, GS 10618). Langgai, 700 m, VII.1949 (2 ♂, GS 10616). Central Sumba, Waimangura, 450 m, VIII.1949 (2 ♂). Lindi Watju, 400–500 m, 27.IX.–15.X.1949 (1 ♂).

Distribution: Sri Lanka (Ceylon), Sumba.

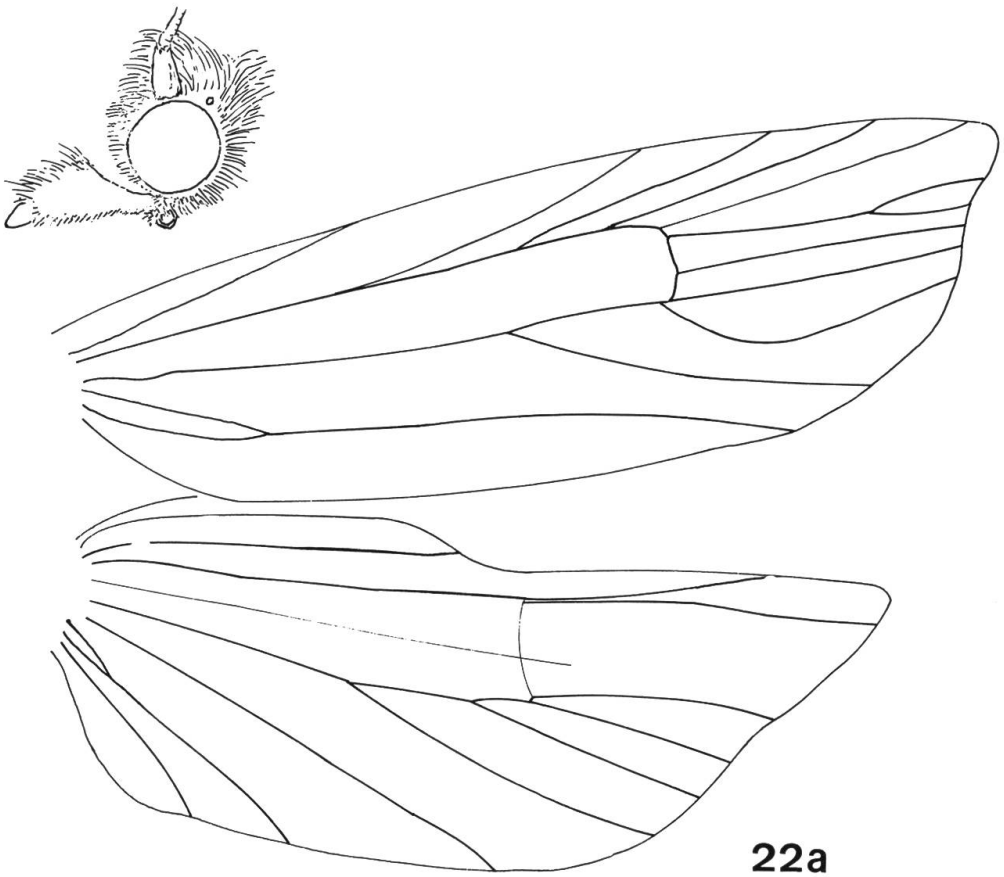
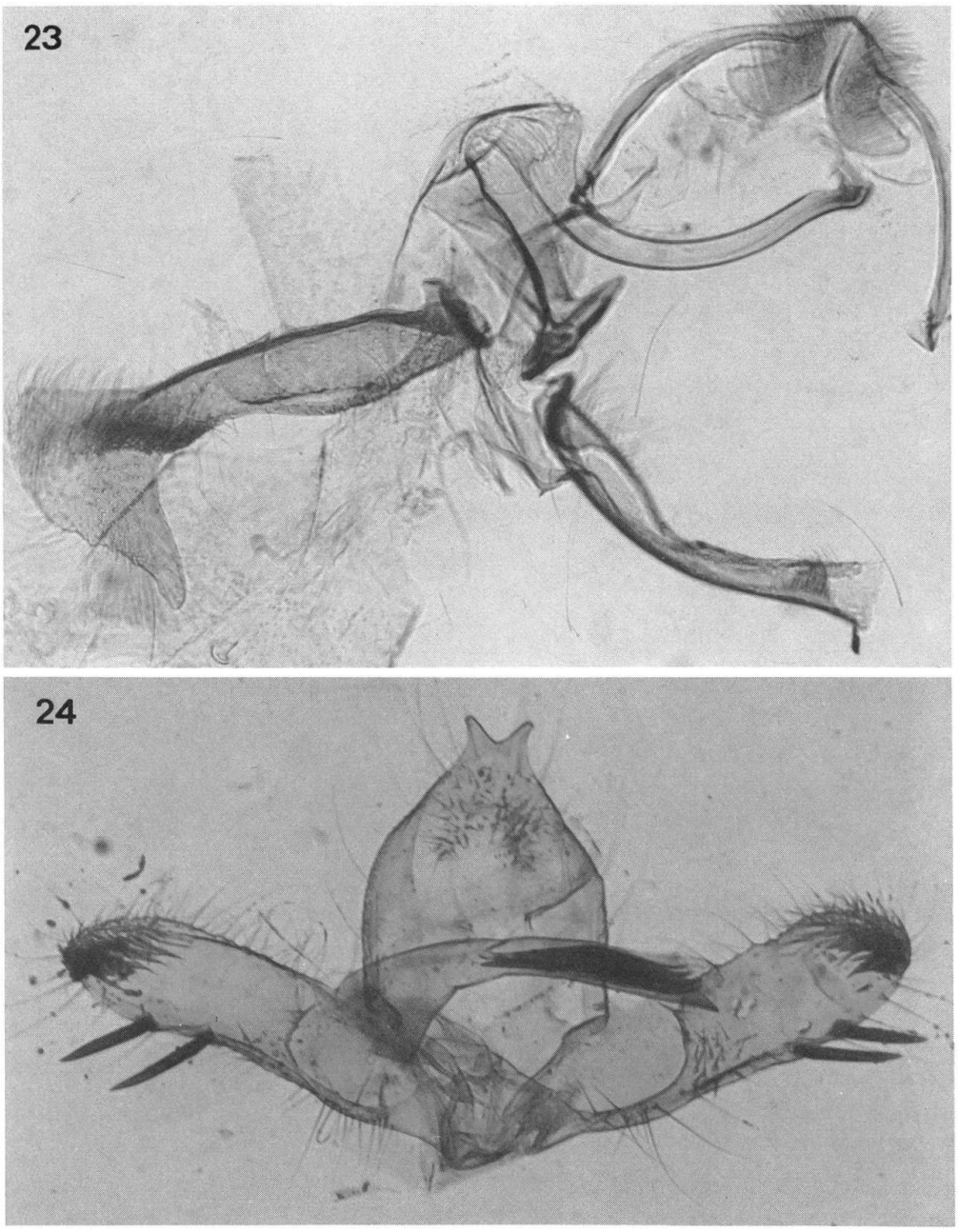




Fig. 22: *Herpystostena sicaria* (Diakonoff): 22a, sketch of head and wing venation. 22b, male genitalia, GS 10616.




Figs 23–24: Male genitalia of Eucosmini: 23, *Ancylis (Anchylopera) oestobola* n. sp., holotype. 24, *Herpistostena sicaria* (Diakonoff), GS 10616.

**Rhopobota metastena** n. sp. Fig. 26.

♂. 11.5 mm. Head densely scaled, dull light ochreous-grey, dense scaling on face becoming whitish below. Palpus rather short, white on the inside. Antenna thickened, scape dull grey, flagellum with a faint

silky gloss. Thorax smooth, ashy grey. Abdomen dark grey, venter pale grey, anal tuft pale fuscous.

Fore wing with a moderate costal fold; wing rather narrow, oblong, distincly gradually narrowed posteriorly, broadest at ¼, costa rather curved along basal half, gently sinuate, almost straight along posterior half, apex falcate, termen sinuate, very short, vertical, dorsum broadly rounded anteriorly, gently curved posteriorly, tornus gradually, obliquely rounded, indefinite. Light ashy-grey with a slight silky gloss, markings limited, light and dark brown, dull. Costa suffused with dark brown, suffusion becoming slightly broader, gradually darker blackish-brown, apex black; ten about equidistant coarse white double costal marks, posterior less oblique, well before apex; dark spots between white marks emitting oblique, parallel, partly suffused brownish-black narrow streaks; first at ¼, extended along fold in an oblong-oval spot; more distinct streak from ½, to some irregular dark brown dusting in middle of disc at ¾ of wing length, somewhat longitudinally extended, ending in a blackish larger spot, indistinctly connected by a vertical lighter suffusion with a brown spot on end of fold: a brownish suffusion on base of wing; ocelloid spot indicated by a large subquadrate patch on middle of dorsum, with anterior edge ill-defined, brownish, with a thin whitish line, posterior edge formed by a distinct white, outwards-concave line, followed by a brownish marginal streak along dorsum. Cilia grey-fuscous with a narrow white basal line, tips of cilia darker, black at apex.

Hind wing evenly dull cinereous-fuscous, a row of ill-defined brassy spots along terminal edge. Cilia bronze-fuscous, paler along dorsum, throughout with a white basal streak.

Male genitalia (Fig. 26). Surprisingly similar to those of the Palaearctic type-species, *R. naevana* Hübner, differing only by thinner bristled cucullus that is less oblong and more truncate, by smaller aedeagus and by narrower bristly «head» of the contiguous socii.

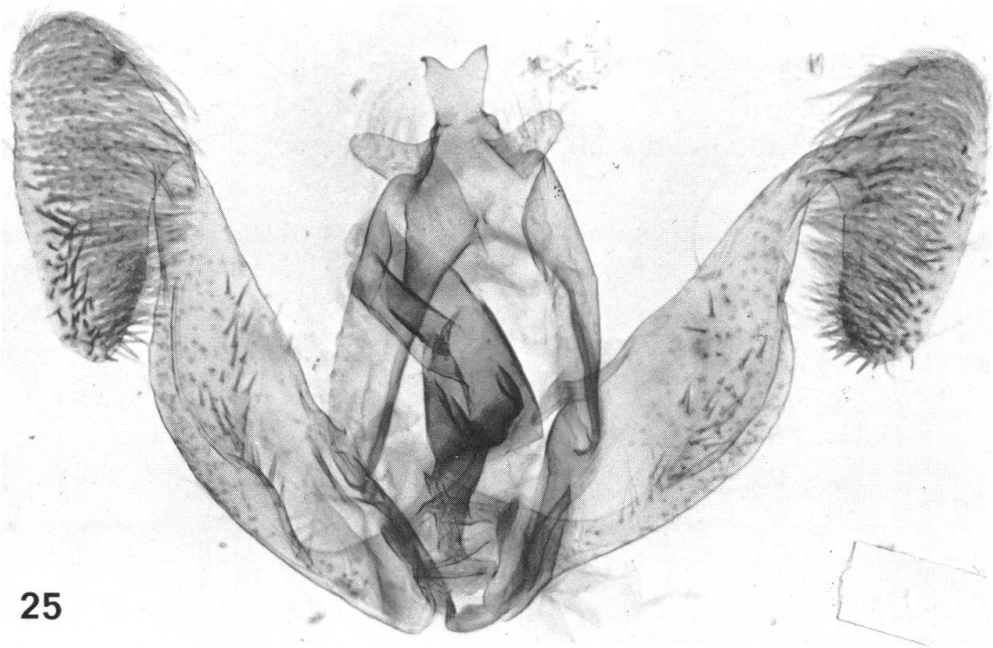
Derivatio nominis: μετα = at the end, στενός = narrow.

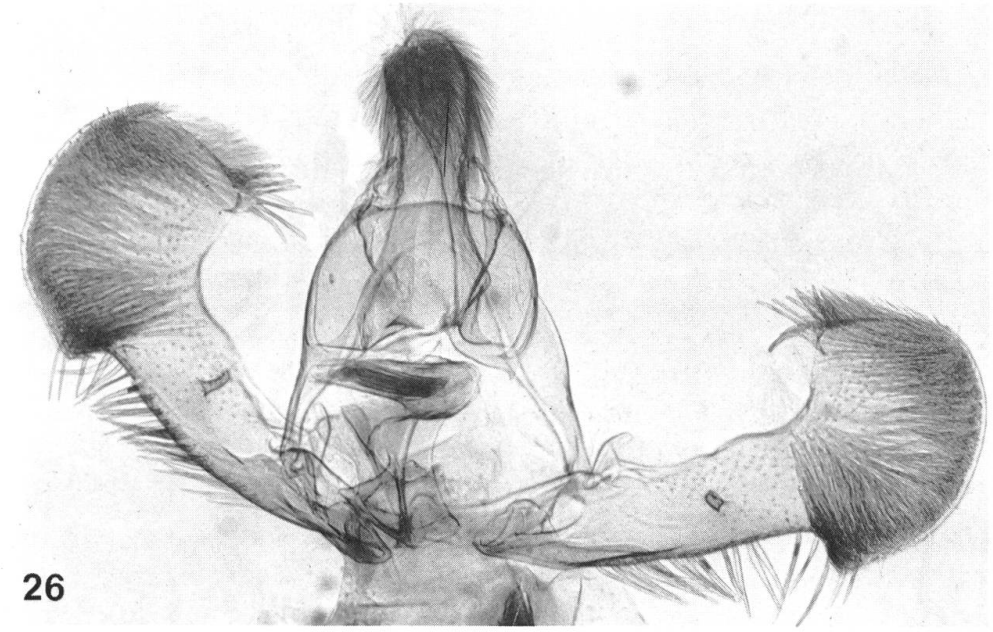
Type: West Sumba, Pogobina, 500 m, IX.1949 (holotype ♂, GS 1717).

Closely related to the Palaearctic *R. naevana* Hübner, differing by distinctly narrowed fore wing, by colouring and markings and by minor differences of the male genitalia.

**Ancylis (Anchylopera) oestobola** n. sp. Fig. 23.

♂. 13 mm. Head creamy, forehead densely scaled, projecting over




Figs 25–26: Male genitalia of Eucosmini: 25, *Epinotia (Ceriodes) aethopa* n. sp., holotype. 26, *Rhopobota metastena* n. sp., holotype.

face; face snow-white, median segment strongly dilated towards apex, light ochreous, apex of median, and entire terminal segment, snow-white. Antenna rather thickened, grey-fuscous. Thorax pale ochreous. Abdomen glossy light fuscous, tinged pale ochreous, venter and anal tuft pale ochreous.

Fore wing oblong, narrow, hardly dilated, broadest in middle,

costa gently curved throughout, apex falcate, termen deeply excavate above, prominent in middle, oblique below. White, rather irregularly dusted with light fuscous, here and there streaked with darker fuscous; less than anterior half of costa suffused with pale grey, with some seven dark fuscous transverse wedge-shaped marks, becoming more oblique posteriorly; posterior half of costa dark fuscous, with some six pairs of greyish marks, on costal edge white; a pure white inwards-oblique streak on costa before base of apex; a grey subcostal suffusion, attenuated at ends, from 2/5 of costa to the white preapical streak; conspicuous pure white, slightly spindle-shaped, longitudinal streaks: largest, from middle of base to before termen above tornus, rather pointed; another white streak smaller, from upper angle of cell to white preapical mark on costa; white streaks almost touching at base of the small one and separated by two parallel dark fuscous streaks, upper forming the lower edge of upper (smaller) streak; apex with a round dark fuscous spot; termen partly infuscated; a thin black marginal line along the concavity of termen. Cilia fuscous with a white basal band, gradually dilated from tornus to concavity, thence forming a white bar below apex.

Hind wing semipellucent light fuscous, glossy, wing membrane with bluish reflections. Cilia concolorous, with a pale basal line.

Male genitalia (Fig. 23). Tegumen broad and rather low, top pointed. Socii large, contiguous, then excurved. Valva rather short, hammer-shaped, cucullus broad above, narrowed to a point below, with a longitudinal patch of hairs at base. Aedeagus long, slender, curved, with a single small cornutus at top. Caulis long.

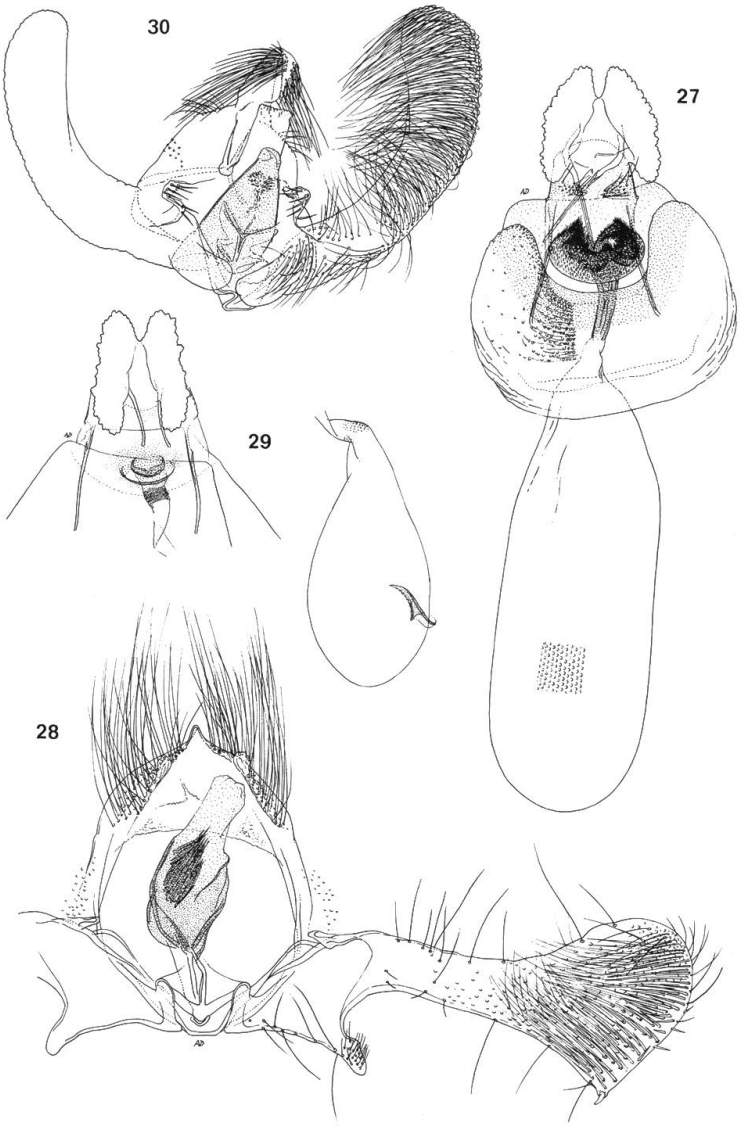
Derivatio nominis: οἰστός = arrow, βάλλω = to throw.

Type: W Sumba, Pogobina, 500 m, IX.1949 (holotype ♂, GS 1718).

A distinct species with narrow fore wing and characteristic markings. The genitalia resemble those of *A. hylaea* Meyrick, from Assam, but differ in details of socii and the shape of the valva.

**Ancylis rostrifera** Meyrick Figs 28, 29.

*Ancylis rostrifera* Meyrick, 1912, J. Bombay Nat. Hist. Soc. 21: 862. – Diakonoff, 1950, Bull. Brit. Mus. (Nat. Hist.) Ent. 1: 282 (lectotype design.). – Clarke, 1958, Meyrick's Types 3: 295, pl. 146 figs 2–2a (lectotype, genitalia ♂ figured). – Diakonoff, 1982, Zool. Verh., 193: 63 (Ceylon).




Figs 27–30: Genitalia of Eucosmini and Olethreutini: 27, *Zomariana carnicolor* (Meyrick), female, GS 7383. 28–29, *Ancylis (Anchylopera) rostrifera* Meyrick: 28, male, GS 2705. 29, female, GS 1721. 30, *Endothenia engone* n. sp., male, holotype.

Material studied: West Sumba, Waimangura, 450 m, VIII.1949 (7 ♂); Pogobina, 500 m, IX.1949, 4 ♂, 2 ♀, GS 1720 ♀). Central Sumba, Loko Djengo, 400–500 m, IX.1949, 5 ♂, 4 ♀, GS 1721 ♀, 3221 ♀); Lindi Watju, 400–500 m, X.1949 (1 ♂).

Entirely similar to the topotype.

This small, distinctly marked species is known to me also from Java

and Borneo, but probably as distinct subspecies which will be trated elsewhere.

Distribution: Sri Lanka, Sumba, Java, Borneo.

**Ancylis (Anchylopera) convergens** n. sp. Figs 8, 9.

♀. 11 mm. Head light fulvous-ochreous. Palpus tawny-ochreous, partly mixed with chestnut. Thorax fulvous-ochreous. Abdomen fuscous. Fore wing oblong, hardly narrowed posterad, apex falcate, termen deeply excavate above, rounded-prominent below. Pale fulvous-ochreous, markings light and dark chestnut, tinged ferruginous. Anterior 2/5 of costa deep chestnut with some five marginal whitish streaks, indicating interspaces between dark transverse marks which are entirely confluent and not traceable separately; this deep streak of costa extended below into a dark suffused elongate-triangular spot, anteriorly dark chestnut-fuscous, posteriorly light chestnut-ochreous, terminated by a whitish triangular costal mark at the base of the apical falcation; a bright chestnut suffusion occupying more than anterior half of dorsum, from base, almost touching fold (somewhat rubbed), an irregular ferruginous-chestnut streak from about 1/3 of disc (rubbed there), running horizontally and concave above, on lower angle of cell with an oblong darker suffused patch, thence narrower again, to before termen, with a second parallel streak above it, running to chestnut spot filling out apex; terminal part with three fuscous parallel streaks, rather ill-defined, dilated posteriorly, more oblique than dorsum; a minute dark line along concavity below apex. Cilia dull pale creamy-fuscous.

Hind wing semipellucent light golden-fuscous, glossy, with darker dusting tending to form transverse striation posteriorly (pale bases of scales). Cilia fuscous, with a pale basal line.

Female genitalia (Figs 8, 9). Sterigma sclerotic, an inverted crescent, short-aciculate. Colliculum, a broad, subsclerotic tube, gently narrowed downwards. Ductus bursae short and narrow, sinuate, with a linear central cestum. Corpus bursae with erected anterior part, remainder pear-shaped. Signa two, inequal, flatly compressed, with narrow basal plates.

Type: E Sumba, Melolo, 0–25 m, V.–VI.1949 (holotype ♀ GS 1716). The unique specimen is somewhat rubbed, but the markings almost completely intact.

The species is characteristic by the developed discal markings and the genitalia.

**Ancylis (Anchylopera) monochroa** n. sp. Fig. 31.

♂. 12 mm. Head pale tawny-creamy, a strong tuft on front, projecting over face, mixed with chestnut. Palpus subrhomboidal, flattened laterally, rather smooth, acutely pointed, creamy with a faint submedian horizontal streak, light chestnut. Thorax pale tawny-fulvous. Abdomen light brown-fuscous, anal tuft ochreous-white.

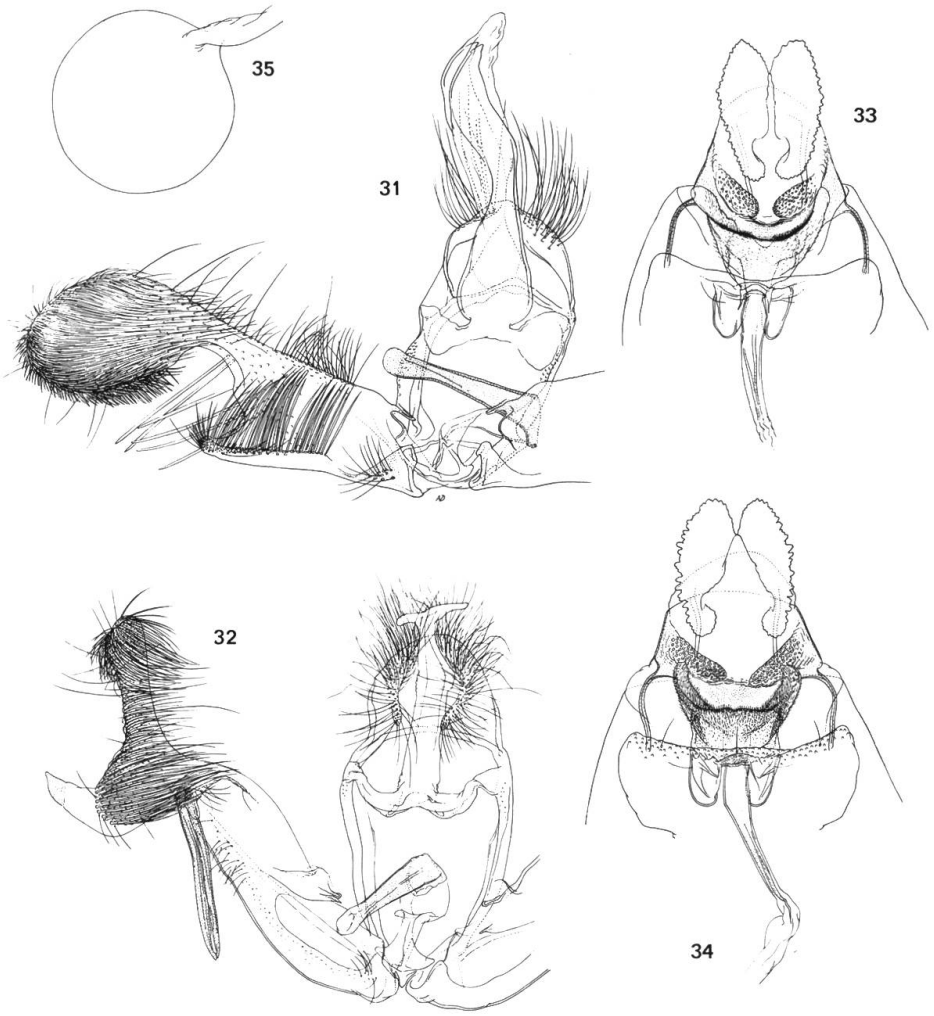
Fore wing oblong, a trifle narrowed posterad, costa curved anteriorly, almost straight to tip of apex, this acute, projecting, termen deeply sinuate above, rounded-prominent below. Creamy, partly suffused with light ochreous, more so on posterior half, sparsely strewn with oblong paler and darker chestnut scales, denser and slightly infuscated on lower half of base of wing; costa along 2/5 with a regular series of slender dark chestnut oblique strigulae, alternating with creamy ones, anteriorly almost horizontal, gradually becoming moderately oblique, extending to middle of wing; posterior 3/5 of costa with a narrow deep fuscous-chestnut streak, its anterior end forming a broader oblong greyish-fuscous patch, suffused below; costal streak gradually narrowed towards 3/4 of costa, thence dilated again towards apex; apex dark fuscous, cut by a vertical white strigula at base, edged below with a creamy-white line, running along terminal concavity to round spot in tornus and narrowly followed by a dark brown marginal line; chestnut scales in disc forming a faint and irregular broad vertical transverse band just before middle, indistinctly extended along lower half of wing halfway towards tornus; fold partly filled out with chestnut; a round fuscous-chestnut spot in tornus. Cilia light tawny, darker posteriorly, suffused with white along base, except along concavity.

Hind wing subpellucent glossy pale fuscous. Cilia deeper greyish-fuscous with a narrow, pale basal line.

Male genitalia (Fig. 31). Tegumen high, top rounded. Tuba analis very large, with, laterally along its lower half, sides sclerotic. Socii parietal, long-haired. Valva robust, broad, deeply excavated beyond middle, cucullus part obliquely oval, spiny along lower half, sacculus bluntly prominent, with long, slender spines from beyond base. Aedeagus short, slender, straight, top rounded, without cornuti.

Type: East Sumba, Langgai, 700 m, VII.1949 (holotype ♂, GS 1715).

Probably belongs to the *A. glyciphaga* Meyrick group of species but is distinct by lack of markings and the genitalia, especially the unusually large tuba analis.




Figs 31–35: Genitalia of Eucosmini and Olethreutini: 31, *Ancylis (Anchylopera) monochroa* n. sp., holotype, male. 32–35, *Rhectogonia dyschima* n. sp.: 32, holotype, male. 33, paratype, female, GS 5847. 34, allotype, female. 35, the same, bursa copulatrix.

**Gephyroneura bathysema** n. sp. Figs 36–38.

?*Enarmonia hemidoxa* Issiki, 1957 (nec Meyrick, 1907).

♂. 10.5 mm. Head light yellow, rather mixed with black. Antenna purplish-black, scape yellow, mixed with black. Palpus light yellow. Thorax purple-black, richly mixed with light yellow. Abdomen dark grey, venter pale yellow.

Fore wing broad, subtriangular, costa considerably curved, less so in middle, apex rounded, termen rounded, moderately oblique. Slightly

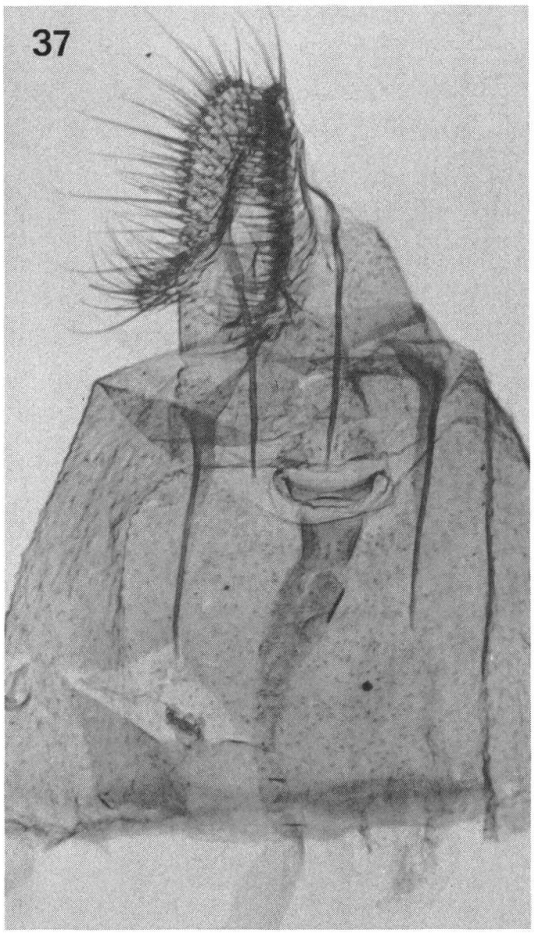
more than basal half light yellow, with a golden gloss, sparsely dusted with black, this dusting tending to form ill-defined transverse series towards ¼; denser dusted towards base, rather thinner dusted posteriorly, a band along posterior edge almost not dusted at all; a patch of dense dusting on base of dorsum; short transverse dots along anterior fourth of costa, becoming two or three slender, more distant lines posteriorly; posterior half of wing rather bright crimson, with a touch of yellowish in centre and towards termen, rather closely marbled with purple-black, appearing dull anthracite-bluish in certain lights; posterior half of costa black, with six yellow oblique marks, becoming less oblique posteriorly: three anterior single, close together, fourth and fifth double, distant, sixth single, whitish, just before apex, a dark leaden, submetallic streak from about middle of costa, running below costa towards termen below apex, not reaching this; a black band from costa just before middle, narrow and oblique, below costa becoming broad, well defined posteriorly, characteristically serrate: with a slender horizontal tooth in middle, flanked by rather deep yellow notches, these followed by obtuse, shorter prominences; posterior edge of band suffused, connected with black marbling, that is rather coarse with more or less contiguous inequal dots, tending to be crested lengthwise, covering crimson area regularly, not equal in right and left wing. Cilia black-purple, slightly barred with reddish, a thin white basal line.

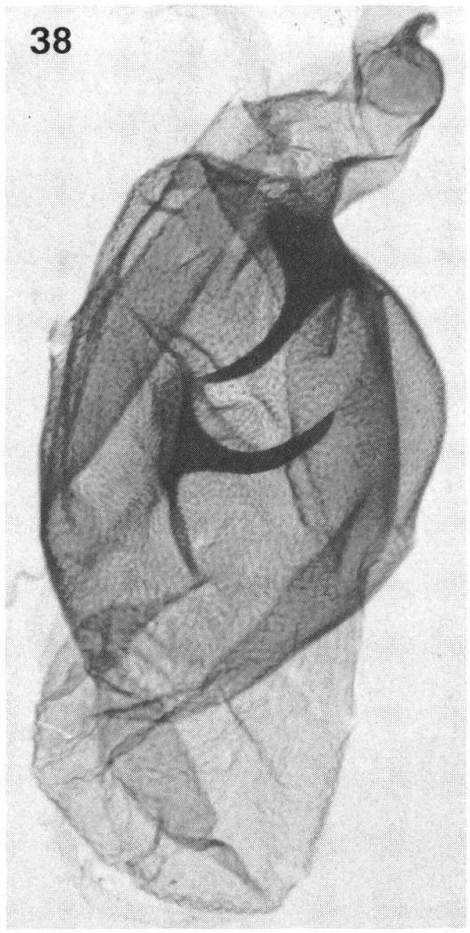
Hind wing dull purplish-brown, along broad margin suffused with dull black. Cilia light fuscous with a darker fuscous base, cilia in tornus whitish.

♀. 11 mm. Similar to the male, black dusting of basal yellow half somewhat denser, tending to form fine reticulation; posterior half with the dark pattern entirely anthracite-bluish, only extreme anterior edge narrowly dull jet-black; this edge deeper serrate, median tooth distinct above this a rounded and another acute tooth. Cilia purple-black, anthracite in certain lights, with crimson bars: two below apex and three in and around tornus.

Hind wing more brownish tinged with paler, tawny base. Cilia light orange, basal third irregularly brown; cilia on dorsum throughout creamy.

Male genitalia (Fig. 36). Tegumen moderate, elongate-oval, top rounded with socii on top, each with a comb of blunt, pending spines. Tuba analis oval. Valva membraneous, with a median slender longitudinal ridge, top rounded, lower edge of cucullus slightly angulate, sacculus concave at base, edge rounded. Caulis, a flat oval body, erect,


Figs 36–38: Genitalia of *Gephyroneura bathysema* n. sp.: 36, male, holotype. 37, female, allotype. 38, bursa copulatrix.

twice as high as broad, narrowed in middle, base rounded, with short, lateral down-curved prominences. Aedeagus short, top obtuse, cornuti, a short sheaf of numerous spines. Fine pencil-like coremata at 8th sternite.

Female genitalia (Figs 37, 38). Ovipositor rather slender, finely long-haired. Apophyses short and slender. Sterigma simple, top concave. Ostium, a depressed double ring, concave above. Colliculum, a short simple funnel. Ductus bursae simple. Corpus bursae finely punctulate-scobinate, lower third narrowed. Signa, two slender acute hooks with funnel-shaped bases.

Types: East Sumba, Melolo, 0–25 m, V.–VI.1949 (holotype ♂, GS 10655; allotype ♀, GS 10656, 1 paratype ♀). Prai Jawang, 50–150 m, VI.1949 (2 paratypes ♂).

The species is closely related to an as yet undescribed pest of the pepper culture in the island of Banka, differing by denser black dotting of the latter species and by the minor differences of the genitalia (the shape of the caulis). Another closely probably related, but apparently distinct species is *Enarmonia hemidoxa* Issiki (nec Meyrick, 1907), in Esaki c. s., (1957).

**Gephyroneura hemidoxa** (Meyrick)

*Laspeyresia hemidoxa* Meyrick, 1907, J. Bombay Nat. Hist. Soc. 18: 145 (India: Khasis, ♂♀). – Clarke, 1958, Meyrick's Types 3: 440, pl. 219 figs 3–3a (lectotype design., fig.). – Obraztsov, 1959, Tijdschr. Ent. 102: 193 (part.). Nec Fletscher, 1921; nec Issiki, 1957.

Material studied: East Sumba, Prai Jawang, XI.1949 (1 ♀, GS 2703). Also from West Java, Mt. Gedeh-Panggrango, Tjibodas, 1400 m, 30.XII.1940 (author) (1 ♂, GS 2684) (homoeotype). East Java, Nongkodjadjar, Goenoeng Toenggangan, 1300 m, 24.III.1940, A. M. R. Wegner (1 ♂) (homoeotype).

Note: As stated above records from Japan do not pertain to this but to the preceding species, *G. bathysema* sp. nov., or another closely related species, while the record from Travancore (a specimen, bred from a shoot of pepper vine) very probably pertains to a closely related species, a pest of the pepper vine from Banka Island, that will be treated elsewhere. The two latter species are indeed very similar and can be easily confounded, but why *hemidoxa* has been confused with them, is less clear.

Food plants: Unknown.

Distribution: India: Khasis, Sumba, ?New Guinea (Obraztsov, 1959). Nec Japan (Issiki, 1957), nec India: Travancore (Fletcher, 1921).

## **Zomariana** n. gen.

Type species: *Argyroploce carnicolor* Meyrick, 1931.

Head with appressed scales. Ocellus posterior. Haustellum short. Antenna short-pubescent in male. Palpus subascending, triangularly dilated posteriorly, terminal segment short, subobtuse. Thorax without a crest. Posterior tibia with smoothly appressed scales, slightly roughish below.

Fore wing oblong-truncate, wihout a costal fold in male, costa gently curved, apex subrectangular, termen slightly convex, almost straight above. Vein 1b furcate at base, 2 from before ¾ of lower edge of cell, 3 from angle, 3–5 closely approximated at base and equidistant, not approximated at termen, 7 separate, to termen, 7–9 approximated and equidistant, 10 from halfway 9–11, 11 from before middle, median branch in cell developed but thin, from base to above base of 5, chorda very short and weak, from before base of 9 to base of 7.

Hind wing oblong-subtriangular, about 1, with a cubital pecten. Vein 2 from ⅘ of lower edge of cell, 3 and 4 short-stalked from angle, 5 curved and approximated at base to 4, 6 and 7 closely approximated towards base, discoidal strongly concave.

Male genitalia. Tegumen rather short, with vinculum shorter than valva, triangular, with a large circular and disc-like top, below forming a well-defined, sclerotic, triangular and acutely pointed gnathos. Socius extremely large, rising, membraneous, beset with fine primary bristles and dense scales. Transtilla, a slender rod with dilated oval ends. Valva large, robust, pulvinus strong, oblique-trapezoidal, with a longitudinal, long-haired ridge to apex. Sacculus under ⅓ with small spines at end before deep excision, cucullus haired, its lower anterior angle densely and finely bristled; harpe on the outside, a sheaf of brown stiff bristles, projecting across excision. Aedeagus large, straight and thick, base dilated.

Female genitalia. Sterigma deeply excised in middle, sides rounded. Ostium, a spherical sclerotic body, with a broad transverse (dorsoventral) excision on upper side and a small lip in front, this excision covered throughout on outer and inner side with dense short bristles. Colliculum, a sclerotic long tube. Ductus bursae short. Corpus bursae large, sausage-shaped, without signa.

Derivatio nominis: Zomaria = nomen generis.

The present genus may belong to a category of genera that possibly represents intermediate forms between Eucosmini and Olethreutini, showing a combination of features of both these tribes, without being

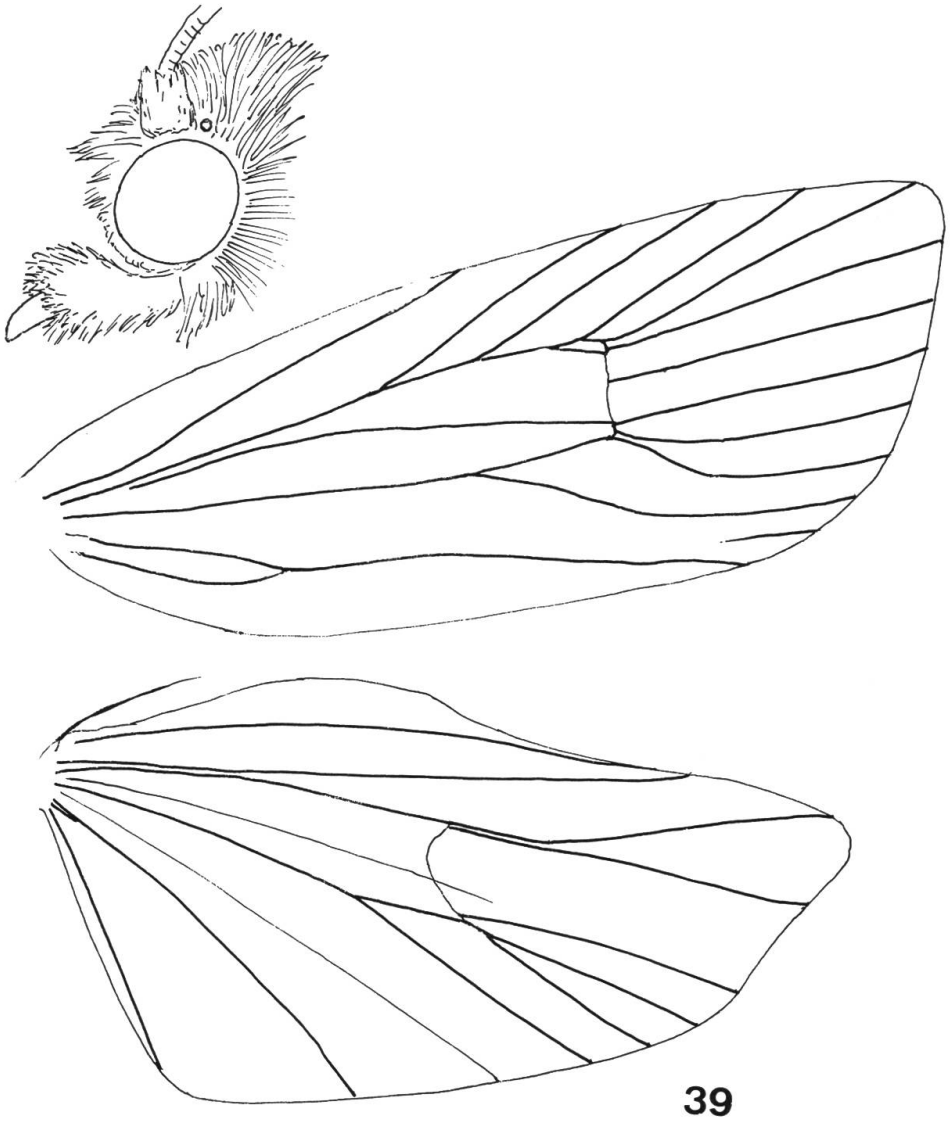



Fig. 39: *Zomariana carnicolor* (Meyrick), sketch of head and wing venation.

interrelated all too closely. We once elaborated upon these forms, not uncommon in southern Asia (Diakonoff, 1973), with, as an exemple, *Rhectogonia* Diakonoff, and may refer for particulars to that place.

As can be assumed from Meyrick's assignment of *carnicolor* to *Argyroploce*, this species has olethreutine facies and wing venation, except that the chorda is almost vestigial and very short and the median branch in cell ends *above* the base of 5 which is very unusual, for, as far as I know, in Olethreutinae this branch always terminates in or below that base. The female genitalia are rather olethreutine, with a complicated ostium. But the male genitalia, that superficially are similar

to those of the type of Nearctic *Zomaria interruptolineana* Fernald, judging from the shape and the character of the valva, are decidedly eucosmine.

Meyrick's reason for the above assignment of *carnicolor*, is the presence of a black hair pencil in a subdorsal groove in the hind wing, comparable with that in «*Argyroploce*» *philocompsa* Meyrick. However, this is one of the secondary sexual characters of the male, that are common to both Olethreutini and Eucosmini, in the latter at least in the group of the above mentioned «intermediate» genera. *A. philocompsa* has been referred to *Didrimys* Diakonoff, a true olethreutid (l. c., p. 390).

**Zomariana carnicolor** (Meyrick) n. comb. Figs 27, 39, 40.

*Argyroploce carnicolor* Meyrick, 1931, Exotic Microlep. 4: 311 (Java: Kediri).

Material studied: East Sumba, Mau Marru, 500 m, VII.1949 (1 ♀, GS 7383; 1 ♂).

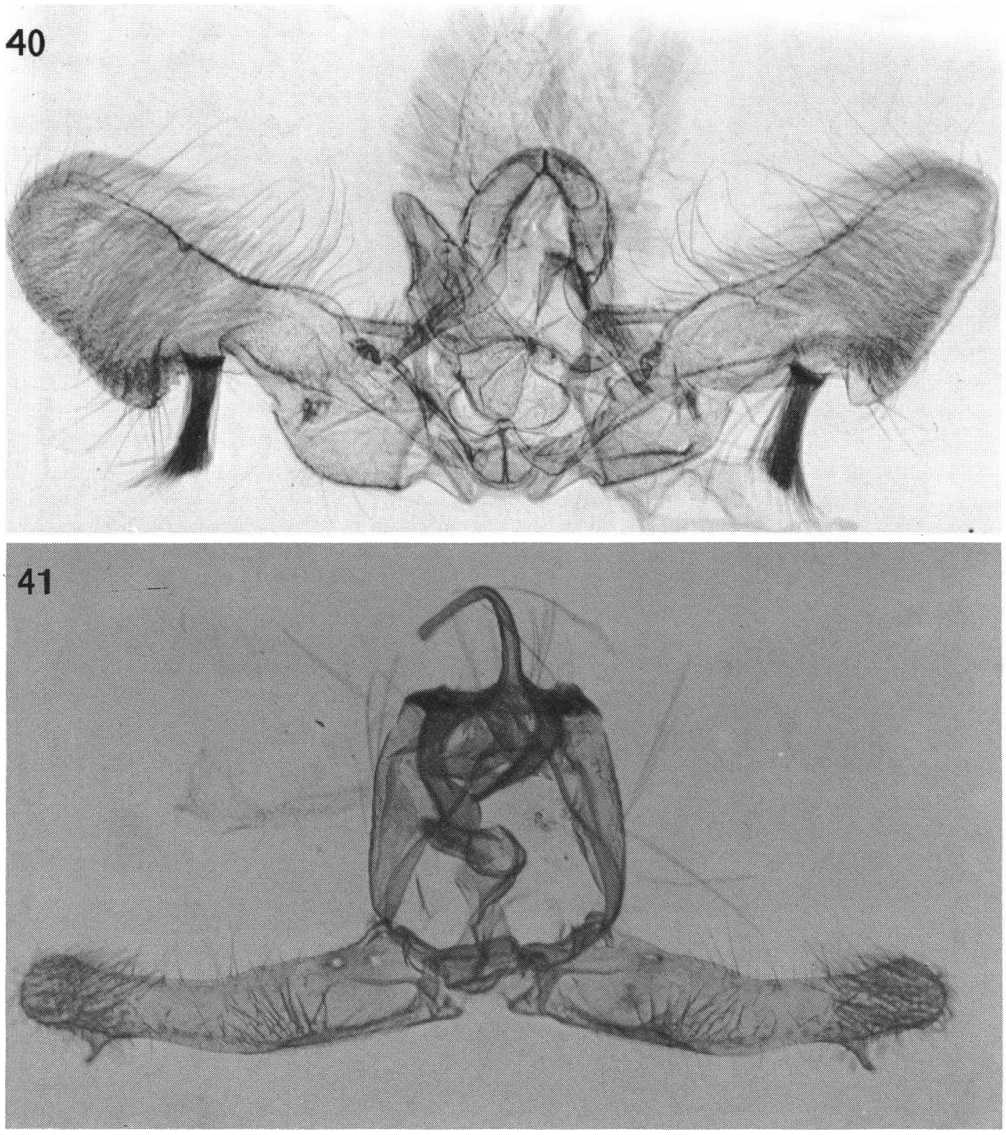
Besides, the following material from other localities of this distinct but little known species may be recorded:

East Java, Pasoeroean, 5 m, 3.III.–8.VII.1940–1941, A. Diakonoff (7 ♂, 4 ♀, GS 10623 ♀). Mt. Ardjuno, Tretes, 900 m, 8.II.1940, A. Diakonoff. Tengger Range, Tosari, 1777 m, 23.II.1940, A. Diakonoff (1 ♀). Nongkodjadjar, 1300 m, 6.III.–20.IV.1940, A. M. R. Wegner (4 ♀).

Central Java, Lectotype (present designation), ♂, labellel thus:/gen. no. 10607 A. Diak./L. G. E. Kalshoven, Java, Kediri, teak forest, 25.12.1930, no. 222/Kedending/*Argyroploce carnicolor* Meyr./ (my lectotype label)/. The food plant, Kedending (Javanese) is *Averrhoa carambola*. Further material: 2 ♂, lectoparatypes. Semarang, 140 m, 6.VIII.1931 (1 ♂) (no abdomen). Gedangan, 7.XI.1931, L. G. E. Kalshoven (1 ♂).

West Java, Bandoeng, 4.VI.1925, A. Diakonoff (1 ♀) (about the only specimen of my high school collection of the Microlepidoptera of Java that has survived the Second World War). «West Java», E. Jacobson (1 ♂). Gedeh-Panggrango Range, Tjibodas, 1300 m, 11.XI.1948 (M. A. Neervoort) (1 ♀).

Distribution: Java, Sumba.




Figs 40–41: Male genitalia of Eucosmini and Olethreutini: 40, *Zomariana carnicolor* (Meyrick) lectotype. 41, *Lepidunca empidomorpha* n. sp., holotype.

## Olethreutini

### **Lepidunca** n. gen.

Type species: *Lepidunca empidomorpha* n. sp.

Head with loosely appressed scales, a small ridge across forehead. Ocellus large, inferior. Haustellum short. Antenna thickened in male, scape with a notch, simple. Thorax smooth. Labial palpus slightly sinuate, subascending, median segment dilated with rough scales above

and beneath towards apex, apical segment short, exposed. Thorax smooth. Posterior tibia normal.

Fore wing long, very narrow, laciniate, not dilated, costa with a strong fold almost to middle, gently convex along basal half, straight posteriorly, apex prominent, rounded, termen very oblique, sinuate and concave above, broadly rounded below. Vein 1b from base, 1c (fold) strong, running closely to cubitus and almost obscuring and pushing aside vein 2, which originates at ¼ of lower edge of cell, 3 from angle, strongly curved, 4 absent, 5 straight, almost connate with 3, 6 subparallel, closer to 5, remote from 7, 7 and 8 stalked, 7 to termen, 10 far remote from 9, 11 from far before middle of cell; chorda and media not perceptible.

Hind wing slightly over 1, oblong-oval, apex strongly produced, almost linear, pointed; termen, sinuate and extremely oblique; semipellucent, clothed thinly with long hair-scales; A veins thickened with hair-scales; A3 developed, 2 from beyond middle of cell, 3 from angle, 4 absent (or coincident), 5 slightly approximated at base, media developed throughout, coincident with 5 from beyond its base to end, 6 absent, 7 strong, straight, from base to apex of wing, 8 weak, close to wing margin, to middle of costa.

Male genitalia. Tegumen subquadrate, subsclerotic on flat top. Uncus, a slender, simple hook, with a small upcurved spike at base. Gnathos large, sclerotic, V-shaped, arms flattened, each with a large, oblong, internal, oval lobe, leaning with tips against one another; socii absent. Valva long, slender and flat, cucullus slightly upcurved, bristly, an obtuse blunt spine on lower edge. Sacculus ½, slender, narrowed, with a bunch of bristles at apex, base triangularly dilated. Aedeagus short, with a bulbous base, on a long caulis.

Derivatio nominis: *lepidus* = slender, *uncus* = a part of the parameres.

The genus is characteristic by the well developed uncus and gnathos, by the costal fold and the notched scape of the antenna. Its position is rather obscure.

**Lepidunca empidomorpha** n. sp. Figs 41, 42.

♂. 6 mm. Head fuscous-ochreous. Palpus deeper fuscous. Antenna fuscous. Thorax light grey. Abdomen pale fuscous.

Fore wing long and very narrow (Fig. 42), not dilated, costa hardly curved along anterior half, with a strong fold to middle, straight posteriorly, apex produced, obtusely pointed, termen very oblique, con-

cave below apex, broadly and obliquely rounded below. Less than upper half of wing rather light grey finely marbled with darker grey, more so on costal fold and along posterior half, apex rather dusted with blackish; more than lower half of wing pale ashy-grey, along more than basal half semipellucent and appearing whitish, except for a strong dark fuscous-grey streak along fold from base to dorsum, at end extended into a rhomboidal spot, inwards-oblique; beyond this band lower half of wing somewhat less semipellucent by grey suffused streaks along terminal veins. Cilia grey with a pellucent basal band.

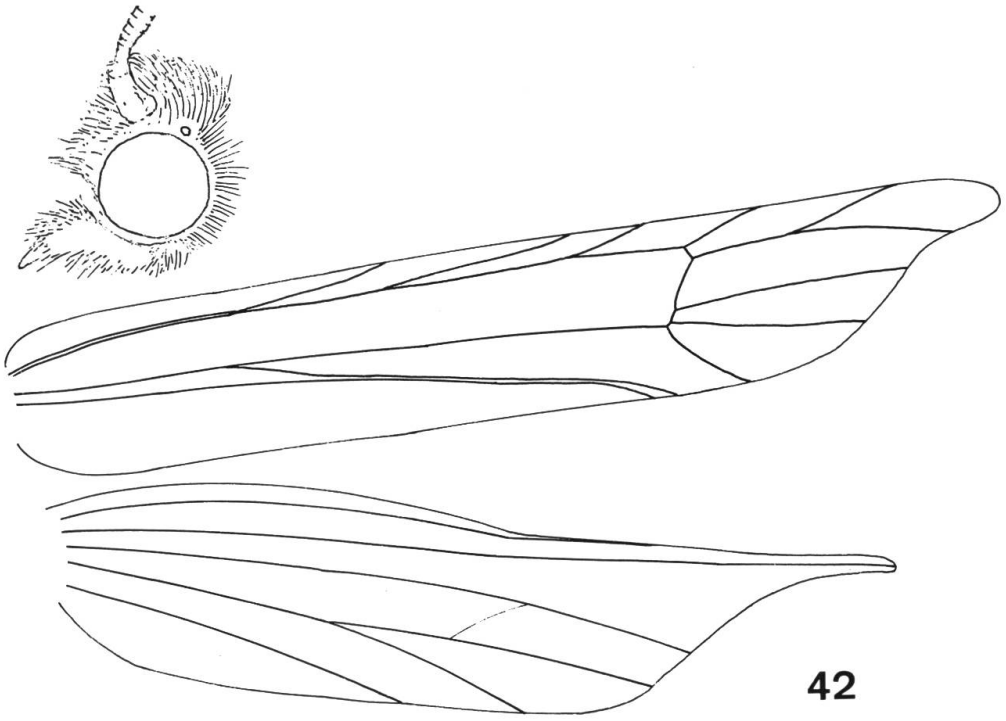



Fig. 42: *Lepidunca empidomorpha* n. sp., sketch of head and wing venation.

Hind wing semipellucent pale fuscous with a slight gloss, veins opaque, underside thinly clothed with long fine hair-scales, veins thickened with these scales. Cilia pale fuscous with a slight bronze gloss.

Male genitalia (Fig. 41), as described with the genus.

Derivatio nominis: ἐμπίς = musquito, μορφή = shape.

Type: Central Sumba, Lindi Watju, 400–500 m, 27.IX.–15.X.1949 (holotype ♂, GS 10615).

Perhaps the smallest Tortricid we ever came across.

Notwithstanding its extreme smallness, this tortricid still has the general facies of the true Eucosmini, with notched antennae and a dis-

tinct costal fold. The reduction of the neuration of the wings must be in connection with their narrow shape.

**Rhectogonia dyschima** n. sp. Figs 32–35.

♂. 10 mm. Head dark fuscous, forehead purplish, with small lateral purplish tufts over face, face whitish. Antenna hardly ¾, moderately thickened, serrulate, short-ciliate. Palpus fuscous, slightly marbled darker, median segment abruptly dilated on posterior half, edge roughish, terminal segment moderate, smooth, slender, subobtuse. Thorax rather light fuscous. Abdomen fuscous, anal tuft large, pale fuscous in male, pale ochreous in female.

Fore wing moderately broad, dilated, oblong, broadest at ¾, costa curved at base, straight beyond, gently curved along posterior third, apex rather pointed to subobtuse, termen weakly sinuate, oblique. Light fuscous suffused with darker fuscous with some purplish tinge. Anterior ¾ of wing rather evenly darker fuscous, darkest in centre of wing, edge ill-defined, parallel to termen; an oblique, ill-defined whitish-fuscous or pale fuscous streak, from beyond ¾ of costa towards upper third of termen, not reaching this, preceded by a faint vertical purple patch, spindle-shaped, from below vein 7 to termen above tornus; this pale streak parted on costa with purple and followed by another pale, small, dark-parted costal dot, apex and termen suffused with dark purple-fuscous. Cilia purple, with a creamy basal third.

Hind wing pale fuscous, with a pinkish tinge, rather glossy. Cilia paler, mixed with fuscous.

♀. 11–12 mm. Head as in male, tufts at the sides of face larger, triangular. Palpus purple. Thorax vinaceous-fuscous, posterior tuft purple.

Fore wing broader than in male, less dilated. Vinaceous-fuscous-grey, faintly striated with dark (tips of scales). Costa with a series of blackish transverse dots, rather short and obtuse; a larger wedge-shaped mark beyond ⅙ and another larger triangular one, before middle of costa, these marks connected by a blackish-purple semiovally curved line, not reaching middle of disc, posteriorly extended to form a moderate circle over upper edge of cell; a small inwards-oblique purple mark below and before that circle, halfway to fold (in left wing these markings filled out with purple); a double pinkish-white wedge on ¾ of costa, followed by a smaller single one, both merging below in a white-silvery suffusion; upper half of wing between these and preceding markings filled out with anthracite-blackish; posterior fourth of wing

paler vinaceous, except purple along costa and in apex; the spindle-shaped mark well-defined, purple, as in male from below vein 7 to termen above tornus, deep purple on veins. Cilia purplish, barred with darker, a paler basal line.

Hind wing fuscous with a faint pinkish gloss. Cilia paler fuscous with a darker submedian band and a paler pinkish basal line.

Male genitalia (Fig. 32). Tegumen high, elongate-ovate. A pseudo-uncus is a hyaline T-shaped process below top. Socius partly parietal, with a short free point, long-haired throughout, as is top of tegumen around base of pseudo-uncus. This connected by a long hyaline stipes with distinct undulate transverse band (gnathos). Valva long, rather narrow, constricted below cucullus; this large, hairy, bifid, ventral outward process hooked with a broad sclerotic spike; another double huge sclerotic spike at base of cucullus, directed rostrad. Aedeagus small, with spherically dilated base.

Female genitalia (Figs 33–35). Sterigma transverse, weak, with rounded sides. Ostium complicated: a wide aciculate funnel without posterior wall, sides wing-like, rising, concave, base of ostium with a pair of characteristic thumb-like pockets, flanking colliculum; this subsclerotic, narrow. Ductus bursae simple, corpus bursar small, simple.

Derivatio nominis: δυσχῖμος= dangerous.

Types: Central Sumba, Loko Jengo, 400–600 m, IX.1949 (holotype ♂, GS 10627; 2 paratypes ♂♀). West Sumba, Pogobina, 500 m, IX.1949 (allotype ♀, GS 2698); Rara, 350 m, VIII.1949 (3 paratypes ♀, GS 2699); Waimangura, 450 m, VII.1949 (4 paratypes ♀, GS 5837 and 5847). East Sumba, Langgai, 700 m, VII.1949 (2 paratypes ♀, GS 10631).

The species is variable, not only the described male holotype is rather unicolorous fuscous, also several female paratypes are quite similar; the most distinctly marked is the allotype. It is probable that also such mottley males occur.

The general build of the male genitalia assigns this species to the genus *Rhectogonia* Diakonoff, in spite of some discrepancies of the heavily armed valva and the following minor features of the hind wing: cubital pecten absent; termen rather notched on vein 5, this vein less closely approximated at base, 6 and 7 long-stalked, discoidal obliterate between 5 and 6+7. In fore wing median branch ends below base of 5.

The furcate gnathos, pending in the type-species, in *dyschima* is rising beyond top of tegumen, and so may be easily mistaken for an uncus.

**Cyclacanthina episema** Diakonoff

*Cyclacanthina episema* Diakonoff, 1973, Zool. Mon. 1: 352, figs 517, 542, 544 (Java; Sumba).

Material studied: West Sumba, Waimangura, 450 m, VIII.1949 (1 ♂, GS 7541).

Distribution: Java, Sumba.

**Syntozyga psammetalla** Lower

*Syntozyga psammetalla* Lower, 1901, Trans. Proc. & Rep. Roy. Soc. S. Austral. 25: 70 (♂). – Diakonoff, 1973, Zool. Mon. 1: 340, figs 534–535, 543.
*Polychrosis psammetalla,* Meyrick, 1911, Proc. Linn. Soc. N. S. Wales 36: 258, no. 364.

Material studied: E Sumba, Melolo, 0–25 m, V.–XI.1949 (2 ♂, GS 7382, 7539).

**Endothenia citharistis** (Meyrick)

*Argyroploce citharistis* Meyrick, 1909, J. Bombay Nat. Hist. 19: 595. – Clarke, 1955, Meyrick's Types 1: 91. – Diakonoff, 1973, Zool. Mon. 1: 365, figs 519–522, 529, 529A.

Material studied: East Sumba, Mau Marru, 500 m, VII.1949 (2 ♂, GS 7540). West Sumba, Pogobina, 500 m, IX.1949 (2 ♂, GS 5848). Waimangura, 450 m, VIII.1949 (1 ♂).

Distribution: India (N Coorg, Assam, Khasis), Burma, Java, Sumba (Mau Marru).

**Endothenia engone** n. sp. Fig. 30.

♂. 8 mm. Head fuscous. Antenna fuscous-ochreous. Palpus longer than diameter eye, projecting, slender, apex extended with roughish scales; dark fuscous mixed with pale tawny, basal half pale tawny. Thorax and abdomen fuscous.

Fore wing oblong, broadest at 4/5, rather narrow, costa slightly curved towards ends, almost straight in middle, apex obtusely pointed, termen almost straight, oblique. Tawny-white, marked with darker and lighter fuscous, seemingly transversely striated because of narrow pale bases of scales. Costa with a series of indistinct oblong marginal small spots; an ill-defined darker fascia at costa well beyond middle, slightly outwards-oblique, below middle extending into a blotch reaching more than halfway to tornus, above limited by vein 4, posterior end truncate, well-defined; a streak (right wing) or an oblique series of three interconnected roundish dots, from just above middle of termen to middle of vein 8, thence sinuate to top of transverse fascia; a darker suffusion in apex. Cilia fuscous (rubbed).

Hind wing fuscous-bronze, glossy. Cilia fuscous with a pale basal line.

Male genitalia (Fig. 30). Tegumen broad, top rounded. Uncus long, clavate, hooded, long-haired in front. Valva moderate, gradually gently dilated, long-haired. Labis, a single cone, with smooth top. Aedeagus, large, thick, conical, base very thick. Cornuti, a flat patch of minute spines.

A small, pale species, with rather simplified male genitalia; it is of uncertain affinity.

Derivatio nominis: ἔγγονος = granddaughter.

Types: West Sumba, Pogobina, 500 m, IX.1949 (holotype ♂, GS 10638). Central Sumba, Loko Jengo, 400–600 m, IX.1949 (1 paratype ♂).

**Gatesclarkeana erotias** (Meyrick)

*Platypeplus erotias* Meyrick, 1905, J. Bombay Nat. Hist. Soc. 16: 585 (Ceylon). – Clarke, 1955, Meyrick's Types 1: 132.

*Argyroploce erotias,* Meyrick, 1911, Proc. Linn. Soc. N. S. Wales 36: 269 (Kei Ids., Timor). – Fletcher, 1921, Mem. Dept. Agric. India, Ent. 6: 59. – Fletcher, 1932, Imp. Counc. Agric. Research, Sci. Mon. 2: 29. – Diakonoff, 1966, Zool. Verh. 85: 16, figs 28, 30, 32.

*Olethreutes erotias,* Clarke, 1958, Meyrick's Types 3: 507, pl. 252 figs 4–4b (lectotype sel., figs).

*Gatesclarkeana erotias,* Diakonoff, 1966, Zool. Verh. 85: 50. – Diakonoff, 1968, U.S. Nat. Mus. Bull. 257: 42, 321 (fig. 58, recte 60, 59, 322) (figs 63, 64). – Diakonoff, 1971, Veröff. Zool. Staatssamml. München 15: 200 (S Thailand). – Diakonoff, 1973, Zool. Mon. Leiden 1: 10, figs 3, 28.

Material studied: Central Sumba, Lindi Watju, 400–500 m, 27.IX.–15.X.1949 (1 ♂, GS 10635). East Sumba, Mau Marru, 500 m, VII.1949 (1 ♂, GS 10636).

Distribution: Ceylon, India, Sikkim, Kei Ids., Sumba, Timor, Thailand.

Tortricinae
Polyorthini

**Polylopha sichnostola** n. sp. Figs 43–44.

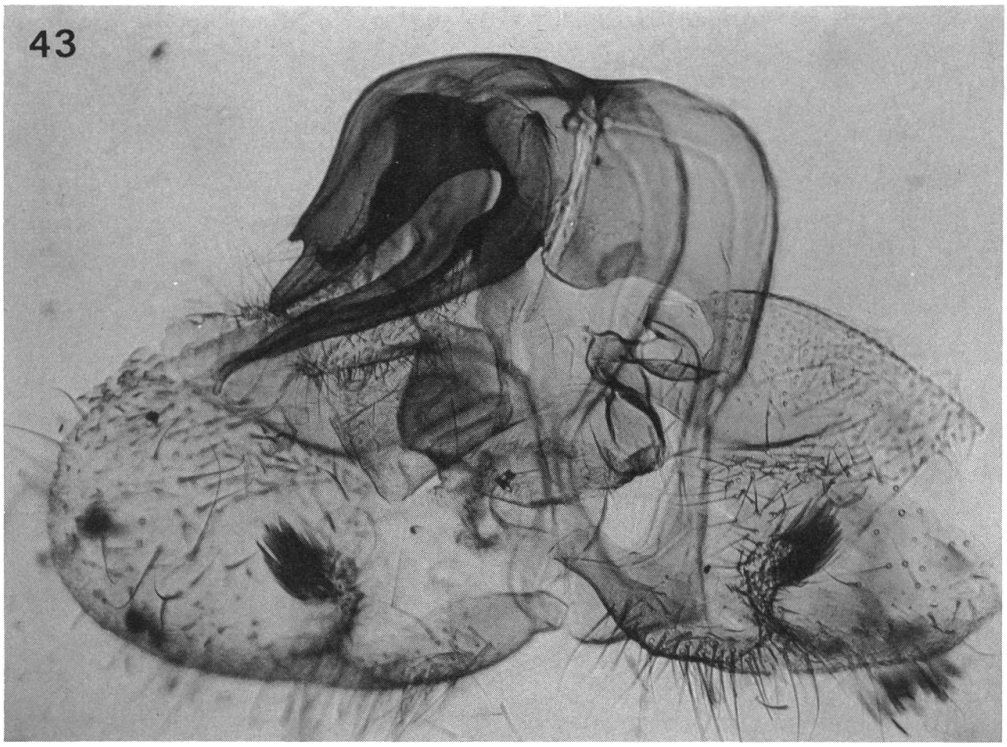
♂. 16 mm. Head dark fuscous, frons laterally with a triangular ochreous thickened patch, bearing three parallel black lines, face below light ochreous. Antenna ochreous. Palpus smoothly short-scaled, angularly bent, ascending, lower half appressed to face, flattened dorsoventrally, with rising half cylindrical; bright ochreous, terminal segment with basal half white, apical half bluish-grey. Thorax fuscous,

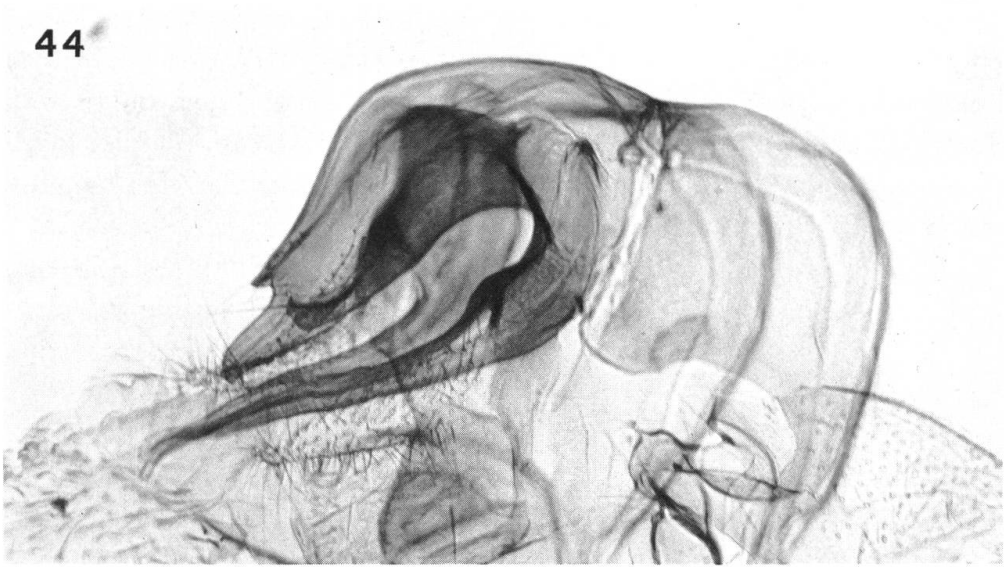
with two sublateral yellow stripes along inner edges of tegulae, narrowed beyond middle, not reaching apex. Abdomen dark purplish and slaty grey, venter whitish tinged yellow, posterior segment with grey rings.

Fore wing considerably dilated, oblong-suboval, costa little curved anteriorly, more curved along posterior half, apex rather rounded, termen convex, long. Upper third of wing dull orange-red, along posterior third becoming gradually narrowed by fuscous ground colour, occupying remainder of wing; costal third cut by six faintly glossy light leaden-grey streaks first from above middle of base, horizontal, along 2/5 of wing, second from base just above first, subcostal along 1/3, thence curving downwards to end of first streak; third streak from before middle of costa to middle of wing at 2/3, converging with top of second (in right wing two shorter, subparallel streaks, second of these from below costa); fourth streak more distant, rather wedge-shaped, excurved (concave) posterad, base subfurcate; two ultimate streaks narrower, forming the usual O-shaped subapical figure, obliquely-oval; apex and upper half of termen with a bright yellow, black-edged streak, cut above end by a terminal leaden mark, merging into the base of the O-mark; a narrow bright yellow horizontal line from middle of base to before 3/4; below this dorsum deep fuscous, containing strongly posterad-curved dorsal dentoid patch, cinereous, edged and parted by three paler grey-yellowish lines; another larger broad similar paler grey patch, equally marked with three paler and less distinct lines, outwards-concave, rising from posterior fourth of dorsum, just not reaching tornus, above middle of disc, edged posteriorly by a narrower yellow band, above curving around top of preceding patch, merging into fourth leaden streak, and containing a pair of parallel black lines along its anterior margin; and a series of three black dots, above becoming a single black line along posterior edge of yellow band; termen beyond this leaden-grey. Cilia (imperfect) dark fuscous with blue reflections, dull white around tornus and along upper half of termen and apex.

Hind wing dull bronze-fuscous, a broad stripe along and beyond lower half of cell paler, semipellucent; apical third of wing deeper purplish. Cilia white, with a fuscous, basal band, becoming purplish posteriorly.

Male genitalia (Figs 43–44). Sclerotic. Tegumen strong and broad, sclerotic, subspherirical. Uncus, a broad, rigid, concave flap, curving down, with a short point, beyond this short-furcate; gnathos strong, porrected, much narrowed, exceeding length of uncus, Hami soldered




Figs 43–44: Male genitalia of *Polylopha sichnostola* n. sp., holotype: 43, total view. 44, tegumen, more magnified.

with gnathos at base, laying upon gnathos. Socii rather thick, visible below and parallel to, but shorter than gnathos, their bases not traceable. Valva rather short, broad, curved and rounded, with a characteristic round, bristly harpe below and before centre, labides very large, anellus denticulate. Aedeagus very short, cylindrical.

Derivatio nominis: συχνός = rich, στολή = dress.

Type: Central Sumba, Lindi Watju, 27.IX.–15.X.1949 (holotype ♂, GS 7381).

A moderate species with the characteristic, «traditional» colouring and markings and with distinct genitalia. The species is perhaps nearest to the Australian *P. epidesma* Lower; although the palpi are peculiar and unusual, the genitalia and the neuration assign the species to the present genus.

## **Thaumatoptyla** n. gen.

Type species: *Thaumatoptyla verrucosa* n. sp.

Head smoothly short-scaled, a thick transverse tuft on forehead, roughish in front, projecting over face. Ocellus posterior. Haustellum vestigial. Antenna in male with a broad notch at base of flagellum,

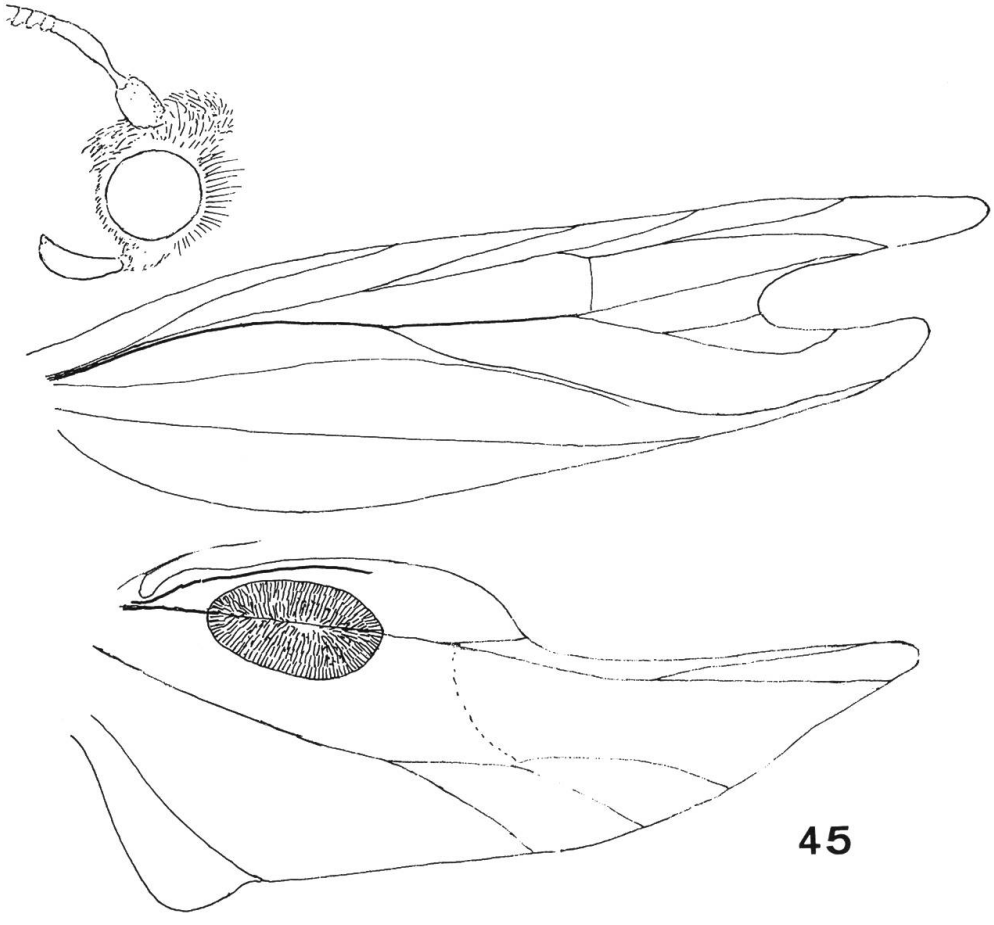



Fig. 45. *Thaumatoptila verrucosa* n. sp., sketch of head and wing venation, male.

which is little thickened, serrulate, simple. Eye very large. Labial palpus porrected, towards posterior end gradually and moderately rising, slender, moderately clavate by very short, smooth scales, terminal segment very short, subobtuse. Thorax smooth.

Fore wing oblong, laciniate, costa straight throughout, apex moderately pointed, termen deeply excised over posterior fourth of wing, and furcate, top of wing so forming two long lobes, upper longer, lower broader, slightly clavate, posterior edge rounded, so forming a kind of tornus; both lobes and the excision normally ciliated throughout, cilia dense and rich, along excision upper and lower cilia with tips overlapping, dorsum gently curved along basal ⅔, moderately narrowed posteriorly. Vein 1b imperceptible, vein 1c running above middle of wing breadth, strongly sinuate posteriorly, bending down and running to ⅔ of dorsum; vein 2 from before ¼, running parallel and almost coincident with fold, to ⅔ of dorsum, thence along and just above dorsum to middle of lower lobe; vein 3 short-stalked with 4, both gradually curving and diverging, 3 to middle of lower edge of excision, 4 to just beyond its base; 5 from base of stalk of 3+4, to base of upper edge of excision, discoidal semicircular, band 7 long-stalked, from upper angle of cell, forming a very narrow fork, 6 to upper edge of excision before its end, 7 to tip of upper lobe (to apex), 8 to costa at a point before that opposite base of excision.

Hind wing 1, oblong-semioval, with a narrow long-produced apex; with a cubital pecten of loose short black scales, on upper side of the cubital vein, a single row, merging in basal androconial patch; on under side basal half of costa with a broad projecting semioval lobe, bearing an oval large wart-like flat tumescence beyond wing base shorter than costal lobe, concealing basal parts of vein 8 and upper edge of cell, that is pushed down, so that veins, appearing beyond wart, are 8, close under costa and 7, coincident with radius (upper edge of cell); these converge at middle of wing and run to apex as a single straight vein; lower edge of cell (cubitus) from base, running slightly below middle of wing, 2 from ⅔, 3 and 4 long-stalked, 3 extremely short, 5 approximated at base, discoidal between 5 and 6 absent, vein A3 very thin, almost coincident with cubitus along basal third, and with end of vein 2; tornus of wing slightly projecting angularly.

Derivatio nominis: θαυμάσιος = wonderful, πτίλον = wing.

**Thaumatoptila verrucosa** n. sp. Figs 45, 46.

♂. 9 mm. Head black, vertex grey with white. Antenna grey-fuscous. Palpus rather long, subporrected, slightly upcurved, slender at base, gently dilated towards apex of median segment, apical segment short, obtuse. (Thorax partly denuded). Abdomen missing.

Fore wing moderate (Fig. 45), broadly lanceolate, gently narrowed posterad, costa little curved at base, more so towards apex, apex narrow, pointed and subfalcate, termen bilobed, being deeply excised over 1/5 of wing length, lower lobe broader, shorter, with rounded tornus. White, mixed with pale fuscous-grey. Basal third white with a faint light

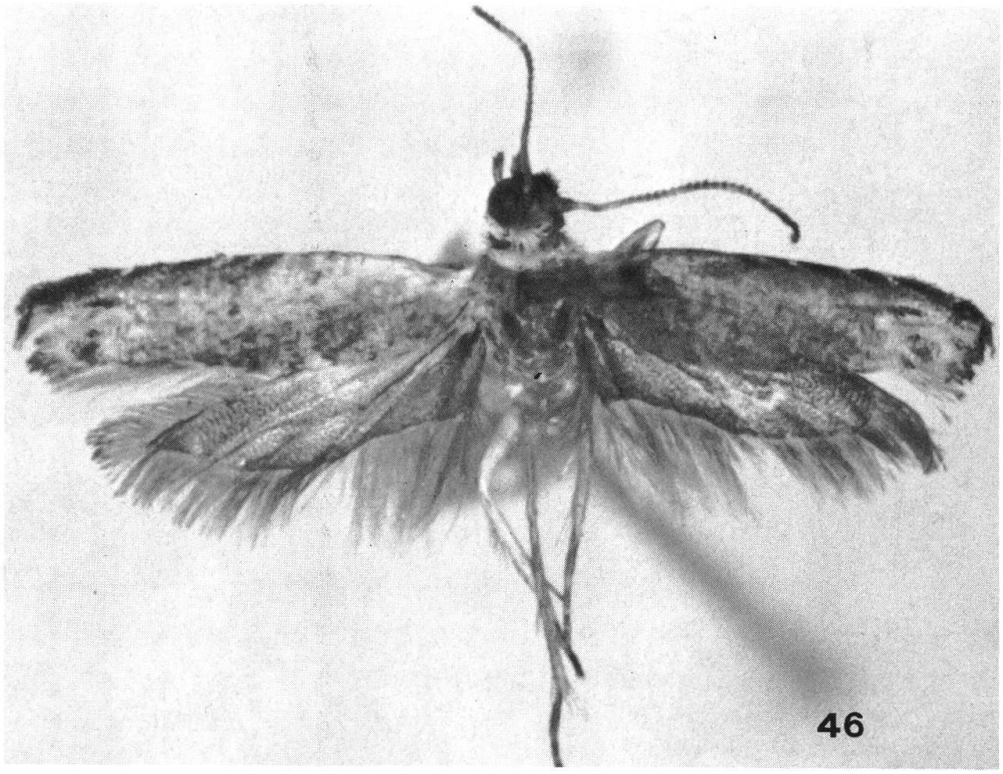



Fig. 46: *Thaumatoptila verrucosa* n. sp., holotype.

fuscous-grey, large, regularly oval, prostrate patch, from base to 1/3 of dorsum, upper edge along median half exceeding fold, dark grey; costa with a deep purple streak, narrowly marginal along 1/4, thence dilated, to apex, filling out posterior half of wing where it is black; five distinct silvery-white strongly oblique costal streaks, gradually becoming more distant posterad; anterior at 1/3, posterior at 1/5; posterior 2/3 of wing irregularly marbled with pale fuscous-grey, tending to form outcurved transverse bands along median third of wing; terminal excision with a

small dash of black-purple small scales on upper edge along its base, a broader black dash along posterior half of lower edge, top half of lower edge dark grey; almost white costal third of wing emitting a narrow streak along middle of wing, furcate at ⅔ of wing length, ending at top of upper edge and at middle of lower. Cilia dark grey, along terminal excision, white, in tornus light grey.

Hind wing subtrapezoidal, apex long, produced. Semipellucent, grey, apex opaque grey, base transparent; a small triangular patch of black androconial scales of cell $a_2$. Cilia long, light grey, darker around apex.

Derivatio nominis: verrucosus = with warts.

Type: Central Sumba, Lindi Watju, 400–500 m, 27.IX.–15.X.1949 (holotype ♂).

A light grey, intricately marbled species (Fig. 46), with a distinct dark costal streak with white lines, so characteristic for many Chlidanotini. It is a great pity that the abdomen of the only specimen is missing, but the species is so well characterized by the peculiar sensory warts of the hind wing and the unique, deeply incised termen of the fore wing, that we venture to describe it nevertheless. Some genera of the tribe, as e. g. *Gnaphalostoma* Diakonoff, possess a strongly concave termen. The deeply excised termen of the present genus may be some final stage of the same phylogenetical trend.

## Phricanthini

### **Chersomorpha** Meyrick

*Chersomorpha* Meyrick, 1926, Exotic Microlep., 3: 243. Type species: *C. toaspila* Meyrick, 1926, by original disignation.

The genitalia of the unique male type specimen, the wing venation and the general superficial appearance of this insect satisfy us that it should be removed from the present family and transferred to the tribe Phricanthini of the family Tortricidae. The genus is close to *Phricanthes* Meyrick, 1881, and differs chiefly by the peculiarities of the male genitalia.

**Chersomorpha hyphantria** n. sp. Fig. 47.

♂. 13 mm. Head glossy white (vertex denuded). Antenna pale ochreous, scape large, with an apico-dorsal brown-tipped short process or tooth, flagellum considerably thickened along basal ⅔, flattened dorsally, densely and stiffly short-ciliate; pale ochreous. Palpus moder-

ate, smoothly scaled, median segment not dilated (apical segment missing). Thorax snow-white with a median dark grey spot (damaged). Abdomen white.

Fore wing oblong-oval, rather narrow, costa curved throughout, stronger curved at base, apex indefinite, termen rounded, moderately oblique, vein 8 apparently to apex. Silvery-white, with scales moderately raised, with veins thickened, making wing appear semi-translucent. Markings reduced, fuscous-grey, rather faint and not quite similar in right and left fore wing. Costa with a dark grey marginal mark at base, costal edge anteriorly minutely edged with fuscous; basal patch indicated by its edge at about 1/8: acutely prominent posterad above middle, formed of very irregular small spots, little oblique; in right wing irregular fuscous-grey spots forming an incomplete letter W, touching costa beyond 2/5, at 3/5 and 4/5, respectively, interrupted by white interneural spaces, extended and more dense on costa, in centre of disc and along posterior leg of the «W» which is less curved and parallel to termen; terminal edge narrowly and irregularly infuscated; left wing with markings in disc apparently disappeared, but along dorsum with a series of irregular dark grey-fuscous dots, forming three larger spots, on end of


Fig. 47: *Copromorpha hyphantria* n. sp., male genitalia, holotype.

fold, in termen and above and before this, in disc. Cilia white (partly rubbed).

Hind wings snow-white, right wing with veins and extreme margin marked narrowly throughout with fuscous.

Male genitalia (Fig. 47). Resembling those of *C. pleurophanes* Meyrick from Ceylon and Assam, but nearest to those of *C. roepkei* Diakonoff, from Java, differing by larger uncus, differently shaped halves of gnathos, centred with a short dense brush of spines (instead of a sclerotic cup) and by broader valva. Aedeagus broader, with a large sheaf of dense, slender, spiny cornuti.

Derivatio nominis: ὑφάντρια = weaver.

Type: East Sumba, Langgai, 700 m, VII.1949 (holotype ♂, GS 1306).

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## Alphabetical index of insect names

synonyms in italics

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