

LEPIDOPTERA *TORTRICOIDEA* FROM TSARATANANA RANGE
[NORTH MADAGASCAR]

by

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Dr. P. E. L. VIETTE kindly put at my disposal the small but most interesting collection of the representatives of this family of Microlepidoptera from the until now unexplored fauna of the Tsaratanana Range. The limited number of species collected allows but a glimpse of the character of this fauna. Beside a number of more widely distributed species of which there are 17, there is a number of veritable forms of high altitudes, viz. 11, already known to me from the mountains of Central and East Madagascar. Finally there are 7 genera and 24 species which are new to me ; some of these may be endemisms.

The entire material of certain new species, available also from other localities than the Tsaratanana Range, often in long series, is included in descriptions in order to make these as complete as possible.

I am grateful to the Authorities of the Muséum national d'Histoire naturelle and Office de la Recherche scientifique et technique Outre-Mer, of Paris, for the permission to study this material and to retain certain duplicates for the collection of the Leiden Museum. To the Netherlands Organisation for the Advancement of Pure Research (ZWO) my thanks are due for a grant for the making of a part of the drawings by Mr. A. C. M. VAN DIJK.

An interesting account of the collecting in the Tsaratanana Range, with an itinerary and photographs of the impressive scenery and collecting localities is published by Dr. P. E. L. VIETTE (1967).

The word « matsabory » often cited with the collecting localities, is a native word, meaning : « every small or big piece of ground, rounded and humid, sometimes drying up and during rainy seasons partially transformed into a bog or a small lake » (VIETTE, 1967 : 84, footnote, my translation).

TORTRICIDAE

TORTRICINAE

Viettea spectabilis Diakonoff, 1960

Viettea spectabilis Diakonoff, 1960 : 10, text fig. 1-2, pl. 2, fig. 5-9.

DISTRIBUTION. Central Madagascar : Ankaratra Range, Ambahona Forest.

Piste de Mangindrano au Maromokotra, au N. du piton coté 2 362 m, 9-12.XI.1966,

2 310 m, camp 2 (*P. Griveaud* & *P. Viette*), 1 ♂, gen. on slide no. 7329 ; 1 ♀, gen. on slide no. 7268.

Digitosa leptographa Diakonoff, 1960

Digitosa leptographa Diakonoff, 1960 : 24, text fig. 17, 18 ; pl. 3, fig. 15, pl. 4, fig. 16-17.

DISTRIBUTION. East Madagascar : Ambatondrazaka, Andranomalaza ; Sandrangato Forest.

En dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050], III.1965 (*P. Soga*), 1 ♂, genitalia on slide no. 7262.

Digitosa stenographa spec. nov. (pl. 6, fig. 1)

♂ 23 mm. Head and palpus light fulvous suffused with slaty-grey, tips of scales pale. Antenna greyish-fulvous, whitish-ringed. Thorax fulvous-grey, collar and tegula more fulvous-tinged, tips of scales pale. Abdomen pale whitish-yellow.

Fore wing oblong-suboval, dilated, costa prominent at 1/5 and before 3/4, curved anteriorly, almost straight posteriorly, apex rounded-rectangular, termen almost straight, slightly oblique, rounded below. Bronze-fulvous, suffused with greyish-fuscous, so as to turn grey-fuscous towards and on costa ; dorsum and termen tinged tawny-fulvous-orange, becoming brighter tawny-orange posteriorly. Basal patch reaching in middle to 1/4, edge very oblique, from 1/5 of costa to 2/5 of dorsum, pointed on upper edge of cell, concave above this point and in fold, vertical and straight on dorsum ; this edge narrowly ferruginous ; central fascia broad, with parallel edges, outwards-oblique above, gradually curved downwards and about vertical below ; its edges ferruginous, an interrupted parting ferruginous line, from before middle of costa occupying about 1/6 of its length, to dorsum before tornus ; a ferruginous-brown line, parallel to fascia, from posterior prominence of costa to tornus ; a couple of similarly coloured lines before apex and termen ; suffused darker fuscous transverse patches on dorsum beyond base, in middle and well before tornus. Cilia greyish-fulvous, with whitish tips and ferruginous basal third.

Hind wing pale yellow with a slight gloss, finely transversely strigulated along and before margin, from costa to tornus ; dark dotting of underside faintly showing through. Cilia pale yellowish, becoming pale grey around apex, a fuscous subbasal band, in apex basal, to middle of termen, an interrupted faint dotting along 2/3.

Male genitalia with an oval uncus with an obtusely pointed top (not obtuse as in other species), narrowed at base, sacculus slender, its dilated basal portion short, rounded-prominent at about 1/4. Aedeagus rectangularly bent, its apical half straight. The species differs from its congeners, as far as the genitalia are concerned, by the shape of the short and slender sacculus and by that of the aedeagus. It is allied to *D. gnesia* Diak. and *D. leptographa* Diak.

Massif du Tsaratanana, piste de Mangindrano au Maromokotra, au N. du piton coté 2 362 m, 9-12.XI.1966, 2 310 m, camp no. 2 (*P. Griveaud* & *P. Viette*), 1 ♂, holotype, genitalia on slide no. 7264.

Parapandemis caryocentra Diakonoff, 1960

Parapandemis caryocentra Diakonoff, 1960 : 37, text fig. 24-27 (♂ ♀). — 1963 : 133.

DISTRIBUTION. East Madagascar : Perinet ; Anosibe Road ; Italaviana ; Fort Dauphin.

Piste de Mangindrano au Maromokotra, au N. du piton coté 2 362 m, 9-12.XI.1966, 2 310 m, camp no. 3 (*P. Griveaud* & *P. Viette*), 1 ♀, genitalia on slide 7246 ; 1 ♀, the same, but 2 500 m ; the same range, en dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], III.1965 (*P. Soga*), 1 ♀.

Parapandemis stalagmographa Diakonoff, 1960

Parapandemis stalagmographa Diakonoff, 1960 : 42, text fig. 40-41, pl. 7, fig. 36-37 (♂ ♀).

DISTRIBUTION. East Madagascar : Ambatondrazaka ; Perinet. Central Madagascar : Ambatolampy district.

En dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], III.1965 (*P. Soga*), 1 ♂.

Parapandemis griveaudi Diakonoff, 1960

Parapandemis griveaudi Diakonoff, 1960 : 45, text fig. 42-43, pl. 6, fig. 33-33 a, pl. 8, fig. 44-45, pl. 9, fig. 48 (♂ ♀).

DISTRIBUTION. East Madagascar : Ambatondrazaka ; South Moramanga ; Italaviana ; Marojejy Range ; Sandrangato Forest. Central Madagascar : Betsileo country ; Nature Reserve III.

En dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII.1964 (*P. Soga*), 2 ♂, genitalia on slides nos. 7257, 7258. Piste de Mangindrano au Maromokotra, au N. du piton coté 2 362 m, 9-12.XI.1966, 2 310 m, X.1966, camp no. 2 (*P. Griveaud* & *P. Viette*), 1 ♂.

Parapandemis retroflua Diakonoff, 1960

Parapandemis retroflua Diakonoff, 1960 : 53, text fig. 48-49, pl. 10, fig. 55-56 (♂ ♀).

DISTRIBUTION. Central Madagascar : Ankaratra Range, Ambatolampy district. East Madagascar : Marojejy Range, Moramanga district.

En dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], III.1965 (*P. Soga*), 1 ♂.

Parapandemis rotundata Diakonoff, 1960

Parapandemis rotundata Diakonoff, 1960 : 56, fig. 30-33.

DISTRIBUTION. East Madagascar : Perinet, Nosivola.

Matsabory en dessous de l'Andohanisambirano, 5-8.XI.1966, 2 050 m, 1 ♂, 1 ♀ (*P. Griveaud* & *P. Viette*) ; same locality 1 900 m [2 050 m], déb.XII.1964 (*P. Soga*), 1 ♀.

***Parapandemis lichenosema* spec. nov. (text fig. 1-2)**

♂ 27-30 mm, ♀ 29-35 mm. Head tawny-fuscous, densely scaled, a tuft projecting over forehead tawny-ochreous, face whitish. Palpus rather short rounded, robust, throughout mixed with light ochreous ; median segment with smoothly rounded edges, terminal segment almost entirely concealed. Thorax rather bright tawny-fulvous, posteriorly becoming light pinkish-fulvous, mixed with pale yellowish, apex pale yellowish strongly mixed with blackish-purple ; tegulae with thick and raised tufts of scales. Abdomen light yellowish-ochreous. Legs ochreous and pale yellow, anterior and median ringed with pale purplish.

Fore wing suboval, costa curved throughout, more curved along basal half, apex obtusely subrectangular, termen gently convex above, broadly rounded beneath. Dull ochreous-tawny touched with olive, suffused with dark purplish-black and marked with irregular pale, greenish-white spots and dots. Costa with somewhat irregular blackish transverse strigulae from base to well before apex; purple-black suffusion indicating a basal patch reaching to slightly beyond 1/4, edge obtusely angulate and indistinctly serrulate; an ill-defined transverse fascia darker on lower half, almost obliterate towards costa; space between basal patch and fascia also, but less, suffused with purplish, more so along dorsum; a large triangular suffusion occupying entire dorsum, but not reaching transverse fascia; tornus somewhat obscured by purplish suffusion; a moderate greenish-white spot on 1/3 of dorsum centred with a purple point, another larger similar spot on dorsum beyond middle, reaching into cell, semicircular, centred with two purple marks; irregular transverse series of greenish-white, purple-centred small dots and points sparsely scattered over purplish areas of wing, but none on light ground colour. Cilia purplish-brown.

Hind wing pale yellow, glossy, apex and termen between veins 3-8 suffused with pale pink; irregular dark transverse strigulation of the underside of wing showing through. Cilia pale golden-yellow with a strong gloss.

Underside of fore wing tawny-pinkish, with a broad pale ochreous, distinctly black-strigulated edge; of hind wing light yellowish-ochreous throughout, with purple-black irregular dotting, and transverse strigulae along costa.

One female with greenish-white dotting, extended all over the wing, not all dots dark-centred, large dorsal pale spots almost interconnected.

Male genitalia. Resembling those of *P. capnobathra* (Meyr.) but differing by a more slender and longer uncus, a more slender labis and especially by the sacculus which is shorter but more prominent, with upper edge not serrate, but with a strongly curved cusp at the base. Aedeagus is gradually curved, not sinuate, as in *capnobathra* Meyr.

Female genitalia. Sterigma sclerotized, lamella antevaginalis, a dark gently curved bar, lateral angles short and rounded, semioval; lamella postvaginalis distinct, concave, aciculate.

Massif du Tsaratanana, piste de Mangindrano au Maromokotra, au N. du piton coté 2 362 m, 9-12.XI.1966, 2 310 m, camp no. 2 (*P. Griveaud* & *P. Viette*), 1 ♂, holotype, genitalia on slide no. 7321; 1 ♂, 1 ♀ paratypes; matsabory en dessous de l'Andohani-sambirano, 5-8.XI.1966, 2 050 m, camp no. 1 (*same collectors*), 1 ♀, allotype, genitalia on slide no. 7254; 1 ♂, paratype; the same, déb. XII.1964, 1 900 m [2 050 m] (*P. Soga*), 1 ♂, paratype, genitalia on slide no. 7253. 4 ♂, 2 ♀.

Judging from the male genitalia, nearest to *P. capnobathra* (Meyr.) but as to the general appearance, colouring and markings, resembling *P. pauliani* Diak. most. The colouring and markings resemble dry leaves with lichen spots upon them and are also very similar to those of *Goniotorna decipiens* Diak., a remarkable example of a parallel development of this protective coloration.

Parapandemis capnobathra (Meyrick, 1930)

Homona capnobathra Meyrick, 1930 : 605 (♂). — VIETTE, 1947 : 56. — CLARKE, 1955 : 73. — CLARKE, 1958 : 148, pl. 74, fig. 2-2 b.

Parapandemis capnobathra : DIAKONOFF, 1960 : 58, pl. 10, fig. 59-61 (♂).

Parapandemis euphana Diakonoff, 1960 : 59, pl. 38, fig. 252-253 (♀). **Syn. nov.**

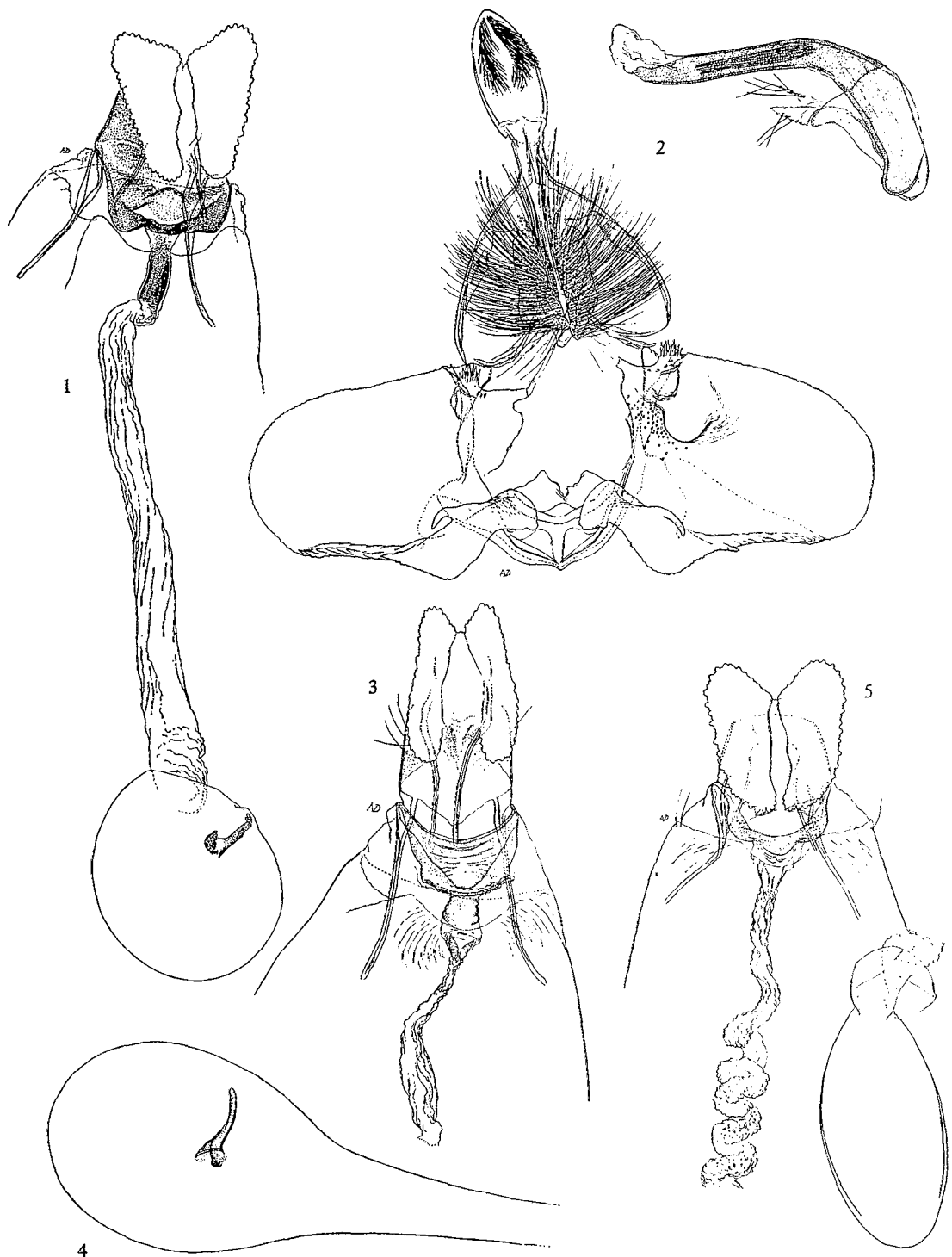


Fig. 1-5, Genitalia of Tortricinae. 1, *Parapandemis lichenosema* spec. nov., ♀, allotype; 2, ♂, holotype, with aedeagus, right; 3, *Cosmiophris chrysobola* spec. nov., ♀, holotype; 4, bursa; 5, *Cuspidata obscura* spec. nov., ♀, holotype, with bursa.

DISTRIBUTION. East Madagascar : Moramanga, Ankasoka and « Madagascar ».

Herewith I affirm my own presumption of 1960, and suppress *P. euphana* Diak. consequently, as being the female of *P. capnobathra* (Meyr.). This is evident from the present ample additional material.

En dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], XII.1964 (*P. Soga*), 20 ♂, 4 ♀, genitalia on slide no. 7388 ♀ ; the same range, N. O. de Mangindrano, Analabana, 10-20.IV.1964 (*P. Soga*), 1 ♀. Madagascar Nord, route du Haut Sambirano, 10 km d'Ambanja, col du Bekaka, 140 m, 16-17.XII.1963 (*P. Viette et P. Soga*), 1 ♂.

Only two males have the dark markings of the lectotype specimen, formed by blackish suffusion : a moderate basal patch, triangularly prominent above middle and erased below fold, an oblique transverse fascia, in one specimen obliterate above cell, and a terminal fascia, dilated above, confluent with the transverse fascia in tornus ; a third specimen has limited suffusion on base of costa ; all other males are devoid of this blackish suffusion and only show faint transverse median fascia, disappearing towards dorsum and a parallel narrower fascia, separating the apical fourth of wing, sometimes absent ; finally two specimens have the ground colour darkened, but without the blackish tinge.

The hind wing is variably suffused with pinkish-fulvous, this colour usually extending over the whole wing and paler only at base ; the rather distinct large hair tuft on base of cell is light grey ; sometimes the hind wing is pale ochreous or whitish-ochreous, with the dark dotting of the underside showing through and distinct, especially a series of 3-5 black dots between veins 5 and 6 ; only the wing apex suffused with pinkish-fulvous.

The females measure 36-40 mm. The hair-tuft on the base of cell in the hind wing is similar to that in the males and also either grey or concolorous with the wing.

The locality, omitted from my original description of « *euphana* » is East Madagascar, Ankasoka, 1 130 m, Moramanga district, 31.X.1957 (*P. Griveaud*), 1 ♀, holotype of *euphana*, genitalia on slide no. 2933. The ♀ paratype of *euphana* is from Andranotobaka, Ambatolampy, 1 400 m, III.1957 (*P. Griveaud*), abdomen missing.

***Parapandemis perispersa* spec. nov. (pl. 6, fig. 3-4)**

♀ 30 mm. Head light ochreous. Palpus long, about 5 × the width of eye ; light brownish-tawny, densely strewn with fine grey points, basal fourth whitish ; terminal segment tawny-brown. Thorax pale ochreous suffused with light purplish-fulvous. Abdomen sordid pale ochreous strewn with purple points, anal tuft small, pale ochreous.

Fore wing oblong-truncate, costa moderately but distinctly sinuate, apex subobtusely, termen sinuate, vertical. Light fulvous evenly suffused with light grey, with a purplish tinge and a golden gloss in certain lights : regularly strewn throughout with short transverse purple-black strigulae tending to form undulate transverse striae. Costal edge narrowly white from beyond base to apex. Cilia concolorous except for the black strigulae.

Hind wing whitish-yellow with a glossy tornus, apical third suffused with light fulvous-tawny and transversely strigulated with purplish-grey, similar to the fore wing but slightly paler. Cilia yellowish-white, with an interrupted purplish subbasal line.

Female genitalia of the ordinary *Parapandemis* type : with a simple, wide ostium and little sclerotized sterigma. Lamella postvaginalis strongly constricted along median third, lamella antevaginalis rather narrow, simple, lateral angles rounded. Colliculum very dark, plicate from the left side and narrowed, and truncate. Signum a long acute cusp.

Massif du Tsaratanana, matsabory en dessous de l'Andohanisambirano, 5-8.XI.1966, 2 050 m, camp no. 1 (*P. Griveaud* & *P. Viète*), 1 ♀, holotype, genitalia on slide no. 7248.

No males are available. The species may be intermediate between the *capnobathra* group and the *stipulaceana* group of species.

***Parapandemis ianus* spec. nov. (pl. 6, fig. 2)**

♂ 21.5 mm. Head tawny-fuscous (imperfect), palpus tawny. Thorax light tawny-ochreous. Abdomen pale greyish-fuscous, with a slight vinaceous tinge, anal tuft grey.

Fore wing broadly suboval, dilated, costa strongly rounded anteriorly, less curved posteriorly, apex subrectangular, termen hardly concave above, rounded beneath. Light pinkish-ochreous, glossy, densely strewn with fuscous-grey, beyond cell forming undulate well-defined series of purplish-grey dots between veins. Costa suffused with grey throughout; transverse fascia straight, but slightly zigzag in the middle, from before middle of costa to dorsum before tornus, on its lower fourth dissolved into roundish dots; costal patch ill-defined, formed by grey suffusion, subtriangular, top reaching just beyond upper edge of cell to vein 5. Cilia grey with light ochreous tips, basal third with a dark grey band, obliterate in tornus.

Hind wing pale golden-ochreous, glossy, posterior third with a pink suffusion, transverse rows of dark grey irregular dots on the underside showing through on posterior part of wing. Cilia pale ochreous with along basal third a series of distant dark grey dots.

Male genitalia. Resembling those of *P. capnobathra* (Meyr.) closely, but less robust, uncus narrower, the distinct difference forms the aedeagus which is shorter, less slender, not bent downwards beyond middle, as in *capnobathra*, has a dilated and rounded top with a serrulate blade rather before, and triangular prominence just below, the top. (The aedeagus in *capnobathra* is pointed, with a short triangular prominence below, just before the top).

Massif du Tsaratanana, en dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb.XII.1964 (*P. Soga*), 1 ♂, holotype, genitalia on slide no. 7261.

***Parapandemis subovata* nov. (text fig. 6, pl. 7, fig. 4-5)**

♂ 26 mm. Head pale ochreous, tufts around bases of antennae brighter ochreous. Antenna brownish, ciliations about 1. Palpus brown mixed with blackish and whitish scales, terminal segment dark brown. Thorax pale ochreous, tegulae and collar mixed with deeper ochreous-tawny. Abdomen pale yellowish-ochreous.

Fore wing oblong-suboval, costa strongly curved along basal 3/4, straight posteriorly, apex rounded-rectangular, termen gently convex, almost vertical above, rounded beneath. Light purplish-fulvous, costa from base to about 2/3 bright ochreous, lower

edge of this colour limited by base of upper edge of cell, thence limited approximately by the course of vein 11 ; basal 2/3 of dorsum as far as lower parting vein (middle of cell height) and from base to before end of cell, pale yellow ; costal edge narrowly pale yellowish from 1/4 to apex ; ochreous costal patch with a few slender, oblique and faint series of purplish dots and strigulae and the top of transverse fascia, just antemedian, purplish-fulvous, parallel and just before edges with rows of sparse, inequally spaced black or purple dots, largest dot just below cell ; dorsum above and slightly before middle with an oval longitudinal tawny suffusion ; fine purple points strewn here and there over the wing, a more distinct oblique series of points (indicating inner edge of costal patch) from below 2/3 of costa towards 2/3 of termen. Cilia purple-fulvous.

Hind wing with veins 3 and 4 short-stalked ; glossy pale yellow, apex suffused with fulvous-pinkish. Cilia concolorous, around apex with a darker subbasal line.

Male genitalia. Uncus characteristic, broad and curved, little narrowed at base, gently narrowed towards apex which is rounded. Valva semioval, slightly shorter than in *stipulaceana*, with sacculus less abruptly bulbous beyond base. Aedeagus shorter than in *stipulaceana*, its basal half broader, top more obtuse.

Massif du Tsaratanana, en dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb.XII.1964 (*P. Soga*), 1 ♂, holotype, genitalia on slide 7263 ; same locality 5-8.XI.1966, 2 050 m, camp no. 1 (*P. Griveaud & P. Viette*), 1 ♂, paratype.

♀ 35-36 mm. Head pale yellow, suffused with light tawny-ochreous. Antenna light tawny. Palpus light fulvous strewn with purple, especially along the edges, terminal segment fuscous. Thorax (partly denuded) light tawny-fulvous, suffused with pale yellow anteriorly, apex with a fuscous spot. Abdomen pale fuscous-yellow.

Fore wing oblong-suboval, costa curved throughout, apex rounded-rectangular, termen almost straight above, strongly rounded below, somewhat prominent. Glossy pale whitish-grey-tawny with some olive tinge and brighter tawny dull colour tending to form little undulate, transverse fasciae, as broad as the glossy interspaces and visible only in certain lights. Costal edge from beyond base to apex with a conspicuous yellowish-white narrow streak ; minute and irregular purplish-black points sparsely scattered over wing but only on dull tawny parts, except towards margins. Cilia grey with a pinkish tinge, tips white, basal third fulvous.

Hind wing glossy pale yellow, suffused with light tawny-pink on posterior half becoming deeper towards apex, costa throughout pale yellow. Cilia infuscated, with a faint darker fuscous subbasal line.

Female genitalia rather differing from those of *P. capnobathra*. Ostium wide, lamella antevaginalis sclerotized and densely aciculate with an oval impression of the frontal wall, its corresponding lower edge excised ; lamella postvaginalis also distinct, constricted on each side, lower edge with two points, with round excisions at the sides. Colliculum rather short. Signum, a slender hook.

Matsabory en dessous de l'Andohanisambirano, 5-8.XI.1966, 2 050 m, camp. no. 1 (*P. Griveaud & P. Viette*), 1 ♀, allotype, genitalia on slide 7251 ; 1 ♀, paratype.

A large species with oblong-oval unicolorous wings with a short apex, characteristic by pale yellowish costal line.

Judging from the male genitalia it is closest to *P. stipulaceana* (Mab.), but superficially the female resembles rather *P. capnobathra* (Meyr.). The shape of the uncus and of the sacculus, besides the colouring, characterize this species.

Parapandemis sclerophylla Diakonoff, 1960

Parapandemis sclerophylla Diakonoff, 1960 : 60, pl. 14, fig. 80-81 (♂).

DISTRIBUTION. Central Madagascar : Andranomalaza.

En dessous de l'Andohanisambirano, matsabory, 1 900 m, [2 050 m], III.1965 (*P. Soga*), 1 ♂.

Parapandemis pauliani Diakonoff, 1960

Parapandemis pauliani Diakonoff, 1960 : 63, pl. 9, fig. 51-54 (♂ ♀).

DISTRIBUTION. Central Madagascar : Manjakandriana. East Madagascar : Marojejy Range, Ambatondrazaka, Italaviana, Ampitameloka. North Madagascar : Mt. Ambre.

En dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], III.1965 (*P. Soga*), 1 ♀, genitalia on slide no. 7252.

Parapandemis xylophyes Diakonoff 1960 (pl. 7, fig. 1-3)

Parapandemis xylophyes Diakonoff, 1960 : 65, pl. 11, fig. 64-66 (♂).

DISTRIBUTION. East Madagascar : Nature Reserve III. Ivelona Valley.

N. O. de Mangindrano, Analabana, 1 640 m, 10-20.IV.1964 (*P. Soga*), 1 ♀, neallotype, genitalia on slide no. 7244 ; the same range : en dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb.XII.1964 (*P. Soga*), 7 ♂, 3 ♀ ; the same, 2 050 m, 5-8.XI.1966 (*P. Griveaud & P. Viette*), 1 ♂, 1 ♀.

♀ 25-26 mm. Neallotype, in all respects similar to the earlier described male, only larger, with slightly narrower forewing with a deeper sinuate termen. The colouring and markings are characteristic : a finely marbled pale ochreous-olive ground colour, upon which dark brown markings ; of these the triangular subapical patch on termen is striking.

Female genitalia. The ninth segment sclerotized. Sterigma crescentic, rather broad, median part formed by a thickened lamella antevaginalis with a concave upper edge, lateral parts of sterigma dilated, inverted-triangular. Ostium triangular. Colliculum narrowed, bent below middle, above with three dark sheaths. Signum large without capitulum. Receptaculum seminis large, with a finely maleate wall.

This is a distinct species.

Parapandemis xanthacra Diakonoff, 1960

Parapandemis xanthacra Diakonoff, 1960 : 66, pl. 12, fig. 69-70, pl. 13, fig. 77 (♂ ♀).

DISTRIBUTION. East Madagascar, Moramanga : Ankasoka, 1 130 m ; Ambatovositra.

Matsabory en dessous de l'Andohanisambirano, 5-8.XI.1966, 2 050 m (*P. Griveaud & P. Viette*), 1 ♂, genitalia on slide no. 7379. A well preserved specimen, with the pale costal line continued in apex and along apical half of cilia as far as tornus, cilia in tornus dark fuscous ; central fascia slender and distinct, from before middle of costa to lower angle of cell, gently concave posteriorly, vertical below cell, but upper half of this portion obliterate ; wing before fascia paler tawny and less densely strewn with dark dots except along dorsum.

Parapandemis straminocula straminocula Diakonoff, 1960

Parapandemis straminocula Diakonoff, 1960 : 69, text fig. 46-47, 50-51, pl. 11, fig. 67-68, pl. 13, fig. 78 (♂ ♀). — 1963 : 134.

DISTRIBUTION. Generally distributed, from 910 to 1 200 meters altitude.

Contreforts de Tsaratanana, Haut Sambirano, 1 200 m, vallée de la Besanetribe, 5-9.XII.1963 (*P. Viette*), 1 ♂. En dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], III.1965 (*P. Soga*), 1 ♂.

Parapandemis straminocula plectopa Diakonoff, 1960

Parapandemis straminocula plectopa Diakonoff, 1960 : 71.

DISTRIBUTION. Central Madagascar : Ankazobe, Ambohitantely, 1 000-1 400 m, Ambatolampy. East Madagascar : Ankasoka.

En dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII.1966 (*P. Soga*), 2 ♂, genitalia on slide no. 7250 ; piste de Mangindrano au Maramokotra, au N. du piton coté 2 362 m, 9-12.X.1966, 2 310 m, camp no. 2 (*P. Griveaud* & *P. Viette*). 1 ♂.

Niphothixa amphibola Diakonoff, 1960

Niphothixa amphibola Diakonoff, 1960 : 77, text fig. 53, pl. 13, fig. 79, pl. 14, fig. 84-85 (♂ ♀).

DISTRIBUTION. East Madagascar : Mananilazy. Central Madagascar : Ambatolampy : Ampolomita.

En dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII.1964 (*P. Soga*), 1 ♂, genitalia on slide no. 7255.

Niphothixa atava spec. nov. (pl. 9, fig. 3-4)

♀ 24-28 mm. Head bright tawny, face paler. Palpus long, $3 \frac{1}{2} \times$ the width of eye ; light fulvous-tawny, mixed with purplish-grey scales and sparsely strewn with pale whitish-fulvous ; lower edge of palpus towards base white. Pectus white. Thorax bright tawny, infuscated posteriorly, apex dark fuscous. Abdomen light ochreous, tergum grey, anal tuft very dense, spreading, dark fuscous.

Fore wing oblong-subtruncate, costa sinuate, apex moderately pointed, termen sinuate, broadly rounded beneath, vertical. Deep tawny-fulvous touched with orange ; markings sparse jet-black dull dots, more or less interconnected by faint glossy anthracite-coloured suffusion. A series of slender oblique strigulae along basal half of costa, except on its extreme edge ; an irregular oblique series of dots and accompanying suffusion, indicating faint basal patch to $\frac{1}{3}$, with a blunt point above middle, edge above this very oblique, below this less oblique and concave to $\frac{2}{5}$ of dorsum ; a similarly faint transverse fascia indicated by upper half only, being an outwards-curved wedge-shaped fascia, from before middle of costa to lower angle of cell ; a hardly visible costal patch at $\frac{3}{4}$, triangular but with posterior half obliterate ; oblique parallel rows of black points more distinct along edges of these markings ; more dots scattered before termen. Cilia concolorous, more or less suffused with anthracite-colour.

Hind wing light ochreous with a strong pinkish-golden gloss except towards pale

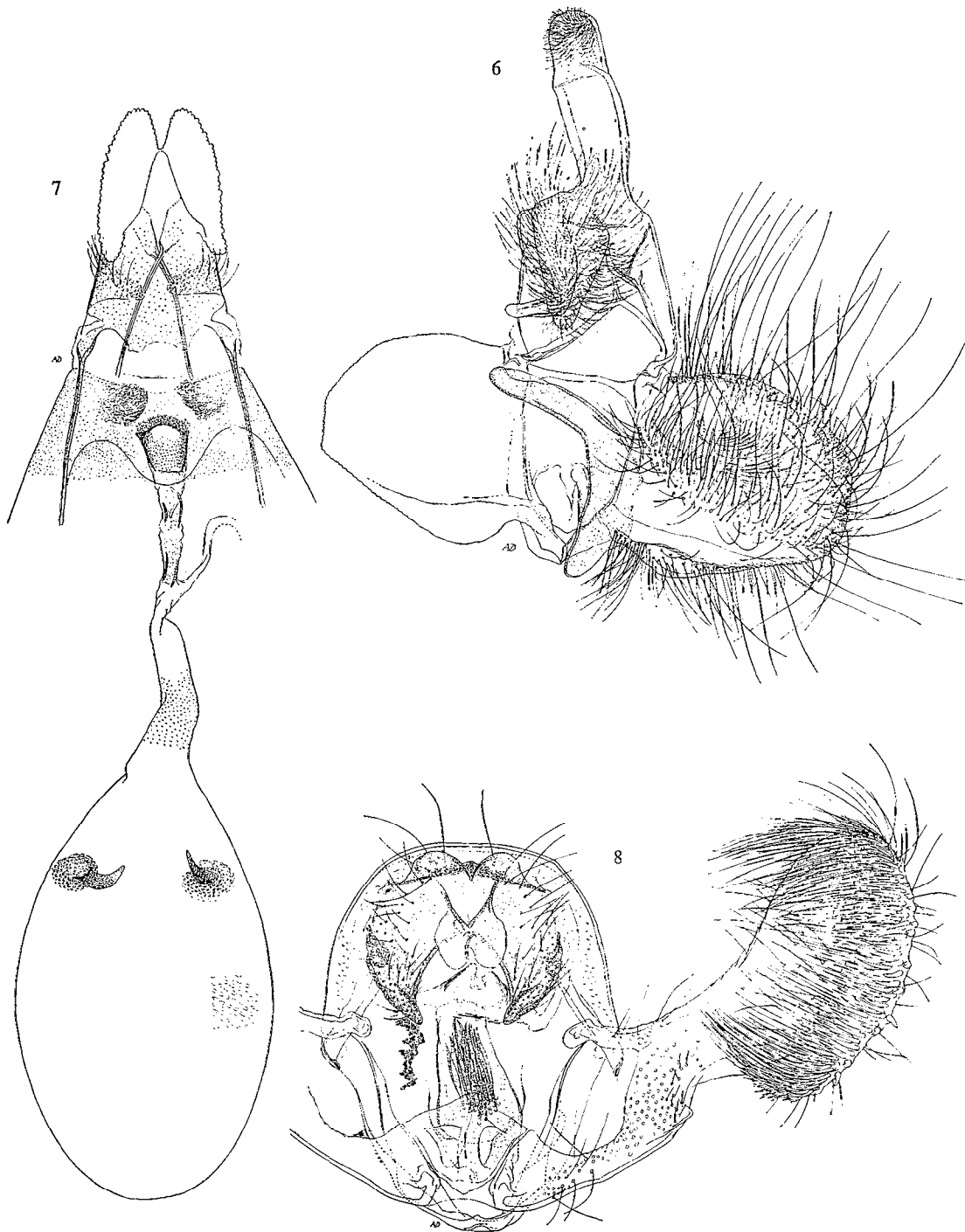


Fig. 6-8, Genitalia of Tortricinae. 6, *Parapandemis subovata* spec. nov., ♂, holotype ; 7, *Dracontogena niphadonta* gen. & spec. nov., ♀, allotype ; 8, *Stephanoma triangulum* gen. & spec. nov.

yellowish base and costa ; a few dark points towards apex. Cilia concolorous with a purplish subbasal fascia.

Female genitalia with sterigma broad, lamella postvaginalis with two oblique submedian upwards-converging folds, lamella antevaginalis rather depressed and sinuate, with longitudinal folds in middle, lower edge concave, hooks broadly rounded. Colliculum moderate, dark and suboval, with a branch at the left side. Signum, a long rather narrow blade, its base and capitulum small.

Massif du Tsaratanana, piste de Mangindrano au Maromokotra, au S. du piton coté 2 831 m, 13-15.XI.1966, 2 500 m, camp no. 3 (*P. Griveaud & P. Viette*), 1 ♀, holotype, genitalia on slide no. 7247 ; 1 ♀, paratype ; the same, au N. du piton coté 2 362 m, 9-12.XI.1966, 2 310 m, camp no. 2 (*same collectors*), 4 ♀, paratypes ; the same, matsabory en dessous de l'Andohanisambirano, 5-8.XI.1966, 2 050 m, camp no. 1 (*same collectors*), 2 ♀, paratypes, genitalia on slide no. 7396.

Niphothixa spec.

A well-preserved specimen without abdomen may belong to this genus. It is from the piste de Mangindrano au Maromokotra, au S. du piton coté 2 831 m, 13-15.XI.1966, 2 500 m (*P. Griveaud & P. Viette*).

Cuspidata (Cuspidata) oligosperma Diakonoff, 1960

Cuspidata (Cuspidata) oligosperma Diakonoff, 1960 : 83, text fig. 54-55, 58-62, pl. 16, fig. 94 (♂ ♀).

DISTRIBUTION. East Madagascar : Perinet ; Sandrangato forest ; Ambatondrazaka district, Andranomalaza. North Madagascar : Mt. Ambre.

N.O. de Mangindrano, Analabana, 10-20.IV.1964, 1 640 m (*P. Soga*), 1 ♂, genitalia on slide no. 7306.

Cuspidata (Cuspidata) ditoma Diakonoff, 1960

Cuspidata (Cuspidata) ditoma Diakonoff, 1960 : 86, text fig. 63, pl. 15, fig. 90-91, pl. 16, fig. 95-96.

DISTRIBUTION. East Madagascar : Perinet ; Ambatondrazaka, Ampitameloka, Mananilazy ; Italaviana.

En dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII.1964 (*P. Soga*), 1 ♀, genitalia on slide no. 7266.

Cuspidata (Cuspidata) anthracitis Diakonoff, 1960 (pl. 8, fig. 2-4)

Cuspidata (Cuspidata) anthracitis Diakonoff, 1960 : 88, pl. 15, fig. 93 (♂).

DISTRIBUTION. East Madagascar, Ambatondrazaka.

En dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII.1964 (*P. Soga*), 3 ♂, genitalia on slides nos. 7260, 7303 and 7389. Piste de Mangindrano au Maromokotra, au N. du piton coté 2 362 m, 9-12.XI.1966, 2 310 m, camp 2 (*P. Griveaud & P. Viette*), 1 ♀, neallotype, genitalia on slide no. 7249.

The fore wing not so darkly suffused as in the holotype, while the hind wing is suffused with fuscous only at the extreme apex. But the colouring of the hind wing,

light citric yellow, and the male genitalia relegate the specimens to the present species and not to the closely allied *C. (C.) castanea* Diak. which has a light ochreous hind wing, less grey fore wing etc. The present specimens are slightly larger than the typical material from lower altitude and have brighter yellow hind wings. But the differences are too slight for a subspecific separation.

♀ 24 mm, neallotype. Head, antenna, palpus and thorax fulvous with some purplish gloss in certain lights, thorax also with ochreous tinge. Abdomen pale ochreous-yellow, tinged greyish.

Fore wing suboval-truncate, costa strongly curved anteriorly, gently sinuate posteriorly, apex rectangular, termen gently outwards-oblique and straight above, broadly rounded below. Glossy, even brownish-tawny-fulvous, in certain lights with numerous undulate and slender transverse strigulae of deeper and somewhat orange-tinged dull fulvous colour, becoming denser towards dorsum; on costal half of wing sparsely strewn with black points. Central fascia indicated by two oblique ferruginous strigulae on costa just before middle, posterior of these longest; a conspicuous almost equilateral dark and dull purplish-brown costal patch, strongly marbled with glossy ground colour; ill-defined vertical marks of deep purple suffusion on dorsum. Cilia glossy fulvous.

Hind wing pale golden-yellow, cilia concolorous.

Female genitalia closely resembling those of *C. oligosperma* Diak., but with a small funnel-shaped colliculum, as in *C. ditoma* Diak. but with the median part of the lower rim of sterigma obliterate (as in *oligosperma*, not as in *ditoma*!).

Cuspidata obscura spec. nov. (text fig. 5)

♀ 13.5 mm. Head, palpus, antenna and thorax dark fuscous with some golden gloss; palpus about $4 \times$ diameter of eye; dusted with paler. Abdomen glossy light greyish-fuscous.

Fore wing oblong-subtruncate, costa strongly sinuate, apex rectangular, termen straight above, broadly rounded beneath. Fuscous, with numerous ill-defined and very slender duller brown transverse strigulae and finely dusted throughout with pale ochreous-whitish, together the three colours mend into an even dark fuscous-brown with a golden gloss. Cilia concolorous. One paratype strewn with coarse suffused round blackish-fuscous dots; another paratype paler with some olive tinge, especially over posterior half with a faint indication of a dark fuscous rather narrow central fascia from beyond $2/5$ of costa across and below lower angle of cell.

Hind wing white touched with pale yellowish and on apical half more or less obscured by a pale grey reticulation, becoming a grey suffusion towards and in apex. Cilia concolorous.

Female genitalia. Sterigma rather thickened and finely aciculate throughout, outer lower angles rounded-prominent. Colliculum short and funnel-shaped. Otherwise similar to *C. ditoma*, but in that species sterigma is less developed, rather hyaline and not aciculate, its outer angles less rounded and more distinctly angular.

Massif du Tsaratanana, piste de Mangindrano au Maromokotra, au N. du piton coté 2 362 m, 9-12.XI.1966, 2 310 m, camp no. 2 (*P. Griveaud* & *P. Viette*), 1 ♀, holotype, genitalia on slide no. 7265; 1 ♀, paratype; the same, but: au S. du piton coté 2 831 m, 12-15.XI.1966, 2 500 m (*same collectors*), 1 ♀, genitalia on slide no. 7386;

en dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII.1964 (*P. Soga*), 1 ♀, paratype, without abdomen.

The specimen from 2 500 locality is slightly darker, with a faint blackish-brown transverse fascia from before middle of costa, interrupted below origin, and with two faint ochreous spots, on 1/3 and 2/3 of dorsum, respectively. The genitalia are similar.

Anthophrys spectabilis Diakonoff, 1960

Anthophrys spectabilis Diakonoff, 1960 : 122, text fig. 74, pl. 22, fig. 143-145 (♂).

DISTRIBUTION. Central Madagascar : Betsileo country ; Andringitra Range. East Madagascar : Marojejy Range ; Ambatondrazaka district ; Moramanga district.

Piste de Mangindrano au Maromokotra, au N. du piton coté 2 362 m, 9-12.XI.1966, 2 310 m ; 9-12.XI.1966, 2 310 m (*P. Griveaud* & *P. Viette*), 1 ♂, genitalia on slide no. 7269.

Cosmiophrys chrysobola spec. nov. (text fig. 3-4)

♀ 24-25 mm. Head bright ochreous. Antenna dark fuscous-brown. Palpus dark ferruginous-brown, upper edge suffused with ochreous-orange. Thorax ferruginous, apex mixed with whitish, tegula with orange tip. Abdomen glossy pale yellow, venter suffused with ferruginous.

Fore wing oblong, gradually dilated, costa gently sinuate, apex obtusely pointed, termen sinuate, oblique, broadly rounded beneath. Bright ochreous-orange, strewn with numerous pale yellow, brown-edged spots of variable size, mostly along edges of markings which are orange-brown, marbled and suffused with dark brown. Basal patch from before 1/5 of costa to dorsum before middle, edge strongly concave above dorsum, above middle connected by a rising branch with the transverse fascia which is shaped as a large triangle, reaching 3/4 across wing, top truncate ; containing on middle of costa an oblique-rectangular mark of ground colour with sides formed by pale yellow dots ; thus posterior leg of triangle strongly dilated towards costa and reaching to apex ; an irregular brown patch opposite upper half of termen, almost connected with a similar spot, about triangular, on dorsum before tornus ; a ferruginous terminal line. Cilia orange, suffusedly barred with ferruginous.

Hind wing glossy pale golden yellow, becoming deeper ochreous and dull towards apex, with faint transverse series of reddish dots. Cilia pale yellow, an interrupted sub-basal fulvous band, cilia around apex slightly barred with brown.

In brighter coloured paratypes the basal patch contains an elongate-oval patch of ground colour on lower half of base and on base of dorsum, the posterior dorsal patch is connected with costal triangle and the preterminal patch is well-defined, free and rhomboidal. The dark brown markings are slightly mixed with black.

Female genitalia. Sterigma sclerotized throughout, inverted-trapezoidal, lamella antevaginalis with a large triangularly excised upper edge almost to lower margin which is slightly thickened, with small but distinct angles ; ostium tubular, conical. Colliculum, a small funnel with two converging sclerites in ventral wall. Signum, rather slender, sinuate, base moderately dilated.

Piste de Mangindrano au Maromokotra, au N. du piton coté 2 362 m, 9-12.XI.1966,

2 310 m, camp no. 2 (*P. Griveaud* & *P. Viette*), 1 ♀, holotype, genitalia on slide no. 7245 ; 2 ♀ paratypes.

Also from : East Madagascar. Marojejy Range, Sambava district, matsabory, 2 030 m, XII.1958 (*P. Griveaud*), 1 ♀, paratype.

The generic position of this elegant species is somewhat uncertain, as no males are available, while until present neither females of the type-species, *C. stigma* Diak., have become known.

Goniotorna (Goniotorna) erratica (Diakonoff, 1947)

Syndemis erratica Diakonoff, 1947 : 24, fig. 3-4 (♂ ♀).

Goniotorna (Goniotorna) erratica : DIAKONOFF, 1960 : 150, text fig. 77, pl. 28, fig. 188-189. — VIETTE, 1947 : 56. — VIETTE, 1963 : 136.

DISTRIBUTION. Central Madagascar : Tsimbazaza Park, Tananarive. East Madagascar : Nature Reserve III, Manakambahiny East ; Marojejy Range.

Piste de Mangindrano au Maromokotra, au N. du piton coté 2 362 m, 9-12.XI. 1966, 2 310 m, camp no. 2 (*P. Griveaud* & *P. Viette*), 1 ♂, genitalia slide no. 7259.

Characteristic feature of this species is the presence of a short *downturned* subapical thorn at the left side of the aedeagus.

Goniotorna (Goniotorna) megalogonia Diakonoff, 1960

Goniotorna (Goniotorna) megalogonia Diakonoff, 1960 : 150, pl. 28, fig. 184-185, pl. 30, fig. 197-198. — 1963 : 136.

DISTRIBUTION. East Madagascar : Perinet ; Ranomafana ; Nature Reserve III ; Ambatondrazaka district ; Marojejy Range.

En dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII.1964 (*P. Soga*), 1 ♂, genitalia on slide no. 7301.

Goniotorna (Oestophyes) mucida Diakonoff, 1960

Goniotorna (Oestophyes) mucida Diakonoff, 1960 : 142, pl. 27, fig. 178-179.

DISTRIBUTION. Central Madagascar, Ankaratra Range, 1 850 m.

En dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII.1964 (*P. Soga*), 1 ♀, genitalia on slide no. 7304.

***Goniotorna (Tenuisaccula) macula* spec. nov. (pl. 9, fig. 1-2)**

♂ 19 mm. Head and palpus dark fuscous, face paler. Antenna finely light-ringed. Thorax bright tawny-fulvous, apex infuscated. Abdomen glossy pale brownish-fuscous, posterior 1/4 darker.

Fore wing with ground colour actually light ochreous, finely dusted with fulvous but visible only on costal third between markings. These markings formed of ferruginous dusting partly turning crimson and finely strewn with a few suffused black dots. Costal edge with a series of inequally spaced and ill-defined blackish blotches ; basal patch to beyond 1/6, posteriorly crimson-tinged, at base light ochreous ; central fascia little oblique, narrower than basal patch ; apical third throughout bright ful-

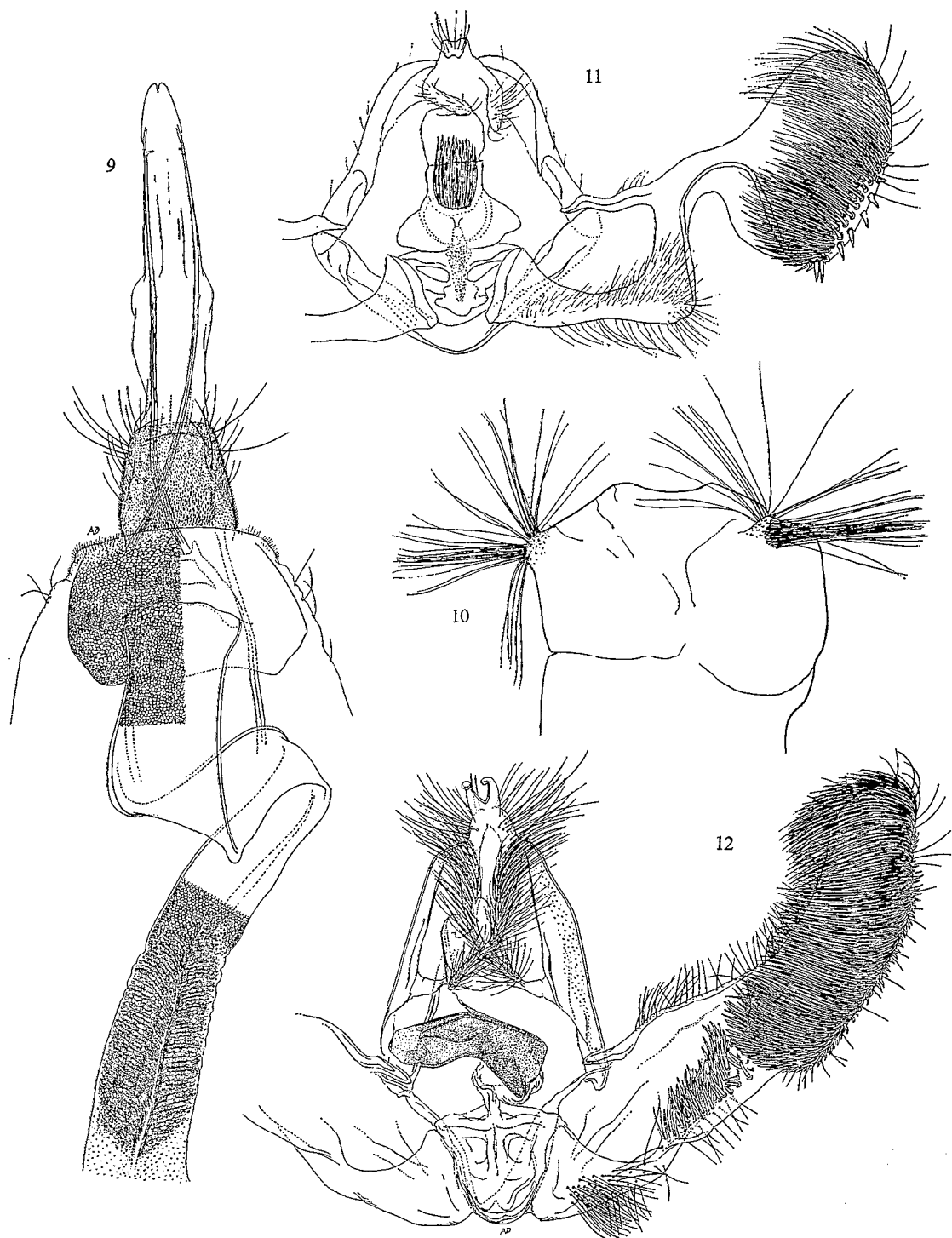


Fig. 9-12, Genitalia of Microlepidoptera. 9, *Meridarchis unitacta* spec. nov., ♀, holotype; 10, *Syropetrova viridis* gen. & spec. nov., ♂, holotype; 11, *coremata*; 12, *Plutographa cyclops* spec. nov., ♂, holotype.

vous turning crimson ; dorsum from before 1/4 to middle of tornus with a semioval patch reaching above middle of disc, whitish, densely but irregularly marbled with fuscous, and transversely striated with white ; followed by a dark fuscous suffusion filling out tornus and exceeding middle of terminal area but above not reaching edge of wing ; a couple of whitish dots opposite middle of termen halfway towards semioval patch. Cilia bright ferruginous with a pale tawny basal line.

Hind wing fuscous, becoming darker towards apex, costa pale fuscous. Cilia dark fuscous with a pale grey apical half and a pale fuscous basal line.

Male genitalia closest to those of *G. (T.) rhodolemma* Diak. but differing as follows. Uncus subtruncate, top slightly emarginate. Gnathos more slender. Transtilla shorter, labides shorter and more robust. Sacculus more slender and less sclerotized. Aedeagus longer and more slender, rectangularly bent, with an acute top, beside top a large semirhomboidal sclerite with serrulate edge.

Massif du Tsaratanana, piste de Mangindrano au Maromokotra, au N. du piton coté 2 362 m, 9-12.XI.1966, 2 310 m, camp no. 2 (*P. Griveaud* & *P. Viette*), 1 ♂, holotype, genitalia on slide no. 7267.

Goniotorna (Serruligera) melanoconis Diakonoff, 1960

Goniotorna (Serruligera) melanoconis Diakonoff, 1960 : 164, pl. 33, fig. 214-216 (♂).

DISTRIBUTION. Central Madagascar : Betsileo country. East Madagascar : Perinet ; Nature Reserve III. North Madagascar : Mt. Ambre.

En dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII.1964 (*P. Soga*), 10 ♂, genitalia on slide no. 7302.

Epichoristodes (Epichoristodes) leucocymba (Meyrick, 1912)

Cacoecia leucocymba Meyrick, 1912 : 4 (♂). — 1912 b : 16. — 1913 : 23. — VIETTE, 1947 : 56. — CLARKE, 1955 : 185.

Epichoristodes (Epichoristodes) leucocymba : DIAKONOFF, 1960 : 168, text fig. 78, pl. 34, fig. 225-226, pl. 35, fig. 229-230, 230 a, 230 b.

DISTRIBUTION. East Madagascar : Perinet, Nature Reserve III ; Ampitameloka ; Ampenetra ; Andohahelo Range. Central Madagascar : Ankozobe district ; Ankaratra Range ; Betsileo Country.

En dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII.1964 (*P. Soga*), 1 ♂.

***Epichoristodes (Epichoristodes) macrosema* spec. nov. (pl. 8, fig. 1)**

♂ 17 mm. Head and antenna light ochreous. Palpus light ochreous, densely dusted with fulvous. Thorax (rubbed) dark fuscous suffused with pale ochreous. Abdomen ochreous-white, anal tuft pale ochreous.

Fore wing oblong-truncate, costa arched at base, straight in middle, slightly curved before apex, apex obtusely pointed, termen gently concave and vertical above, rounded beneath. Pale ochreous-yellow, evenly suffused with fuscous except narrow edges to markings. Markings well-defined, purplish-brown, towards edges slightly darker, becoming paler altogether on lower half of wing, especially towards dorsum. Basal patch to about 1/4, angulate above middle, concave above and below this ; transverse fascia

from well before middle of costa to posterior half of dorsum, gradually curved and dilated downwards, also edges gradually curved, base of fascia occupying less than posterior half of dorsum; central patch semioval, along about 1/4 of costa, to before apex, below halfway towards vein 7; an erect pear-shaped spot before upper part of termen, connected by an irregular dark line with costal patch and with lower part of termen; the connecting line interrupted below. Cilia dark brown, with a darker basal line.

Hind wing dull pale ochreous, semipellucet towards base, posterior third becoming brighter yellow-orange, extreme apex obscured by a few vertical rows of suffused purplish spots. Cilia pale ochreous, a purple subbasal line around apex.

Male genitalia. Resemble those of *E. ypsilon* Diak. most, but differ as follows. Valva shorter, sacculus slightly broader with a longer point; uncus shorter and broader. Labis oblique, longer and more slender, with only two or three teeth, compressed together. Aedeagus large, much broader, stronger curved before middle, top strongly dilated, with a long thorn above.

En dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII.1964 (*P. Soga*), 1 ♂, holotype, genitalia on slide no. 7300.

Epichoristodes (Epichoristodes) apiletica Diakonoff, 1960

Epichoristodes (Epichoristodes) apiletica Diakonoff, 1960 : 170, pl. 33, fig. 217-219, pl. 35, fig. 227-228 (♂ ♀).

DISTRIBUTION. Central Madagascar : Betsileo Country, Ankaratra Range. East Madagascar : Ampitameloka.

En dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII.1964 (*P. Soga*), 2 ♂.

Epichoristodes (Tubula) nervosum spec. nov. (pl. 10, fig. 1-2)

♀ 23 mm. Head pale ochreous, on vertex two longitudinal dark fuscous stripes, forehead with a transverse purple brush of short scales, partly concealed under the scale tuft of the vertex. Antenna pale tawny. Palpus fuscous, median segment with a pale lower half of its base, and with a median band of irregular purplish fine marbling. Thorax pale fuscous (rubbed), apex fuscous, tegula fuscous with a narrow pale ochreous edge. Abdomen silvery-white, posterior half infuscated, anal tuft pale ochreous.

Fore wing suboval, not dilated, basal third strongly curved, middle straight, posterior part hardly curved, apex rounded-prominent, termen rounded, oblique. Pale yellowish-ochreous, slightly suffused here and there with pale lilac-fuscous, all veins narrowly dark fuscous-grey, markings fuscous-grey, ill-defined. Costa irregularly clouded as far as vein 8, an almost horizontal, slightly pinkish-tinged fascia from 2/5 of costa to upper edge of cell, a more conspicuous yellowish-white patch from upper edge of cell to apex, limited by the course of veins 8 and 6, but towards cell triangularly dilated, not interfering with dark veins; in this way more or less distinct markings of purplish-grey suffusion are formed: an elongate semioval streak along posterior 2/3 of costa not reaching cell and a large oval patch along termen and in tornus, neither reaching cell; dorsum and tornus with a row of dark blotches alternating with pale spots. Cilia (damaged) pale ochreous barred with fuscous.

Hind wing pale ochreous, densely infuscated except along costa. darker fuscous towards apex. Cilia pale ochreous with a fuscous subbasal band.

Female genitalia. Resembling those of *E. leucocymba* (Meyr.), but colliculum longer and with a very short, rounded and ill-defined, not dilated upper part, gradually narrowed below this, at the end dilated again. Signum apparently absent (corpus bursae damaged).

En dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII.1964 (*P. Soga*), 1 ♀, holotype, genitalia on slide no. 7305.

Apotoforma Busck, 1933

Apotoforma Busck, 1933 : *Ent. Americana*, 13 : 153. — RAZOWSKI, 1964 : *Acta zool. cracov.*, 9 : 377. — 1965, *World Fauna Tortricini* : 159.
Emeralda Diakonoff, 1960 : 190.

The female specimen of the type-species has the following structural particulars : head with roughly appressed scales. Ocellus posterior. Proboscis developed. Palpus moderate, median segment slender at base, abruptly dilated at apex, terminal segment long : 1/2, obtuse, exposed, obliquely ascending.

Hind wing with veins 3 and 4 separate, discoidal more oblique, 6 and 7 closely approximated towards base (not connate !) vein 8 separate from base, anteriorly not converging but parallel to the upper edge of cell.

Apotoforma cimelia (Diakonoff, 1960) (text fig. 13, pl. 11, fig. 1-2)

Emeralda cimelia Diakonoff, 1960 : 190, text fig. 84-85 (♂, head missing).
Apotoforma cimelia : RAZOWSKI, 1964 : *Acta zool. cracov.*, 9 : 377. — 1965, *World Fauna Tortricini* : 168, fig. 225, pl. 5, fig. 7.

DISTRIBUTION. North Madagascar : Diégo Suarez.

Contreforts [du Tsaratanana], Haut Sambirano, 1 100 m, vallée de la Besanetrikelly, 9-12.XII.1963 (*P. Viette*), 1 ♀, neallotype, genitalia on slide no. 7270.

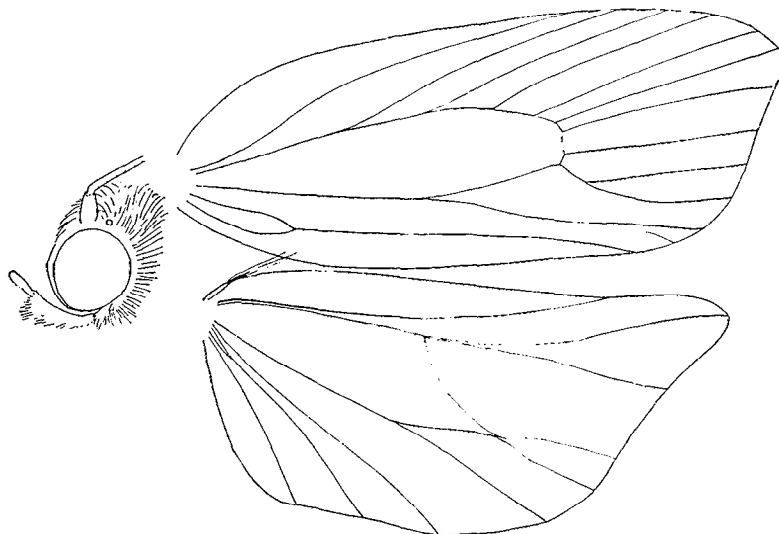


Fig. 13, *Apotoforma cimelia* (Diak), head and wing neuration, ♀.

♀ 14 mm. Head tawny-fuscous, between antennae pale ochreous (imperfect). Palpus moderately long, median segment slender at base, abruptly dilated at apex; whitish, apical half suffused with pale fulvous; terminal segment thick, obtuse, 1/2, obliquely rising; pale pinkish-ochreous, with a basal and a broad subapical purplish ring.

Fore wing narrower and appearing longer than in male. Colouring and markings very similar and differing only thus. Costal edge narrowly pale ochreous, with some five oblique purplish marks beyond transverse fascia, two minute ones before; transverse fascia from 1/3 of costa to dorsum beyond middle; subterminal fascia broad, vertical, densely irrorated with ferruginous-purple, termen with a series of not interconnected slender oblique purple lines, ending on termen, not preceded by a pale line.

Hind wing grey-fuscous, slightly paler towards base, darker towards apex. Cilia pale ochreous.

Female genitalia with the ovipositor lobe strongly constricted in middle. Sterigma very broad but little sclerotized, lower angles dark-edged and rounded. Ostium wide, with a rounded top and dilated lower half, punctulate inside, its lower edge somewhat thickened. Corpus bursae large, pear-shaped. No signum.

OLETHREUTINAE

Laspeyresiini

Cryptophlebia (*Cryptophlebia*) *semilunana* (Saalmüller, 1880)

Carpocapsa semilunana Saalmüller, 1880 : 310, no. 92.

Cryptophlebia (*Cryptophlebia*) *semilunana* : DIAKONOFF, 1958 : 89, pl. 4, fig. 1. — 1963 : 142.

DISTRIBUTION. « Madagascar ». East Madagascar : Perinet.

En dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII.1964 (*P. Soga*), 1 ♀.

Dracontogena gen. nov. (text fig. 14)

Head with roughly appressed scales, a small transverse crest across face. Ocellus posterior, minute. Proboscis weak. Antenna in male shortly fasciculate-ciliate (short white cilia making impression of antenna being serrate), in female minutely pubescent. Palpus moderate, bent twice, porrected, covered with closely appressed scales, median segment triangularly dilated in middle, upper edge smooth in male, slightly roughish in middle in female, terminal segment smooth, subtruncate, short in male, twice as long and moderate in female. Thorax with a double posterior crest in male, less distinct in female. Hind tibia dilated and posteriorly thickened with long scales, less so in female.

For wing with vein 2 from beyond 3/4 of cell, 3 and 4 closely approximated from angle, 5 parallel, 7 free, to termen, 11 from middle of cell, cell rather abruptly dilated along posterior half, both parting veins distinct.

Hind wing with a cubital pecten, in female : 2 from beyond middle, 3 and 4 stalked from angle, 5 approximated at base, 6 and 7 closely approximated along base. Male with a modified hind wing : vein 2 from towards angle (from about 5/6), 3 and 4 long-stalked, 5 little approximated, 6 and 7 little approximated and parallel along

base ; with a deep triangular excision on vein 2, devoid of cilia along the portion from apex to excision, with long dense hairs along dorsum, an oval smooth patch of modified scales along lower edge of cell from beyond base to beyond angle (concealing cubital pecten). Hind wing in female normal.

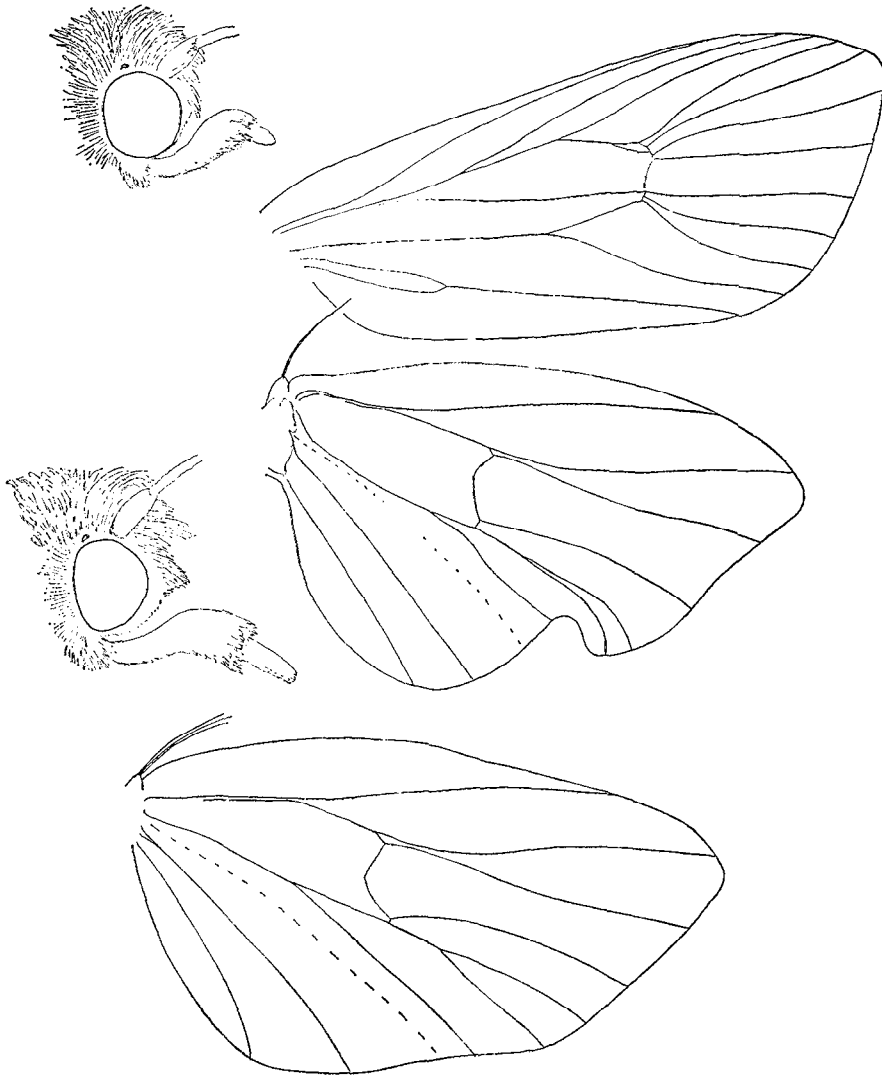


Fig. 14, *Dracontogena niphadonta* gen. & spec. nov., head, above ♂, below ♀ and wing neuration ♂, below of hind wing ♀.

Male genitalia of *Cryptophlebia* type. Tegumen slender, weak, with narrow legs and bow-shaped top. Vinculum short, strong. Caulis very long, rigid. Valva broadly oval, dilated, edge with a dense corona of recurved bristles, disc with an oval membranous tumescence, sometimes absent. Aedeagus straight, pointed, rather narrow. Eighth segment modified, tergite with an X-shaped sclerite, sternite with a basal transverse, and another apical, rounded, sclerites.

Female genitalia. Eighth and ninth segments sclerotised, the former with a thickened anterior ventral edge. Ostium bursae obliquely cup-shaped, aciculate inside. Colliculum an irregular slender tube. Corpus bursae pear-shaped. Signa almost equal, two pointed hooks with moderate basal plates.

Type-species, *Dracontogena niphodonta* spec. nov.

The genus belongs to the *Laspeyresiini*, in spite of the slightly approximated vein 5 in the hind wing, viz. to the *Cryptophlebia* group of genera. The robust species are easy of recognition by the colouring and markings which resemble those of *Hermenias* Meyr., and by the sexual dimorphism.

Another, closely allied species is *Dracontogena tonitrualis* (Meyrick, 1934) comb. nov., from Portuguese Guinea (« *Eucosma* »).

« *Eucosma* » *metamorphica* Meyrick, 1928, also from Portuguese Guinea, without marked sexual dimorphism, may be allied.

Dracontogena niphadonta spec. nov. (text fig 7, 14, 34)

♂ 16-23 mm. Head, antenna, and palpus jet-black. Thorax black with a straight submarginal anterior white transverse band, dilated on tegulae posteriorly, posterior edge irregular; posterior half of tegula with white tips of scales; a few white scales along anterior margin; tip white. Abdomen sordid whitish-grey, anal tuft pale grey. Legs black, anterior tibia with a faint white ring and a white tip, tarsus white-ringed, posterior tibia blackish, dilated by roughly appressed hair-scales, especially dense above, white.

Fore wing oblong-subtruncate, moderately dilated, rather narrow, costa curved at 4/5, rather straight before, apex obtuse, termen straight, hardly rounded, oblique. Velvety jet black, an anthracite-black slightly glossy transverse patch at 2/3, triangularly dilated on costa, abruptly dilated posteriorly on lower half, so as to occupy almost entire tornal area, but not reaching margin; costa with a rectangular spot at 1/3, followed by a similar but much smaller spot beyond middle: vinaceous-brown, almost entirely dusted with white transverse lines on costa: one between spots, minute, two more beyond spots; a wedge-shaped white costal spot before apex; a large white patch along dorsum, from well beyond base to 2/3, upper edge with two obtuse teeth; some white and brownish dusting between anthracite mark and tornus; a slender snow-white streak along upper third of termen; sometimes white terminal markings extended, with a white strigula before apex. Cilia black with anthracite gloss in certain lights, snow-white opposite terminal white streak, a slender white bar in tornus.

Hind wing pale grey, becoming darker grey towards apex, glossy silvery grey in posterior half of cells 1c and 2; dorsum densely scaled, whitish-grey, with a suffused subbasal ochreous shade; more than lower posterior quarter of cell densely clothed with short black scales, forming a slightly raised conspicuous patch, surrounded by dark grey suffusion mixed with white hairs; termen deeply triangularly notched just below vein 1c. Cilia absent between apex and notch, elsewhere pale grey.

♀ 22-26 mm. Similar to male but differing as follows. Palpus longer. Abdomen bronze-brownish, becoming dark brown towards apex. Anthracite gloss extending over costa. Basal patch replaced by a moderate marginal streak with two large equilateral triangular spots at the ends reaching 1/3 across wing, connecting streak sometimes obliterate; these white markings crossed by slender black lines from dorsal margin.

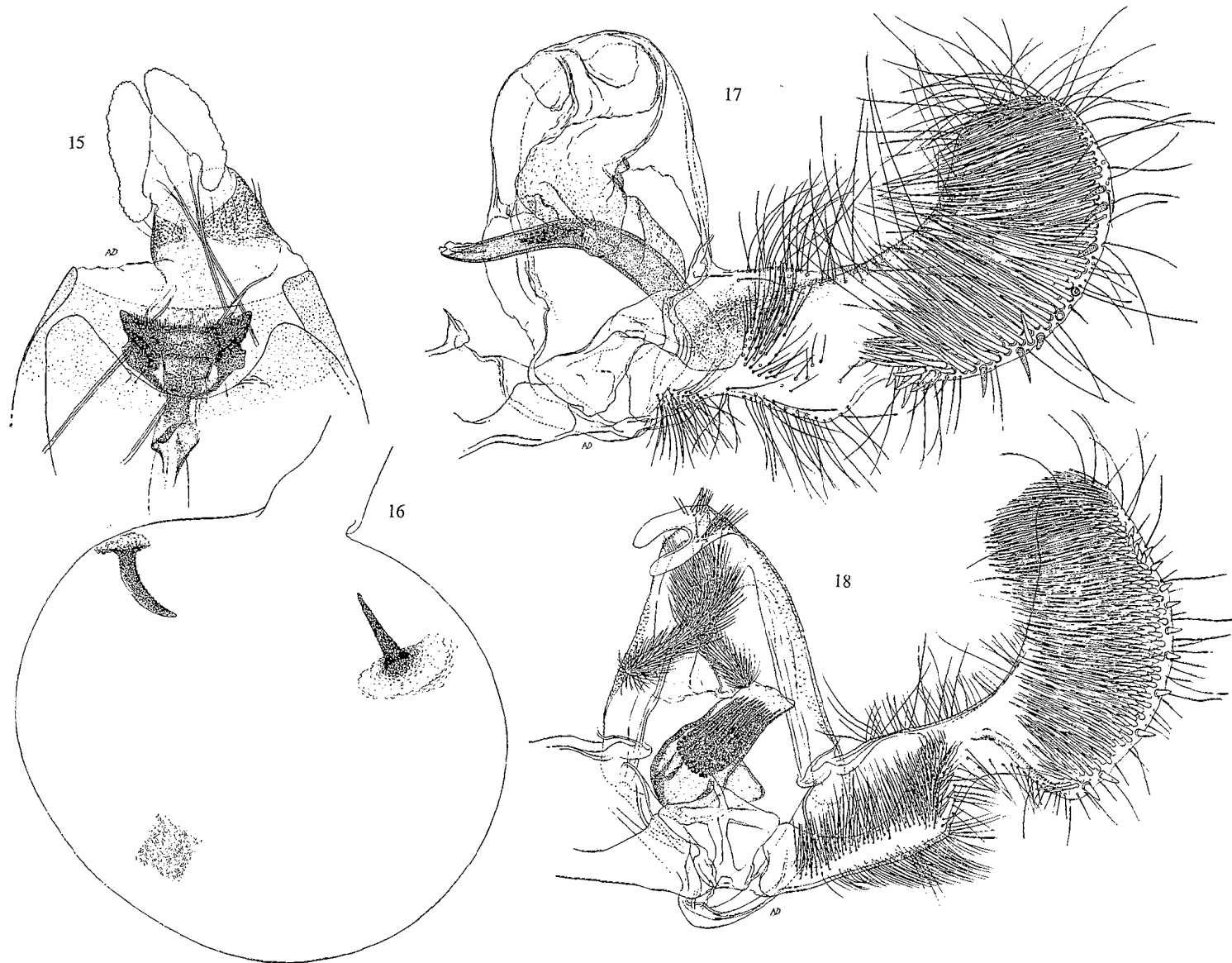


Fig. 15-18. Genitalia of Olethreutinae. 15, *Epinotia (Panoptia) phloeorrhages* spec. nov., ♀, allotype; 16, bursa; 17, *Thylacandra sycophyes* spec. nov., ♂, holotype; 18, *E. (P.) phloeorrhages*, ♂, holotype.

Hind wing not modified, dark brown-bronze, cilia paler with a fine blackish sub-basal line.

In one female specimen ternal patch vinaceous-tawny, hardly reaching costa.

Male and female genitalia as described for the genus.

Central Madagascar, Plateau d'Imerina, Tananarive, Parc de Tsimbazaza, 1 200 m, 7.XI.1951 (*P. Viette*), 1 ♂, holotype, gen. no. 2163. East Madagascar, environs de Perinet, 910 m, Forêt d'Analamazoatra, 27.XI.1954 (*P. Viette*), 1 ♀, allotype, gen. no. 2164.

Paratypes : Central Madagascar, Plateau d'Imerina, Parc de Tsimbazaza, Tananarive, 1 200 m, 4.X.1951, 1 ♂, 25.X-3.XI.1963, 1 ♀ ; Andranotobaka, 1 400 m, Ambatolampy, III.1957, 2 ♂, 3 ♀ ; Pays Betsileo, 1 600 m, Route du Sud, km 302, forêt d'Ambatofitorahana, 24.III.1955, 1 ♂, 1 ♀ ; La Mandraka, 1 250 m, Manjakandriana, 2.XI.1956, 1 ♀ ; Andringitra Range, Forêt Vakoana, Ambalamarovandana, 1 530 m, 21.XI.1956, 1 ♀ ; the same region, Plateau Soaindrana, 2 070 m, 15.XI.1958, 1 ♀ ; the same, Forêt Imitso, Anjavidilava, 2 030 m, 9.I.1958.

East Madagascar, Marojejy Range, Réserve nat. int. XII, Ambatosoratra, XI.1960, 1 050 m, 1 ♀ ; Route de Lakato, km 10, Ambodiriana, 1 050 m, III.1957, 1 ♂ ; environs de Perinet, 910 m, forêt d'Analamazoatra, 15.III and 20.IV.1955, 3 ♂ ; 14.I-16.III.1955, 7 ♀ ; district d'Ifanadiana, environs de Ranomafana, 700 m, 28.III.1955, 1 ♀ ; Ampitameloka, sud Moramanga, 840 m, 1 and 6.VIII.1956, 2 ♂ ; district Sambava, massif de Marojejy, Ambodifiakarana, 1 600 m, XII.1958, 1 ♂ ; Andranomalaza, Rés. nat. III, Mananilazy, VII.1957, 1 ♂, 1 ♀.

North Madagascar, Montagne d'Ambre, Les Roussettes, 1 000 m, 21 and 27.XI.1958, 2 ♀, 3.XII.1958, 1 ♀ ; Massif du Tsaratanana, en dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII. 1964, 2 ♂, 4 ♀. (*P. Griveaud, P. Soga, P. Viette, R. Vieu* : 16 ♂, 27 ♀).

Closely allied with *D. tonitrualis* (Meyrick) comb. nov., from Portuguese Guinea (São Tomé).

***Thylacandra sycophyes* spec. nov. (text. fig. 17, pl. 10, fig. 3-4)**

♂ 22-23 mm, ♀ 25-27 mm. Head pale tawny, on vertex slightly mixed with greyish. Palpus rather slender, ascending close to face ; deeper tawny, mixed with dark brown ; terminal segment short, subobtusate, dark brown above. Antenna tawny. Thorax light tawny, with a faint lilac gloss in certain lights. Posterior tibia ochreous-whitish, glossy, tarsus dark brown, whitish-ringed. Abdomen pale greyish-brown, becoming dark fuscous towards apex, anal tuft dark fuscous.

Fore wing elongate-triangular, dilated, costa moderately curved at extremities, straight in middle, apex rounded, termen long, almost straight in middle, oblique. Pale tawny-ochreous, slightly strigulated and marbled with fuscous. Costa from base to apex as far as upper edge of cell suffused with fuscous, towards base becoming fasciate and outwards-oblique ; fuscous suffusion extending downwards, so as to fill out entire cell, over median third of wing reaching dorsum ; this suffusion strewn with fine dark points, not distinctly tending to form oblique purple lines, one line at 1/5, another before middle of wing, parallel and inwards-oblique, are more distinct ; three rounded raised tufts along fold, beyond 1/5, beyond 1/3 and in middle of wing, respectively ; leaden-grey, somewhat glossy suffusion extending between cell and apex and on posterior parts of the raised tufts ; ill-defined, slight light purple suffusion on end of cell and along

dorsum ; terminal pale part of wing with an ill-defined dark fuscous-grey submarginal fascia, narrowed downwards and interrupted between veins ; a bright ferruginous marginal streak from apex to tornus, broadly interrupted between veins. Cilia (imperfect) pale fuscous with darker grey-fuscous bars opposite veins.

Hind wing dark fuscous-bronze, becoming paler grey-fuscous towards base, cilia pale ochreous with a fuscous subbasal band.

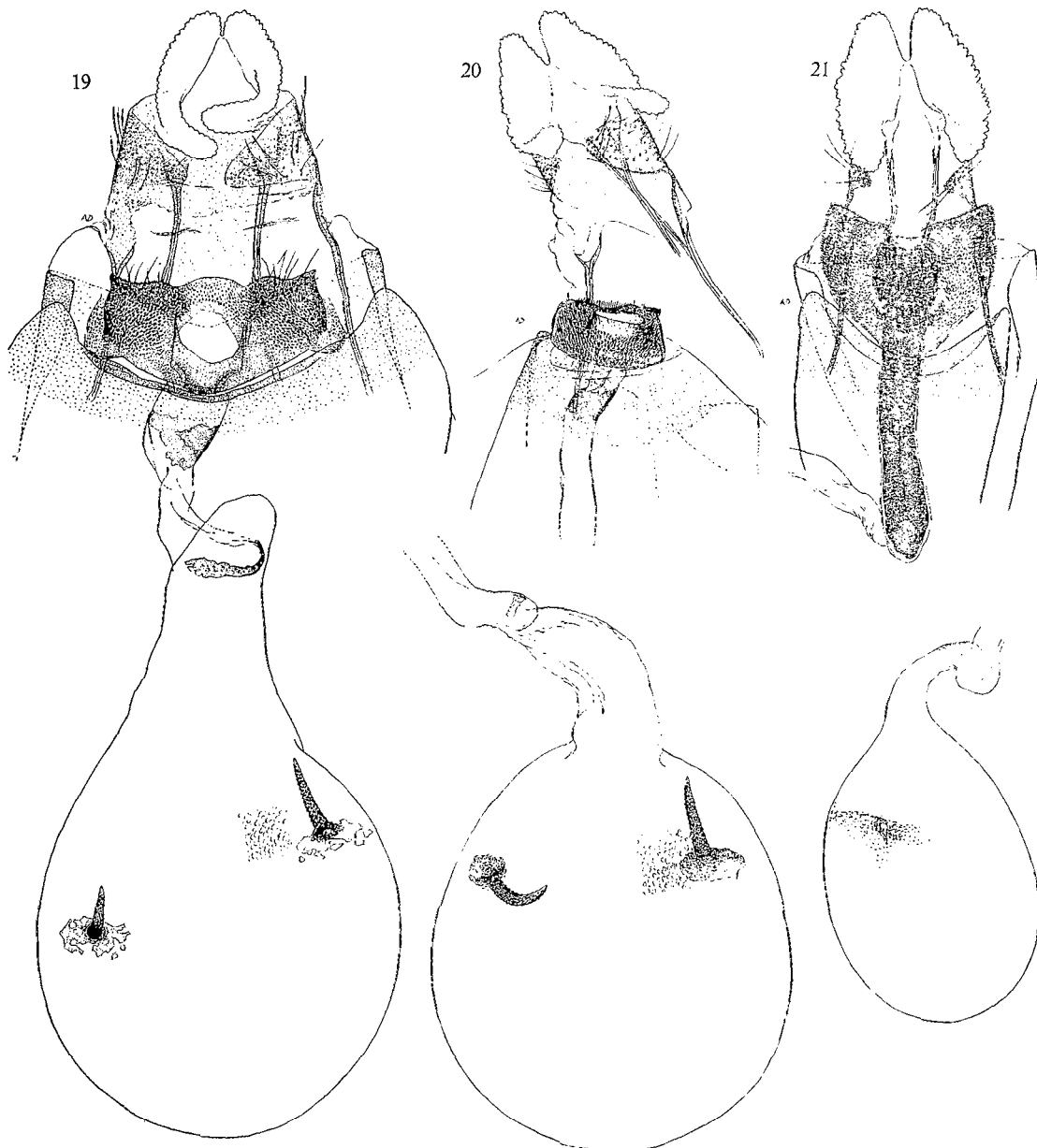


Fig. 19-21, Female genitalia of allotypes of Olethreutinae. 19, *Syropetrova viridis* gen. & spec. nov. ; 20, *Epinotia (Panoplia) heteranthera* spec. nov. ; 21, *Dolichohedya tripila* gen. & spec. nov.

Male genitalia. Tegumen entirely membraneous. Valva somewhat broader, sacculus with an obtusely prominent thickened top, excision distinct; cucullus bristles mixed with dark spines, forming a small dense patch at end of excision; modified circular field in disc (as in *T. argyromixtana*) absent. Caulis robust, aedeagus long, both as in that species.

Female genitalia. Sterigma, a large, erect plate, with thickened and concave sides, upper edge more concave, with a narrow rim; ostium ovoid, colliculum dark, moderate, rather narrow. Ductus bursae short. Corpus bursae large, ovoid, containing a large irregular concretion (probably a deformity and incidental). Signa, two little curved horns.

Central Madagascar, Ankaratra Range, Manjakatempo, Ambahona forest, 1 850 m, 19.III.1952 (*P. Viette*), 1 ♂, holotype, gen. no. 2337. North Madagascar, Massif du Tsaratanana, en dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII.1964 (*P. Soga*), 1 ♀, allotype, genitalia on slide no. 5905; 1 ♂, gen. 7393, 2 ♀, paratypes.

Closely allied with *T. argyromixtana* (Mab.), but lighter, general colouring fulvous, instead of blackish. The male genitalia are very distinct.

***Syropetrova* gen. nov. (text fig. 22)**

Head with roughly appressed scales, spreading on vertex. Ocellus posterior. Proboscis developed. Antenna in the two sexes moderately thickened, subserrulate and short-ciliate. Palpus moderately curved, obliquely ascending in male, longer, more curved and ascending in female, median segment exceeding vertex; in the two sexes smooth above, with a rough fringe of scales beneath, subcrescentic, apical segment

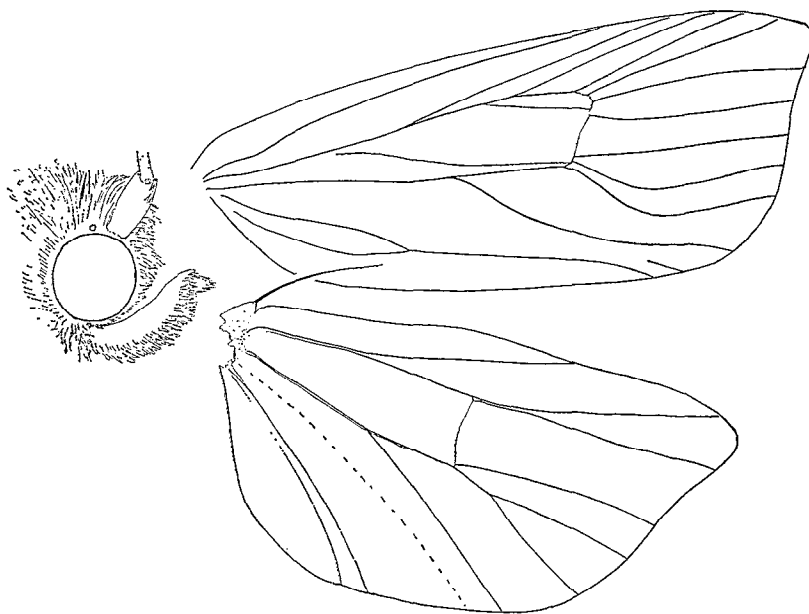


Fig. 22, *Syropetrova viridis* gen. & spec. nov., ♂, sketch of head and wing neuration.

subobtuse, porrect. Thorax without a crest. Posterior tibia with appressed scales above and beneath.

Fore wing oblong-subtruncate. Vein 2 from beyond middle, 3 from angle, 3-5 separate and almost equidistant, 6 remote, 6 and 7 distant, but gently converging towards base, 7 separate, to termen, 7-9 separate and equidistant, 10 from beyond middle of distance 9-11, 11 from middle, upper parting vein from before base of 10 to above base of 6, lower parting vein from towards base to base of 4.

Hind wing inverted-trapezoidal, over 1, with a cubital pecten. Vein 2 from about 2/3, 3 and 4 stalked from angle, 5 closely approximated to stalk at base, 6 and 7 closely approximated towards base.

Male genitalia of *Petrova* type but differing by the presence of a short, furcate uncus, by the absence of an apical cusp or cusps along the top of sacculus and chiefly, by the presence of coremata at the 7th segment of the male. Further description with the type species.

Female genitalia of *Petrova* type.

Type species, *Syropetrova viridis* spec. nov.

Apparently a development of the *Petrova* stock.

***Syropetrova viridis* spec. nov.** (text fig. 10, 11, 19, 22)

♂ ♀ 19-30 mm. Head and palpus with the faintest greenish tinge. Antenna light tawny-ochreous, scape greenish-white. Thorax white suffused with peculiar pale bluish-green, more distinct in certain lights, especially anteriorly; a longitudinal median blackish stripe mixed with bluish-green. Abdomen sordid ochreous or tawny-white.

Fore wing elongate-subtriangular, costa slightly curved at extremities, straight in middle, apex obtuse, termen vertical and slightly concave in middle, prominent and rounded below. White with the faintest bluish-green tinge, sometimes snow-white, suffused with pale greyish-blue-green, this colour deeper along costa. A club-shaped, inwards-oblique patch of unobscured ground colour, from below 3/4 of costa to dorsum beyond middle, gradually narrowed, base slender, sometimes upper half of this patch centred with very faint greyish-green-blue; costa with a subtriangular moderate black spot just before middle, preceded by two small spots, in every interspace three fine black costal strigulae, median thicker; top of costal triangle connected by a grey blackish suffusion with a grey black longitudinal spot, occupying posterior half of cell from upper edge to lower parting vein; these dark markings surrounded by grey-blue-greenish suffusion, forming a strongly narrowed below, transverse band, not reaching dorsum; sometimes posterior edge of this band regularly scalloped; basal patch to 1/3, ill-defined, with several transverse strigulae, blue-greenish or pale yellowish-olive, sometimes greyish; posterior half of costa with four black small spots, penultimate largest, ultimate just above apex, sometimes absent; these spots alternating with single minute strigulae; several more or less interrupted slender pale blue-green striae curved and descending from below these spots across wing, before apex, so as to form three or four inequal subterminal fasciae to tornus, some of these suffused grey; a sinuate vertical subterminal series of black marks of diverse number and size; apex and termen with a narrowly interrupted ferruginous or fulvous marginal fascia; an irregular subquadrate brown spot before tornus; dorsum with a blackish broad streak from beyond base to tornus, interrupted in middle by a double white line, above anterior portion coarse black dusting sometimes slightly mixed with ochreous, posterior portion

forming an elongate-triangular spot with bluish-green top. Cilia white, a blackish-blue subbasal band cut by several white bars, tips of cilia with fuscous bars.

Hind wing light ochreous-fuscous with a golden-pinkish faint gloss, paler towards base. Cilia fuscous-whitish with a subbasal fuscous band.

Male genitalia. Tegumen broad, truncate. Uncus very small, top concave. Socius small, slender, pending. Valva with a rectangular sacculus, excision deep, obliquely oval, corona present, short bristles. Aedeagus rather short; cornuti, a dense sheaf.

Female genitalia. 8th sclerite considerably sclerotized. Sterigma, a transverse broad band with vertical sides, lower edge moderately prominent in a rounded triangle; ostium large, erect-oval, lamella postvaginalis with rounded upper edge; colliculum almost annular, ostium, a slender semiannular sclerite atop corpus bursae; signa slender, with small basal plates.

Central Madagascar, Massif de l'Ankaratra, Manjakatempo, Forêt d'Ambahona, 1 850 m, 26.XI.1951 (*P. Viette*), 1 ♂, holotype, gen. no. 2597; Pays Betsileo, 1 600 m, Route du Sud, km 302, forêt d'Ambatofitorahana, 23 and 24.III.1955, 2 ♂, paratypes; Route d'Ambositra à Ambohimanga du Sud, km 39, 1 350 m, 6-11.X.1963 (*P. Viette*), 1 ♂, 1 ♀, paratypes, genitalia on slide no. 7392 ♂. East Madagascar, environs de Perinet, 910 m, forêt d'Analamazoatra, 16, 17.III.1955, 2 ♂ paratypes; route d'Anosibe, km 26, forêt de Sandrangato, 17, 19 and 20. X.II.1954, 3 ♂, paratypes (*P. Viette*). District Sambava, Marojejy Range, Ambinanitelo, 500 m, XII.1958 (*P. Griveaud*), 1 ♂, paratype; Réserve nat. III, Andranomalaza, vallée d'Ivelona, X.1957 (*P. Soga*), 1 ♂, 1 ♀, paratypes. North Madagascar, Montagne d'Ambre, les Roussettes, 1 000 m, 23.XI.1958 (*P. Viette*), 1 ♀, allotype, genitalia on slide no. 7391; Massif du Tsaratanana, en dessous de l'Andohanisambirano, matsabory, 1 900 m [2050 m), déb. XII.1964 (*P. Soga*), 1 ♂, paratype.

Stephanoma gen. nov. (text. fig. 23)

Head with appressed scales, roughly projecting over face. Antenna moderately thickened in male, short-ciliate. Palpus rather short, little exceeding width of eye and very broad (as broad as eye), strongly dilated from base by closely appressed and rather smooth scales, top of median segment truncate, slightly roughish, terminal segment appressed, only obtuse tip exposed.

Fore wing without a costal fold, oblong-subtruncate, cell narrow, 2 from beyond 1/2, 3 from angle, 4 closely approximated at base, 7 separate, to termen, 7-8 approximated at base, 11 from middle, upper parting vein from halfway between 11 and 10 to just below base of 7.

Hind wing broad, semioval, over 1, with a cubital pecten. 2 from beyond middle, 3 and 4 connate, 5 approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen low, rounded, its ventral side formed by a rounded sclerotized plate, with two short dorsal lobes and two large triangular, pointed ventral lobes, being the socii. Uncus, a prominence upon the centre of this plate, formed of two lobes. Gnathos band-like, dilated in middle. Valva of *Eucosma* type but with a large, broadly semioval cucullus, sacculus simple, with a small apical triangular prominence; excision moderate. Aedeagus moderate, dilated at base, cornuti, a sheaf of long spines.

The gender of the generic name is feminine.

Type-species, *Stephanoma triangulum* spec. nov.

A specialised member of the *Epiblema-Eucosma* group. The male genitalia are very characteristic.

***Stephanoma triangulum* spec. nov. (text fig. 8, 23)**

♂ 20 mm. Head tawny-whitish, mixed with white, two white tufts before bases of antennae, face dark fuscous. Palpus black, apex of median segment above and terminal segment entirely, white. Antenna whitish touched with tawny. Thorax whitish, laterally suffused with pale tawny-pink, apex coarsely strewn with black. Legs : anterior black, median brown, posterior pale tawny-white, all white-ringed. Abdomen grey mixed with black, with long light tawny hairs.

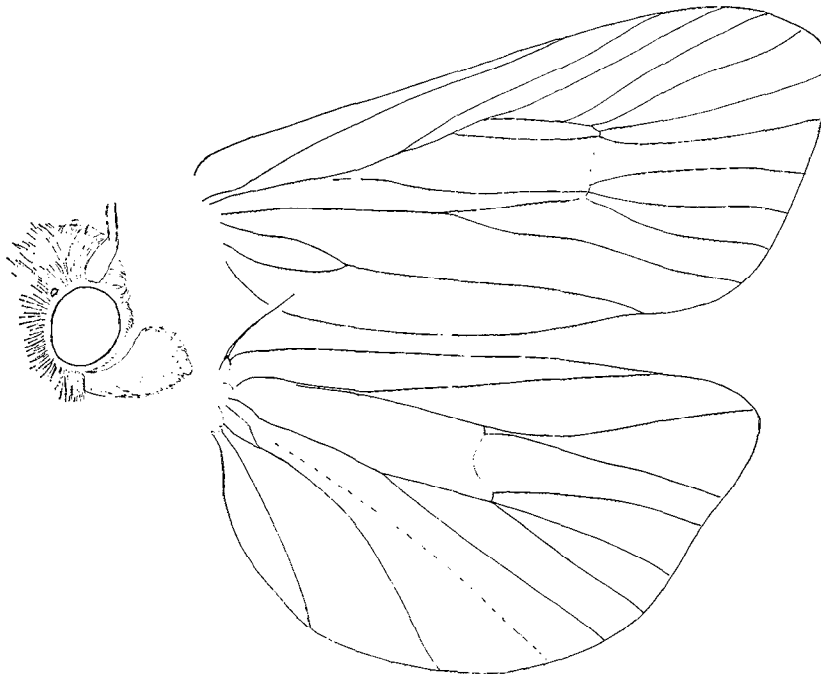


Fig. 23, *Stephanoma triangulum* gen. & spec. nov., ♂, sketch of head and wing neuration.

Fore wing subtruncate, rather broad, costa gently sinuate and rounded-prominent before middle, apex almost rectangular, slightly rounded, termen almost straight, little concave above, rounded below, little oblique. White, slightly marbled with pale chocolate-brown and partially and sparsely dusted with black ; markings black and pale chocolate-brown. Basal patch to 1/3, edge oblique and well-defined, along median third triangularly prominent, prominence with top below middle of wing breadth, black, in centre with a large suffused pale chocolate-coloured patch, extended along base of fold, but hardly reaching margins of basal patch ; costa with an oblique median transverse spot, almost interrupted above its lower extremity, along middle parted by a couple of pale chocolate-coloured lines ; this patch preceded on costa by three black marks, median largest ; and followed by four obliquely-triangular black spots ; first of these smallest, preceded and followed by a minute mark, fourth rather before apex ; a pale

pink suffusion below middle half of costa ; apex and terminal edge black, strewn with white points ; an equilateral blackish-brown spot on $3/4$ of termen, broadly edged with white : a similar white edge to lower half of the basal patch ; remainder of the lower half of wing suffused with light chocolate-brown becoming paler upwards, this suffusion forming two larger irregular inverted triangular patches, flanking the dorsal triangle ; a white fascia just before margin of posterior part of dorsum before tornus and before lower part of termen, followed by a black marginal line, interrupted in tornus ; second brown triangle centred with black suffusion sending out a black furcate fascia to apex and middle of termen, respectively, anterior edge of this fascia serrate above. Cilia anthracite-colour.

Hind wing tawny-brown, becoming dark brown posteriorly, cilia dark brown.

Male genitalia as described with the genus.

Massif du Tsaratanana, en dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], III.1965 (*P. Soga*), 1 ♂ holotype, genit. slide no. 7310, 1 ♂ paratype.

A conspicuous species.

***Epinotia (Panoplia) phloeorrhages* spec. nov. (text fig. 15-16, 18)**

♂ 22 mm. Head and palpus sordid light ochreous, tips of tufts on vertex greyish, median segment of palpus with a grey straight subapical ring. Thorax fuscous, mixed with ochreous-whitish, apex mixed with white ; mesothorax pale grey. Posterior tibia pale grey, tarsus black, grey-ringed. Abdomen fuscous-black, basal segment and anal tuft glossy fuscous-whitish, in female abdomen fuscous-brown, anal tuft ochreous.

Fore wing oblong-triangular, oblong-subtruncate in female, costa curved throughout, apex moderately pointed, termen sinuate above, rounded beneath, oblique. Upper half of wing pale ochreous, lower half whitish. Strongly obscured by numerous approximated fine and strongly zigzagged dark brown lines, less dense below fold, elsewhere forming a continuous pattern, similarly on and between markings. Basal patch to $1/3$, edge serrate : triangular excision at $1/4$, a truncate slender prominence in fold ; costa throughout with numerous transverse dark brown small strigulae, slender wedge-shaped strigulae alternating with linear ; a moderate elongate dark brown spot on middle of costa and a larger conspicuous blackish-brown prostrate-oval ocellus on middle of dorsum, indistinctly interconnected by a transverse band of cloudy grey suffusion, outwards-convex, in middle containing a small transverse dot on closing vein ; indefinite grey suffusion, obscuring apical third of wing ; a somewhat irregular creamy line, connecting whitish small dots on veins, from a double small white mark on costa before apex, crossing to the subterminal dot on vein 8, thence to marginal dots on 6 and 5, then submarginal, vertical, resting on termen above tornus. Cilia sordid pale fuscous, basal half dark fuscous, with a pale basal line, posterior half with some dark bars.

Hind wing grey-bronze-fuscous, becoming dark bronze towards apex. Cilia sordid pale ochreous-fuscous, with a dark grey basal half and a narrow basal line.

♀ 28-32 mm. Similar to male, but fore wing more truncate and markings differing as follows. Ochreous ground colour more bronze-tinged and extended, white ground colour only on dorsal fifth of wing ; marbling and strigulation coarser, median suffusion obliterate, small spot on end of cell more distinct ; dorsal ocellus pentagonal ; besides more terminal markings are visible, being a semicircular dark brown band before apex, posteriorly concave, from costa, its lower end emitting a fine, zigzagging black line

discending before termen to tornus ; some irregular black zigzags before tornus ; three white spots before, in, and above tornus, each finely parted by black.

Hind wing pale orange, along veins and irregularly along margins suffused with dark fuscous-bronze.

Male genitalia. Tegumen high. Uncus moderate, with a dilated base and two porrect hooks, top concave. Socius straight and long, slender, gently narrowed, pending. Valva with a moderate submedian excision, its edge throughout with an erect fold, sacculus with a subrectangular, slightly prominent point, a submarginal patch of sparse hairs, from base of sacculus to top of primary excision ; cucullus little curved, rather broad, top narrowed and rounded, corona developed. Aedeagus moderate, thick. Cornuti, a thick sheaf.

Female genitalia. Seventh segment sclerotized throughout, sternite with a semicircular excision. Sterigma, a somewhat elevated annular structure around ostium, dorso-laterally extended into pointed-oval lobes, densely aciculate. Lodix moderate, in middle narrowed, end irregular. Signa almost equal, slender and moderately curved horns, flattened laterally.

Central Madagascar, route d'Ambositra à Ambohimanga du Sud, km 39, 1 350 m, 6-11.XI.1963 (*P. Viette*), 1 ♂, holotype, genitalia on slide no. 7394 ; 3 ♂, 8 ♀, paratypes. Massif de l'Ankaratra, Manjakatempo, forêt d'Ambahona, 1 850 m, 17.XII.1954, 1 ♀, allotype, genitalia on slide no. 2594 ; 1 ♂, 1 ♀, paratypes (*P. Viette*).

All the following are paratypes. Central Madagascar, forêt Vakoana, Ambalamarovandana, 1 530 m, Andringitra Range, 22.1.1958 (*P. Griveaud*), 2 ♂. East Madagascar, Réserve nat. III, Ambatovositra, Andranomalaza, II-III.1957 (*P. Soga*), 2 ♀. Route de Lakato, km 15, Ankasoka, 1 100 m, 17-21.X.1963 (*P. Viette*), 1 ♂, 1 ♀. Pourtour 3° Réserve nat. int., route de Manakambahiny Est, env. de Nosivola, 1 000 m, 10.XI.1954 (*P. Viette*), 1 ♂, genitalia on slide no. 2593, 2 ♀, 16.XI.1954. Route d'Anosibe, km 26, 16-17.XII.1954 (*P. Viette*), 4 ♀. Route d'Anosibe, km 52, 1.I.1957 (*P. Griveaud et R. Vieu*), 1 ♂, 1 ♀. Environs de Perinet, 910 m, forêt d'Analamazoatra, 23.XII.1954 and 16-17.III.1955 (*P. Viette*), 1 ♂, 3 ♀. Marojejy, district Sambava, Anjanaharibe S., Betsakosako, 1 030 m, XI.1961 (*P. Soga*), 1 ♂, 3 ♀ ; the same range, Rés. nat. int. XII, Ambatosoratra, sommet, 1 700 m, XI.1960 (*P. Soga*), 1 ♂ ; the same reserve, Béondroka, 1 200 m, XII.1960 (*P. Soga*), 1 ♂ ; the same range, Ambodifiakarana, 1 600 m, XII.1958 (*P. Griveaud*), 1 ♀.

North Madagascar, Massif du Tsaratanana, en dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII.1964 (*P. Soga*), 2 ♂, 5 ♀.

***Epinotia (Panoplia) pictura* spec. nov. (text fig. 25-26, pl. 11, fig. 3)**

♂ 26 mm. Head and scape of antenna white, flagellum black. Palpus black, median segment with a large white spot at apex above, terminal segment white, with apical half on lower side black. Thorax with anterior half and an apical spot white, remainder black, tegula white with a large black spot on shoulder. Legs black, posterior leg grey, all legs ringed with white. Abdomen blackish, with broad posterior paler bands across segments, anal tuft silvery-white.

Fore wing oblong-subtriangular, costa curved at base, less so posteriorly, apex obtusely pointed, termen sinuate above, rounded below. White, markings black, partly filled out with dark leaden-grey. Basal patch to 1/3, edge zigzagged : straight above and

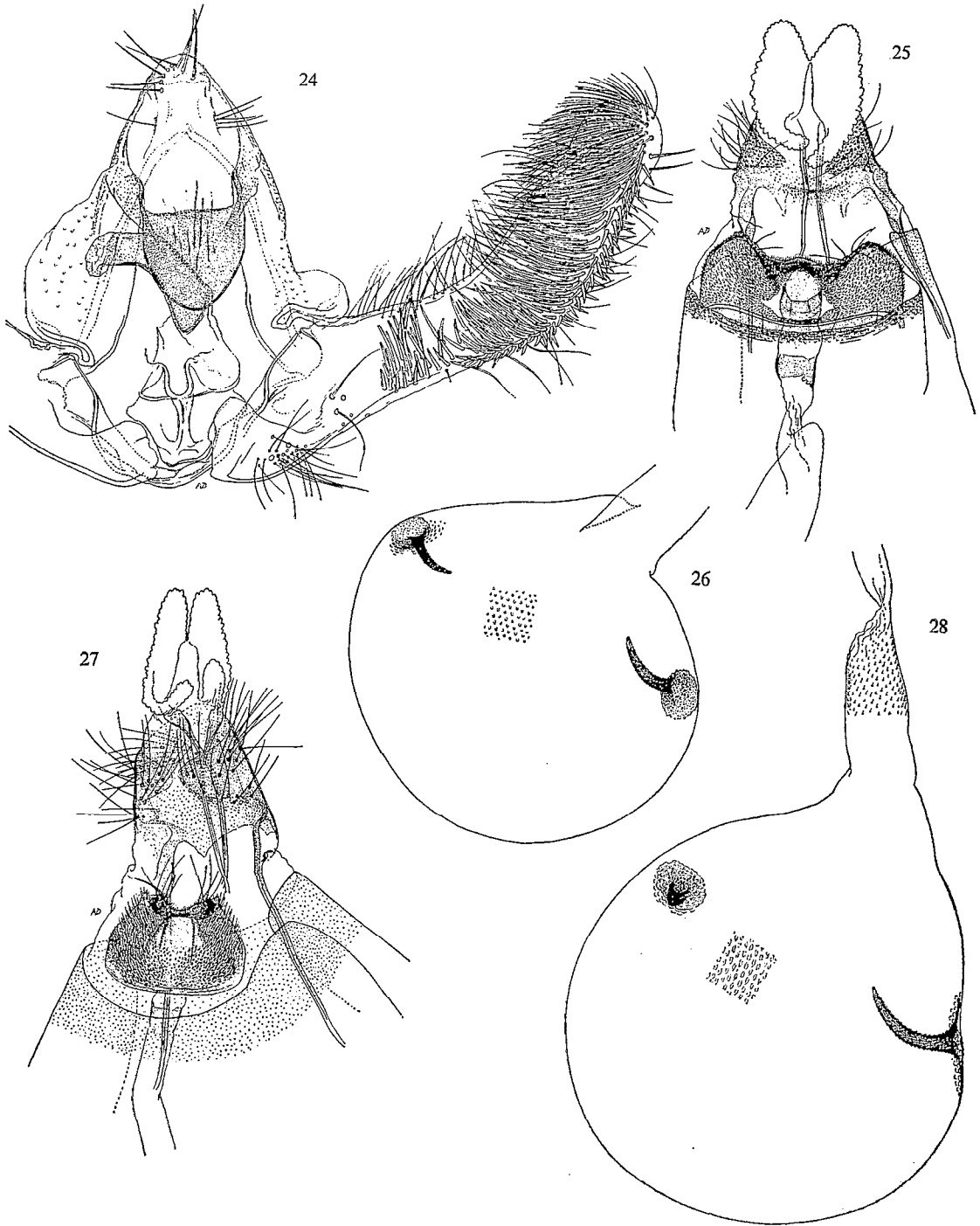


Fig. 24-28, Genitalia of Olethreutinae. 24, *Hilaroptila mimetica* gen. & spec. nov., ♂, holotype; 25, *Epinotia (Panoplia) pictura*, ♀, allotype; 26, bursa; 27, *E. (P.) dorsifraga* spec. nov., ♀, holotype; 28, bursa.

below, its middle third strongly projecting and slightly dilated, edge of projection with three unequal teeth, giving the edge the shape of a crown, lower tooth just above fold ; basal patch itself separated in three equal parts by a zigzag white median transverse fascia, parallel to edge of patch ; basal third of patch including two white dots on base ; a third white spot just before the pointed middle of basal patch which interrupts the white fascia ; posterior third of patch double on costa, with a round grey subcostal spot, another smaller spot just below fold ; median fascia indicated by two rounded black spots on middle of costa, interconnected by a mixed grey and black curved fascia on upper edge of cell ; and by a black L-shaped mark below preceding, across lower $2/3$ of wing, resting on $3/4$ of dorsum ; apical black patch V-shaped, lower half rounded and filled out with grey ; a black dot on costa halfway between basal patch and median fascia and between this and apical spot, respectively ; faint double small marks on and above middle of dorsum ; a narrow short marginal black streak on middle of termen. Cilia white with a black bar opposite apex, a blotch on basal half opposite terminal streak and L-shaped mark (on dorsum) ; apical third of cilia suffused with black except below apex and in tornus.

Hind wing rather dark grey, becoming blackish towards apex, below cell suffused with glossy white ; cilia grey with a whitish basal line and a whitish supramedian band from apex to beyond vein 1c.

♀ 24-26 mm. Allotype almost entirely similar to the male, but dark markings somewhat extended : the basal patch with a more serrate upper half of edge, L-shaped mark strongly dilated. Hind wing with the glossy white suffusion, rather darker grey throughout.

Two female paratypes with identical genitalia (one of them dissected) and similar dark markings but rather differently looking because of the ground colour being strongly marbled with light slaty-grey and slightly touched with greenish, mostly leaving white edges to markings, but partly extending and continuous, especially below middle and above fold.

Male genitalia. Uncus lobes long, gently clavate, less than $1/2$ length of socius. Socius very long, reaching gnathos, gently dilated and broadest in middle, posterior edge obtusely angulate at that point. Gnathos delicate, membranous, only lower edge distinct, inbent along middle third. Valva strongly constricted, sacculus obtusely angulate, cucullus oval, rather broad and little oblique, with 4-7 marginal spines.

Female genitalia. Sterigma, a broad band with separate basal stripe-like sclerite, upper edge with semicircular lateral lobes, their upper edge thickened mesially, ostium transverse, lamella postvaginalis subcrescentic. Colliculum moderate, tubular ; cestum, a double slender almost linear sclerite. Signa very narrow, basal plates large.

Massif du Tsaratanana, piste de Mangindrano au Maromokotra, au S. du piton coté 2 831 m, 13-15.XI.1966, 2 500 m (*P. Griveaud* & *P. Viette*), holotype, ♂, gen. slide no. 7312, allotype ♀, gen. slide no. 7339, paratypes, 2 ♀, gen. slide no. 7309. Four specimens. An elegant and conspicuous, motley marked species.

***Epinothia (Panoplia) transversa* spec. nov. (pl. 12, fig. 1-2)**

♀ 18.5 mm. Head and scape white, flagellum of antenna black. Palpus grey, apical edge of median segment and terminal segment entirely, white. Thorax fuscous-black, tegula with white apical half. Legs fuscous-black, white-ringed, posterior leg grey with cream-coloured rings. Abdomen fuscous-black.

Fore wing oblong-subtruncate, gradually curved anteriorly, hardly curved posteriorly, apex subobtusely projecting, termen sinuate above, broadly rounded below. White, strongly dusted and transversely strigulated with fuscous-black, markings extended, fuscous-black, slightly mixed with lighter fuscous-tawny. Basal patch to beyond 1/3, edge outwards-oblique and irregularly serrate, with a notch below costa, another above dorsum, and a median cusp continued by slaty-grey suffusion along fold to median fascia; basal patch containing a white oval spot along base of dorsum, traversed by two zigzag black lines; median fascia well-defined and rather narrow on middle of costa, forming a large rounded patch from upper edge of cell to above dorsum, suffused and lighter fuscous, mixed with grey, partly edged with tawny and dusted with white above fold; this patch connected by a suffused dark and broad bar with a deeper fuscous-brown, tawny-edged round spot below costa before apex; posterior half of costa with a blackish streak and six inequally spaced pairs of slender white marks; a round black spot in apex, continued by a vertical line with middle of (receding) termen; markings much obscured by grey and fuscous strigulation of the ground colour. Cilia dark grey with an ill-defined basal and a faint suprmedian whitish lines, a white blotch on basal half of cilia above middle of termen, cilia in tornus white.

Hind wing blackish-bronze with a golden gloss, becoming paler towards base, blackish and duller towards apex.

Female genitalia. Sterigma, a semispheroidal cup, frontal edge with rounded excisions at the sides with thickened edge, lamella postvaginalis rather straight, aciculate. Colliculum large, oblique, right side rounded, left side short; cestum small and short, a denticulate crescentic fragment. Signa moderately slender and shorter than in *pictura*.

Massif du Tsaratanana, en dessous de l'Andohanisambirano, matsaboro, 1 900 m [2 050 m], déb. XII.1964 (*P. Soga*), 1 ♀, holotype, gen. slide no. 7311; 1 ♀, paratype.

A moderate species with a characteristic *Epinotia* appearance.

***Epinotia dorsifraga* spec. nov. (text fig. 27-28, 35)**

♀ 19-20 mm. Head pale fuscous, sides of vertex brown, face black with white maxillary palpi. Labial palpus with basal and median segments pale fuscous, median gradually becoming suffused dark fuscous towards apex, upper half of apical edge white, terminal segment white. Thorax white with broad blackish lateral streaks which are interrupted below middle and suffused with ferruginous on shoulder, tegula ferruginous with white apical third. Abdomen glossy fuscous-grey.

Fore wing oblong, rather narrow, costa moderately curved at extremities, apex rather pointed, termen short, concave in middle, obliquely rounded below. Dark fuscous suffused with chestnut-brown, costa with two approximated pairs of white marks at 1/4, merging below in a greyish irregular angulate band to 1/3 of dorsum, thus separating an ill-defined angulate basal patch; five more distant and smaller pairs of costal white marks, becoming larger posteriorly; ocelloid patch large, thickly edged with silvery-grey, with three black stigulae; dorsum blackish, with a large white streak from base and a jet-black spot on base, point of streak slender, semicrescentic, transverse and concave posteriorly; a second similar transverse and slender white mark from middle of dorsum, more inwards-oblique, interrupted by fold, hardly reaching cell; a third short white transverse mark on dorsum before tornus and a fifth above this, on upper angle of cell, more or less inwards-oblique; numerous silvery-grey spots in disc

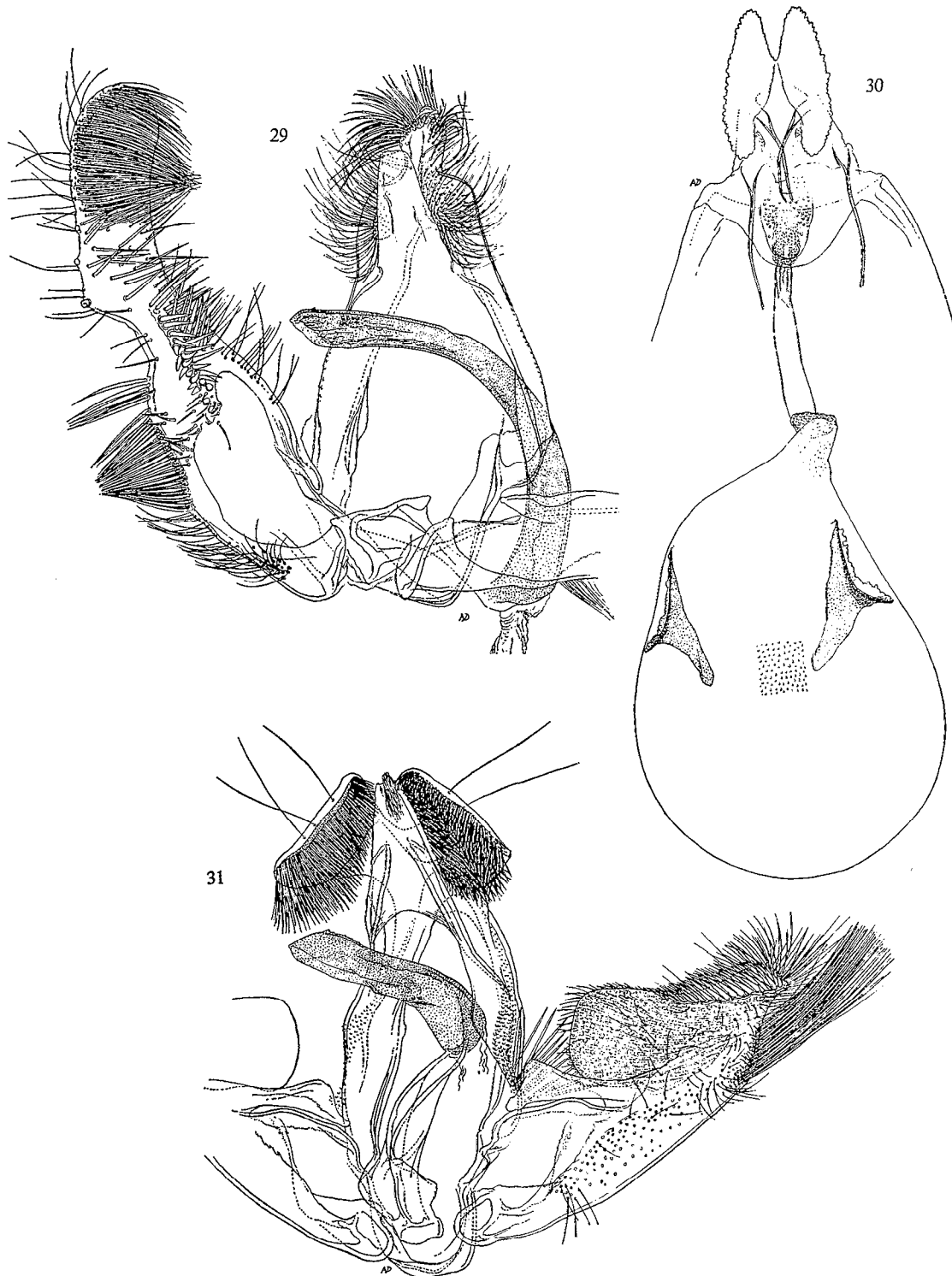


Fig. 29-31, Genitalia of Olethrentinae. 29, *Dolichohedya tripila* gen. & spec. nov., ♂, holotype; 30, *Syngamoneura rubronotana* Mab., ♀, neallotype; 31, *Bucephalacra scoliosema* gen. & spec. nov.

more or less defined and partly edged with black scales ; two white spots on upper half of termen extending over basal third of cilia and a third spot in tornus. Cilia pinkish-fulvous, with a slight crimson gloss in certain lights, basal third black, with three above-mentioned white bars, opposite apex cilia black ; in tornus white and black.

Hind wing pale whitish-golden, with a brighter golden gloss towards apex.

Female genitalia. Eighth segment elongate, conical, slightly sclerotized and bristled. Genital segment stronger sclerotized, sterigma a semioval, subglobular sclerite with punctulations, except before ostium, upper edge notched, edges of notch thickened, bristly. Colliculum short. Signa long, slender horns.

Matsabory en dessous de l'Andohanisambirano, 5-8.XI.1966, 2 050 m, camp no. 1 (*P. Griveaud & P. Viette*), 1 ♀, holotype, genitalia on slide no. 7387 ; piste de Mangindrano au Maromokotra, au N. du piton coté 2 362 m, 9-12.XI.1966, 2 310 m (*same collectors*), 2 ♀, paratypes (without abdomens).

The generic position of the species is uncertain without the knowledge of the genital characters of the males. Tentatively it is placed in *Epinotia*.

***Epinotia (Panoplia) heteranthera* spec. nov. (text fig. 20)**

♂ ♀ 16-18 mm. Head white, sides of vertex and face ferruginous-brown. Palpus with basal and median segments black, median with a large oval white spot at apex above, terminal segment black, minutely white-tipped. Antenna grey finely ringed with black, base entirely black, scape white with outer side suffused with tawny. Thorax white, a large triangular lateral spot anteriorly, covered by tegula, tegula with basal half ferruginous. Legs black, white-ringed, posterior leg grey with white rings.

Fore wing oblong-subtruncate, rather narrow, costa gently curved throughout, apex slightly rounded. Ferruginous mixed with dark fuscous, purplish, black and leaden-grey, reddish-ferruginous colour predominating in middle of wing, posteriorly forming bright tawny-orange marbling. A white marginal streak from middle of base of wing to 3/5 of dorsum, including a purplish oval spot on base of dorsum and a few transverse black strigulae along middle of dorsum ; the white streak continued thence to below costa before apex and parallel to costal edge, towards apex, interrupted in middle of wing ; a straight branch from middle of dorsum to beyond leg of costa, furcate on costa, costa black, with a pair of light grey transverse marks beyond base, two minute white pairs on middle of costa ; three large and thick pairs along posterior third of costa, below two penultimate pairs connected with the white streak, ultimate pair subapical ; a prostrate-suboval spot in centre of disc beyond cell, narrowly connected anteriorly with black marks in cell (thus interrupting white streak) ; these black markings more or less edged with irregular slaty-grey, especially below ; apex and termen ferruginous-black, two small white dots on termen ; ocelloid spot large, inverted-triangular in male, rounded in female, white centred with orange, mixed with slaty-grey above, more so in male. Cilia purple-grey, basal third purple-black, cilia in tornus pale tawny.

Hind wing light tawny-bronze, dorsum in female as far as cell and vein 3, pale glossy golden ; apex of wing fuscous-bronze. Cilia concolorous.

Male genitalia. Uncus prominent and rounded, top hairy, pointed appendages perfect. Socius long and slender, not dilated, not reaching gnathos. Gnathos, short curved arms supporting cup-shaped tuba analis. Valva with a small pulvinus, cucullus longer than 1/2 valva, curved, top pointing outwards, naked. Cornuti, a thick sheaf of spines.

Female genitalia. Eighth segment moderately sclerotized. Sterigma cylindrical, aciculate, sides and upper edge dark. Colliculum small, obliquely truncate. Signa, slender horns with round basal plates.

Massif du Tsaratanana, matsabory en dessous de l'Andohanisambirano, 5-8.XI.1966, 2 050 m, camp no. 1 (*P. Griveaud & P. Viette*), 1 ♂, holotype, genitalia on slide no. 7340 (left fore wing missing); the same, piste de Mangindrano au Maromokotra, au N. du piton coté 2 362 m, 9-12.XI.1966, 2 310 m, camp no. 2 (*same collectors*), 1 ♀, allotype, genitalia on slide no. 7341.

Plutographa gen. nov. (text fig. 32)

Head with thick, closely appressed short scales. Ocellus posterior. Proboscis absent. Palpus moderate, ascending, closely appressed to face, median segment gently subclavate, hardly dilated, little curved, rounded, lower edge roughish, terminal segment very short, truncate, exposed. Thorax with a thick posterior crest, tegulae with roughly appressed scales. Abdomen densely covered with long hair. Posterior tibia with closely projecting scales above and beneath.

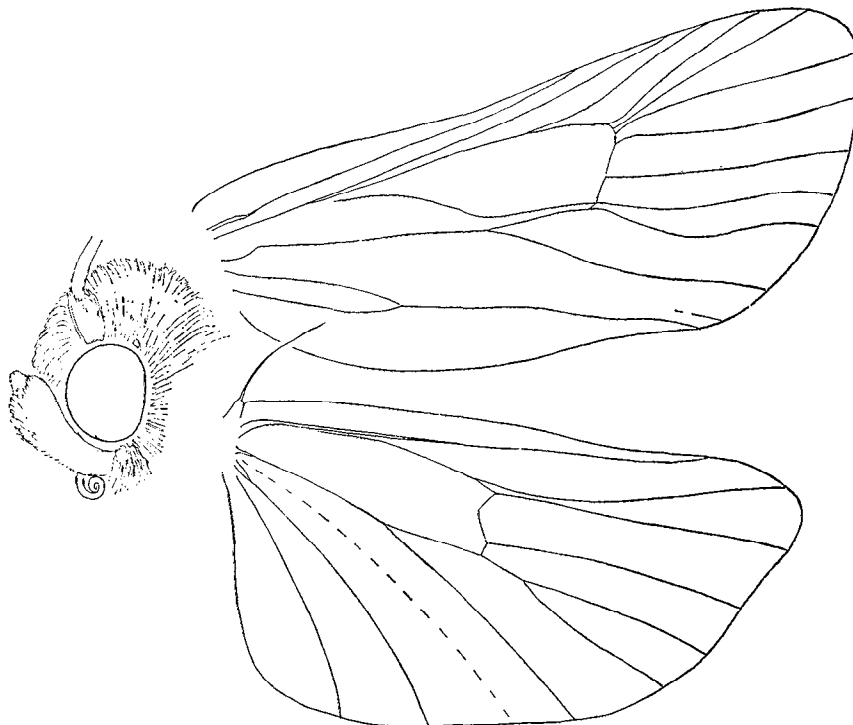


Fig. 32, *Plutographa cyclops* gen. & spec., nov., ♂ sketch of head and wing neuration.

Fore wing oblong, rather narrow. Vein 2 from $2/3$, 3 from angle, approximated to 4 at base, 5 distant, parallel, 6-8 moderately approximated at base, 7 to termen, 9 close to 8, 10 from more than $5/6$ distance 11-10, 11 from well before middle, parting vein from well before 10 to base of 7, accessory cell narrow.

Hind wing broadly semioval, 1 $1/4$, cilia $1/5$, with a cubital pecten. Vein 2 from

just beyond middle, 3 and 4 stalked from angle, 5 subparallel, 6 and 7 closely approximated towards base.

Male genitalia of *Epinotia* type, tegumen high, uncus a rounded and hairy process, with two curved hooks under the top. Socius extremely long and slender, densely haired. Gnathos, short curved arms with the cup-like tuba analis. Valva with a short, curved sacculus, posteriorly with a large patch of sacculus bristles. Cucullus curved, moderately broad, with a prominent and broadly rounded anal angle. Aedeagus short, little narrowed, bent in middle.

Female genitalia (known to me of a so far undescribed species), with the eighth segment sclerotized, ventrite deeply emarginate to receive an oval ostium with a narrow rod-like lamella antevaginalis and a thickened lamella postvaginalis, also sides of ostium thickened, with shallow folds. Colliculum moderate, irregular, Signa reduced : round basal plates of small scobinations, thorns missing.

Type-species, *Plutographa cyclops* spec. nov.

A conspicuous genus with large and robust species with the appearance of a *Cryptophlebia*. Actually closely related with *Epinotia*, judging from the male genitalia. However, the general facies, the female genitalia and the very long socii are characteristic and distinct.

***Plutographa cyclops* spec. nov. (text fig. 12, 32)**

♂ 26-28 mm. Head and face anthracite-black. Antenna deep ferruginous finely purple-ringed. Palpus ascending, closely appressed to face, ferruginous-black. Thorax and tegulae dark fuscous-grey, anthracite-coloured in certain lights, posterior tuft extremely dense and thick, deep ferruginous seen from behind, black. Legs ferruginous mixed with purple, posterior leg and spurs pale ochreous, above and below, coxa purple-black, tarsus fulvous. Abdomen pale ochreous, dull.

Fore wing oblong-suboval, dilated, costa tolerably straight, gently curved at base, apex rounded, termen rounded, little oblique, dorsum rounded-prominent anteriorly, concave before tornus, tornus rounded. Dark slaty-grey, dull, strewn with fine ferruginous points and strigulae tending to form transverse zigzag pattern ; more distinct transverse purplish strigulation towards middle of costa and of dorsum. Basal patch hardly reaching $1/3$, only edge indicated by suffused purple-black line, rectangularly angulate halfway between fold and dorsum, straight and slightly outwards-oblique below angle ; with a purplish streak along dorsum and a couple of similar zigzag transverse lines across middle of patch ; posterior third of wing forming a conspicuous light ochreous ocelloid spot or semicircle, open only along a short stretch below anteriorly and filled out with purplish and dark ferruginous marbling ; anterior edge of patch ferruginous-black with a pair of ill-defined parallel black lines, anterior continued below as a strongly inwards-angulate line to $3/5$ of dorsum, posterior line shorter, ending by an upwards-curved ferruginous-tawny thorn penetrating into ocelloid patch ; orange-tawny suffusion connecting patch with costa before apex and continued posteriorly as a submarginal line to apex and along termen to tornus, followed by a ferruginous narrow marginal line and preceded by a streak of ground colour, extending from below costa before apex to above tornus and almost interrupted above middle. (In paratype posterior edge of ocelloid patch formed by a pair of distinct parallel pale ochreous lines). Cilia purplish-pink, glossy brighter pink in certain lights, especially in tornus.

Hind wing bright yellow-golden, without gloss, apex and termen with about three irregular and interrupted rows of slender purplish strigulae, becoming sparser downward; a broad blackish-purple patch along posterior half of vein 1a continued on cilia and preceded by similar fine dusting. Cilia golden-yellow.

Male genitalia. Tegumen high, triangular, top somewhat truncate. Uncus with a hairy and conical base, top bifid, arms hooked. Socius extremely long and slender, long-haired. Valva long, rather slender, sacculus ill-defined, Spc_1 an oblong submarginal patch, dilated posteriorly. Cucullus with extremely dense bristles, lower angle broadly rounded and prominent. Aedeagus moderately bent in middle, rather broad.

Massif du Tsaratanana, en dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], III.1965 (*P. Soga*), 1 ♂, holotype, genitalia slide no. 7308, 1 ♂, paratype.

A robuste species with the colouring and markings slightly resembling a *Cryptophlebia*.

Syngamoneura Mabille, 1900 (text fig. 33)

Syngamoneura Mabille, 1900 : 750. — FLETCHER, 1929 : 214 (Phaloniidae). — VIETTE, 1947 : 58 (Phaloniidae).

Type-species, *Syngamoneura rubronotana* Mabille, 1900.

The genus may be redescribed as follows. Head with roughly appressed scales. Ocellus posterior. Proboscis developed. Antenna in male thickened, subserrulate, minutely fasciculate-ciliated. Palpus moderate, ascending close to face, reaching level of base of antenna, median segment but little dilated, with appressed scales, roughish only along lower edge posteriorly, terminal segment short, obtuse, obliquely porrected. Thorax smooth. Posterior tibia without pencil, with smoothly appressed scales, roughish at apex and in middle below.

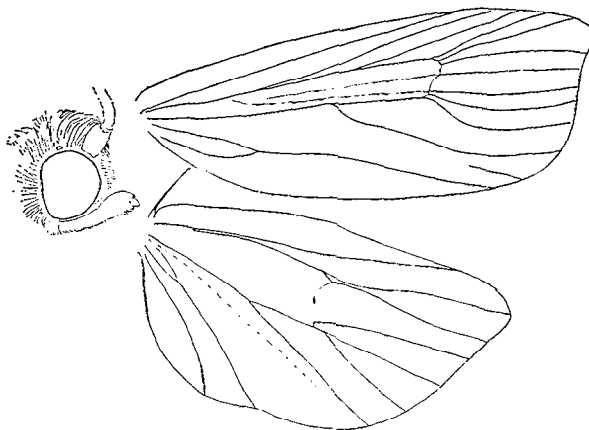


Fig. 33, *Syngamoneura rubronotana* (Mab.), ♂, sketch of head and wing neuration.

Fore wing oblong-truncate, moderately dilated, without costal fold, costa curved and prominent beyond base and before apex, straight between. Vein 1a furcate, 1c strong, broadly sinuate over lower half of wing, cell narrow, 2 from about 2/3, 3 from angle, strongly sinuate, 3-5 equidistant 7 separate, to termen, 7-9 moderately approximated at base (described as being connate), 11 from before middle.

Hind wing with a cubital pecten, sub-semioval, 2 from 2/3, 3 and 4 connate or short-stalked from angle, 5 closely approximated at base (described as originating from the same point as 3 and 4), 6 and 7 closely approximated towards base.

Male genitalia. A small, bilobed and weakly bristled uncus. Remarkable large socii completely clothed with short stiff spines, arranged in somewhat irregular transverse series. Valva with sacculus under 1/2, subquadrate, cucullus oblong. Aedeagus on long caulis, large. Cornuti, a large sheaf of spines.

Female genitalia. Lamella postvaginalis a well-defined, but weak erect-oval plate, punctulate in the centre and leading to a small shallow cup-shaped ostium, its frontal edge very narrow; colliculum slender, shorter than lamella postvaginalis. Corpus bursae pear-shaped. Signa two flattened large horns with flattened and long bases, without basal plates.

A specialized genus with rather puzzling characters of the male genitalia. Now that the female becomes known, it proves a rather close relationship with *Ancylis* Hübner which is certain, but not less surprising. The facies of the species does not remind one of an *Ancylis* at all.

Syngamoneura rubronotana Mabille, 1900 (text fig. 30, 33)

Syngamoneura rubronotana Mabille, 1900 : 750 (♂). — VIETTE, 1947 : 58 (Phaloniidae). — 1954, *ibid.* : 380 (*rubronotata*). — DIAKONOFF, 1959 : 173, fig. 8, t. 1, fig. 5, 6 (holotype and genit. figured).

DISTRIBUTION. Locality omitted from the original description, but apparently it is « Antongil » (Baie d'Antongil).

East Madagascar, environs de Perinet, 910 m, forêt d'Analamazoatra, 21.XI.1954, 22.XII.1954, 14.I.1955, 1 ♂ homoeotype, genitalia on slide no. 2328; district d'Ifanadana, Ranomafana, 700 m, 26.III.1955 (*P. Viette*), 1 ♂, homoeotype. Sud Moramanga, Ampitameloka, 840 m, 1.VIII.1956, 4 ♂. Matsabory, 2 030 m, XII.1958, district de Sambava, Marojejy, 6 ♂. Central Madagascar, forêt d'Imaitso, Anjavidilava, 2 030 m, Andringitra Range, 20.I.58 (*P. Griveaud*), 3 ♂. Réserve nat. III, Andranomalaza, Vallée d'Ivelona, X.1957 (*P. Soga*), 1 ♀, neallotype, genitalia on slide no. 7397. Anjozorobe, XI.1957 (*P. Griveaud*), 1 ♂.

North Madagascar, Montagne d'Ambre, Les Roussettes, 1 000 m, 5-12.II.1959 (*P. Viette*), 1 ♂. Massif du Tsaratanana, piste de Mangindrano au Maromokotra, au N. du piton coté 2 363 m, 9-12.XI.1966, 2 310 m, camp no. 2 (*P. Griveaud* & *P. Viette*). 1 ♀, genitalia on slide no. 7385.

♀ 19 mm, neallotype. Similar to male, but differing by the more extended fuscous-purple apical area, with four larger pairs of pale leaden costal marks; dorsal spot larger, dark fuscous, its sides slightly concave, a fuscous-brown light suffusion extending from posterior side of patch to before tornus and forming an oval spot; a few black points arranged in an arc above and parallel to edge of suffusion. Hind wing bright golden-yellow, glossy, only apex slightly purplish-tinged.

In the Tsaratanana specimen black points minute, but in an almost continuous series from dorsum beyond base to above tornus, thence in a strong curve to dorsum before tornus; oval suffusion brighter fulvous, broadly separated from dorsal patch, which is light grey, regularly black-dotted; pairs of leaden-coloured marks long, posterior continued before termen to above tornus.

Female genitalia as described with the genus.

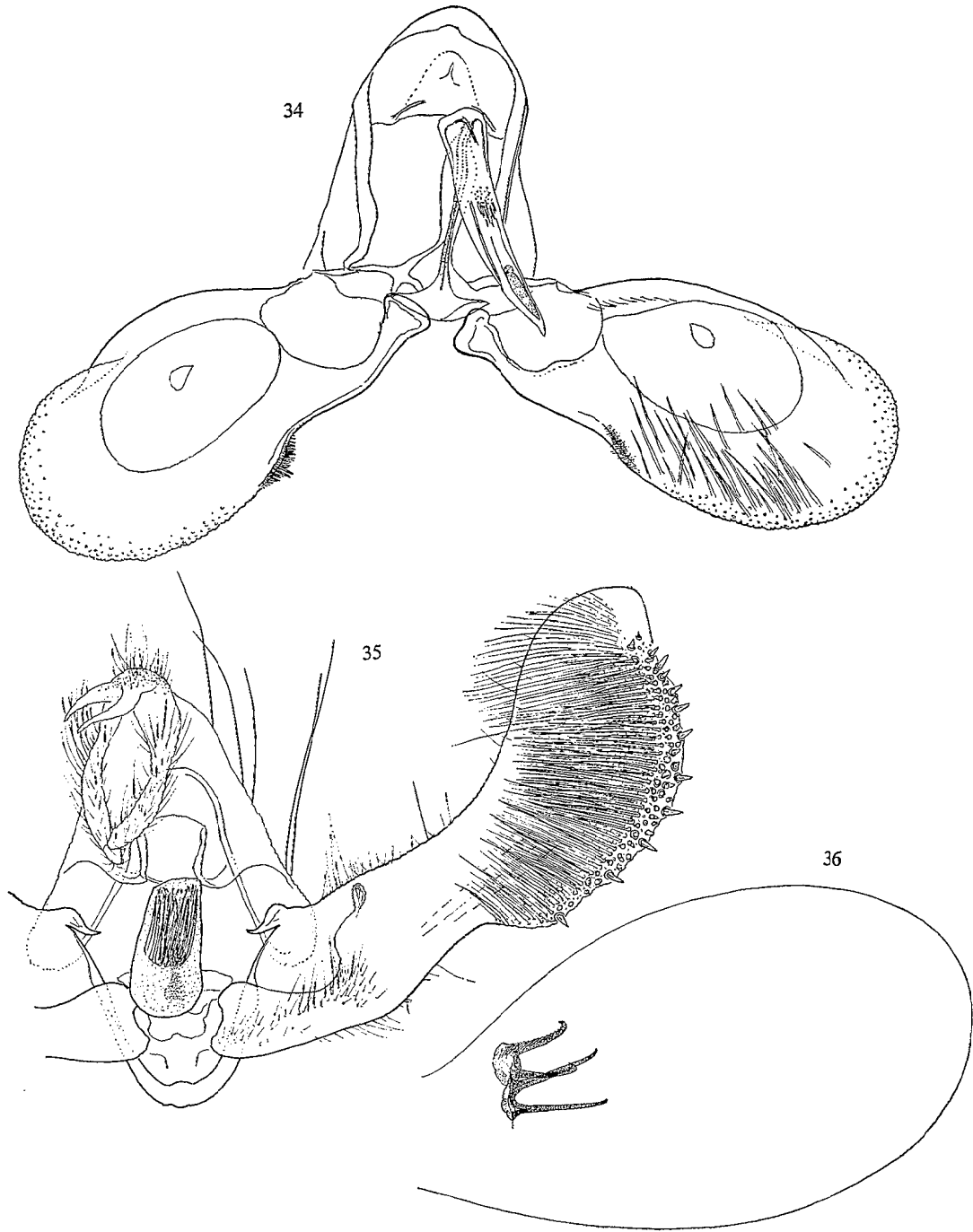


Fig. 34-36, Genitalia of Olethreutinae and Carposinidae. 34, *Dracontogena niphadonta* gen. & spec. nov., ♂, holotype; 35, *Epinotia (Panoplia) dorsifraga* spec. nov., ♂, holotype; 36, *Meridarchis unictata* spec. nov., ♀, holotype, bursa copulatrix.

*Olethreutini***Hilaroptila** gen. nov. (text fig. 37)

Head with appressed scales, roughish on vertex, face smooth. Ocellus posterior. Proboscis short. Palpus short, projecting less than width of eye, median segment rather slender, not dilated, with smooth scales, roughish along lower edge and at apex, terminal segment slender, spindle-shaped, exposed, slightly pending, subobtuse, about 1/3 length of median. Antenna thickened, long-fasciculate-ciliated, fascicles over 1. Thorax with a double posterior crest. Posterior tibia normal, smooth, short-scaled below.

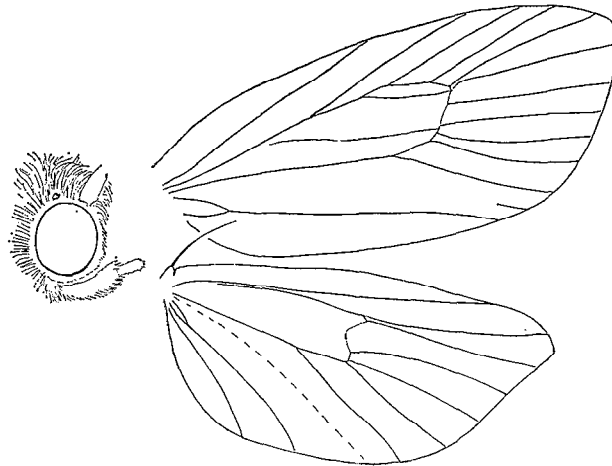


Fig. 37, *Hilaroptila mimetica* gen. & spec. nov., ♂, sketch of head and wing neuration.

Fore wing suboval, dilated and rather broad, costa moderately curved at ends, apex pointed, termen long, but little oblique, gently convex. Vein 2 from beyond 5/6 of lower edge of cell, 3 from angle, close to 4 at base, 4-7 distant and tolerably equidistant, 7 separate, to termen, 7 and 8 closely approximated towards base, 9 closer to 8, 10 from 3/4 distance 11-10, 11 from distinctly before middle, upper parting vein from 2/3 distance between 11-10, turned upwards at the end, to above base of 7.

Hind wing rather short, pointed-semioval, as broad as fore wing. 2 from beyond 2/3, 3 and 4 separate, 5 approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen high, triangular, with slender bristles at the top. Uncus absent. Gnathos robust, sclerotized, shaped as a long rounded and broad, sclerotized lobe, pending, with thickened upper edges of arms. Valva long and slender, slightly bent in middle. Sacculus indefinite, a patch of hairs, Spc_1 , a large groupe of sparse spines; extreme top of cucullus naked. Aedeagus small, curved.

Type-species, *Hilaroptila mimetica* spec. nov.

An interesting, novel form, characterized especially by the unusual position of vein 2 in the fore wing and by the genitalia. The colouring and the markings of the type species are remarkably similar to those of *Dolichohedya tripila* spec. nov., described below.

PLANCHE 6

Fig. 1-4, Genitalia of Tortricinae. 1, *Digitosa stenographa* spec. nov., ♂, holotype ; 2, *Parapandemis ianus* spec. nov., ♂, holotype ; 3, *P. perispersa* spec. nov. ♀, holotype ; 4, the same, bursa.

PLANCHE 7

Figs. 1-5, Female genitalia of Tortricinae, 1, *Parapandemis xylophyes* Diak., ♀, neallotype ; 2, the same, ductus bursae ; 3, bursa copulatrix ; 4, *P. subovata* spec. nov., ♀, allotype ; 5, the same, bursa.

PLANCHE 8

Figs. 1-4, Genitalia of Tortricinae. 1, *Epichoristodes (E.) macrosema* spec. nov., ♂, holotype ; 2, *Cuspidata anthracitis* Diak., ♂, slide no. 7307 ; 3, the same, ♀, neallotype ; 4, the same, bursa.

PLANCHE 9

Figs. 1-4, Genitalia of Tortricinae. 1, *Goniotorna (Tenuisaccula) macula* spec. nov., ♂, holotype ; 2, the same, aedeagus ; 3, *Niphothixa atava* spec. nov., ♀, holotype ; 4, the same, bursa.

PLANCHE 10

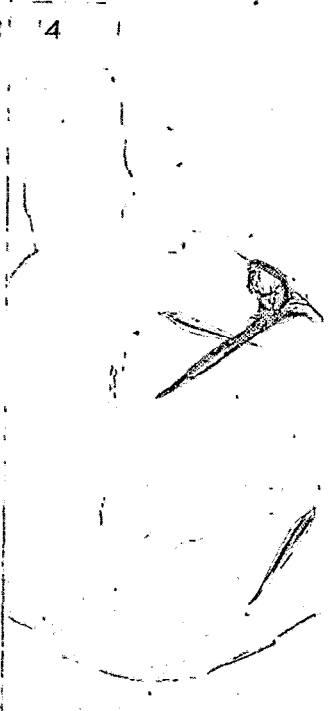
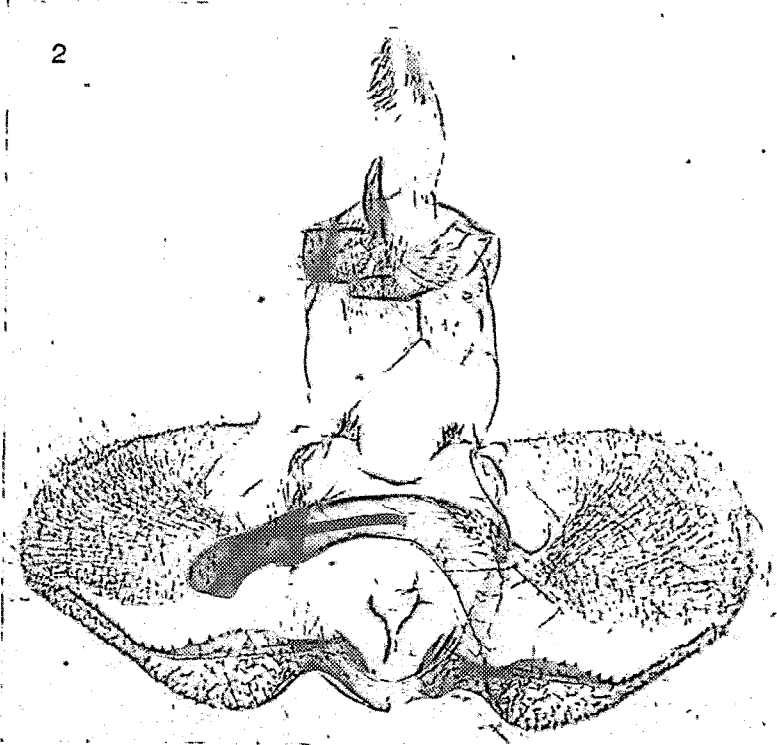
Figs. 1-4, Female genitalia of Tortricidae. 1, *Epichoristodes (Tubula) nervosum* spec. nov., holotype ; 2, colliculum and ductus bursae ; 3, *Thylacandra sycophyes* spec. nov., allotype ; 4, bursa.

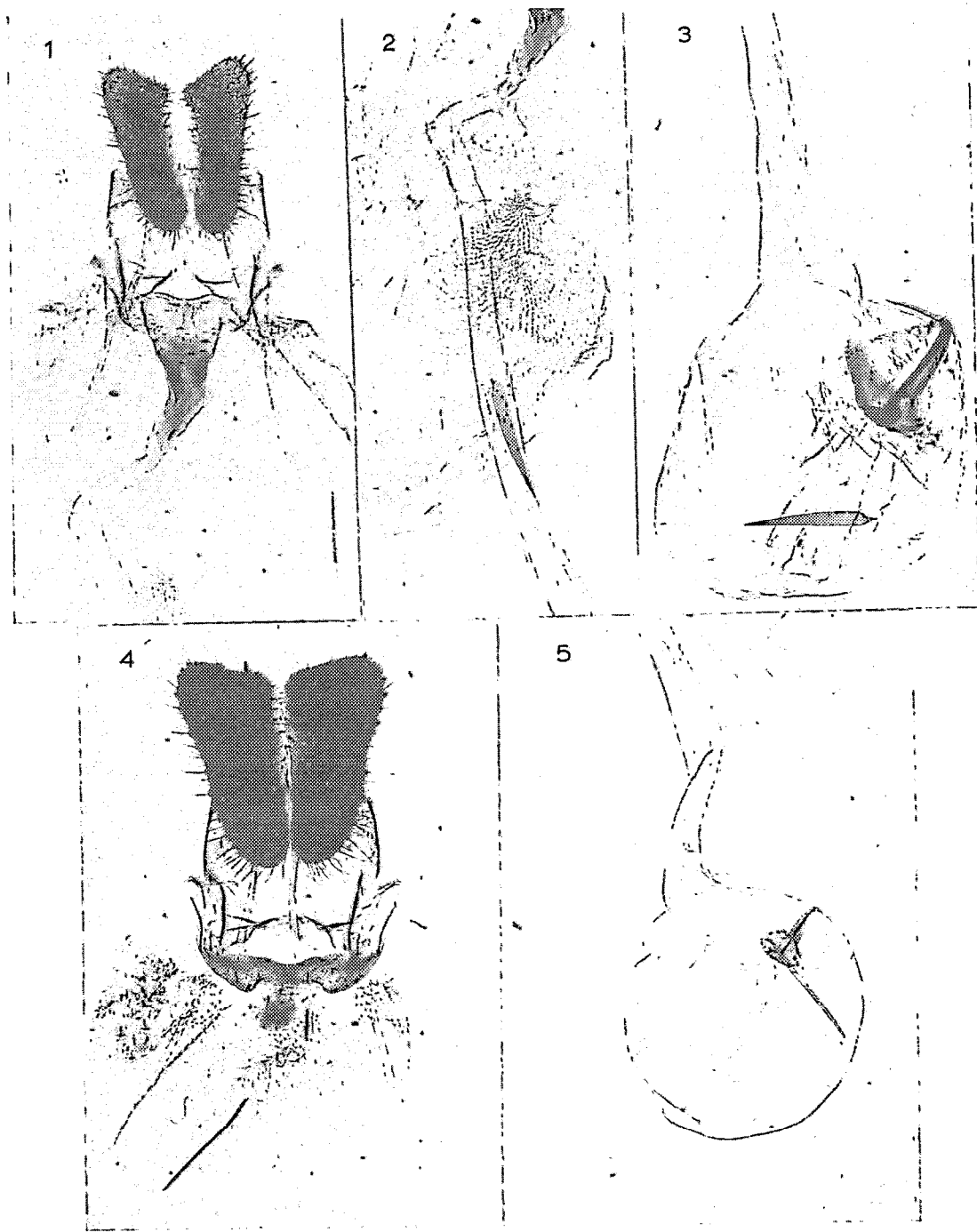
PLANCHE 11

Fig. 1, *Apotoforma cimelia* (Diak.), ♀, neallotype, genitalia. Fig. 2, the same, bursa. Fig. 3, *Epinolia (Panoplia) pictura* spec. nov. ♂, holotype, genitalia.

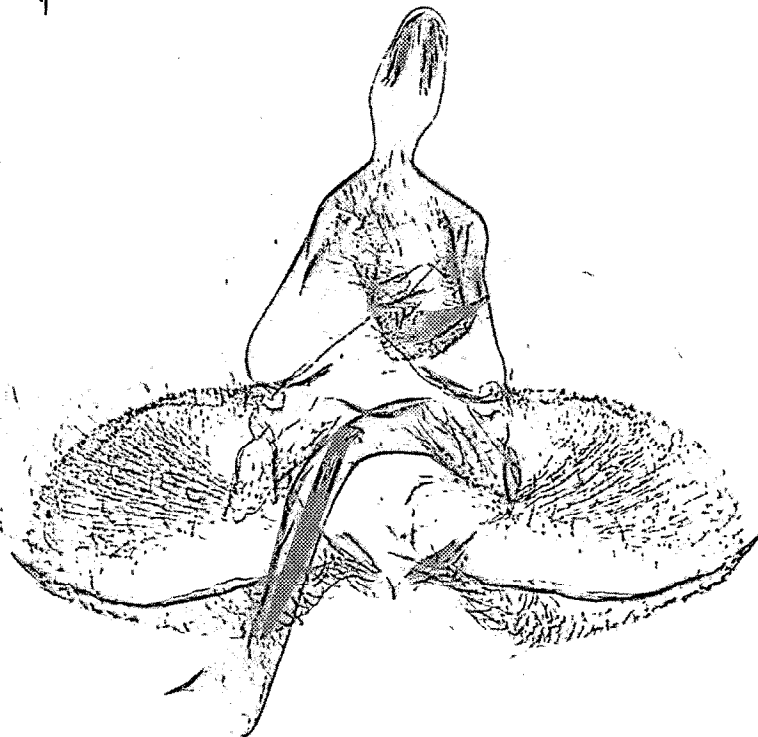
PLANCHE 12

Fig. 1, *Epinolia (Panoplia) transversa* spec. nov., ♀, holotype, genitalia. Fig. 2, the same, bursa.

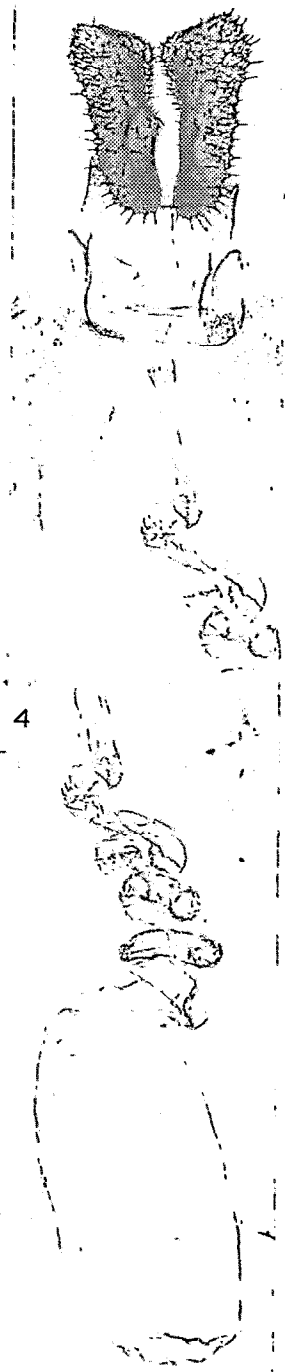




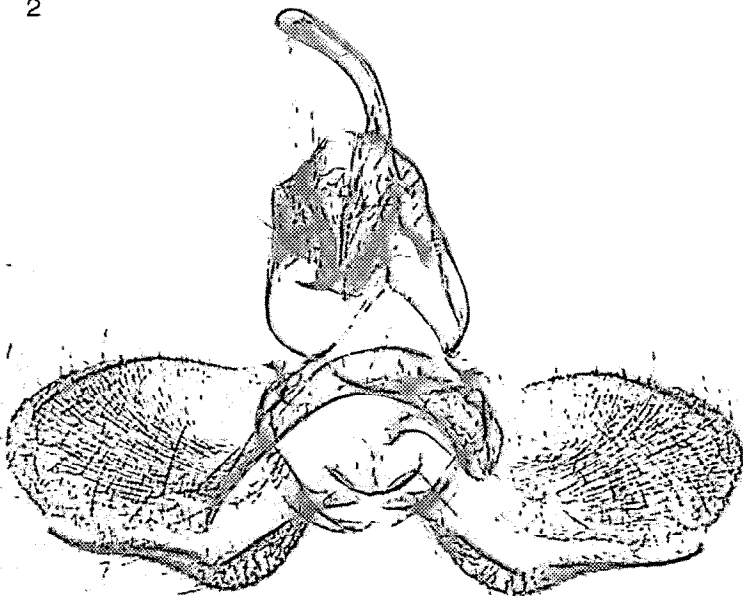
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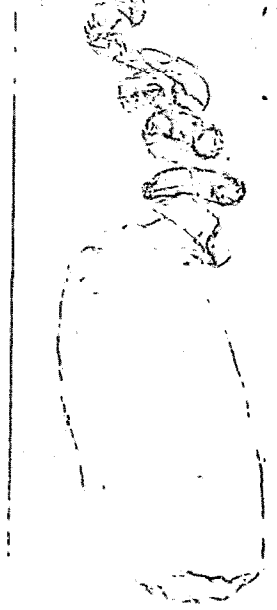
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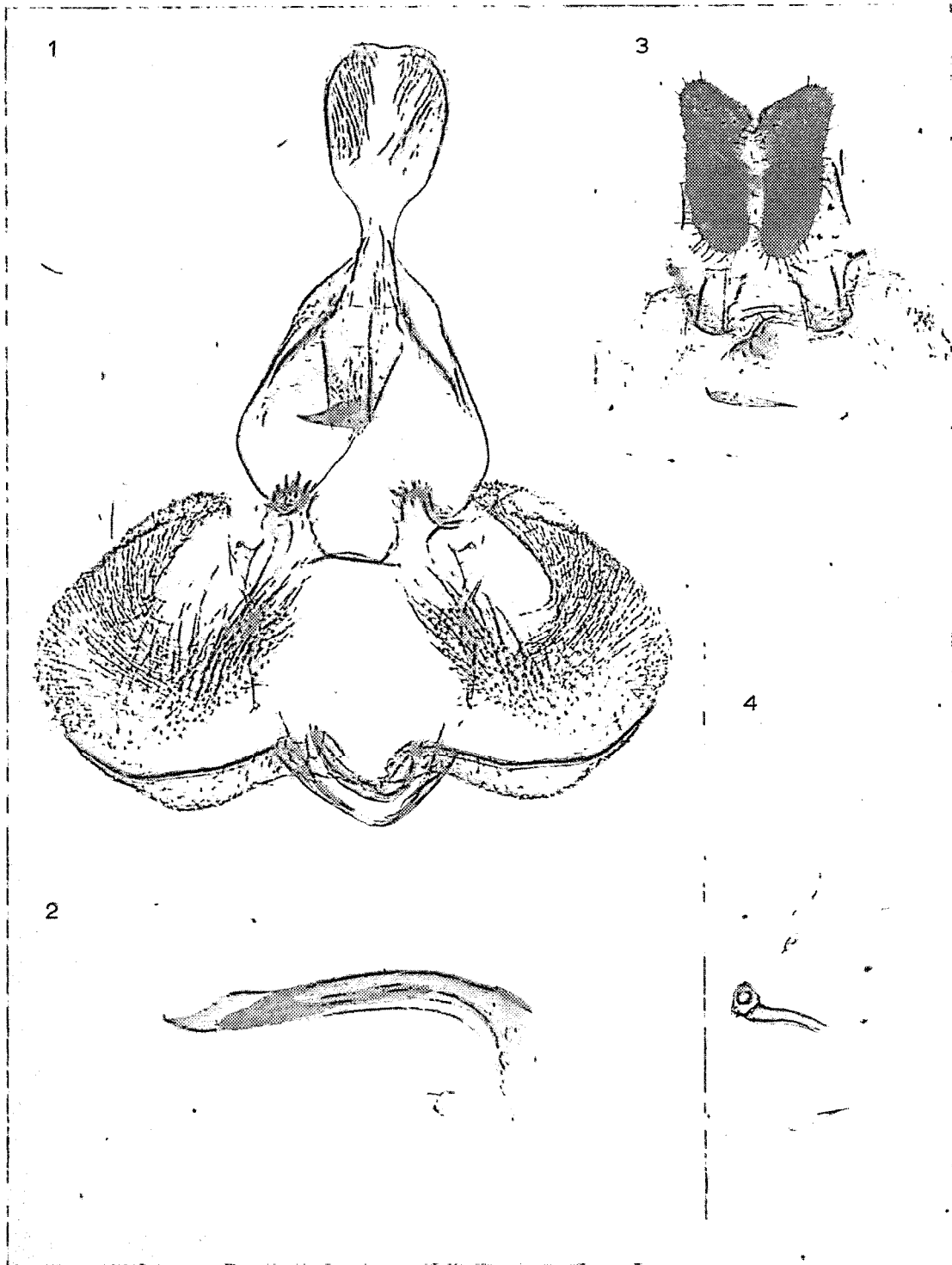


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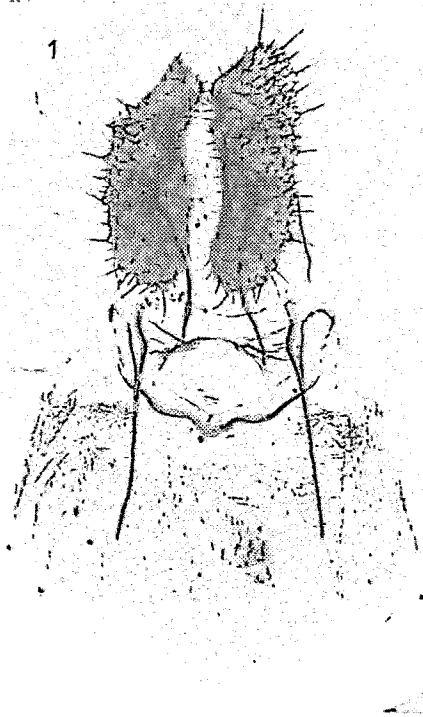


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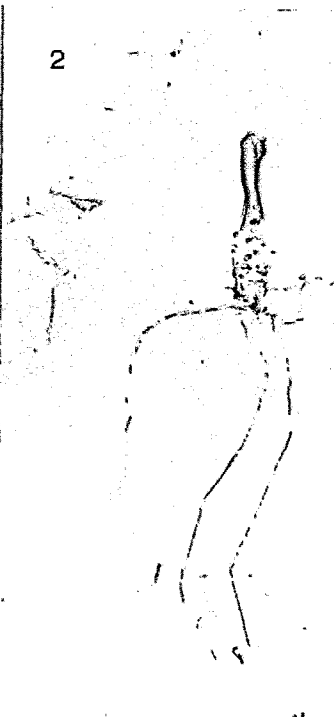




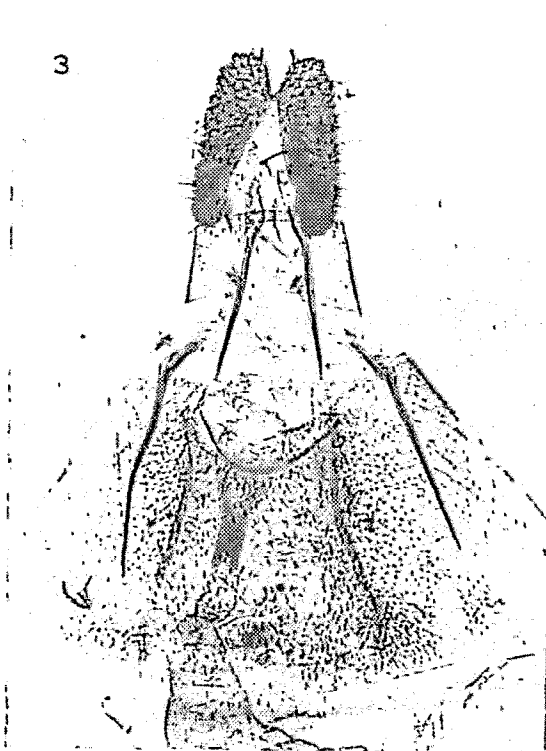
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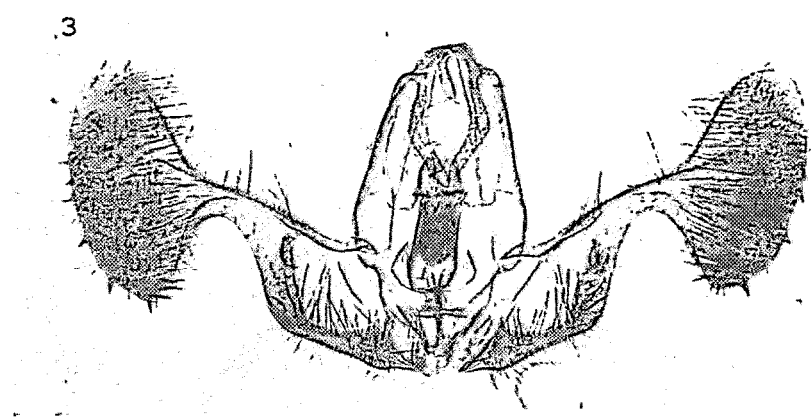
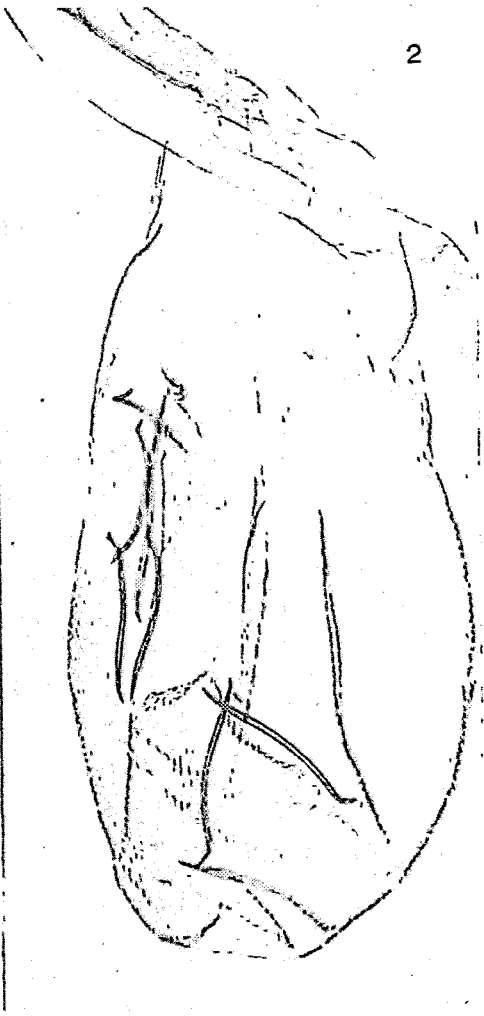
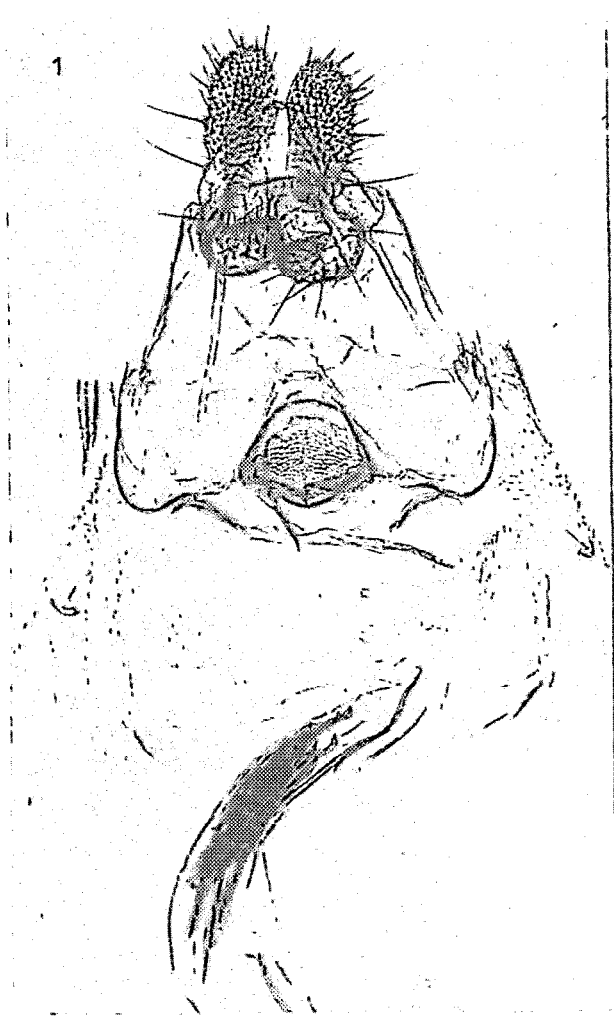


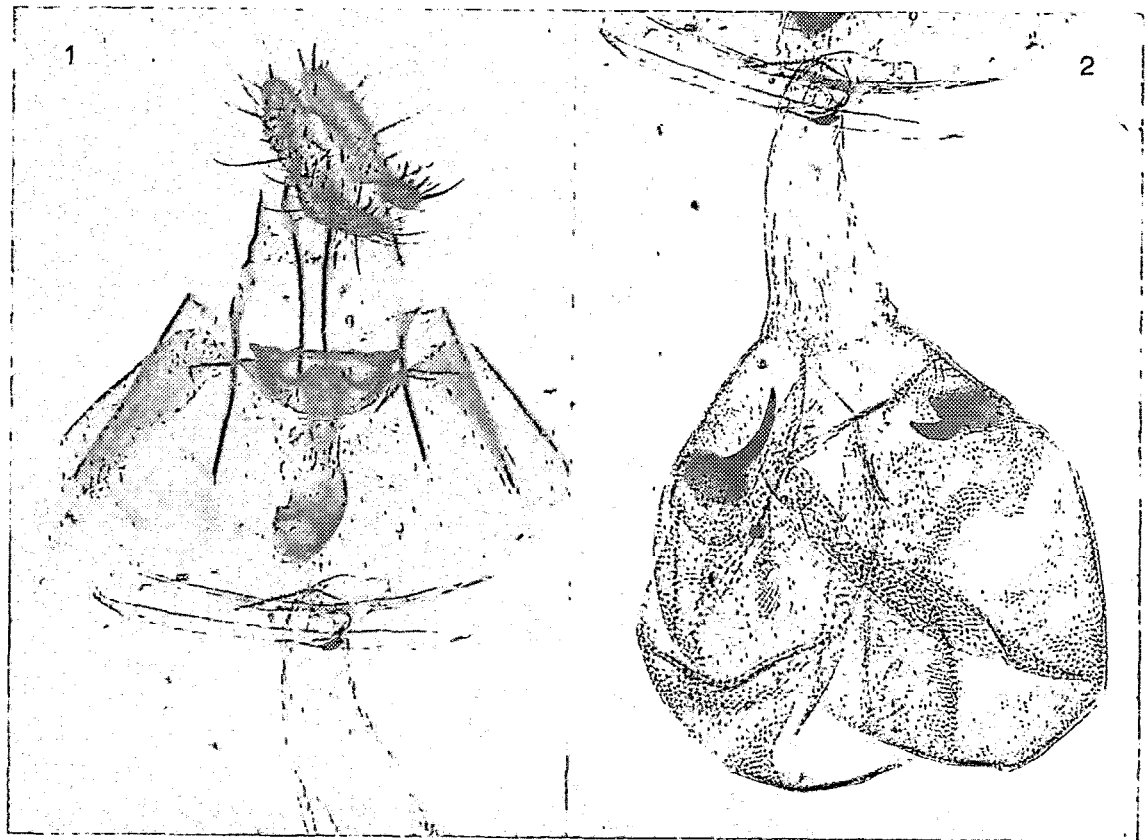
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A yellow hind wing in the tribe Olethreutini is very unusual. It is more common in the Laspeyresiini.

Hilaroptila mimetica spec. nov. (text fig. 24, 37)

♂ 15.5 mm. Head jet-black, collar whitish, face white with black lateral spots. Palpus whitish with a subbasal and a subapical black band, dusted slightly with black elsewhere. Antenna black ringed with white? (almost entirely missing). Legs black and white, posterior leg whitish, femur and tarsus greyish. Thorax black with a median whitish spot, metathorax with posterior edge yellowish.

Fore wing suboval, rather broad, pointed and hardly dilated: costa moderately curved at base, apex obtusely pointed, termen rounded, oblique. Black, markings pale grey and white, gently touched with yellow (strongly rubbed). Discernible are: a broad double, gently curved transverse band at 1/3, not quite reaching dorsum; posterior third of costa with four small white oblique marks, second one double; a well-defined longitudinal oval white spot below costa well before apex, its upper and posterior edges with four acute teeth (just below veins); another larger and ill-defined white patch on dorsum before tornus, slightly strewn with yellow; sprinkling of round light grey-blue dots spread over posterior half of wing; tornus suffused with greyish-tawny and marbled with white. Cilia concolorous (rubbed).

Hind wing bright orange-yellow with a black marginal band except on dorsum, gently and gradually dilated towards apex of wing. Cilia black, along dorsum orange-yellow.

Male genitalia as described with the genus.

North Madagascar, Massif du Tsaratanana, en dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII.1964 (*P. Soga*), 1 ♂, holotype, genitalia on slide no. 7338.

Deceivably similar to *Dolichohedya tripila* spec. nov., described below, but much smaller, with brighter yellow hind wings, etc.

Dolichohedya gen. nov. (text fig. 38)

Head with roughly appressed hairs, on sides of vertex roughly spreading. Ocellus posterior. Proboscis developed. Antenna short-biciliate in male, ciliations under 1, short-ciliate in female. Palpus curved, ascending, closely appressed to face, clothed with dense smoothly appressed scales, slightly roughish along lower edge, apex of median segment rounded, terminal segment rather short, exposed, obtuse, longer in female. Thorax with a thick, spreading posterior crest, smaller similar, brushlike, crests on tips of tegulae. Posterior tibia thickened by loosely projecting moderately dense scales above and beneath.

Fore wing oblong-subtriangular, apex rather rounded, termen oblique. Vein 2 from beyond middle, 3 from angle, 3-5 approximated and equidistant at base, 6 remote, 6-9 moderately approximated and equidistant at base, 10 widely remote at base, converging posteriorly, from beyond 2/5 distance 11-9, 11 from about 1/3, upper parting vein from halfway 11-10 to below base of 7.

Hind wing with a cubital pecten, almost 1 1/2, broadly semioval, top obtusely

pointed. Vein 2 from beyond middle, 3 and 4 stalked, 5 closely approximated at base, 6 and 7 closely approximated towards base.

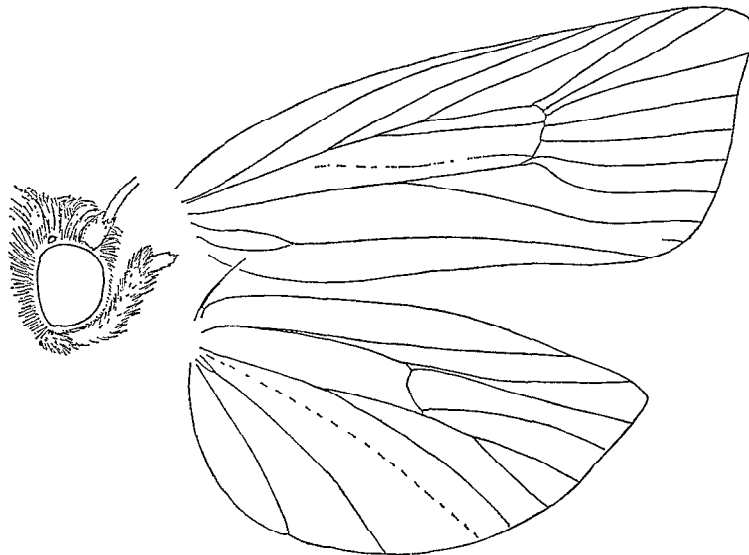


Fig. 38, *Dolichohedya tripila* gen. & spec. nov., ♂, sketch of head and wing neuration.

Male and female genitalia as described with the type-species.

Type-species : *Dolichohedya tripila* spec. nov.

A distinct genus, nearest to *Hedya* Hübner, but with an unusually long aedeagus and correspondingly long colliculum, and with peculiar, characteristic neuration.

***Dolichohedya tripila* spec. nov. (text fig. 21, 29, 38)**

♂ 20-23 mm. Head and thorax black mixed with dark leaden-grey, bases of scales partially white. Palpus black, base light greyish, terminal segment light greyish except edge and tip. Metathorax whitish. Abdomen dark fuscous, with a strong golden gloss, venter dull blackish-fuscous.

Fore wing without costal fold, oblong-triangular, rather rounded, costa hardly curved anteriorly, except before apex, apex broadly rounded, termen rounded, oblique. A large rough projecting marginal tuft on 1/4 of dorsum. Dark leaden-grey, purplish-grey in certain lights. Markings white spots and black transverse parallel strigulae. More than basal half with some four purplish-black strigulae, strongly angulate posterad above middle of wing, ultimate strigula broadest; three ultimate strigulae on costa alternating with two short strigulae; above dorsum three strigulae abruptly dilated and forming rounded spots, centred with ground colour; posterior third of wing with a large oval white patch from costa to just below vein 7, not reaching apex; this patch on costa suffused with pale ochreous and with two small marginal black marks; a regularly circular white spot, occupying lower half of closing vein, not touching preceding spot, encircled with black, emitting a line to fold, parallel to four streaks, and another horizontal line extending towards termen, merging into irregular black pre-terminal marbling, extending transversely to tornus and narrowed below; a third white

spot, centred with pale grey, slightly oblique, oval-transverse, before tornus ; a ferruginous-black oblique line before apex and another one along lower half of termen, preceded by a white line ; dorsal tuft deep bluish-grey, purplish in certain lights. Cilia (imperfect) grey-purple or bluish, with a whitish irregular base and a median series of black bars.

Hind wing light ochreous-yellow, apical third infuscated, costa whitish. Cilia dark fuscous, with a narrow white basal line and a dark subbasal streak.

Male genitalia. Tegumen high, narrowly triangular, shoulders rounded. Uncus short, rounded, top bristly. Tuba analis large, conical, rigid. Socius a large flattened and rounded pad. Gnathos slightly sclerotized, a transverse moderate band. Valva moderate, Spc_1 a pointed sheaf of bristles, Spc_2 forming a strong patch of spines upon a longitudinal raised ridge ; cucullus elongate, suboval, bristly and with a marginal corona of distant spines ; primary excision shallow.

♀ 24 mm. In all respects similar to the male, except the fore wing being somewhat narrower and less dilated and the hind wing more infuscated in apex and less along lower half of termen.

Female genitalia. Seventh segment moderately sclerotized throughout, eighth ventrite more sclerotized, subtrapezoidal, with upper edges excized, lower edge angular ; sterigma central, spherical, long-aciculate, lamella antevaginalis in front excized from above rectangularly to its middle. Colluculum very long, about $6 \times$ sterigma, strongly sclerotized and tubular. Signum, a patch of larger acicula.

East Madagascar, environs de Perinet, 910 m, forêt d'Analamazoatra, 26.II.1954 (*P. Viette*), 1 ♂, holotype, genitalia on slide no. 2604 ; route d'Anosibe, km 26, forêt de Sandrangato, 18.XII.1954 (*P. Viette*), 1 ♂, genitalia on slide no. 5922. District Sambava, Réserve nat. XII, Marojejy Ouest, 1 850 m, II.1960 (*P. Soga*). North Madagascar, Massif du Tsaratanana, en dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII.1964 (*P. Soga*), 1 ♀, allotype, genitalia on slide no. 7364 ; 4 ♂, paratypes.

A conspicuous, elegant species with — for *Olethreutini* — an unusual colour of the hind wing.

Bucephalacra gen. nov. (text fig. 39)

Head with appressed scales, sides of crown roughly spreading. Ocellus posterior. Proboscis developed. Palpus moderately long porrected, projecting the width of eye, with smoothly appressed scales, median segment sinuate and dilated towards top, top above roughly rounded, below angularly projecting, terminal segment exposed, moderate, obtuse, not exceeding apical projection of median segment. Antenna filiform, ciliate in male, ciliations under 1. (Thorax denuded). Posterior tibia normal, with appressed hair-scales above and beneath.

Fore wing oblong-suboval, moderately dilated, narrow and long, without a costal fold. Vein 2 from rather beyond $2/3$, 3 from angle, 4 not closer to 3, 7 separate, to termen, 8 closer to 7, 10 closer to 9, 11 from middle, parting vein rather curved downward, from halfway 11-10, to base of 7.

Hind wing with a cubital pecten ; semioval, apex rather produced. Vein 2 from beyond middle, 3 and 4 connate, 5 closely approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen high and rather narrow ; a conical brush of pointed scales

under the top. Uncus absent; socii extremely large, elongate-oval flaps, attached immediately below apex of tegumen, densely haired below. Gnathos, an ill-defined membrane. Valva complicated, triangular, cucullus forming a voluminous reclining pad, densely long-bristled on the backside and with spines and bristles on top; a long pencil of bristles on the outer side, apparently Sp_3 ; disc of valva below pad of cucullus with a long clavate process (harpe), directed basad. Caulis very long, aedeagus moderate, little curved.

Type-species, *Bucephalacra scoliosema* spec. nov. A specialized genus with uncertain affinity. The complicated development of the valva is very peculiar.

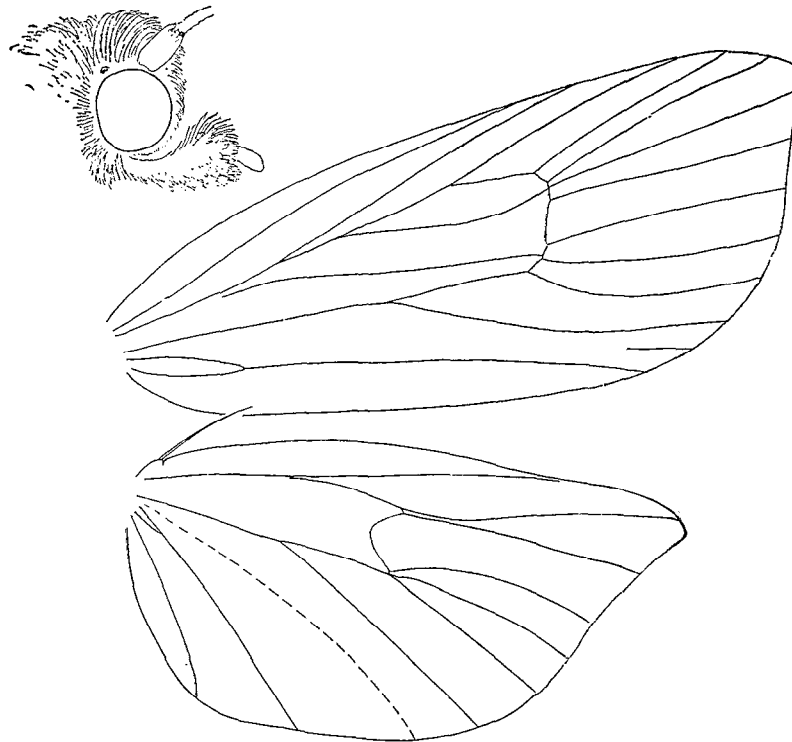


Fig. 39, *Bucephalacra scoliosema* gen. & spec. nov. ♂, sketch of head and wing neuration.

***Bucephalacra scoliosema* spec. nov. (text fig. 31, 39)**

♂ 25 mm. Head dark fuscous-brown, vertex mixed with light ochreous-tawny along middle. Palpus dark fuscous-brown, basal segment and base of median cream-coloured, edge of this colour well-defined, from base of segment above to middle of its lower edge below. Thorax (denuded) apparently dark brown, a cream-coloured spot on shoulder. Legs dark brown, creamy-ringed, posterior leg greyish-ochreous. Abdomen dark fuscous, glossy, anal tuft ochreous inside.

Fore wing oblong-suboval, costa straight in the middle, curved at extremities, apex subobtuse, termen straight, slightly irregular, moderately oblique. Rather light grey-fuscous, markings dark fuscous-brown and white. Basal patch ill-defined (partly rub-

bed) formed by darker fuscous-brown coarse dusting, with a darker and continuous suffusion along dorsum ; costa throughout with pairs of short, indistinct fuscous-creamy transverse marks, a short dark streak along middle, and two distant dark spots, before and beyond $3/4$, respectively ; upper half of cell along central third of wing length filled out with dark fuscous brown, this patch cut by two white transverse jots before its extremities, anterior white jot slender and almost vertical, posterior twice as broad and inwards-oblique ; the dark brown patch suffused above posteriorly by little contrasting and dull very dark leaden-grey colour forming a rounded patch and reaching almost to costa ; a dark brown short streak along costa in middle ; a strongly outwards-oblique clavate well-defined mark across fold beyond middle of wing, faintly connected by a curved line with dorsum ; a larger, somewhat sinuate erect-oval spot, representing ocelloid spot, above and below with slender stalks ; space around this mark extended to costa at $3/4$ strongly mixed and marbled with cream-colour, forming narrow edges to ocelloid spot and with an especially distinct marbling on upper third of wing breadth ; a large reniform transverse and outwardly oblique dark brown patch well before apex, broader above ; apex beyond this entirely suffused with lighter fuscous. Cilia dark fuscous-brown, in tornus tawny.

Hind wing brownish-bronze with a faint gloss, darker towards edge, cilia fuscous with a darker subbasal line.

Massif du Tsaratanana, en dessous de l'Andohanisambirano, matsabory, 1 900 m [2 050 m], déb. XII.1964 (*P. Soga*), 1 ♂, holotype, genitalia slide no. 5927.

CARPOSINIDAE

Meridarchis unitacta spec. nov. (text fig. 9, 36)

♀ 19 mm. Head and thorax creamy white, faintly touched with fuscous, thorax with suffused blackish lateral submedian spots. Palpus very long, projecting well over $4\times$ width of eye, basal third black, rest white irrorated with black, upper edge and inside pure white, terminal segment moderate, obtuse ; blackish, apical third white.

Hind wing narrowly sublanceolate, pointed, termen straight, very oblique. Glossy white touched with very pale yellow, markings black. Basal patch to $1/6$ of costa, edge strongly inwards-oblique ; black almost filled with a white wedge-shaped and suffused spot from base of dorsum, leaving a narrow black edge ; a rather ill-defined large triangle, occupying central half of costa and reaching $2/3$ across disc, except rather narrow sides filled with ground colour and suffused with black, except on costa where it contains two black dots ; edge thickened towards top of triangle ; and containing a more conspicuous jet-black spot below posterior extremity ; a faint transverse black dusting at $1/4$ of wing, containing a black dot above dorsum and an almost vertical narrow fascia at $4/5$, dilated on costa and followed by a costal black point ; a streak along termen, serrate along inner edge. Cilia suffused dark grey with white tips and a pale tawny basal line.

Hind wing and cilia glossy pale grey.

Female genitalia. Eighth segment short-haired. Ostium with a sclerotized trapezoidal structure at the top with two short processes. Sterigma with reticulate structure. Ductus bursae finely reticulate above, below with two longitudinal ridges from

which originate fine transverse ribs, like side nerves of a leaf. Corpus bursae and signa normal.

North Madagascar, Massif du Tsaratanana, piste de Mangindrano au Maromokotra, au S. du piton coté 2 831 m, 13-15.XI.1966, 2.500 m (*P. Griveaud & P. Viette*), 1 ♀, holotype, genitalia on slide no. 7342.

Characteristic by long, narrow wing, black irrorated markings appearing greyish except for the jet-black dot below end of posterior side of costal tringle and especially, by the structure of the ductus bursae.

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