

TORTRICOIDEA FROM NEPAL, 2

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With 110 text-figures and 14 plates

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INTRODUCTION

Until quite recently, Nepal has been hardly accessible for biological exploration, the reason why its fauna of the Tortricidae or leaf rollers remained little known. Very few incidental records and descriptions are available from former years. However, since this situation has been completely changed: with the opening of this fascinating country to research, scientists and explorers from all over the world hastened to Nepal in a continuous stream of mountaineering, geological, biological and other expeditions.

With regard to the study of the Nepalese Tortricoidea outstanding material of these insects has been and is still being brought together by a series of collecting expeditions by the Munich Museum, under the auspices of the "Forschungsunternehmen Nepal Himalaya", in the years 1962, 1964, 1967 and 1974

Through the kindness of Dr. W. Forster and Dr. W. Dierl of the Zoologische Sammlung des Bayerischen Staates, Munich, Western Germany, I was entrusted with the study of this excellent and extensive material which is mostly in perfect condition and very well set. In order not to delay the publication of the results I hope to deal with this material in a series of papers. This is the second part, as the first is my note on the species of the genus

Matsumuraeses Issiki, published already in 1972. The Nepalese species of this genus are enumerated in the Appendix 1 to the present part.

I have made grateful use of the interesting itinerary of the 1962 Expedition by Dr. Ebert (1966) and of the 1964 Expedition by Dr. Dierl (1966). The surveys of the climate, landscape and types of vegetation in Nepal contain instructive descriptions of collecting localities; it enables an outsider gaining of an insight in the biotopes of the species collected and helps to entangle the complex morphology of that fascinating region, where tropical jungle is followed by subtropical mountain forest, in its turn bordering on temperate vegetation type, changing into subalpine and, finally, into alpine zone far above forest limits. The rainfall decreases from East to West, while three seasons: dry and wet monsoon, and winter, alternate, and arid areas are found in the rain shadow of the mountains, at the foot of the highest region of the Globe.

Papers, dedicated to the Nepalese Tortricidae are scanty. In 1955 the author published the results of the "Deutsche Nepalexpedition 1955" (Diakonoff, 1955b), of the Munich Museum, recording eight genera and eight species of which one genus and four species were described as new. In 1969 Yasuda treated the Tortricinae brought together by the Japanese Nepal Himalaya Expedition 1962, recording seven species and describing three of them as new.

I am greatly obliged to the authorities of the Munich Museum for the opportunity to study this material, for the permission to retain certain duplicates for the collection of the Leiden Museum, and for a grant kindly awarded to me for a fortnight stay at the British Museum, London, in order to study certain type specimens. My thanks are also due to my colleagues at that Museum, Dr. Klaus Sattler, Dr. Gaden S. Robinson and Messrs. B. V. Ridout and K. R. Tuck, for their kind help and also to Mr. J. D. Bradley, Commonwealth Institute of Entomology, London and to Dr. J. F. Gates Clarke, National Museum of Natural History, Washington, D.C., for their kind assistance, advice and interest in this paper.

My sincere thanks are also due to my colleague, Dr. V. I. Kuznetsov, Zoological Institute of the Academy of Sciences of the USSR, Leningrad, for kindly commenting on most of the *Laspeyresiini* treated, after his painstaking study of my figures of the genitalia and of colour slides of the specimens and after their comparison with the vast collection of the *Laspeyresiini* of that Institute, especially from Central and eastern Asia. I have much profited by his remarks.

Altogether 42 genera, 86 species and 1 subspecies are treated below of which 11 genera, 45 species and 1 subspecies are described as new; 11 species

and 1 subspecies from other regions than Nepal are recorded incidentally.

The collecting localities are cited in full and arranged after heights above sea level.

Lists of references of the Palaearctic species, often quite lengthy, do not pretend to be exhaustive, for the sake of brevity.

Most figures have been made by the artist and amateur entomologist, Mr. A. C. M. van Dijk of the Hague, some by Mr. J. Wessendorp, staff artist of the Rijksmuseum van Natuurlijke Historie at Leiden, and a few by the author.

COCHYLIDAE

Cochylidia altivaga spec. nov. (figs. 1-2)

♂ 11 mm. Head white. Palpus rather long, obliquely porrected; pale ochreous, tip of median segment and entire terminal segment creamy-white. Thorax pale ochreous-grey, tegulae and apex whitish. Abdomen pale ochreous, apex somewhat suffused brownish.

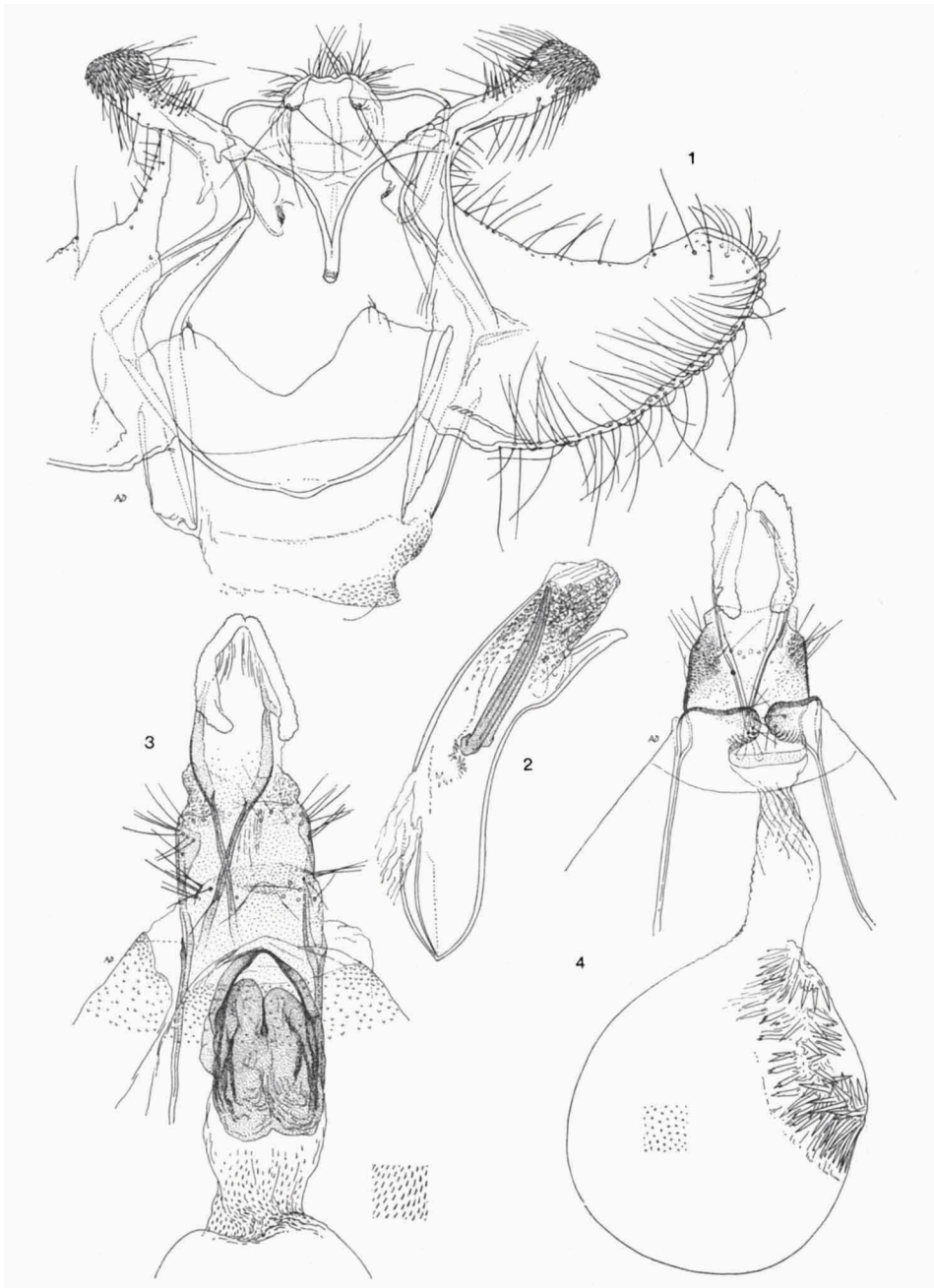
Fore wing oblong-oval, little dilated, moderately broad, costa moderately curved towards apex, little curved elsewhere, apex rounded, termen gently rounded, oblique. Glossy whitish-ochreous. Basal third of costa faintly suffused with light tawny; central fascia straight from costa beyond middle, to dorsum at $2/5$, anterior edge with a large emargination below costa, interrupting fascia except a linear posterior edge; fascia very slightly narrowed downwards, light ochreous, sparsely and evenly dusted with brownish; costal extremity of fascia infuscated; an excurved, subapical second fascia, narrow, from below costa to above tornus, preceded by sparse tawny dusting and faint ochreous suffusion, becoming more distinct above tornus; apical part of wing beyond this fascia conspicuously pale ochreous. Cilia glossy, creamy-whitish.

Hind wing glossy pale golden-ochreous. Cilia whitish.

Male genitalia. Resembling those of *C. contumescens*. Tegumen small and compressed. Socii appressed, bristly. Transtilla with median process longer, narrowed, top hooked. Valva almost as high as broad, outer edge broadly emarginate, lower part curved and narrower than in *contumescens*, upper process similar, clavate, top hairy. Juxta strong, a dark bow. Aedeagus moderate, with a rather short ventral spike. Cornuti, a dense sheaf of long spines, appearing as a single stout spike.

Prov. Chisapani Garhi, Chisapani Garhi, 1600 m, 11-15.vii.1967 (Dierl-Forster-Schacht), 1 ♂, holotype, genit. slide 8900.

The markings are rather reduced but show the same elements as in the Japanese endemic species, *C. contumescens* (Meyrick) which must be the nearest ally.



Figs. 1-2. Genitalia of Cochylidae, holotypes. 1, *Cochylidia altivaga* sp. n. ♂; 2, the same, aedeagus; 3, *Cochylis aethoclasma* sp. n., ♀; with right, structure of the wall of bursa copulatrix; 4, *C. stirodelphys* sp. n., ♀.

Cochylis stirodelphys spec. nov. (fig. 4)

♀ 11 mm. Head, palpus creamy-white. Thorax pale ochreous (greasy). Abdomen light ochreous.

Fore wing oblong, moderate, dilated, costa obliquely and gently curved along anterior half, almost straight posteriorly, apex obtusely pointed, termen hardly sinuate above, rounded below, little oblique. Glossy light ochreous, costa moderately suffused with light tawny and anteriorly finely dusted with dark brown. Basal patch indicated only by a deeper ochreous roundish, strongly suffused spot just above basal fourth of dorsum, central fascia unicolorous tawny-ochreous, darker only on costal edge, from middle of costa to $2/5$ of dorsum, gently outwards-convex throughout; a roundish spot or dark brown dusting just beyond fascia on and above fold, followed by a transverse stria, less oblique than central fascia, similarly coloured, crowned with a few dark brown specks on upper angle of cell; a moderate oblong dark brown costal spot at $4/5$, paler-centred on margin, continued across wing by a very faint tawny suffusion halfway towards lower part of termen; a subapical costal point; a few brownish scales scattered over wing before apex and termen; dorsum with a row of blackish small dots. Cilia light ochreous.

Hind wing glossy pale grey-fuscous, strewn with darker fuscous, veins slightly darker. Cilia pale golden-fuscous with a submedian darker shade.

Female genitalia. Subgenital segment slightly sclerotized, elongate. Sterigma simple, a median split, quickly dilated into a transverse ostium, with a slightly thickened, subrefracting straight lower edge with rounded ends, lateral edges of ostium with fine transverse wrinkles. Ductus bursae narrow along upper third, abruptly dilated and wide along lower part. Corpus bursae large, spherical. Signa absent.

Rapti Tal, Jhawani, 200 m, 14-19.v.1967 (Dierl-Forster-Schacht), 1 ♀, holotype, genit. slide 8899.

A small species with the characteristic *Cochylis* colouring and markings. Judging from the genitalia, allied to *C. nana* (Haworth) and *salebrana* (Mann), both Palaearctic.

Cochylis aethoclasma spec. nov. (fig. 3)

♀ 15 mm. Head white. Palpus brownish with a bronze gloss, extreme tips of median and terminal segments whitish. Thorax blackish, turning greyish towards sides, tegula white, with a black spot on shoulder. Abdomen dark fuscous.

Fore wing rather narrow, dilated, costa slightly curved at base, hardly prominent at $1/4$ and again at $4/5$, apex obtuse, termen gently curved,

little oblique. White, with several light grey transverse lines, parallel and rather sinuate. Basal patch indicated by a black suffusion along less than basal fourth of costa, becoming grey below costa; including three small white marginal marks and in middle invaded by white, so as to form only a subtriangular spot at base and a wedge-shaped similar spot at 4/5; this not reaching fold, continued by a grey line to dorsum; costa beyond patch with three black points, two posterior emitting a furcate second grey line, hardly more oblique than preceding; central fascia from a subtriangular dark grey spot on middle of costa (on margin centred white), running to dorsum just before middle, tolerably parallel to grey lines, marbled with white and on dorsum including a median parting thick streak of fulvous suffusion, on both sides edged with incomplete streaks of jet-black marbling, all hardly reaching middle of wing; lower half of fascia followed by a fourth undulate grey line, then by a dark grey spindle-shaped transverse mark and finally by a pair of irregular, partly confluent tawny bands, becoming ferruginous in tornus; ternal edge rather dusted with black; a conspicuous, well defined transverse fascia before 5/6 of wing, on costa inwards-oblique, forming an angulation below costa, thence vertical, inner edge straight, outer outwards-curved in middle of disc, thence concave; this fascia deep ferruginous, mixed throughout with jet-black; wing beyond this pale pink, marbled with fulvous-crimson, slightly dusted with black and with two costal and two terminal deep ferruginous, black-mixed roundish spots; terminal edge narrowly whitish. Cilia dull fulvous.

Hind wing glossy whitish-grey, evenly dusted with fuscous scales. Cilia fuscous with a paler base and a darker submedian suffused band.

Female genitalia. Ovipositor elongate, as are the ninth and eighth segments. Sterigma erected-oval, with two oblong-oval vertical sclerites separated by a median split, with a slender dark dome-like lamella postvaginalis above these. Ductus bursae rather short. Corpus bursae spherical. Signa absent.

Kathmandu, Chauni, 1400 m, 14.iv.1967 (Dierl-Forster-Schacht), 1 ♀, holotype, genit. slide 8898.

An elegantly coloured, conspicuous species, superficially rather similar to the Palaearctic *C. atricapitana* (Stephens), but judging from the genitalia, undoubtedly of the *C. indica* Razowski-*C. maestrana* (Kennel) group of species.

***Aethes irmozona* spec. nov. (fig. 4a)**

♀ 19.5 mm. Head, palpus and thorax pale ochreous. Abdomen pale fuscous-grey.

Fore wing broad, moderately dilated, costa curved anteriorly, almost

straight posteriorly, apex pointed, termen hardly sinuate above, slightly rounded beneath, rather oblique. Pale ochreous, costa narrowly brighter yellowish, lower half of wing from well beyond base suffused with deeper golden-ochreous. Markings rather suffused fulvous, brownish and dark fuscous. A slight horizontal short streak beyond base, just below middle of wing; two parallel, oblique transverse bands, somewhat irregular, first from below $2/3$ of costa to $1/3$ of dorsum, gradually dilated, partly almost interrupted, with a posterior prominence below upper angle of cell and a larger one just below fold; this fascia fulvous, below fold becoming fulvous-

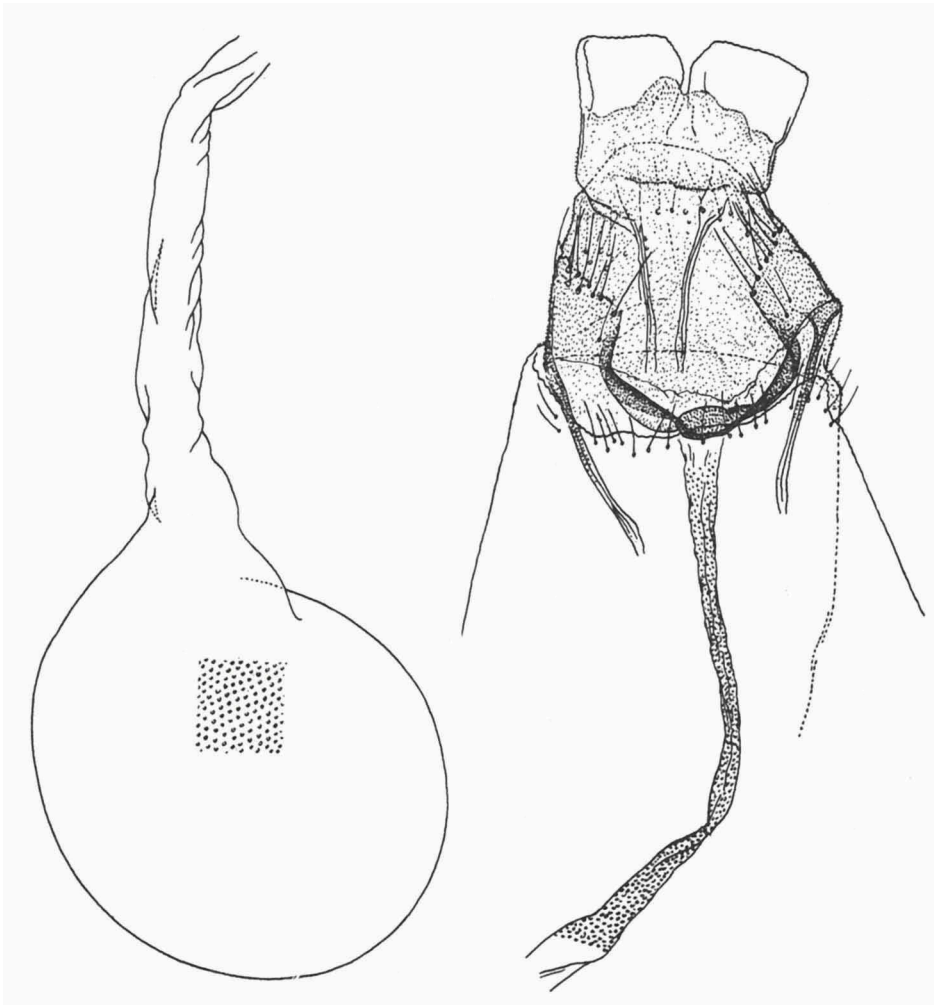


Fig. 4a. Genitalia of *Aethes irmozona* sp. n., holotype, ♀, with left, bursa copulatrix.

fuscous; second fascia from apex to posterior third of dorsum, occupying tornus, upper half blackish-fulvous, lower, rather pale fulvous, infuscated again above tornus; this fascia considerably dilated downwards, being incompletely parted along lower half by ground colour; a small black longitudinal mark below upper edge of cell at $2/5$ of wing length and a smaller black point on closing vein above lower angle of cell. Cilia pale ochreous, in tornus becoming brown.

Hind wing light ochreous, densely suffused with greyish-fuscous. Cilia grey-fuscous.

Female genitalia. Ovipositor peculiar, quadrate, lobi anales being truncate and rectangular. Sterigma shaped as a large median excision, dilated downwards, rhomboidal lower half with a sclerotized, rather broad edge. Ductus bursae narrow and long, gradually dilated, finely granulate throughout downwards. Corpus bursae moderate, spherical, similarly, granulate. No signa.

Kathmandu, Chauni, 1400 m, 25.iv.1967 (Dierl-Forster-Schacht), 1 ♀, holotype, genit. slide 8897.

A species of the characteristic bifasciate facies of the Palearctic *Aethes*, but with peculiar genitalia, viz. quadrate lobi anales, somewhat resembling only those of a form of *A. moribundana* (Staudinger), figured by Razowski (1966, fig. 182-2).

TORTRICIDAE

OLETHREUTINAE, LASPEYRESIINI

Grapholitha (Grapholitha) bicincta spec. nov. (fig. 17)

♀ 11 mm. Head dark slaty-grey with strong opalescence, face and forehead whitish. Palpus moderate, very slender, porrected; whitish-ochreous. Thorax slaty-grey, with a purplish gloss and golden opalescence. Abdomen grey, banded throughout with dark grey, venter white.

Fore wing subtriangularly oval, costa curved anteriorly strongly curved along posterior half, apex rounded, termen slightly convex, oblique. Opalescent pale lilac-grey, posterior half suffused between markings with dark purple. Costa purplish, its basal third narrow, with two pairs of very oblique, whitish lines; posterior $2/3$ of costa with seven large, wedge-shaped yellowish-white marks, becoming less oblique posteriorly, first and second very close, converging; these marks continued by short, light fuscous-grey streaks and alternating with purple, narrowly orange-edged lines, from before first white mark, to end of cell, and from before fourth mark to termen below apex, respectively; dorsal patch large, formed by four sinuate and somewhat

undulate pale grey streaks, with a golden-yellowish very faint opalescence; gently narrowed towards tips, vertical along lower third, strongly bent outwards above; a very faint grey longitudinal line above this patch; ocelloid spot indicated by an almost vertical dark fuscous streak in tornus, reaching with pointed top to middle of disc, on both sides edged with dark leaden-grey metallic lines with pale opalescence. Cilia glossy fuscous-grey with a deep purple basal fourth.

Hind wing deep purple, extreme apex with a faint ochreous submarginal stria. Cilia fuscous-grey, with a dark fuscous-grey basal band.

Female genitalia. Eighth + ninth segment sclerotized, rather broad. Sterigma not modified, ostium small, neither modified. Colliculum, a moderate, slightly sclerotized spindle-shaped tube. Corpus bursae modified, with a cylindrical upper part, with a transverse sclerotized band, forming two darker plates at the sides, with rounded lower edge; remainder of bursa much wider, ovoid; signa two, slender horns.

Kathmandu Valley, Godavari, 11-16.vi.1967 (Dierl-Forster-Schacht), 1 ♀, holotype, genit. slide 8553.

Closely resembling *G. delineana* Walker, but differing by the regularly rounded termen without a white mark, and by the genitalia. Apparently belongs to the section *hyalites*.

Grapholitha (Grapholitha) heptatoma spec. nov. (figs. 19, 22, 23)

♂ 9 mm. Head glossy dark slaty-grey, vertex, face and palpus pale yellowish. Palpus with median segment little dilated, roughish along lower edge, terminal segment exposed, pointed. Thorax smooth, dark slaty-grey with a faint bronze gloss. Abdomen dark slaty-grey.

Fore wing oblong-triangular, costa little curved at base, more curved at apex, obtusely pointed, termen convex, oblique. Deep purple-black, basal 2/3 evenly glossy slaty-grey with slight prismatic reflections, edge moderately suffused, from before 1/3 of costa, very oblique and acutely angulate on upper edge of cell, concave and inwards-oblique thence; costa with a white slender line from before middle, parallel to upper edge of basal patch, on posterior half becoming mixed with brilliant lilac-silvery scales; an almost vertical pair of approximated and slightly converging big marks at 3/5 of costa, white with faintest yellow tinge, anterior wedge-shaped, posterior thicker, truncate, reaching over 1/4 of wing breadth; another pair of white marks at 1/6 smaller, slightly oblique and parallel, in left wing strongly reduced; silvery-lilac metallic markings: a dot between tips of the third and fourth costal white marks, an angulate small line from end of ultimate white mark, to termen below apex and a large erect clavate spot from above end

of dorsum to below costal marks, dilated above; dorsal spot beyond middle, formed of a pair of white well defined converging but not contiguous white marks, regularly spindle-shaped, tips pointed, anterior mark edged by a brilliant leaden thick stria, longer than mark and parallel to edge of basal grey patch. Cilia rather light grey, with a brilliant gloss.

Hind wings deep fuscous-purple, towards base and along dorsum becoming grey-fuscous, less lustrous purplish. Cilia light grey-fuscous, with a strong gloss.

♀ 9.5 mm. Head dark grey, face, palpus and scape of antenna pale yellow. Fore wing very similar to that in male, only basal patch slightly shorter, and second costal mark dilated and slightly parted with purple at base.

Hind wing similar, but base paler and greyish, extreme base semipellucant.

Male genitalia. Resemble those of *Laspeyresia ermolenkoi* Danilevski. Tegumen with rounded top, subscaphium or tuba analis traceable, a large convex membrane with punctulate surface. Valva with a rounded sacculus under $\frac{1}{2}$ length of valva, with rather long and dense bristles, neck of valva moderate, cucullus strongly rounded, with more than outer half of circumference bearing large and broad, dense spines, except along extreme edge which is haired only. Aedeagus long, straight, basal third swollen.

Female genitalia. Eighth segment rather long, moderately sclerotized. Seventh sternite darkly sclerotized, posterior edge concave, angles moderately rounded. Ostium not modified. Corpus bursae pear-shaped. Signa two, small hooks.

Prov. No. 2 East, Jiri, 2000 m, 13.viii.1964 (W. Dierl), 1 ♂, holotype, genit. slide 8541, 1 ♀, allotype, slide 8542; 2 ♂, 1 ♀, paratypes (1 ♂ without abdomen).

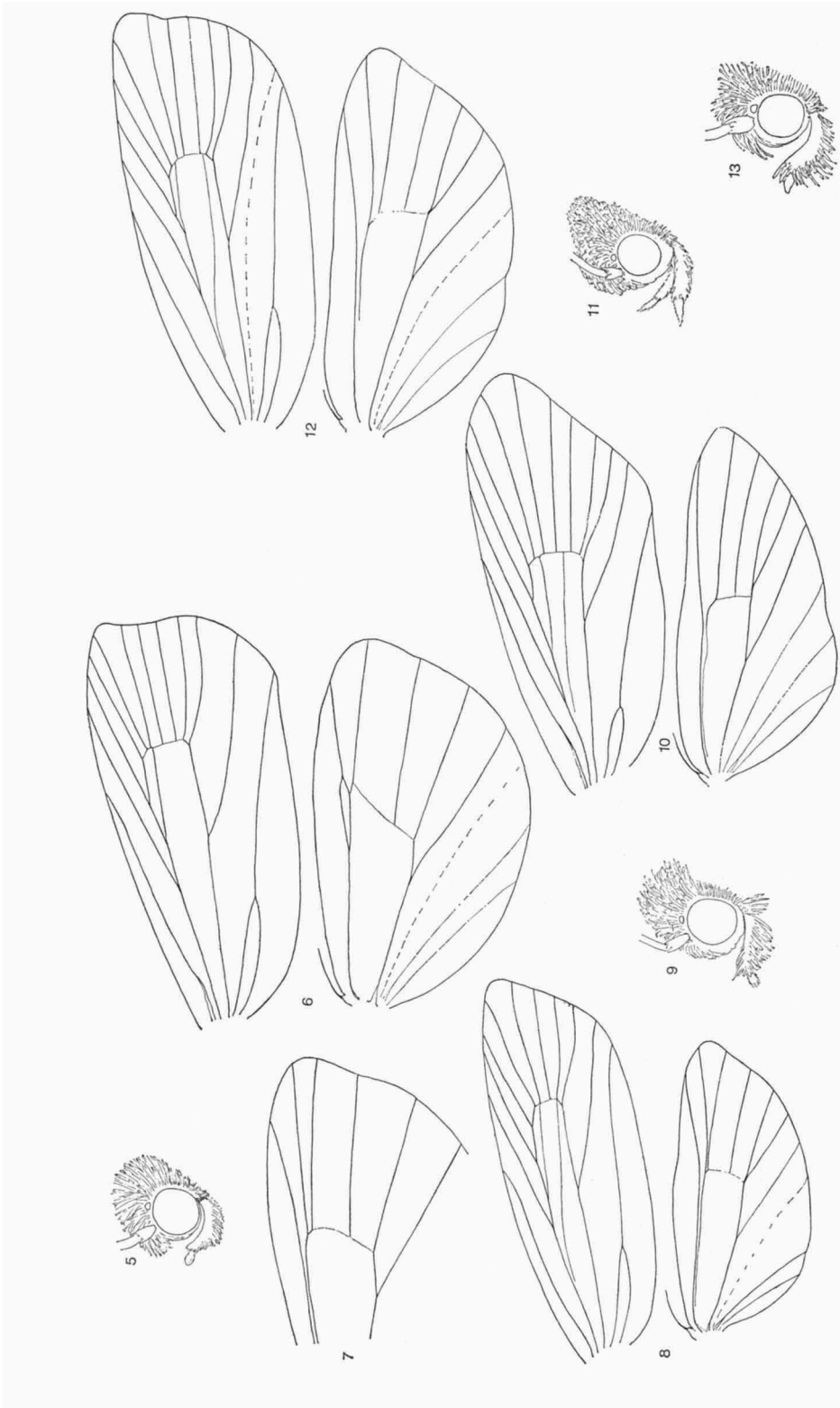
Superficially closely resembling *G. callisphena* Meyrick, from Assam, but with a much narrower dorsal spot and the first costal spot, single.

The neuration of the hind wing is somewhat unusual for *Grapholitha*, veins 3 and 4 being long-stalked, the stalk over two times the length of free parts of these veins. So, actually the hind wing agrees most with that in *Parapammene*, but the genitalia are not at all similar. Therefore I prefer to place the species in *Grapholitha* for the present, judging from the normal and well developed coremata. It belongs in the vicinity of *G. pallifrontana* Zeller.

The locality is warm temperate, with evergreen mixed deciduous forest.

***Grapholitha (Grapholitha) namatophora* spec. nov. (fig. 20)**

♂ 13-14 mm. Head pale grey, becoming opalescent darker grey on vertex, white below, orbits white. Palpus white, terminal segment dark grey. Thorax



Figs. 5-13. Head and wing neuration. 5, *Dierlia aurata* g. & sp. n. ♂, head; 6, do., neuration; 7, do., ♀, apical part of hind wing; 8, *Diacantha xerophila* (Meyr.), g. n., ♂, head; 9, do., head; 10, *Strophedromorpha mica* g. & sp. n., neuration; 11 do., head; 12, *Grapholitha* (G.) *tricyaniis* sp.n. neuration; 13, do., head.

dark slaty-grey with paler opalescence laterally. Abdomen dark grey, first tergite shining leaden, posterior edges of segments pale metallic-leaden.

Fore wing oblong, dilated, costa gently curved throughout, apex subotuse, termen oblique, notched below apex and gently concave halfway between notch and tornus (less distinct in paratypes). Deep blackish-brown with a fine transverse striation (tips of scales black), apical and terminal edge slightly suffused with ochreous. Anterior half of wing as far as fold and at base, as far as dorsum, suffused with light slaty-grey, somewhat opalescent in certain lights and appearing faintly purplish; costa with seven pairs of whitish marks, first indistinct, other moderate, in middle part of costa somewhat extended along costal edge, fifth mark simple, seventh pair large, sub-apical, distant and little oblique; second, third, fourth, sixth, and posterior mark of the seventh pair continued by deep blue metallic streaks across upper third of wing, interrupted opposite terminal notch; dorsal mark formed by two pairs of moderately excurved pale grey streaks, anterior of these reaching just above middle of disc; ocelloid spot small, irregular, pale ochreous with three black short marks, edges bright pinkish-golden; anterior edge little curved, moderately oblique, across lower $2/3$ of wing, not reaching end of dorsum; posterior edge shorter, more slender, less oblique, narrowed below; dorsal marking and ocelloid spot connected above by an irregular sub-crescentic ochreous spot, in left wing irregularly continued along the posterior line of the dorsal mark, to dorsum; dorsum around markings rather darker brownish-black. Cilia light grey with a black subbasal band and a minute pale basal line, disappearing towards apex.

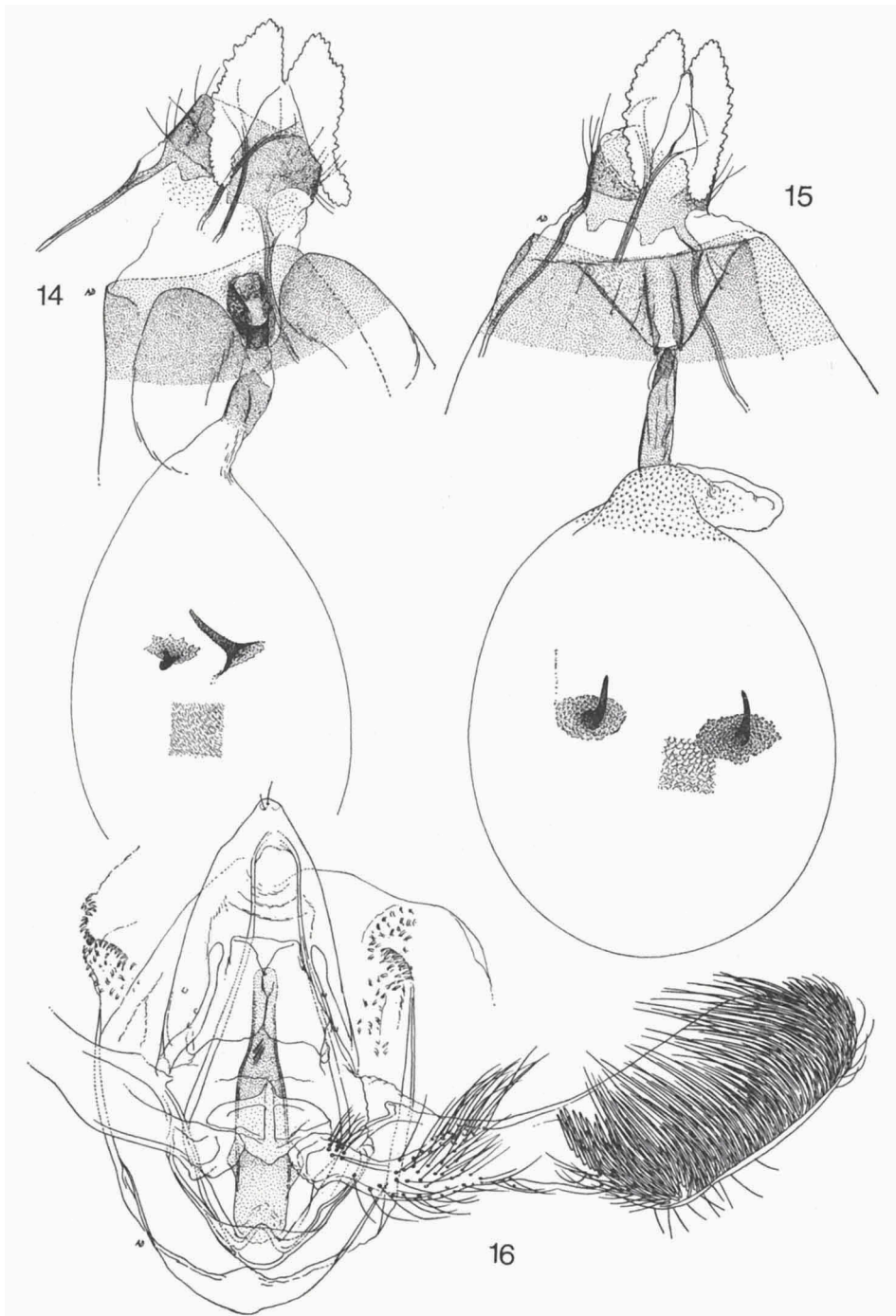
Hind wing white, apical third brownish-black, with darker veins which slightly extend anterad beyond dark colour. Cilia white, around apex pale grey, with a black subbasal band.

Male genitalia. Tegumen top pointed in front, with a rounded subsclerotized top in back. Valva constricted beyond middle, its lower edge turned over, gradually dilated towards constriction, posteriorly with a group of short bristles; cucullus spined and bristled along the edge, a separate curved spine in the primary excision. Edge of the abdominal segment shaped as a slender bow, with narrow, long pencil-like corema from each extremity.

Kathmandu Valley, Godavari, 1600-1800 m, 14-16.vii.1967 (Dierl-Forster-Schacht), 1 ♂, holotype, genit. slide 8548; 2 ♂, paratypes.

The excellently preserved holotype specimen shows rather strong discrepancies from the original description of the female holotype of the allied species, *G. leucitis* (Meyrick).

Belongs with *Grapholitha fimana* Snellen (Far East) and *G. leucitis* Meyrick (Assam) in one group, characteristic by the black and white hind wings.



Figs. 14-16. Genitalia of Laspeyresiini, holotypes. 14, *Pammenc (P.) phthoneris* sp. n., ♀; 15, *P. (P.) bathysema* sp. n., ♀; 16, *Parapammene pericapna* sp. n., ♂.

The collecting locality is in a mixed deciduous forest with a warm to temperate climate.

Grapholitha (Grapholitha) tricyanitis spec. nov. (figs. 12-13, 25, 28-29)

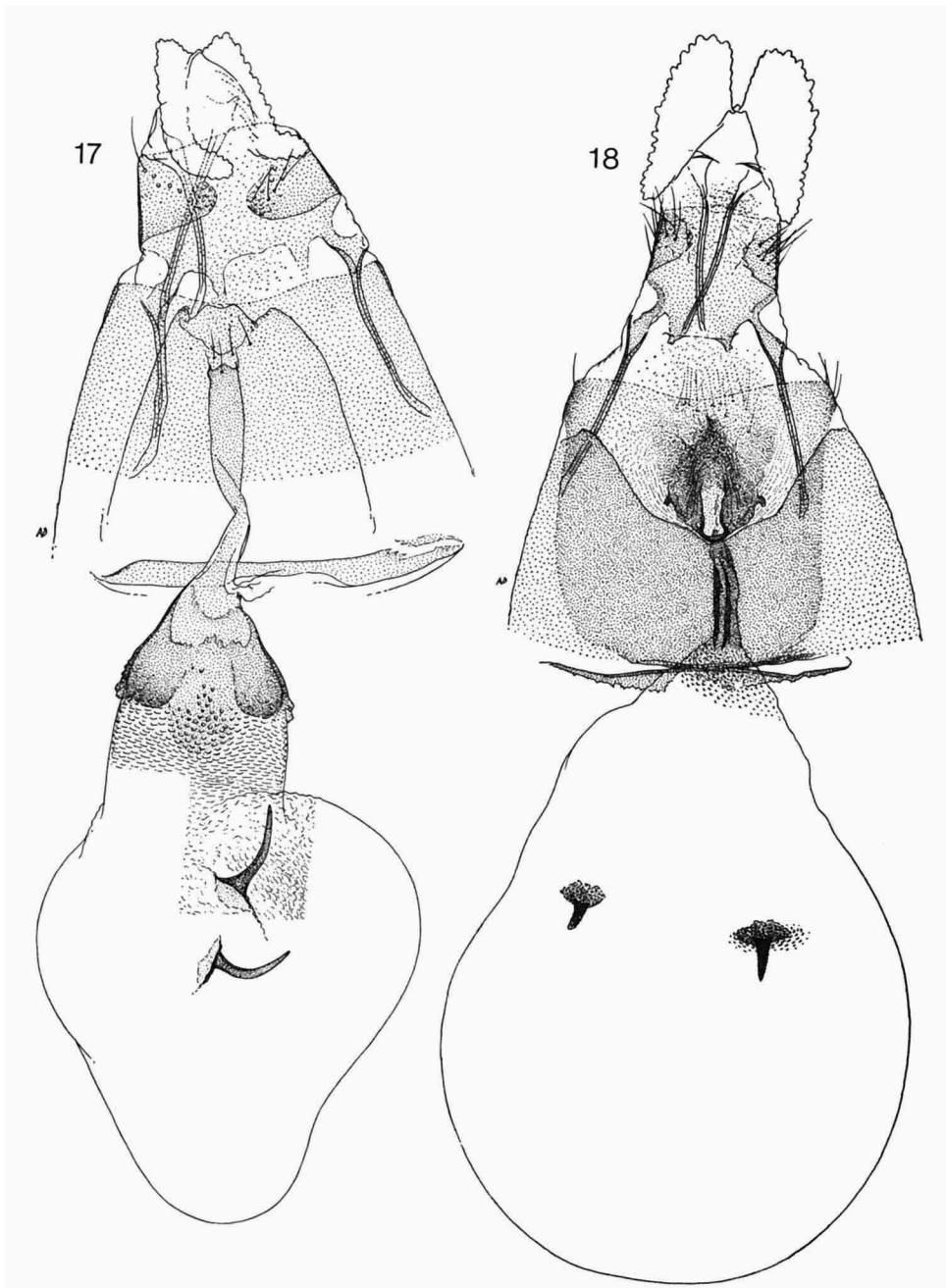
♂ 10-11 mm. Head fuscous-grey, with a slight whitish opalescence. Palpus, rather long, ascending rather close to face, median segment dilated with sparse, loosely projecting scales along apical and lower edge; pale ochreous, apical third dark fuscous-brown. Thorax dark grey. Abdomen dark fuscous-grey.

Fore wing moderately dilated, costa gently curved along basal half, almost straight posteriorly, apex rounded, termen gently concave above, rounded beneath. Basal half grey-purple, apical half deep dull fuscous-brown, strewn with bright yellow scales, denser and orange-golden on costal half. Base of wing except on dorsum and less than basal half of costa as far as upper edge of cell, lilac-grey, turning submetallic pale bluish posteriorly; this part of costa with two very small and three longer, parallel, oblique lines, alternating with similar white strigulae; posterior $\frac{3}{5}$ of costa black, cut by six white wedge-shaped slender marks into more or less wedge-shaped black spots; first of these connected by an oblique and slightly concave line with top of ocelloid spot; first costal mark double, small; these white marks continued across wing by three thick, deep blue leaden, metallic streaks as follows: first from first costal mark, to above ocelloid spot; second from third and fourth marks together, parallel to preceding but limited by vein 7; third short, from sixth costal mark; space between first and second blue streaks parted by black; dorsal spot large, formed by two sinuate, oblique pale leaden-lilac marks, dilated and parted at base, narrowed, not touching at top; a moderate longitudinal mark in disc before and above their tops; ocelloid spot represented only by its anterior edge which is bright silvery-grey, spindle-shaped, vertical, across $\frac{2}{3}$ of wing, preceded and followed by a series of short longitudinal jet-black marks or dots. Cilia fuscous, glossy, base becoming whitish.

Hind wing bright purple, costal $\frac{2}{3}$, except apex and also base, becoming paler, greyish, a slender whitish-blue, not glossy longitudinal stringula in disc.

Male genitalia. Tegumen high and slender, gradually narrowed. Tuba analis membranous, traceable. Valva dilated, rather sinuate, sacculus indefinite, cucullus broader and oval, posterior edge except at top above, with a series of very long strong spines; a single long curved spine from $\frac{2}{3}$ of costal edge, extending width of valva.

♀ 11 mm. Similar to the male, fore wing slightly broader. Costal markings thicker, more wedge-shaped and more defined, together with black streaks



Figs. 17-18. Female genitalia of Laspeyresini. 17, *Grapholitha* (*G.*) *bicincta* sp. n., holotype; 18, *Parapammene pericapna* sp. n., allotype.

less oblique, fourth and fifth costal white marks much less distant. Otherwise similar to the male.

Hind wing similar, base slightly paler grey than in male.

Female genitalia. Eighth sternite triangular, ostium on its top i.e., posterior edge, elevated and cup-shaped, aciculate. Ductus bursae with patches of round scale-like small sclerites along upper half, on lower half becoming small transparent scobinations. Colliculum represented by an irregular, band-like and plicate sclerite. Signa, two long hooks.

Prov. No. 3 East, Junbesi, 2750 m, 25-31.vii.1964 (W. Dierl), 1 ♂, holotype, genit. slide 8544, ♀, allotype, slide 8545.

Helmu-Gebiet, Gusum Banjyang, 2600 m, 1.xi.1967 (W. Dierl), 1 ♂, paratype, genit. slide 8554.

Closely allied with *Grapholitha biserialis* (Meyrick) comb. nov., from Tienmushan, but this possesses eight white marks along posterior 3/5 of costa, pale hind wing, narrower valva, and unicolorous dark fuscous ground colour of the fore wing.

Junbesi is cold temperate, with a *Quercus* fog forest transitional into coniferous forest.

The species is so closely allied to both *Grapholitha latens* V. Kuznetsov and *G. biserialis* (Meyrick) that some doubt arose as to its independence. However, *biserialis* has eight white marks along the anterior 2/5 of the costa, paler hind wings, a narrower valva and a unicolorous dark fuscous ground colour of the fore wing, while the female genitalia are so different that there can be no question of this and *tricyanitis* being conspecific. On the other hand the males and the females of *tricyanitis* are so completely alike, that I have no doubts as to their being sex partners.

These three species and possibly also *G. jesonica* Matsumura, as well as *G. exigua* V. Kuznetsov, form a natural group with a diverse number of large spines in the disc of the valva, a robust and sometimes projecting ostium and a sclerotized and spined ductus bursae. It is tempting to separate them generically, but it seems more sensible to await additional data.

Grapholitha (Grapholitha) chrysacrotoma spec. nov. (figs. 33-34)

♀ 11 mm. Head ochreous? (denuded). Palpus rather long, slender, gradually curved and rather ascending, slender, with roughish scales, terminal segment over 1/2 median, subacute; whitish. Thorax fuscous. Abdomen dark grey.

Fore wing suboval, dilated, costa little curved along anterior half, distinctly curved along posterior, slightly and gradually prominent at 2/3, seemingly

slightly notched before apex, apex rounded, termen gently concave below apex, moderately curved below, little oblique. Rather dark fuscous-grey, actually light tawny-yellowish, densely and finely striated with dark fuscous with a bluish faint gloss in certain lights (dark tips of scales). Costal fourth somewhat brighter glossy bluish, from beyond base to before apex with some eleven unequal bright yellow oblique marks, whitish on extreme edge of wing; these marks very short anteriorly, gradually becoming larger and longer to middle, thence of tolerably equal length, but becoming less oblique; these marks separated by well-defined dark brown not parallel streaks; that from middle of costa sinuate and reaching cell, the following very short, next following long and parallel to median costal line; following line parallel to preceding, but shorter, two ultimate lines converging well below costa; dorsal patch very faint, sordid greyish, parted by four faint darker lines, top of patch exceeding fold and directed outwards; ocelloid spot hardly traceable, represented by two vertical, approximated and slightly sinuate bluish sub-metallic lines; a faint submetallic bluish suffusion connecting ends of yellow costal marks on posterior half of wing; a deep brown small costal spot just before apex. Cilia fuscous with a strong submetallic gloss and faint prismatic reflections, a dull dark blackish-brown basal band.

Hind wing rather dark fuscous-purple, extreme base paler. Cilia fuscous, glossy, concolorous with those in fore wing but paler, a bronze-fuscous basal band.

Female genitalia. Lobi anales much narrowed along lower half. Ninth segment moderately sclerotized. Sterigma formed by an oblong-ovoidal lamella postvaginalis, moderately sclerotized, downwards forming a small cup; colliculum rather sclerotized, semiannular above, dilated and partly membranous below. Signa peculiar, very slender and acute straight horns, with a single spine-like basal process and a weak oval basal plate.

Kathmandu Valley, Godavari, 1600-1800 m, 14-16.vi.1967 (Dierl-Forster-Schacht), 1 ♀, holotype, genit. slide 8584.

The rather obscure species is characteristic by peculiarly curved costa of the fore wing and bright costal marks. Furthermore, the signa are very puzzling, resembling those in *Ancylis*! The only signa in *Grapholitha* resembling this type at all, are those of *G. internana* Guenée. Therefore, tentatively, I place the present species in the section *compositellae*.

Grapholitha astrapephora spec. nov. (fig. 24)

♂ 12 mm. Head olive-grey with whitish opalescence. Palpus moderate, rather slender, not dilated, lower edge roughish; median segment creamy-

white; terminal segment moderate, exposed, black. Thorax olive-grey, opalescent in certain lights, with a golden gloss. Abdomen dark fuscous, anal tuft pale grey, venter whitish, suffused with fuscous.

Fore wing oblong-subtriangular, dilated and rather broad, costa distinctly curved throughout, apex obtuse, slightly prominent, termen slightly notched below apex, rather straight and little oblique below. Basal half of wing light fuscous-olive, with strong whitish opalescence and purple gloss, apical half of wing yellow-orange. Basal patch to $1/3$, semicolorous light fulvous-olive with purplish gloss, only edge faintly darker fuscous, strongly angulate above middle, edges straight; $3/4$ of costa blackish-purple, with six white single marks, suffused below, indistinctly wedge-shaped; two anterior marks greyish, faint, first faintly parted; a larger wedge-shaped and sinuate black-purple mark in middle of costa, below continued by a slightly angulate oblique black line across upper $1/3$ of disc; this mark followed by two distant white marks separated by a black-purple smaller wedge and followed by a larger oblong black-purple mark with a slender oblique line across upper $1/4$ of disc; beyond this the fifth white spot, followed by an oblong marginal spot and two ultimate white marks separated by black; a well-defined, leaden-blue metallic streak from postmedian (third) white costal mark, gradually dilated, obtusely angulate in middle and not reaching tornus, so forming anterior edge of ocelloid spot, posterior edge of which is absent; a second similar metallic line from fifth costal spot towards notch of termen, by far not reaching it, little dilated, slender; a third small leaden mark from ultimate costal white mark, not reaching preceding, very short; ocelloid spot with five slender black lines, its metallic edge preceded by black reticulation; dorsal patch faint, large, premedian, two pairs of slightly converging, moderately oblique lines reaching to middle of disc, edged with deeper fuscous. Cilia light fuscous-grey with a strong, almost metallic gloss, a black dull basal line throughout, cut by white opposite notch of termen.

Hind wing dark fuscous-purple, becoming paler greyish towards base. Cilia glossy whitish with a subbasal fuscous band.

Male genitalia. Tegumen light and slender, little dilated downwards, top with semioval lateral lobes. Valva strongly clavate, basal half sparsely hairy, sacculus indefinite, cucullus irregularly semioval, lower angle prominent, followed by rounded dark emargination. Aedeagus extremely short and broad, apparently three-cuspidate. Cornuti, an oval patch of short spines.

Prov. No. 3 East, Bujan, Dudh Kosi Tal, 2900 m, 18-19.vii.1964 (W. Dierl), 1 ♂, holotype, genit. slide 8556.

The exact position of this species is uncertain. Warm temperate zone with *Quercus* fog forest.

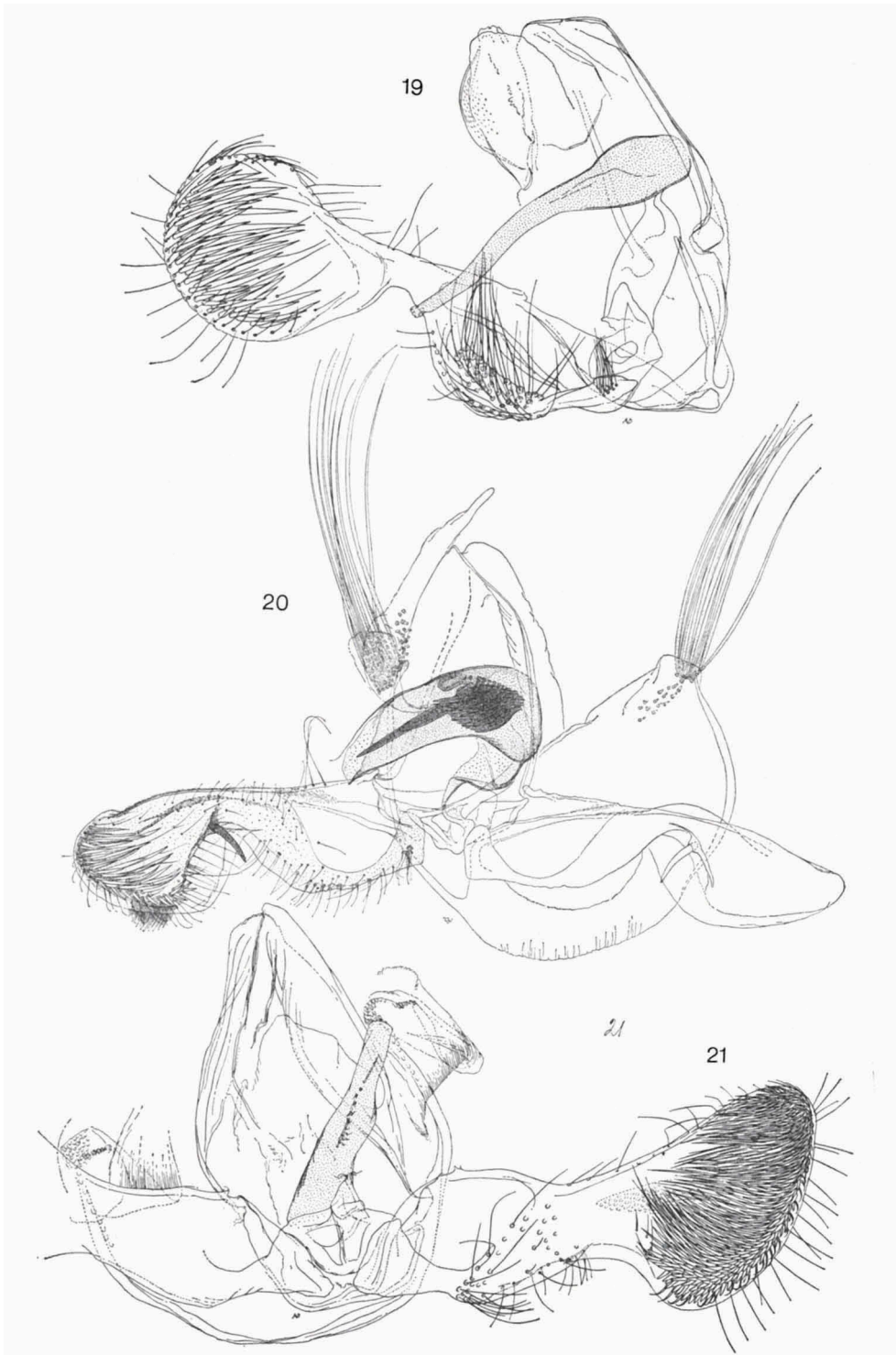
Grapholitha graphologa spec. nov. (fig. 21)

♂ 12.5 mm. Head fuscous, strewn with light ochreous, face pale ochreous. Palpus rather slender, roughish along edge; pale ochreous, infuscated towards apex of median segment, terminal segment dark fuscous. Thorax fuscous, strewn with ochreous, finer towards middle, coarser spotted along edges and on tegulae. Abdomen dark fuscous-grey, venter paler at base.

Fore wing oblong-triangular, rather narrow, costa curved at extremities, straight in middle, apex obtusely pointed, termen almost straight, very gently inbent in middle, oblique. Fuscous, finely striated with light ochreous (tips of scales), transversely striated with shining whitish-silvery; markings darker purplish-fuscous, similarly striated with ochreous and rather suffused. Basal patch to before middle, basal $2/3$ invaded by ground colour; edge with upper third very oblique, there subobtusely angulate, thence moderately concave and little inwards-oblique; costal marks little oblique, rather thick, whitish, finely striated with greyish, silvery in certain lights: two pairs over about $1/6$ of costa just before middle, between basal patch and central fascia; three more similar pairs beyond central fascia, followed by a single small costal dot; central fascia from beyond middle of costa to dorsum rather before tornus, moderately curved and spindle-shaped; two anterior pairs of costal spots continued across wing by pale grey, ill-defined lines, brightly shining pale silvery in certain lights, reaching dorsum and crossing one another in middle of wing, so as to form a letter X, rather outwards-curved in middle; third pair of costal marks continued by a similar, but thicker silvery line, forming posterior edge of central fascia; and below, the anterior edge of ocelloid spot; fourth pair of costal marks smallest, without silver; fifth pair, with a short silvery streak, interrupted below vein 7 and only on dorsum forming posterior rather inwards-oblique edge of ocelloid patch which is rather V-shaped consequently; apex with a suffused blackish-fuscous patch. Cilia (imperfect) silvery, with a dark fuscous basal third along lower part of termen and in tornus.

Hind wing purplish-fuscous, very gradually becoming paler on basal half except towards margins. Cilia silvery-white, basal third dark fuscous.

Male genitalia. Tegumen triangular, narrowed and pointed above. Tuba analis traceable as a hyaline sheet. Valva moderately constricted, edge of sacculus rather abruptly projecting before its middle, shallowly rounded thence, cucullus oblique, transversely oval, base more rounded than top, outer edge regularly convex; surface densely bristled. Aedeagus long and slender, straight, abruptly narrowed along apical third. Cornuti, slender spines in a straight row (about 13 cornuti).



Figs. 19-21. Male genitalia of Laspeyresiini, holotypes. 19, *Grapholitha (G.) heptatoma* sp. n.; 20, *G. (G.) namatophora* sp. n.; 21, *G. graphologa* sp. n.

Prov. No. 3 East, Junbesi, 2750 m, 25-31.vii. 1964 (W. Dierl), 1 ♂, holotype, genit. slide 8540.

The exact position within the genus again is uncertain.

Parapammene pericapna spec. nov. (figs. 16, 18)

♂♀ 13 mm. Head and thorax slaty-grey with faint opalescence and golden reflections. Palpus rather slender, not dilated, closely appressed to face; whitish, upper edge of median segment fuscous. Abdomen dark fuscous-grey.

Fore wing oblong-triangular, moderately dilated, costa gently curved at base, straight in middle, slightly curved along posterior 1/4, apex rounded, termen shallowly notched below apex, rather angularly projecting below notch, almost straight and little oblique thence. Fuscous-grey, finely transversely striated with pale (extreme tips of scales whitish). Costa dark fuscous with eight or nine pairs of rather distant greyish-white short marks, two ultimate marks single; faint dark fuscous oblique lines arranged thus: two shorter lines, to cell, from before 1/4 and before middle, respectively; a third branched long line beyond middle, to termen below apex, followed by three short converging lines before apex, all very faint; a small pale mark on notch of termen. Cilia (imperfect) fuscous, with a dark fuscous basal third and yellowish basal line.

Hind wing pale grey, marginal third distinctly suffused with dark fuscous, dorsum to cell suffused with lighter fuscous. Cilia whitish with a fuscous basal third.

Female genitalia. Resemble slightly those of *P. oxsenheimeriana* Hübner. Eighth sternite broadly emarginate in three different ways: steepest laterally, less steep and gently convex submedially and with a small deeper notch, in middle. Sterigma rounded, lamella antevaginalis with a deep median split to base, gently constricted above base, base rounded, walls wrinkled; lower edge of this lamella narrow, dark, with a small curved appendix at each side. Colliculum, a dark somewhat irregular tube, with longitudinal fold on left side, top obtusely pointed. Signa, two small equal thorns.

Helmu-Gebit, 2600 m, Gusum Banjyang, 3.ix.1967 (W. Dierl), 1 ♂, holotype, genit. slide 8588; 1 ♀, allotype, genit. slide 8557; the same locality, 1.ix.1967 (W. Dierl), 1 ♀, paratype, genit. slide 8583.

Parapammene cyanodesma spec. nov. (fig. 39)

♂ 12 mm. Head fuscous, dusted with tawny-ochrous, orbits and face pale ochreous. Palpus moderate, little dilated, appressed to face, median segment roughish along lower edge and apex, pale ochreous, towards centre and apex suffused with dark fuscous, terminal segment short, blackish.

Thorax dark fuscous, dusted with ochreous-tawny, shoulder mixed with pale ochreous. Abdomen dull black, venter whitish.

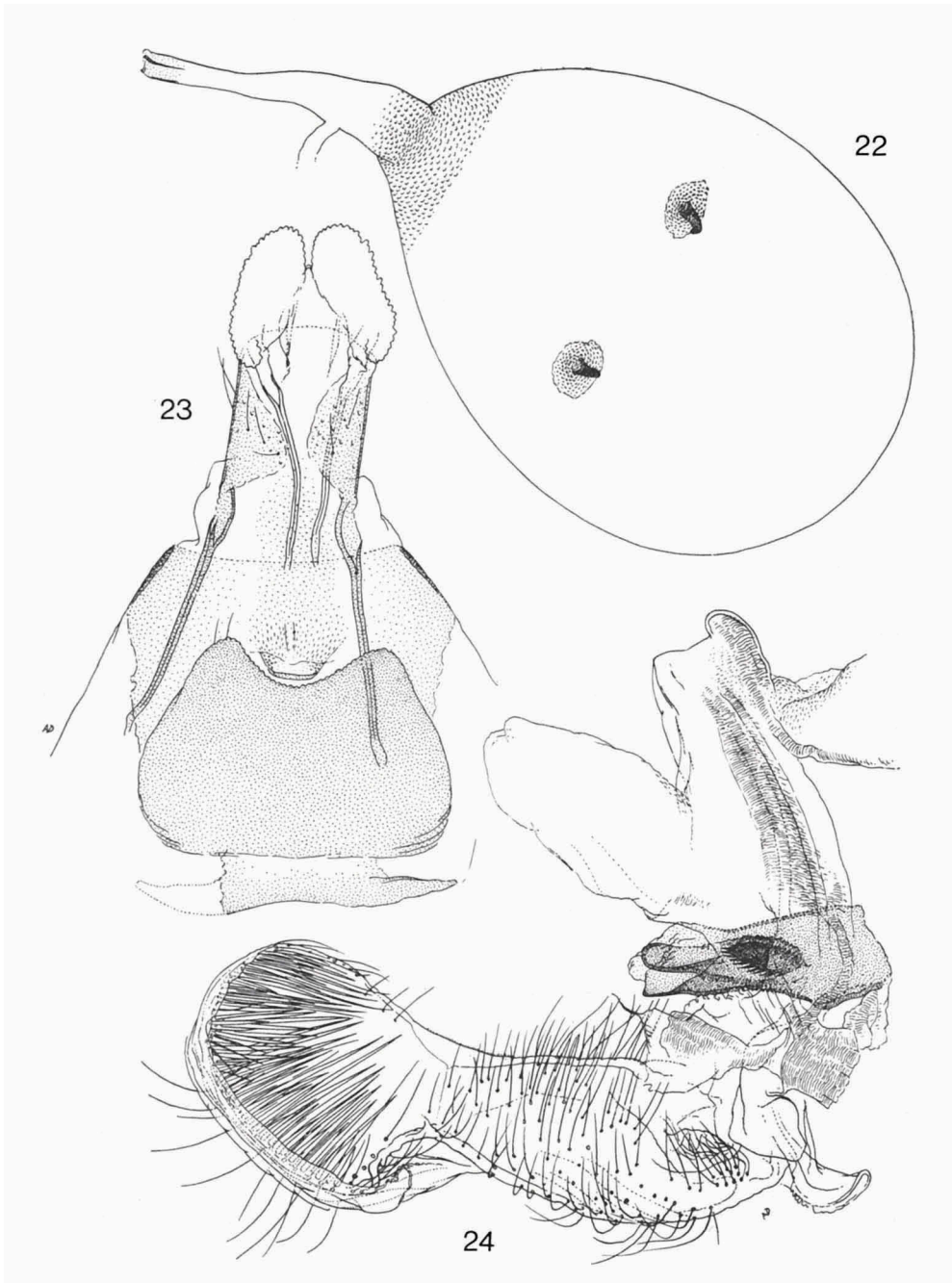
Fore wing oblong-truncate, moderately dilated, costa curved anteriorly, almost straight posteriorly, apex rounded, termen gently concave below apex, rounded below this, vertical. Evenly deep fuscous-brown, with a bronze-purple gloss, finely dusted with light ochreous (extreme tips of scales). Basal patch to $1/3$, its basal half rather denser dusted with pale ochreous, edge with truncate point above middle (broader in right wing); patch on costa with three ill defined pale ochreous spots, last of these paired; costa beyond patch with four narrow pairs of creamy distinct marks; costa beyond central fascia with five larger and more contrasting pairs of marks, not quite similar in right and left wing, second of these almost single, following three wide but short, little oblique; central fascia deep fuscous-brown, similar to basal patch, narrow on costa before middle, quickly dilated along upper oblique third, lower part three times as broad, vertical, anterior edge angulate in middle, posterior angulate above middle, indented below this; space between patch and fascia forming a brightly glossy leaden-bluish transverse band, curved above middle, gently dilated towards costa, more dilated towards dorsum, indistinctly parted towards ends with dark brown, on dorsum finely parted again on both sides; central fascia followed by a narrower similar streak, oblique on upper third, becoming twice as thick and grey-leaden (instead of bluish) on lower half, this part forming anterior edge of ocelloid spot, curving also around its bottom; posterior edge similar, but narrower, interrupted in middle, top connected by oblique leaden line with two penultimate pairs of costal marks; ocelloid spot with four black lines, lowest shifted posterad and cutting metallic edge; a narrow black marginal line around apex and along termen to tornus. Cilia submetallic pale grey, with a black supramedian band, beyond this band mixed with black.

Hind wing purple-bronze, becoming paler towards base. Cilia pale grey with a strong gloss, a blackish-purple basal band and a paler subapical band around apex.

Male genitalia. Tegumen short, broadly triangular. Transtilla well defined and darkly sclerotized. Valva long and narrow, little curved; sacculus narrow, gradually dilated, cucullus oblong-oval, $1/2$, bristly along its entire edge, top rounded, inner angle absent. Aedeagus rather pistol-shaped, apical third straight and narrow. Cornuti, a sheaf of long spines.

Kathmandu Valley, Godavari, 1600-1800 m, 14-16.vi.1967 (Dierl-Forster-Schacht), 1 ♂, holotype, genit. slide 8593.

Distinct by colouring and markings. Nearest to *P. inobservata* V. Kuznetsov.



Figs. 22-24. Genitalia of Laspeyresiini. 22, *Grapholitha (G.) heptatoma* sp. n., ♀, allotype, bursa; 23, do., sterigma; 24, *G. astrapephora* sp. n., ♂, holotype.

Pammene (Pammene) bathysema spec. nov. (fig. 15)

♀ 14 mm. Head fuscous, sides of face pale yellowish. Palpus moderate, subascending, suboval and moderately dilated; whitish, lower and apical edges of median segment broadly infuscated, terminal segment dark fuscous, almost concealed. Thorax smooth, evenly deep fulvous-fuscous with slight whitish opalescence. Abdomen dark grey, venter paler grey at base.

Fore wing oblong-truncate, dilated, costa little curved at extremities, almost straight in middle, apex rounded, termen hardly concave below apex, gently rounded below, hardly oblique. Deep fuscous-coppery, with a silky gloss; costal third of wing deep ferruginous-crimson, becoming reddish-orange posteriorly, this colour extending along terminal fourth of wing to tornus; a bright deep bluish-leadene oblong patch on more than basal fourth of costa extending to cell, end rounded; costa beyond this with about eight slender blackish lines, becoming less oblique and shorter on posterior fourth; three bright blue-metallic streaks alternating with the anterior lines; first of these thick, to cell, second halfway to cell, third slender, on upper $1/3$ becoming pale violet, convex on upper third, thence running obliquely to above tornus, on end extended into an oval spot; a fourth slender, bluish streak between fifth and sixth costal lines, concave, to below apex; a fifth blue metallic streak from costa before apex, not reaching preceding streak; a short violet mark opposite middle of termen and a thicker one, merging in end of third line, together representing ocelloid spot; dorsal spot represented by two weak grey-leadene outwards-oblique and converging, rather thick lines, reaching above fold, but not connected with the first costal metallic line; veins beyond cell on lower $2/3$ of wing streaked with jet-black and dotted between veins, dotting reaching anteriorly to middle of wing, below more or less limited by the median fold; a jet-black marginal line around apex and along termen. Cilia light grey-fuscous with a strong gloss.

Hind wing grey, apex and upper half of termen, as far as $1/5$ of wing length, suffused with black, costa light grey, lower half of costa whitish (touched with grey), this central patch well defined.

Paratype, ♀, similar, but with all metallic lines leadene, not blue and violet.

Female genitalia. Sterigma inverted-triangular, minutely aciculate, edges moderately thickened, with a few bristles. Ostium elongate and erected, cylindrical, widely open along its whole length; colliculum rather long, moderately wide, dark and tubular, with a conical top; signa two, slender hooks.

Prov. Nr. 3 East, Junbesi, 2750 m, 25-31.vii.1964 (W. Dierl), 1 ♀, holotype, genit. slide 8538.

Prov. Nr. 2 East, Bhandar unter Thodung, 2200 m, 2.viii.1964 (W. Dierl), 1 ♀, paratype.

An elegantly coloured species. The only somewhat similar form known to me, is *Grapholitha influxana* Walker, from South America, and the following species. The genitalia resemble moderately those of the Palearctic *P. gemmana* Hübner.

The locality has a cold temperate climate and is situated in the vicinity of *Quercus* fog forest to coniferous forest.

Pammene (Pammene) phthoneris spec. nov. (fig. 14)

♀ 12.5 mm. Head fuscous-grey, face dark grey. Palpus little dilated, oblong-suboval; grey, basal third whitish; terminal segment obtuse, exposed; grey. Thorax blackish, tegulae slaty-grey. Abdomen dark grey, base of venter pale grey.

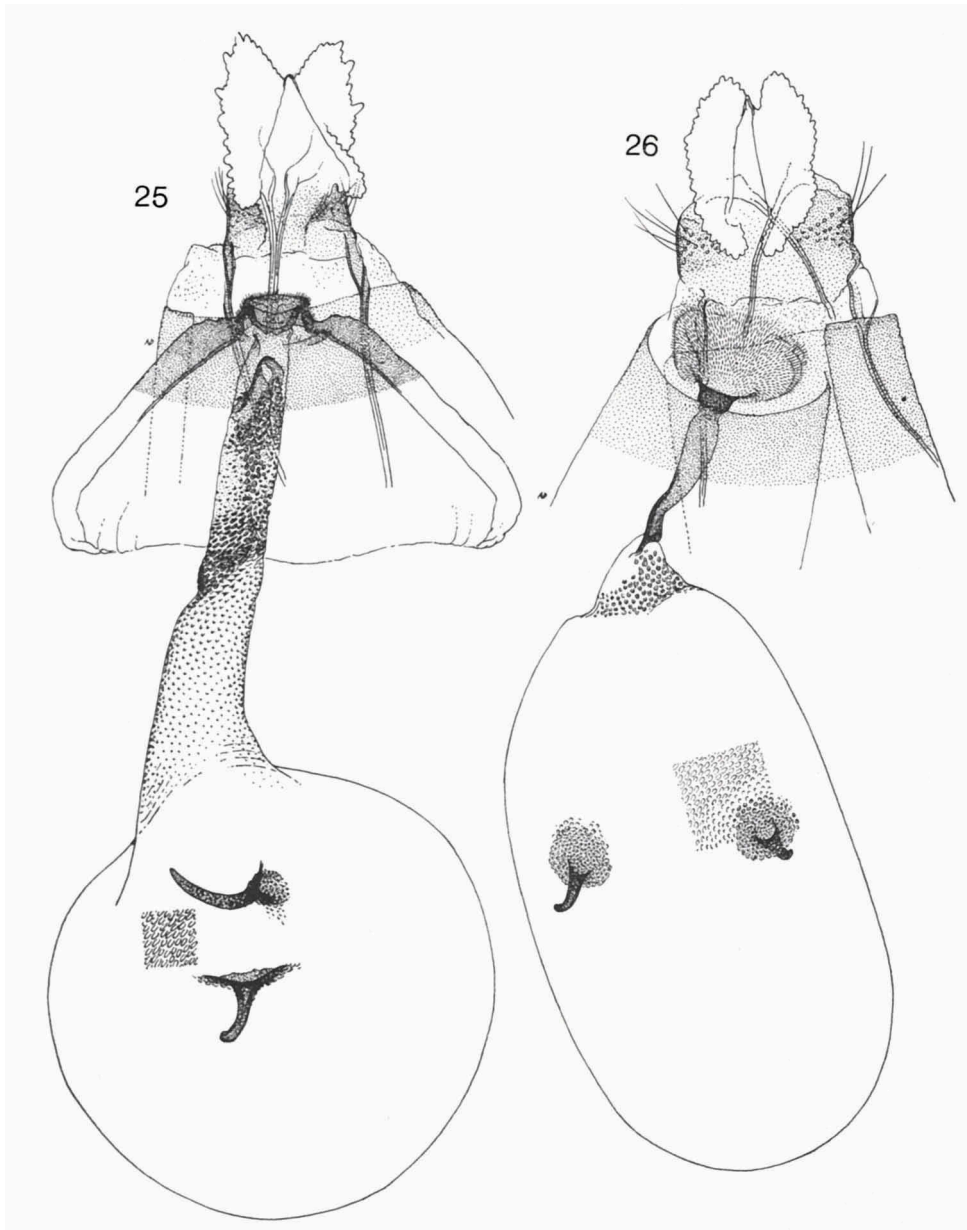
Fore wing rather broad, subtruncate, costa curved along basal half and again at apex, termen hardly sinuate above, rounded below. Ferruginous-crimson, dorsal third as far as ocelloid spot deep ferruginous, feebly marbled with pale slaty-grey, basal fourth suffused with slaty-grey, this suffusion extending on costal half of wing to its middle; second fourth of costa with two slender oblique streaks of crimson ground colour, interspaces on costa rather bluish-metallic; four thick, oblique, slightly raised, deep bluish-lead metallic costal streaks: first at 1/3, to vein 8; second at 3/4, very short, followed by another short mark; a continuous bright metallic curved streak from below and between these two, running to before middle of termen, thence curving to tornus, dilated below, forming posterior edge of ocelloid spot, silvery; ultimate metallic streak from costa just before apex, crossing before apex and merging into preceding line above middle of termen; anterior edge of ocelloid spot thick, silvery, narrowed above; some black dotting in centre of disc at 3/4 of wing. (Cilia entirely rubbed).

Hind wing black, becoming greyish on basal half, central 3/5 from below upper edge of cell to below its lower edge, pure white, this patch well defined, narrowing anteriorly. Cilia (imperfect) white with a blackish basal third.

Female genitalia. Eighth sternite transversely oval, deeply emarginate above, edges of emargination convex, bottom rounded. Ostium, an oval, laterally somewhat compressed collar, aciculate except frontally, where it is sclerotized. Colliculum rather short and broad, top rather obtusely pointed. Ductus bursae short. Signa, two rather long horns.

Prov. Nr. 3 East, Jubing, 1600 m, 20-23.vii.1964 (W. Dierl), 1 ♀, holotype, genit. slide 8539.

Somewhat resembling the preceding species (*P. bathysema* spec. nov.), but with quite different genitalia and peculiarities of markings, somewhat resembling those in *P. blockiana* (Herrich-Schäffer).



Figs. 25-26. Female genitalia of Laspeyresiini, allotypes. 25, *Grapholitha (G.) tricyanitis* sp. n.; 26, *Dierlia aurata* g. & sp. n.

Warm temperate, in the vicinity of *Castanopsis*-mixed deciduous forest.
Probably nearest to *P. flavicellula* V. Kuznetsov.

Strophedromorpha gen. nov. (figs. 10-11)

Head with roughly appressed scales. Ocellus posterior. Proboscis vestigial. Antenna in male minutely ciliate, seemingly subserrulate (subelevated edges of segments). Thorax without a crest. Abdomen and posterior tibia normal.

Fore wing subtriangular, apex rounded, termen slightly convex, gently rounded at ends. Vein 2 from beyond 2/3, 3 from angle, 4 closer to 3, 5 and 6 parallel and straight, 7 separate, to just below apex, 8 from below angle of cell, 9 from angle, 10 from 2/3 distance 9-11, 11 from before middle of cell, chorda from 1-2, median branch below base of vein 5.

Hind wing with 2 from 2/3, 3 and 4 short-stalked from angle, 5 gently curved, very little approximated to 4 at base, 6 separate, from below angle of cell, 7 apparently absent.

Male genitalia. Tegumen more or less globular. Uncus, a membranous weak lobe. Gnathos membranous, large, covering almost upper half of tegumen, with a broad median split, its edges along upper half with numerous perforations, appearing as (pseudo-) papillae. Henion long, longer than aedeagus strongly dilated in middle, lozenge-shaped. Valva extremely small, as compared with tegumen, straight, subclavate, lower edge being moderately concave in middle, cucullus rounded, with asteroid patch of spines of diverse length. Aedeagus small, narrowed towards apex; cornutus, a single sinuate spine.

Type-species, *Strophedromorpha mica* spec. nov. (Nepal).

The insect resembles a Palaearctic *Strophedra* closely, but the genitalia are very peculiar and the vein 7 in the hind wing is absent.

Strophedromorpha mica spec. nov. (figs. 10-11, 27)

♂ 8 mm. Head and thorax grey-bronze, face and palpus white, touched with golden-yellow. Abdomen fuscous-grey-black.

Fore wing oblong-triangular, costa hardly curved at base, distinctly curved before apex, apex rounded, termen straight, strongly oblique. Dark grey, finely striated with white (scales being dark grey with white tips). Basal patch under 1/4, grey, less dusted with white, upper part of edge suffused and indefinite, lower 3/4 distinct, gently sinuate and strongly inwards-oblique. Space beyond patch similarly sinuate, acutely angular below costa, outwards-oblique below, black, broadly parted with dark grey; wing beyond this darker, band evenly dusted or striated with white and appearing lighter

grey, except a narrow, oblong-oval black spot on posterior third of costa to apex, lower edge straight, and an irregular black spot on end of dorsum; this spot delimiting a dorsal spot of grey ground colour, outwards-sinuate, parted with dark grey and once more, on each side, with lighter grey; costa from extreme base to apical patch with nine very small, paired, silvery-white marks; a strongly curved series of well-defined oblong horizontal black dots, from below $2/3$ of costa to above tornus, gradually becoming smaller and rounder downwards. Cilia glossy dark grey, basal fourth darker grey, followed by a whitish outwards-suffused band.

Hind wing rather dark bronze-fuscous, gradually becoming paler grey, and semipellucet towards base. Cilia pale grey, darker around apex and along upper half of termen, throughout with a dark bronze-fuscous basal fourth.

Male genitalia, as described with the genus.

Prov. No. 3 East, Jubing, 1600 m, 3.v.1964 (W. Dierl), 1 ♂, holotype, genit. slide 8543.

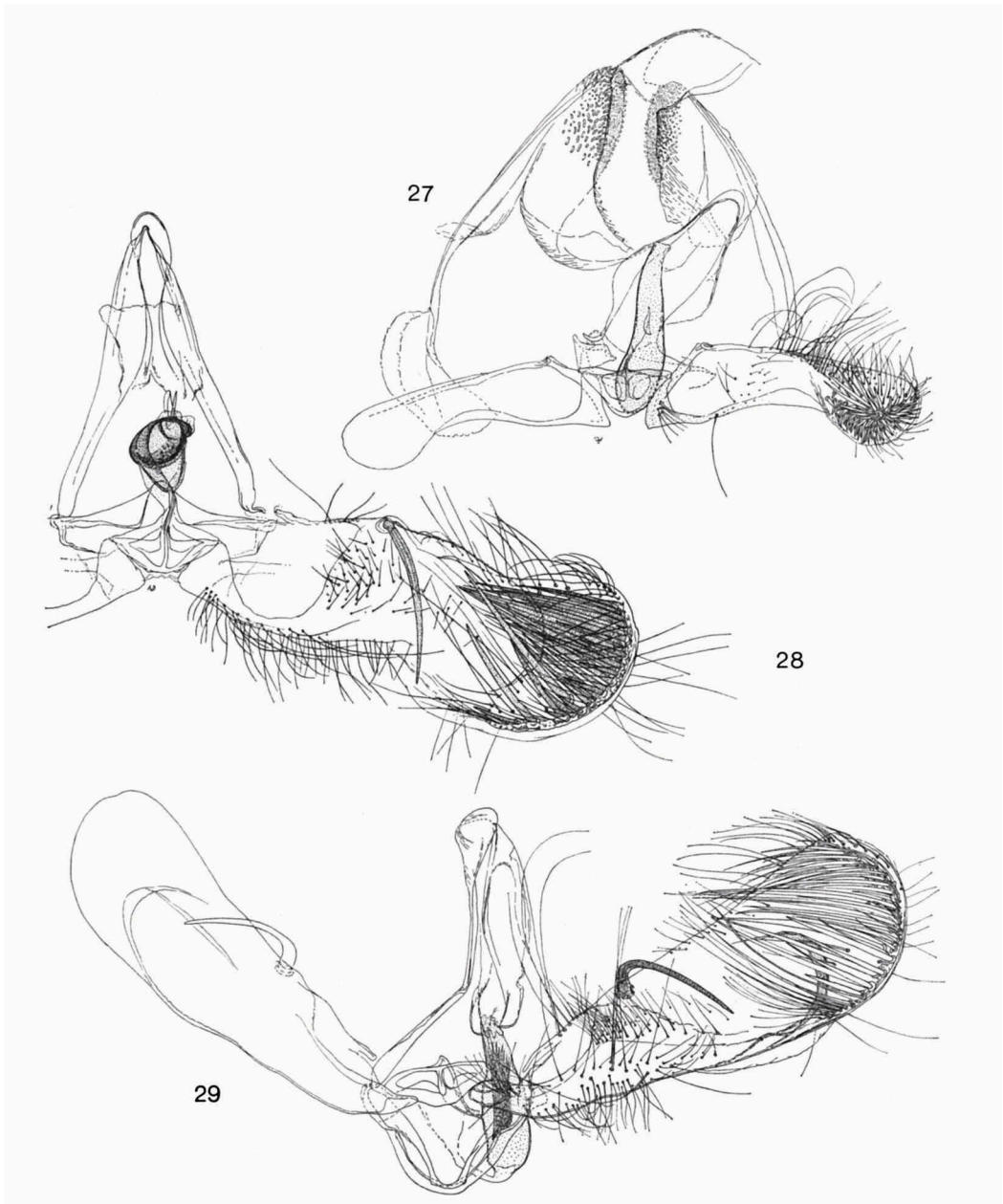
Warm temperate, with *Castanopsis*-mixed deciduous forest.

Dierlia gen. nov. (figs. 5-7)

Head with appressed scales, sometimes roughish between antennae. Ocellus posterior. Proboscis vestigial. Antenna in male short-ciliate. Palpus moderate, subascending, median segment little curved, with scales roughish along lower edge, slightly or hardly dilated posteriorly, terminal segment subobtusate, exposed, moderately drooping. Thorax smooth. Abdomen with a thick, transverse patch of dark, not deciduous androconia across 6th tergite, without coremata.

Fore wing with a patch of inconspicuous, sparse, narrow androconial scales upon glossy membrane, below and over lower angle of cell, from beyond its middle to beyond that angle, between median branch and vein 2; rounded-truncate, moderately dilated, apex rounded, termen notched below apex, rounded and prominent below notch; without a costal fold in male. Vein 2 from well beyond middle of cell, 3 from angle, 3-7 separate and distant, 5 and 6 most distant, 7 to termen, 8 from upper angle of cell, 7 close to 8, 10 from beyond middle distance 11-9, 11 from middle of cell, chorda from $1/2$ to base of 7, median branch to slightly below base of 5.

Hind wing with a cubital pecten, broadly semioval, under 1 $1/2$; in male vein 2 from $3/4$, 3 from angle, 4 absent, or 3 and 4 long-stalked, free part less than $1/4$, 5 parallel and remote, 6 to termen or apex, 7 from before upper angle of cell, to costa, 8 from $2/3$ of upper edge of cell, running into 7 above its base, so forming a narrow closed cell; 4 absent, 6 to termen,



Figs. 27-29. Male genitalia of Laspeyresiini. 27, *Strophedromorpha mica* g. & sp. n., holotype; 28, *Grapholitha* (*G.*) *tricyanitis* sp. n., paratype; 29, do., holotype.

7 free to apex, 8 free to costa in female. Upper side of hind wing with a large androconial field, being a dull naked area, well-defined and on veins normally scaled, extending from upper edge of cell and vein 6 to vein 2 and from beyond base almost to termen, clothed with sparse closely appressed, thin hair-scales.

Male genitalia, closely resembling those in *Parapammene* Obraztsov. Tegumen with a rather pointed top, in lateral aspect without a knob. Gnathos, a voluminous membrane (together with tuba analis), at the sides below with dark semioval basal edges. Valva very similar to that in *Parapammene*, sacculus smaller than cucullus, with a large basal opening, neck of valva thick, but less than $1/2$ breadth of valva, excision with a thickened edge, cucullus shaped as a quarter of an ellipsis, lower edge rounded. Aedeagus small, slender, little curved, gradually narrowed at top. Cornutus, a single long spine.

Female genitalia. Very similar to those of *Parapammene*, sterigma little modified, lamella postvaginalis, a weak semicircular plate, rounded below. Colliculum, a small, dark, funnel-shaped ring. Cestum, a small, irregular sclerite. Signa, two horns.

Type-species, *Dierlia aurata* spec. nov. (Nepal).

An interesting form, superficially nearest to *Pammene* Hübner, except for the peculiar androconial field upon the hind wing and the stalking or coincidence of veins 3 and 4 in the hind wing in both sexes; the genitalia, however, do not fit within the *Pammene* pattern at all and show a close affinity with the genus *Parapammene* Obraztsov, as does the yellowish colour of the type-species. From the last genus, *Dierlia* can be separated at once by the absence of any coremata.

The genus may be allied to *Diamphidia* Obraztsov, but is differing by the absence of vein 4 in the hind wing of the two sexes, and by the remarkable origin of vein 8 in the hind wing of the male. In this respect the neuration resembles slightly that in *Parapammene* ♂, where vein 8 (subcostal vein), originates from the base of the wing and terminates above the base of 7; in *Dierlia* vein 8 originates from $2/3$ of the upper edge of cell and terminates also above the base of 7.

Dierlia aurata spec. nov. (figs. 5-7, 26, 30)

♂ 11.5 mm. Head light fuscous-grey, slightly mixed with light ochreous. Palpus light fuscous-grey. Thorax rather dark fuscous-grey, tegulae and collar rather mixed with light ochreous-yellow. Abdomen opalescent dark grey, venter and anal tuft whitish.

Fore wing suboval-truncate, broad, dilated, costa gradually curved throughout, apex rounded, termen notched below apex, strongly rounded below

notch, vertical; underside with a longitudinal glossy patch over lower angle of cell (as described with the genus, above); with sparse hair-scales. Rather bright ochreous-yellow, finely transversely striated with pale grey-fuscous lines (apical $\frac{2}{3}$ of scales). Basal patch indefinite, edge indicated by a somewhat suffused blackish and oblique slender streak from $\frac{1}{4}$ of costa, not reaching fold; costa narrowly and suffusedly blackish-brown, with numerous very fine and oblique, yellowish-white, pointed pairs of marks: about four ill-defined and short pairs along basal $\frac{1}{4}$; three more distinct pairs between basal patch and central fascia and five well-defined pairs along posterior $\frac{2}{5}$ of costa; of which ultimate two are whiter, single, and less oblique; central fascia indicated only by an oblique somewhat more distinct blackish slender streak from just before $\frac{2}{5}$ of costa, parallel to edge of basal patch mentioned above, straight, pointed, to upper angle of cell (about across upper third of breadth of disc); not well defined light leaden metallic lines originating from pairs of costal marks: two between basal patch and central fascia, not reaching cell; a thicker line beyond central fascia, gradually moderately curved, descending to middle of closing vein, thence vertical, to end of dorsum; a very oblique line from subpenultimate costal mark, to notch of termen and an almost vertical slender line before middle of termen; a blackish-brown marginal streak in apex and along termen, cut by ground colour opposite terminal notch; some faint cloudy fuscous suffusion towards base of dorsum and above end of fold. Cilia pale ochreous mixed with dark fuscous; cilia along tornus except on end of dorsum blackish-grey; a whitish-ochreous basal streak running throughout.

Hind wing vein 4 absent, 7 very short, from before upper angle or cell, running into 8; dark purplish-bronze, glossy, except a large, grey androconial field, dull except bronze veins; field sharply edged, sparsely clothed with appressed dark fuscous hair-scales; this field extending from lower half of cell as far as base of vein 2 and that of vein 5, and limited by course of these veins but posteriorly broadly rounded, so not reaching ends of 2 and 5. Cilia glossy fuscous with purple-bronze basal third.

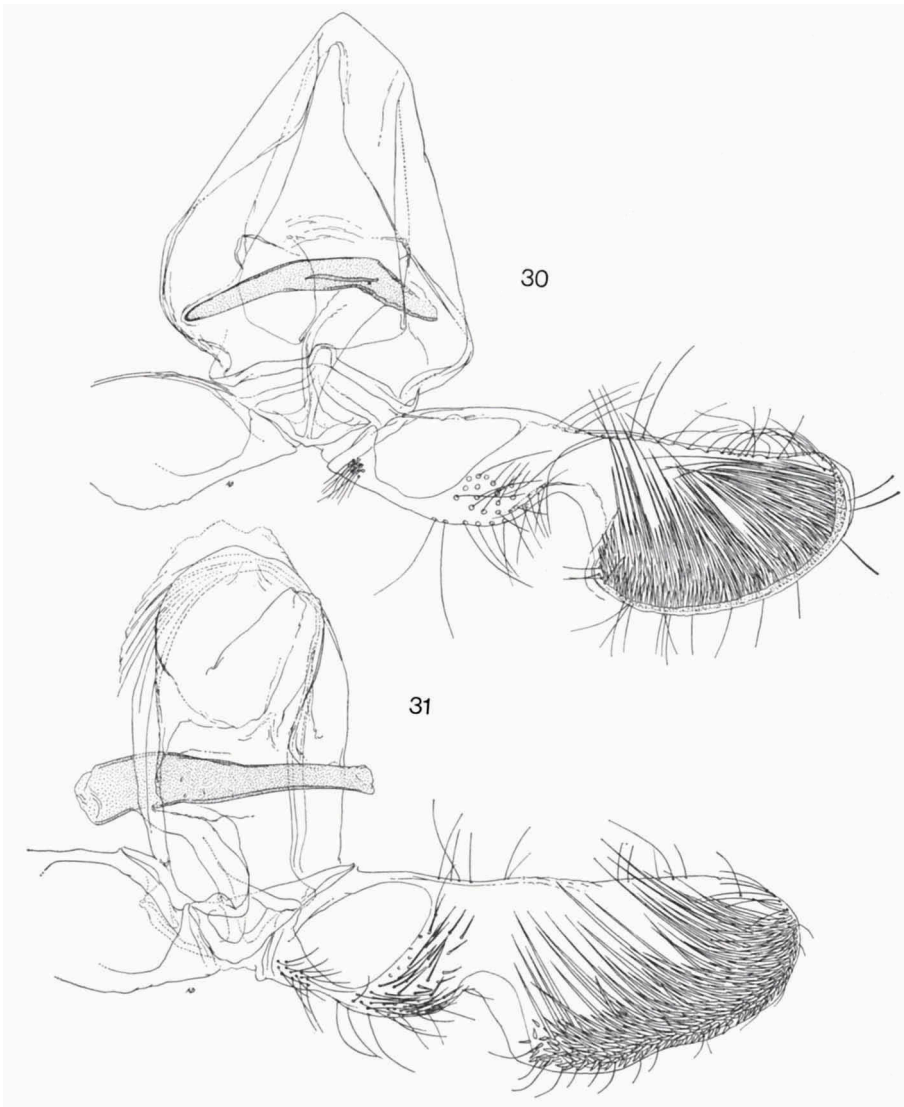
Male genitalia as described with the genus above.

♀ 11.5 mm. Head darker grey, vertex and collar ochreous-yellow. Thorax ochreous-brownish. Abdomen opalescent blackish-purple, venter whitish.

Fore wing shape as in male but termen moderately oblique below. Bright ochreous-yellow, posteriorly faintly tinged orangeish, transverse striation, as in male, being ill-defined. Markings similar, more-slaty-grey and rather less distinct except along costa; long leaden streak furcate on costa; second metallic, oblique streak thicker; a moderately curved vertical series of jet-black strigulae or dots from below costa to $\frac{2}{3}$ of wing breadth, becoming

smaller downwards (entirely absent in male); a series of vertical slender glossy bronze suffused lines along dorsum, in left wing reaching halfway towards fold, in right, shorter; apex and termen rather obscured with brownish. Otherwise as male.

Hind wing dark, blackish-bronze, with hardly any gloss, basal 2/3 tending to turn slightly paler basad. Cilia as in male, with a whitish basal line.



Figs. 30-31. Male genitalia of Laspeyresiini, holotypes. 30, *Dierlia aurata* g. & sp. n.; 31, *Laspeyresia (L.) nebulocula* sp. n.

Female genitalia as described for the genus above.

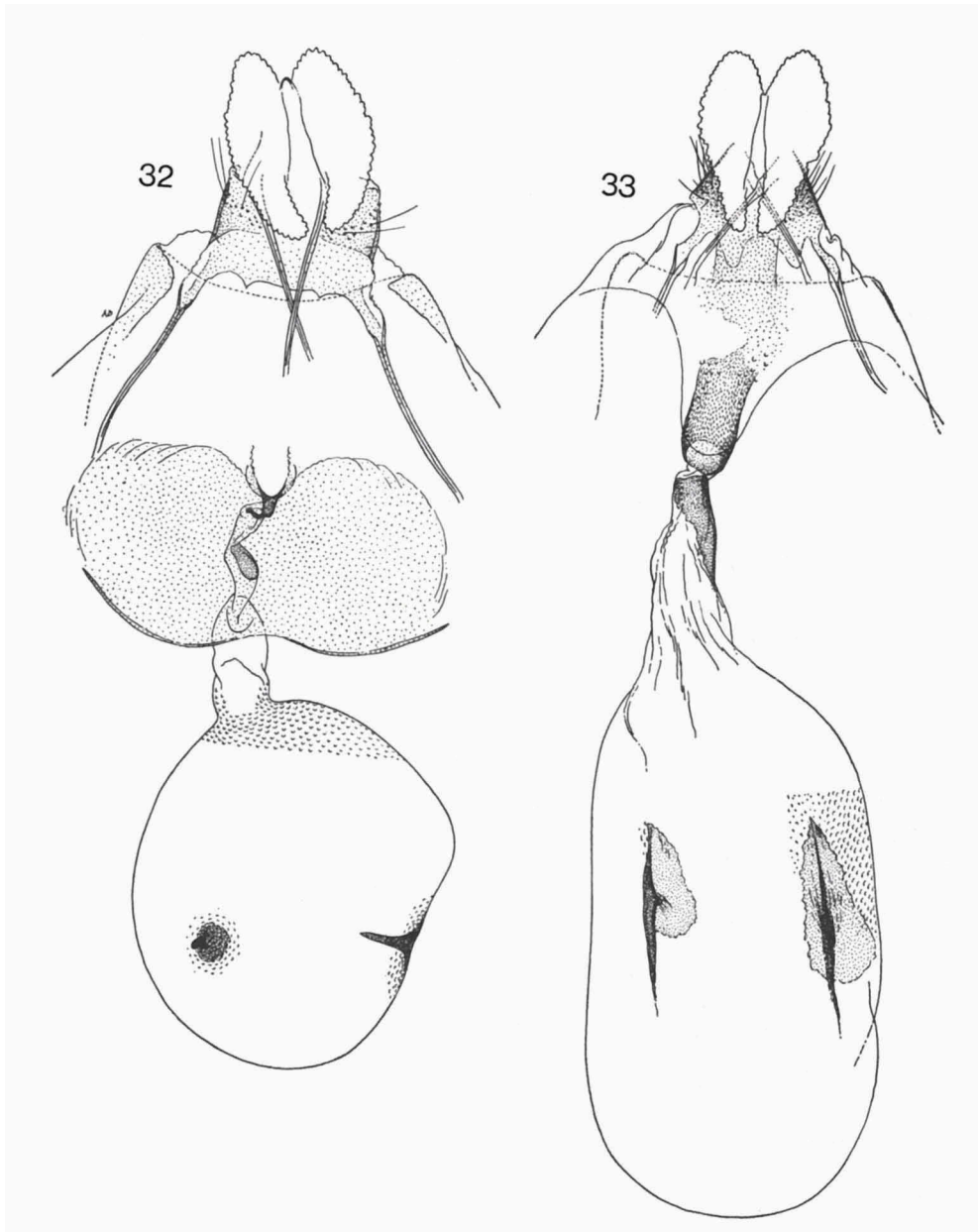
Kathmandu Valley, Godavari, 1600-1800 m, 14-16.vii.1967 (Dierl-Forster-Schacht), 1 ♂, holotype, genit. slide 8590; 1 ♀, allotype, genit. slide 8589.

A small, broad-winged species, conspicuous by the yellow-ochreous colour and the larger androconial field upon the hind wing of the male. Allied with the following species.

Dierlia poeciloptera spec. nov. (fig. 41)

♂ 11 mm. Head fuscous-grey, tuft between antennae roughish, projecting over forehead. Scape of antenna dark fuscous. Palpus pale fuscous, a fuscous-whitish upper edge and a small spot at apex of median segment above. Thorax dark fuscous, strewn with pale fuscous, a pale fuscous irregular transverse median band, preceded and followed by similar blackish bands. Abdomen black, anal tuft dark grey.

Fore wing rounded-triangular, rather dilated, costa curved throughout, apex rounded, termen hardly notched below apex, gently convex and vertical above, rounded beneath. Rather pale grey tinged pale ochreous posteriorly, transversely striated with darker fuscous-grey (bases of scales), also marbled with darker grey and densely strigulated with strongly undulating grey fuscous curved bands. Basal patch slightly darker greyish, with three irregular blackish narrow bands (including edge), jet-black on costa, edge strongly angulate and acute in middle, reaching almost to $2/5$, gently concave above and below; costa between basal patch and central fascia with two pairs of creamy slender marks, each posterior mark double; five creamy moderate marks beyond central fascia, only first of these double, marks becoming less oblique posteriorly; not conspicuous leaden-metallic streaks: first beyond central fascia, curved and rather irregular, oblique to middle of disc, thence vertical; second metallic streak straight, from subpenultimate costal mark, to notch of termen; central fascia moderately broad, from middle of costa to end of dorsum, moderately curved as far as fold before its end, thence vertical; this fascia with a jet-black costal third, abruptly interrupted below costa by mottley ground colour, thence very irregular, interrupted above and below middle, dilated on dorsum; a narrow interrupted straight black line from costa beyond middle to termen just below notch; a series of six preterminal jet-black cuspidate marks, points posterad, gradually becoming slightly larger downwards; upper of these marks linear and included in subapical black line, second mark continued by a curved black horizontal strigula towards termen and curving down before margin; this series of marks represents a large ocelloid spot, shifted upwards; its posterior edge faint, leaden-



Figs. 32-33. Female genitalia of Laspeyresiini. 32, *Diacantha xerophila* (Meyr.), genit. slide 8552; 33, *Grapholitha (G.) chrysacrotoma* sp. n., holotype.

metallic; a narrow brown marginal line in apex and along termen. Cilia glossy dark purple-grey, basal third creamy-white.

Hind wing rather dark purplish-fuscous, on basal half turning paler fuscous-grey; androconial dull pale grey field with sparse, appressed dark hair-scales, its edge running from middle of lower edge of cell to its upper angle, thence along vein 6 to about $3/4$, thence strongly curving down well before wing margin, turning basad on vein 5, thence rounded outwards again and along short vein 4 to base of fork of 3 + 4, thence halfway between these veins and 2, basad; veins inside this field are not differently scaled. Cilia pale fuscous, glossy, a bronze-fuscous subbasal band, interrupted between ends of veins 1c to 4.

Male genitalia. Very similar to those of the type-species, but tegumen higher, therefore more slender; gnathos nor tuba analis are perceptible. Valva rather similar, but cucullus somewhat more elongate, basal opening smaller, bristling on outer side denser; neck similar, but excision narrower, without ridge; sacculus larger, its inner edge with a slight keel. Aedeagus similar to that in *D. aurata* spec. nov.

Kathmandu Valley, Godavari, 1600-1800 m, 14-16.vi.1967 (Dierl-Forster-Schacht), 1 ♂, holotype, genit. slide 8591.

Allied to preceding but quite different by colouring, markings and shape of the androconial field.

Selania acquiescens spec. nov. (figs. 42-43)

♀ 9 mm. Head pale ochreous. Palpus slender, porrected, median segment rather long, smooth, slightly roughish along lower edge; terminal segment short, obtuse, exposed; pale ochreous. Thorax fuscous, slightly dusted with pale ochreous. Abdomen dark grey, venter whitish.

Fore wing oblong-truncate, rather narrow, little dilated, broadest at $3/4$, costa gently and little curved throughout, apex obtusely pointed and prominent, termen sinuate above, rounded below, little oblique. Rather pale grey, very finely striated with pale ochreous (tips of scales), markings rather dark fuscous. Basal patch indicated by narrow edge only, on margins reaching $1/4$, but in middle angulate to $2/5$, point ill-defined, being submerged in a moderate blotch of fuscous suffusion, extending along second fourth of wing breadth, from $2/5$ to end of cell; basal patch finely dusted with fuscous and with a couple of transverse lines, parallel and before its edge, all markings except edge interrupted by a streak of pale ground colour just above fold from beyond base; central fascia just before middle of costa, oblique, linear, to end of above mentioned fuscous suffusion, indefinite below; costa with

short and narrow transverse dark marks anteriorly, beyond fascia five larger marks, dark, wedge-shaped, increasing posteriorly, penultimate longest, marginal, ultimate linear and vertical; these five marks alternating with very short, not conspicuous silvery-white pairs of marks, fourth very small, fifth thick and single; a fuscous line from second dark costal spot crossing to termen below apex, converging there with very fine similar lines from fourth and fifth dark costal spots; fuscous central suffusion indistinctly extended almost to top of ocelloid spot; this with 3-4 black marks and a pale ochreous-

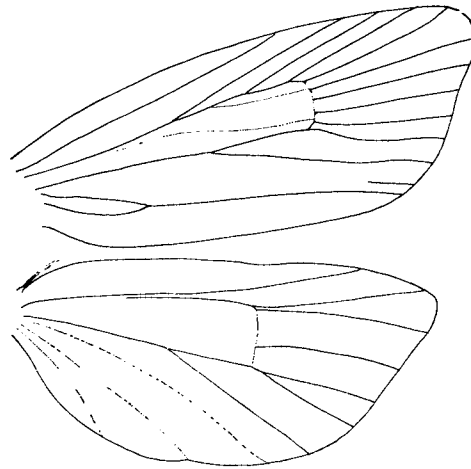


Fig. 34. *Grapholitha (G.) chrysacrotoma* sp. n., wing neuration, ♀, holotype.

whitish vertical posterior edge, more or less extending below to before tornus; otherwise ocelloid spot indefinite; dorsum below fold rather darker fuscous with irregular vertical pale fuscous-ochreous streaks. Cilia pale ochreous with a narrow basal fuscous line around apex, along termen becoming sub-basal, tips of cilia and cilia opposite tornus mixed with fuscous-grey.

Hind wing semipellucet, along margins and more so in apex suffused and dusted with deep fuscous-purple, this suffusion extending along veins basad, but not reaching base.

Rapti Tal, Jhawani, 200 m, 14-19.v.1967 (Dierl-Forster-Schacht), 1 ♀, holotype, genit. slide 8555.

A small species with rather eucosmine appearance, prominent and dark-edged apex of the fore wings and semipellucet hind wings. The genitalia assign it to the present genus.

Laspeyresia (Laspeyresia) pulverula Meyrick

Laspeyresia pulverula Meyrick, 1912c: 876 (♂, recte ♀, Assam). — Caradja & Meyrick, 1937: 3 (Yulingshan). — Fletcher, 1921: 67 (foodplant). — Diakonoff, 1953: 162 (N. Guinea). — 1955a: 174 (N. Guinea). — Clarke, 1955: 265. — 1958: 452, pl. 225 figs. 2-2b (holotype: wings, genit. figured). — Obraztsov, 1959: 194. — Danilevski & Kuznetsov, 1968: 607.

Helmu Gebiet, Gusum Bunjyang, 2600 m, 1.ix.1967 (W. Dierl), 1 ♀, genit. slide 8748.

Kathmandu Valley, Godavari, 1600-1800 m, 4.viii.1967 (Dierl-Schacht), 1 ♂.

Prov. Chisapani Garhi, Chisapani Garhi, 1600 m, 11-15.vii.1967 (Dierl-Schacht), 1 ♀.

Kathmandu, Chauni, 1400 m, 14-22.iv.1967 (Dierl-Forster-Schacht), 2 ♂, genit. slide 8747; 1 ♀.

The males are markedly lighter coloured and a trifle larger than females.

Laspeyresia (Laspeyresia) nebulocula spec. nov. (fig. 31)

♂ 9 mm. Head fuscous-ochreous. Palpus pale ochreous, edge and apex infuscated; little dilated, curved and ascending. Thorax fuscous, mixed with pale fuscous-ochreous. Abdomen dark fuscous.

Fore wing subtruncate, dilated, costa curved anteriorly, less curved posteriorly, apex rounded, termen notched below apex, rounded below, moderately oblique. Pale grey, finely striated with darker slaty-grey (bases of scales), markings still darker, grey-fuscous and blackish. Basal patch to 2/5, rather dark grey-fuscous, three black marks along costa giving rise to three strongly zigzag black lines crossing wing, tolerably parallel, ultimate marginal, which is straight and outwards-oblique along upper half, angulate in middle, concave along lower half; costa black, with five pairs of whitish marks along basal half, first to fourth small and slender, greyish, third and fourth approximated, whiter, fifth pure white and much larger; central fascia from middle of costa, oblique and rather slender, above middle forming a large oval patch not reaching to fold and centred with white dots on its upper half, with a grey suffusion on lower; on dorsum this fascia represented by a rather obscure trapezoidal patch; space between basal patch and central fascia forming a little paler greyish submetallic band, angulate in middle and inwards-convex on lower half, on upper half parted by a darker streak; on lower half this band paler and forming an ill-defined dorsal spot, roundish, outwards-curved, parted by three indistinct dark grey lines; ocelloid spot rather large, erected-oval, leaden grey, glossy narrowly marked along middle with whitish and with some four narrow black lines; a darker grey-leaden line connecting

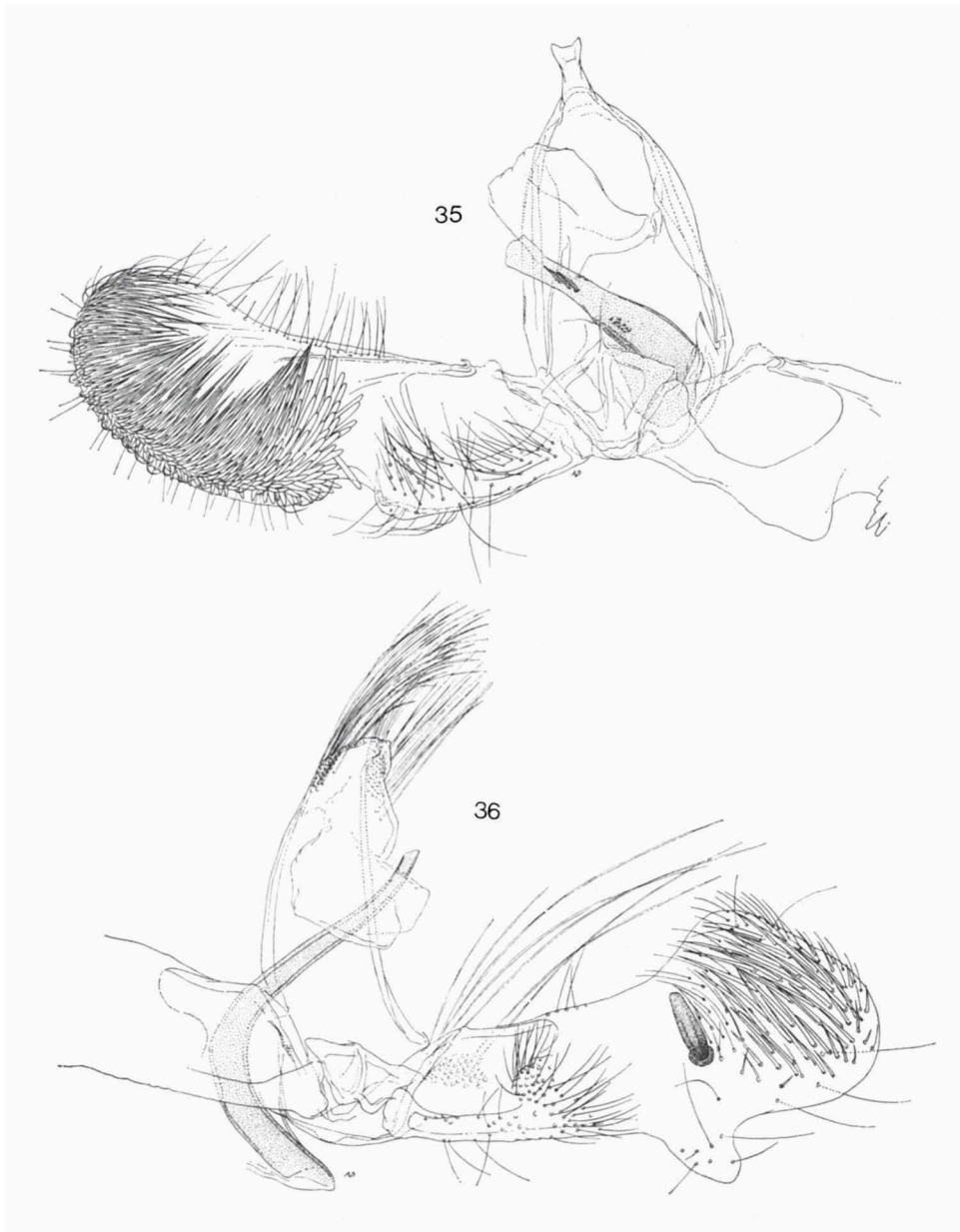


Fig. 35-36. Male genitalia of Laspeyresiini, holotypes. 35, *Grapholitha cyanatra* sp. n.; 36, *Diacantha xerophila* (Meyr.), g. n., genit. slide 8551.

top of spot with first postmedian costal white mark; there are five of these, silvery-white, rather small, wedge-shaped, first and fourth distinctly double, other single, all rather oblique, ultimate very slender and longer; a silvery-white point on notch of termen; a series of very small black lines beyond ocelloid spot. Cilia black with white basal fourth, cilia in tornus grey.

Hind wing purplish-grey, slaty-grey towards base. Cilia glossy dark grey with a purplish-grey basal band.

Male genitalia. Tegumen high and rather broad, arch-like. Gnathos indicated by a hyaline slender transverse band, median third slightly projecting downwards. Valva with a tolerably straight costa, sacculus oval, excision rather wide and triangular; cucullus oblong-triangular, bristly along whole lower apical half; cornuti not perceptible.

Kathmandu Valley, Godavari, 1600-1800 m, 14-16.vi.1967 (Dierl-Forster-Schacht), 1 ♂, holotype, genit. slide 8592.

A small, darkish species, with a characteristic central fascia and a rather large ocelloid spot.

***Laspeyresia cyanatra* spec. nov.** (fig. 35)

♂ 17 mm. Head ochreous, vertex greyish. Palpus pale ochreous, rather slender. Thorax fuscous, very smooth, with faint whitish opalescence. Abdomen black.

Fore wing broad, suboval, costa considerably curved throughout, apex rounded and slightly prominent, termen notched under apex, convex below, long and moderately oblique. Deep fuscous-purple, with a faint network of rather broad blue-metallic lines or bands, not at all conspicuous. Base of wing suffused with somewhat paler fuscous-grey; anterior half of costa with five very short, marginal pale marks in broad pairs, each pair continued by a broad oblique bluish band, very faint, apparently not reaching middle of wing; posterior half of costa with five distinct pairs of creamy-golden marks, last broad but single, each continued by similar bluish streaks across wing, three ultimate streaks converging on termen below apex; a very faint band or suffusion of bluish metallic scales along and before termen; minute whitish points strewn all over posterior half of wing. Cilia grey with a bright silvery gloss, with a jet-black basal band.

Hind wing very broad, $1\frac{1}{2}$, almost as high as long, with gradually curved costa, obtusely pointed apex, almost straight termen and strongly arched, prominent tornus; rather dark ferruginous-grey, on basal $\frac{2}{3}$ paler, actually pale grey, densely strewn with dark ferruginous-grey. Cilia glossy pale grey-bronze, a darker bronze basal band.

Male genitalia. Tegumen moderately broad, with a distinct clavate uncus with an emarginate top. Tuba analis membranous, subscaphium not indicated. Valva oblong-oval, rather broad; sacculus over $1/3$, hairy, top obtusely projecting; cucullus semioval, densely bristled and at base with dense obtuse spines; incision shallow. Aedeagus apparently much dilated at base; cornuti, three moderate spines and two series of small scars.

Kathmandu valley, Godavari, 1600-1800 m, 14-16.vi.1967 (Dierl-Forster-Schacht), 1 ♂, holotype, genit. slide 8594.

A distinct species by a very unusual shape of the broad hind wing and by the presence of an uncus.

Diacantha gen. nov. (figs. 8-9)

Head with appressed scales, a slight tuft over forehead. Ocellus posterior. Proboscis very short. Antenna in male moderately thickened, minutely ciliate. Palpus rather short, curved and subascending, little dilated posteriorly, with appressed scales roughish along lower edge which is also flattened from below; terminal segment short, exposed, subobtuse. Thorax smooth. Abdomen and posterior tibia normal.

Fore wing oblong-subtruncate, rather narrow, costa gently curved, apex obtusely pointed, termen gently convex, oblique. Vein 2 from $2/3$, 3 from angle, 3-5 equidistant and rather remote, 7 separate, to termen, 11 from about middle Chorda from middle to base of 7, median branch to below base of 5.

Hind wing with a cubital pecten, subsemioval, rather pointed, vein 2 from $2/3$, 3 from angle, 4 closely approximated at base in male, very short-stalked in female, 5 hardly approximated at base, submedian, 6 and 7 rather closely approximated towards base.

Male genitalia. Tegumen rather high and narrow. Gnathos, a pending, broad membrane. Valva strongly clavate, without a neck (without constriction), sacculus bristly at top, cucullus with a blunt ventral process at base and with a huge subobtuse spike in middle of its anterior edge. Aedeagus long, narrow, curved or sinuate. Cornuti not perceptible.

Female genitalia. Eighth sternite weakly sclerotized, a prostrate, transverse plate constricted in middle. Ostium small, a semioval structure with a thickened lower edge. Colliculum, a very short and narrow tube, curved at end and connected with a small sclerite lower down. Signa, two moderate horns.

Type-species, *Laspeyresia xerophila* Meyrick (India).

Nearest to *Laspeyresia*.



Figs. 37-38. Male genitalia of *Cryptophlebia* Wals., holotypes; 37, *C. micrometra* sp. n.; 38, *C. nannophthalma* sp. n.

Diacantha xerophila (Meyrick) comb. nov. (figs. 8-9, 32, 36)

Laspeyresia xerophila Meyrick, 1939: 51 (♂). — Clarke, 1955: 328. — 1958: 463, pl. 230 figs. 2-2a (lectotype designated, wings, genitalia ♂ figured).

Distribution. India: Bihar.

Food plant. *Trewia nudiflora* L. (Euphorbiaceae).

♀, metalotype, 10 mm. Slightly paler than average males, ground colour being pale grey, all bands between markings as pale and distinct on the costal half as on the dorsal (in male costal half darker); central fascia well-defined throughout, strongly oblique and narrow along upper third, thence 3 × as broad, vertical, anterior edge irregularly concave, posterior serrate, a large tooth at 1/3 of disc, a small one halfway this and dorsum; ocelloid spot large, anterior edge thick and glossy, pale silvery-grey with faint purplish reflexions; posterior edge less than half width of anterior, narrowed below; ocelloid spot narrowly erect with five black strigulae; basal patch rather pale grey except narrow margin and a couple of inwards-oblique lines towards middle, running to dorsum. Cilia whitish, with fuscous tips and fuscous basal fourth.

Hind wing paler than in male, light fuscous with a purplish gloss at apex, towards base gradually turning fuscous-grey and at basal 1/6 pale and transparent. Cilia whitish, with a fuscous basal third.

Male and female genitalia, as described with the genus *Diacantha*, above.

Rapti Tal, Monahari Khola, Belwa, 350 m, 15-12.v.1967 (Dierl-Forster-Schacht), 1 ♀, metalotype, genit. slide 8552; 3 ♂, genit. slide 8551, 7 ♀.

Cryptophlebia ombrodelta (Lower)

Arothrophora ombrodelta Lower, 1898: 48 (♂, Victoria).

Cryptophlebia ombrodelta; Bradley, 1953: 682, fig. 1, pl. 24 fig. 1, pl. 25 figs. 1-1a (syn. *carpophaga* Wals.). — Diakonoff, 1968: 96, figs. 559-560 (full references). — Simon Thomas, 1962: 28, 89.

Cryptophlebia (Cryptophlebia) ombrodelta: Diakonoff, 1957: 139-141, figs. 1-7, 12-15.

Cryptophlebia carpophaga Walsingham, 1899: 106 (♂, ♀, India).

Argyroploce illepada Meyrick, 1911 (nec Butler, 1882): 265 (syns. *ombrodelta* Low., *carpophaga* Wals.).

Argyroploce lasiandra Meyrick, 1909: 592 (♂, Ceylon). — Clarke, 1955: 182. — 1958: 327, pl. 162 figs. 2-2a (holotype wings, genit. illustrated; syn. of *ombrodelta* Low.).

Distribution. All over South Asia, from South India to New Guinea, and Australia, Philippine Is., Guam Id.

Food plants. Numerous Leguminosae, in pods. Sapindaceae, Rutaceae etc.

Rapti Tal, Monahari Khola, Belwa, 350 m, 5-12.v.1967 (Dierl-Forster-Schacht), 1 ♂, genit. slide 8558. — Bhimpedi, 400 m, 4-7.iv.1962 (G. Ebert & H. Falkner), 1 ♀.

Cryptophlebia hemitoma spec. nov. (fig. 40)

♂ 17 mm. Head pale purplish-ochreous. Palpus deep brownish-fuscous finely dusted with blackish. Thorax grey-purplish-fuscous, apex purple at the sides. Abdomen dark grey.

Fore wing subtriangular, rather broad, dilated, costa rather straight, gently prominent at $1/3$, curved before apex, apex obtusely pointed, termen gently convex, long, oblique. Creamy-white, partly touched with ochreous and suffused with grey. A dark purplish-grey dull patch along $3/5$ of costa, below reaching vein 1b, posterior edge rather well-defined, moderately outwards-oblique, emarginate in middle, this emargination containing a white dot on lower angle of cell; posterior $2/5$ of costa dark grey, cut by broad transverse marks of ground colour touched with fulvous, first and second single, following three double, broad, becoming more distant posteriorly; paler grey small suffusion below costa before apex from where originate slender, slightly zigzag tawny and purplish subparallel lines to end of dorsum, subparallel to termen, and a single purple narrow subterminal line, emitting two similar vertical lines to upper half of termen; a partial similar terminal line below; a series of grey vertical bars along dorsum. Cilia creamy-white, partly dusted and suffused with grey except along base, a dark grey median line.

Hind wing rather light fuscous-grey, finely transversely striated, darker grey towards apex, all over with a golden gloss. Cilia pale grey, with a creamy basal and a darker greyish subbasal band.

Male genitalia. Valva very broad, clavate. Harpe broader, aciculate; sacculus indefinite; cucullus with dense equal rather strong spines. Juxta bilobed, denticulate. Gnathos developed, denticulate. Aedeagus long and slender; cornuti apparently fallen off.

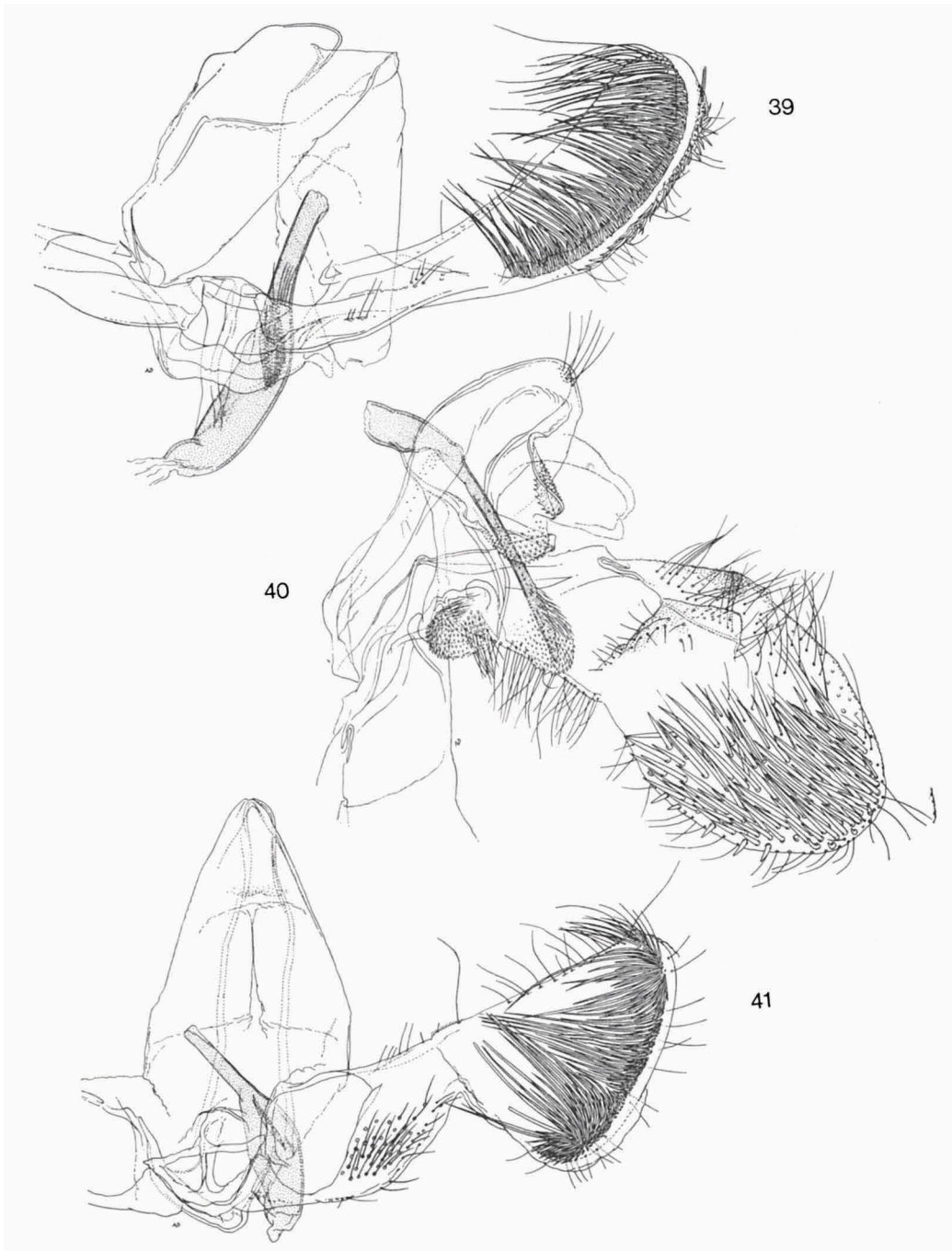
Kathmandu Valley, Godavari, 1600-1800 m, 5.vi.1967 (Dierl-Forster-Schacht), 1 ♂, holotype, genit. slide 8560.

A larger, robuster species with the characteristic facies of the genus. Resembling *C. ombrodelta*, but smaller. Easily recognisable by the genitalia.

Cryptophlebia nannophthalma spec. nov. (fig. 38)

♂ 13 mm. Head and thorax rather dark ashy-grey, median line of vertex slightly paler. Palpus dark grey. Abdomen dark grey, venter pale grey.

Fore wing oblong-triangular, gradually and considerably dilated, costa straight anteriorly, posterior fourth moderately curved, apex obtusely pointed, termen long, oblique, moderately convex. Rather dark ashy-grey, finely transversely striated (tips of scales), moderately strewn with dark fuscous,



Figs. 39-41. Male genitalia of Laspeyresiini, holotypes. 39, *Parapammene cyanodesma* sp. n.; 40, *Cryptophlebia hemitoma* sp. n.; 41, *Dierlia poeciloptera* sp. n.

except a broad moderately curved transverse band of grey ground colour at $3/4$, from costa to tornus; anterior half of costa with five suffused indistinct black spots, posterior largest, subtriangular; posterior half of costa with a marginal black streak cut in three by five pairs of minute pale greyish marks upon grey ground colour; a large wedge-shaped spot of blackish suffusion more or less connected with black costal streak and quickly narrowing downwards, its anterior edge concave in middle, its posterior edge emitting four slender purple lines to termen, curved downwards; a small purple spot in apex; a small pure white dot on lower angle of cell. Cilia pale grey, densely dusted with dark grey, a creamy basal and a darker grey subbasal line.

Hind wing fuscous with very faint coppery tinge, slightly darker suffused along margin. Cilia pale ochreous-grey, with a grey subbasal band.

Male genitalia. Valva oblong, little dilated; sacculus with a straight edge and rectangular top, followed by a moderate excision; cucullus rounded, ventrally with an angular projection, densely long-spined throughout, projection with less numerous, stout spines; a moderate denticulate fold-like harpe in middle of costa. Processus basalis small. Aedeagus little curved, long. Cornuti, a dense cluster of lozenge-like flat spines. Juxta denticulate.

Rapti Tal, Monahari Khola, Belwa, 350 m, 5-12.v.1967 (Dierl-Forster-Schacht), 1 ♂, genit. slide 8559.

A small, slender species, with characteristic male genitalia.

***Cryptophlebia micrometra* spec. nov. (fig. 37)**

♂ 15 mm. Head pale ochreous-fulvous vertex slightly suffused with grey. Palpus fulvous-greyish. Thorax fuscous-grey with some purplish gloss. Abdomen pale silvery-grey.

Fore wing oblong, subtruncate, costa moderately curved throughout, apex subobtusate, termen almost straight, hardly concave above, moderately rounded beneath. Ochreous-whitish, towards costa and beyond cell faintly tinged very pale pinkish (very pale flesh colour), strewn throughout with not dense, fine, purple transverse lines, hardly forming continuous series but being limited above and beneath by veins, usually not exceeding width of interneural spaces. Costa with a row of thicker but very short purple marks; some coarser dotting on dorsum anteriorly from beyond base; a faint small suffused streak along centre of cell. Cilia pale ochreous-pinkish-fuscous, apical half suffused with deep purple.

Hind wing grey becoming pellucid at base. Cilia grey with a whitish basal line.

Male genitalia. Possibly nearest those of *C. illepada* Butler, but with a longer valva, with 5-6 long and rather slender tolerably similar spines arranged along periphery. Aedeagus much smaller than in that species.

West Celebes, Paloe District, Mt. Rangkoenau, 1800 ft, Dec. 1936 (J. P. A. Kalis) 1 ♂ holotype, genit. slide 5838 (Rothschild Bequest, BM). A small species with distinct armature of the valva.

TORTRICINAE, TORTRICINI

Vellonifer doncasteri Razowski

Vellonifer donasteri Razowski, 1964: 388, figs. 52-53. (genit. ♂ ♀). — 1966: 133, 134, figs. 174-177 (genit. ♂ ♀), pl. 4 figs. 2, 3.

Distribution. India: Assam: Khasis, Cherra Punji.

Prov. No. 3 East, Jubing, 1600 m, 8.v.1964 (W. Dierl), 1 ♂ genit. slide 7068.

Kathmandu Valley, Godavari, 1600-1800 m, 6.viii.1967 (Dierl-Schacht), 1 ♂.

Kathmandu, 1400 m, 22-30.viii.1964 (W. Dierl), 1 ♂.

Tropocosta cyanoxantha (Meyrick)

Spatalistis cyanoxantha Meyrick, 1907: 979 (♂ ♀, Ceylon). — 1912b: 54. — 1913: 55. — Diakonoff, 1941c: 432. — Clarke, 1955: 108. — 1958: 224, pl. 112 figs. 2-2b.

Tropocosta cyanoxantha; Razowski, 1964: 393. — 1966: 101, figs. 120, 123-126 (♂ ♀ redescri., genit., head figured).

Distribution. Ceylon (type locality). S India. Java.

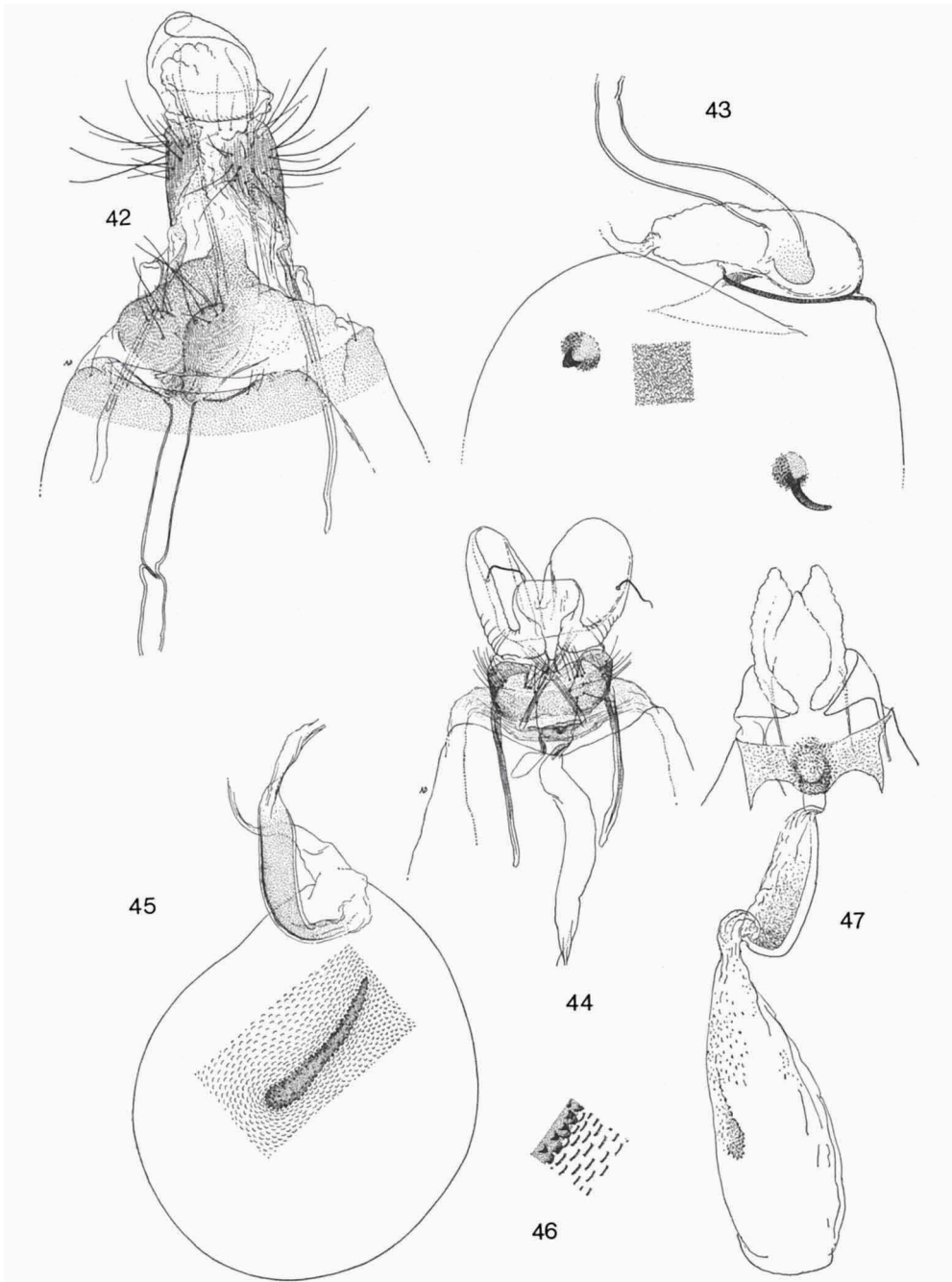
Prov. Nr. 2 East, Jiri, 2000 m, 10.vi.1964 (W. Dierl), 1 ♂, genit. slide 8856.

Transita gen. nov. (figs. 44-46, 48-50)

Head with appressed scales. Ocellus posterior. Proboscis very weak. Antenna in male ciliate, ciliations under 1; in female, simple. Thorax smooth or with a small posterior crest in male (artefact?). Abdomen normal. Posterior tibia in male with bristly hairs, moderately projecting above and beneath.

Fore wing suboval, without a costal fold in male, with series of raised scale-tufts on surface. Vein 2 from beyond 3/5, 3 from angle, 3-5 separate and equidistant, 7 separate to termen, 11 from middle of upper edge of cell, veins inside cell not traceable.

Hind wing subtrapezoidal, apex pointed, termen slightly sinuate above; without a cubital pecten. Vein 2 from beyond 2/3, 3 and 4 stalked from angle, 5 closely approximated at base, 6 and 7 very closely approximated towards base or stalked.



Figs. 42-43. Female genitalia of *Selandia acquiescens* sp. n., holotype. 42, sterigma etc.; 43, do., bursa copulatrix.

Figs. 44-47. Genitalia of Tortricini. 44, *Transita exaesia* g. et sp. n. ♀, allotype; 45, do., bursa; 46, do., structure of wall and signum, more magnified; 47, *Acleris atomophora* sp. n., ♂, holotype.

Male genitalia. Resembling those in *Tropocosta*, but with a peculiar, hammer-shaped valva with prominent sacculus. Socii rigid, rising and corniform. Transtilla present. Aedeagus slender, sinuate, coecum penis dilated and rounded.

Female genitalia. Ovipositor rather rigid, lobus analis oval and concave, at end ventrally with an additional crest on fold which together form a ventral collar. Subgenital segment slightly sclerotized. Ostium, a transverse split. Ostium cup-shaped, with a prominent ventral tip. Ductus bursae weak, its lower third forming a sclerotized tubular cestum. Corpus bursae large, pear-shaped. Signum, a long lamina dentata.

Type of the genus, *Transita exaesia* spec. nov. (Nepal).

An interesting form, apparently intermediate between *Tropocosta* Razowski, 1966, and *Acleris* Hübner, differing from former by free veins 3 and 4 in the fore wing, from the latter by the termination of vein 7, from both by the characteristic genitalia in the two sexes.

Transita exaesia spec. nov. (figs. 44-46, 48-50)

♂ 20 mm. Head fuscous. Palpus dark fuscous, with a paler base and extreme tip. Thorax glossy dark fuscous mixed paler and darker scales, tegulae lighter fuscous. Abdomen dark fuscous, venter pale ochreous.

Fore wing suboval, costa considerably curved anteriorly, less curved

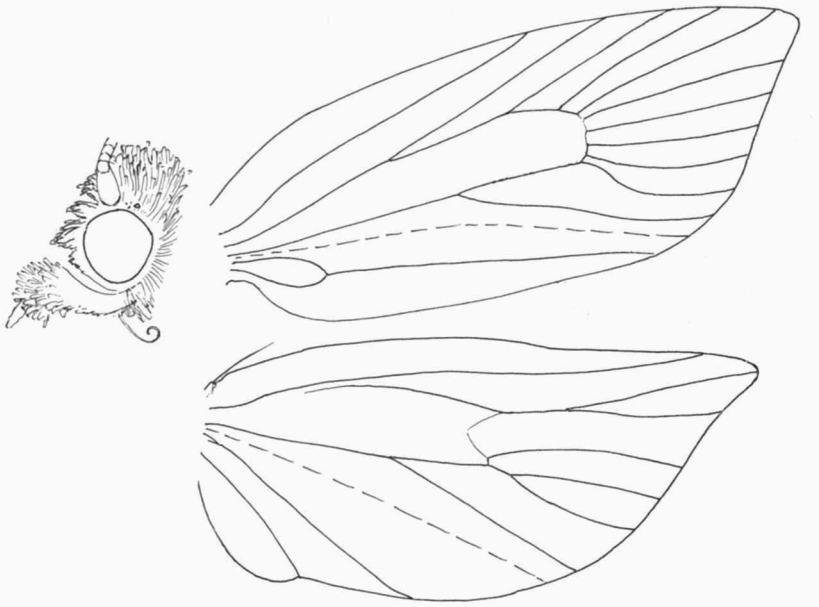


Fig. 48. *Transita exaesia* g. et sp. n., holotype, ♂, head and neuration.

posteriorly, apex obtusely pointed, termen gently concave above, rounded beneath, oblique. Fuscous-bronze, glossy. Basal patch hardly to 1/4, glossy anthracite-grey, darker than ground colour, with a few raised dull black scale-tufts; margins also black and raised, angulate in middle, slightly notched on upper edge of cell; central fascia rather broad, hardly narrowed downward, from costa just before middle, to 3/4 of dorsum; formed by darker fuscous suffusion and rather ill-defined, except serrulate raised black anterior edge, gently concave; posterior edge of fascia only along its upper fourth; a costal patch again less defined, similar to fascia, anterior blackish, raised but interrupted edge formed by a series of dull interneural dots: on bases of veins 10 and 9 and beyond 8, almost horizontal row, thence below veins 7, 6 and 5, slightly oblique; posterior edge (in right wing) indicated only by a subterminal row of similar dots, from before apex to above end of vein 2 (in left wing these markings less regular); a row of dark dots along dorsum. Cilia fuscous-bronze.

Hind wing light fuscous-grey, with a bronze gloss. Cilia concolorous, with a pale basal line.

Male genitalia, as described with the genus above.

♀ 20 mm. Exactly similar to the male but darker all over, except space between basal patch and central fascia, which is contrasting light fuscous-grey, partly whitish edged, strewn with a few dark dots. Cilia as in male, with a broader pale basal band. Otherwise as male.

Female genitalia, as described with the genus above.

Prov. Nr. 3 East, Jubing, 1600 m, 11.v.1964 (W. Dierl), 1 ♂, holotype, genit. slide 6925; the same, 9.v.1964, 1 ♀, allotype, genit. slide 8887; the same, 3.v.1964, 1 ♀, paratype.

With the appearance of a broad-winged *Acleris*, but with peculiar genitalia in the two sexes. Apparently intermediate between *Tropocosta* and *Acleris*.

***Spatalistis rhopica* Meyrick**

Spatalistis rhopica Meyrick, 1907: 979 (♂ ♀, Assam). — 1912b: 54. — 1913: 55, pl. 2 fig. 24, pl. 5 fig. 70. — Diakonoff, 1939a: 225, figs. 11Q, P, 16E, F. — Clarke, 1955: 272. — 1958: 223, pl. 111 figs. 1-1c (wings, head, neur., genit. ♀ figured). — Razowski, 1966: 112-114, figs. 141-143.

Distribution. Assam: Khasi Hills.

Prov. Nr. 2 East, Bhandar unter Thodung, 2200 m, 2.viii.1964 (W. Dierl), 1 ♀, genit. slide 8855.

***Spatalistis gerdia* spec. nov. (fig. 52)**

♂ 12-13 mm. Head light-yellow, mixed with orange-red. Antenna yellow, ringed with orange. Palpus yellow, densely suffused light fulvous, tips of

segments pale yellow. Thorax orange-red, strewn throughout with roundish yellow spots, partly interconnected, apex of thorax mixed with dark grey. Abdomen glossy-white, tergum light ochreous.

Fore wing rather broad, oval-subtruncate, costa rather curved throughout, more so anteriorly, apex pointed and slightly prominent, termen strongly sinuate, little oblique. Bright orange-red, strewn throughout with roundish yellow spots of diverse size, becoming largest towards median third of disc-breadth, except towards base. Markings dark grey, pale-striated (tips of scales) with a brilliant leaden gloss in certain lights. Posterior part of costa with five moderate, inwards-oblique marks, tolerably equidistant, second approximated to first, fifth rather before apex; three straight transverse narrow fasciae: first from just beyond $1/4$ of costa, to dorsum beyond base; so separated basal area with smaller irregular numerous yellow spots; second fascia slightly suprmedian, gently inwards-oblique, broader than others, edged anteriorly by a crest of raised orange-red scales; this fascia not reaching costa, but connected with second and third costal marks; third fascia subterminal, beyond fifth costal spot, connected with this to tornus. Cilia pale yellowish-tawny, glossy.

Hind wing semi-pellucet, glossy pale orangeish, veins brighter, wing membrane appearing greyish in certain lights. Cilia concolorous, glossy.

Male genitalia. Tegumen moderate. Uncus large, triangular, rather weak. Tuba analis very large, exceeding uncus, sclerotized, top bilobed (lateral lobes). Socius pending, rather slender, narrowed, thinly short-bristled. Transtilla, a narrow, curved rod. Valva with a long base, moderately broad; pulvinus bristly; costa thickened, $2/3$, top with a hairy knob; sacculus sinuate, excavated in middle of valva, end rectangular, upper edge sclerotized posteriorly, end with a globular, bristly harpe; cucullus moderate, with an apical slender, clavate digitus. Aedeagus rather short, cylindrical. Cornutus, a single straight spike upon a bulbous base.

Kathmandu Valley, Godavari, 1600-1800 m, 6.viii.1967 (Dierl-Schacht), 1 ♂, holotype, genit. slide 8843, 1 ♂ paratype; the same locality, 31.v.1967 (Dierl-Forster-Schacht), 1 ♂, paratype.

***Spatalistis orbigera* Meyrick**

Spatalistis orbigera Meyrick, 1912a: 14 (♂, Assam). — 1912b: 54. — 1913: 55. — Clarke, 1955: 226. — 1958: 227, pl. 113 figs. 2-2b.

? *Acleris orbigera*; Razowski, 1966: 494, figs. 749-751 (incertae sedis).

Distribution. India: Assam.

Helmu-Gebiet, Gusum Bunjyang, 1.ix.1967 (W. Dierl), 1 ♂, genit. slide 8888.

The small, narrow-winged and distinctly marked species possesses the neuration of a true *Spatalistis*, with veins 3 and 4 in the fore wing stalked and vein 7 to termen below apex, while in the single specimen available to me the veins 7 and 8 are closely approximated towards base in the left, less closely, in the right fore wing. The hind wing has a normal venation.

Therefore I prefer to re-assign the species to the original genus, in spite of the male genitalia resembling those of *Acleris* species, as stated by Razowski. However, he omitted studying the venation. The species must be intermediate and show close relationship of *Spatalistis* and *Acleris*.

Paratorna oenina spec. nov. (fig. 57)

♀ 17 mm. Head dull greyish-vinaceous, orbits suffused with whitish. Palpus pale pinkish-grey, median segment strewn with purple points; apical segment purplish-tipped. Thorax dull fulvous-pinkish. Abdomen dark grey, venter glossy pale ochreous.

Fore wing suboval-truncate, costa abruptly arched and almost rectangularly projecting near base, gently concave beyond this, bent and prominent in middle, straight posteriorly, apex rounded, termen straight and vertical above, rounded beneath. Dull vinaceous-fuscous, rather light, posteriorly becoming lighter, vinaceous-ochreous. Costa vinaceous-orange, with seven subquadrate dark purple-grey spots alternating with minute strigulae, on basal half alternating with a pair of such strigulae; a series of small marginal dark purple-grey marks between veins along termen, in tornus becoming vertical; a hardly perceptible undulate orangeish streak from below 2/5 of costa to middle of dorsum, faintly edged whitish on both sides and parted by a series of 4-5 raised black points, largest of these just before centre of wing. Cilia concolorous, slightly lighter.

Hind wing light fuscous-grey, paler towards base, with a strong golden-bronze gloss, towards apex and posterior edge suffused darker bronze-grey. Cilia concolorous, with a pale basal line.

Female genitalia. Sterigma roughly aciculate throughout. Lamella post-vaginalis shaped as an oval coverlet over a deeply cavernous, transversely oval ostium. Lamella smaller, conical, the entire sterigma so being subspherical. Corpus bursae oblong, pear-shaped, without signum.

Kathmandu Valley, Godavari, 1600-1800 m, 6.viii.1967 (Dierl-Forster-Schacht), 1 ♀, holotype, genit. slide 8844. Differs from all other species by the absence of a signum.

Acleris semitexta (Meyrick)

Peronea semitexta Meyrick, 1912a: 17 (♂, Sikkim). — 1912b: 63. — 1913: 63. — 1937: 176. — Caradja, 1938a: 249. — 1938b: 103, 111. — Clarke, 1955: 284.

Acleris semitexta; Obraztsov, 1956: 153. — Clarke, 1958: 15, pl. 7 figs. 3-3b (type, ♂, wings, genitalia figured). — Razowski, 1966: 274, 275, 473, text figs. 387-391 (genit. ♂ ♀), pl. 13 fig. 4 (adult).

Distribution. Sikkim, Punjab. China.

Prov. Nr. 3 East, Bujan, Dudh Kosi Tal, 2900 m, 18-19.vii.1964 (W. Dierl), 2 ♂, genit. slides 8854, 8873, 1 ♀.

Prov. Nr. 3, East, Chialsa, Solu Khola Tal, 2700 m, 29.iv.-1.v.1964 (W. Dierl), 5 ♂.

Prov. Nr. 2 East, Jiri, 2000 m, 6 and 10.iv.1964 (W. Dierl), 2 ♂.

Kathmandu Valley, Godavari, 1600-1800 m, 14-16.vi.1967 (Dierl-Forster-Schacht), 2 ♀, genit. slide 8846; the same locality and collectors, 5.vi.1967, 1 ♀.

***Acleris extensana* (Walker) comb. nov.**

Teras divisana Walker, 1863: 296 (Ceylon). (Preoccupied by *Tortrix divisana* Hübner [1811-1813]: pl. 31 fig. 198 (= *Acleris hastiana* f. *divisana* (Hübner)). — Walsingham, in Moore, 1887: 491. — Cotes & Swinhoe, 1889: 695, nr. 4737. **Syn. nov.**

Teras extensana Walker, 1863: 296 (Ceylon). — Walsingham, in Moore, 1887: 492. — Cotes & Swinhoe, 1889: 695, nr. 4738.

? *Oxygrapha comparana* Walsingham, 1900a: 572 (nec Hübner) (Nilgiris).

Peronea divisana; Meyrick, 1912b: 62. — 1913: 64. — Diakonoff, 1939a: 232 (*extensana* Walker, *agrioma* Meyrick syn.).

Peronea extensana; Meyrick, 1912b: 62. — 1913: 64. — Diakonoff, 1939a: 232 (syn. of *divisana*).

Oxygrapha dictyodes Meyrick, 1907: 734 (♂ ♀, Ceylon). **Syn. nov.**

Peronea dictyodes; Meyrick, 1912b: 63. — 1913: 63. — Clarke, 1955: 116.

Acleris dictyodes; Clarke, 1958: 7, pl. 3 figs. 3-3b. — Razowski, 1966: 221, figs. 300-305.

Peronea agrioma Meyrick, 1920: 342 (♂, Assam, on apple). — Fletcher, 1921: 199 (biology, food plants). — Meyrick, 1934: 31 — 1935: 51 (China). — 1937: 176. — Clarke, 1955: 39.

Acleris agrioma; Clarke, 1958: 3, pl. 1 figs. 2-2b.

Acleris divisana; Razowski, 1966: 220, figs. 295-297 (genit. ♂ ♀), pl. 8 figs. 1-7 (adult) (*extensana*, *agrioma* syn.).

Distribution. Ceylon (type locality). India: Palnis, Khasis, Darjeeling, Punjab, Manipur, Nilgiris. Bali. West China.

Food plants. *Rosa* (leaves), *Pyrus* (leaves).

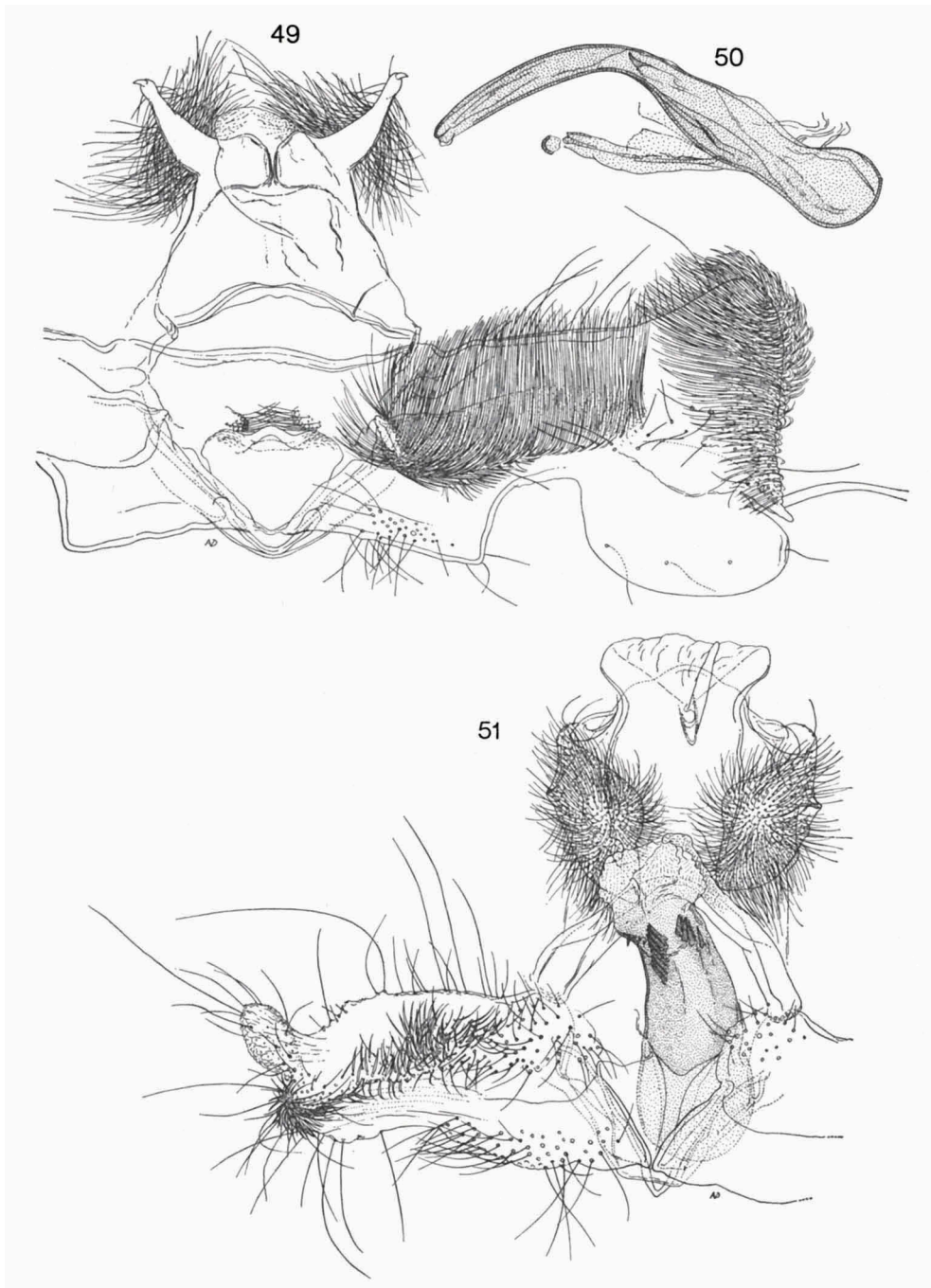
Prov. Nr. 2 East, Jiri, 2000 m, 12.viii.1964 (W. Dierl), 1 ♀.

Helmu-Gebiet, Guzum Banjyung, 2500 m, 3.ix.1967 (W. Dierl), 1 ♀, genit. slide 8848.

Kathmandu Chauni, 1400 m, 22.vii.1967 (Dierl-Forster-Schacht), 1 ♀, genit. slide 8847.

Prov. Nr. 3 East, Jubing, 1600 m, 5.v.1964 (W. Dierl), 1 ♂.

Although the name *divisana* has "place preference" on the same page over *extensana*, the former name is preoccupied and unavailable. The name *Peronea agrioma* Meyrick has been synonymized by me already in 1939.



Figs. 49-51. Male genitalia of Tortricini. 49, *Transita exaesia* g. et sp. n., ♂, holotype; 50, do., aedeagus; 51, *Acleris emitescens* Meyr., slide 8839.

As to the name "*Oxygrapha dictyodes* Meyrick, the material at my disposal appears to be intermediate between *extensana* and *dictyodes*, judging from the elaborate figures of the genitalia of these two species by Razowski. As the actual differences between them are very slight: minor difference in the shape of the fore wing and somewhat smaller size of *dictyodes* — I do not hesitate to synonymize them.

***Acleris enitescens* (Meyrick) (fig. 51)**

Peronea enitescens Meyrick, 1912a: 16 (♂ ♀, Assam). — 1912b: 70. — 1913: 66. — 1914: 48 (Formosa). — Fletcher, 1932: 17 (footplant, India). — Meyrick, 1935: 51. — 1937: 176.

Acleris enitescens; Clarke, 1958: 8, pl. 4 figs. 2-2b. — Okano, 1959: 267, pl. 178 fig. 8 (wings, genit. ♂ figured). — Issiki, 1964: 84, fig. 451. — Yasuda, 1965: 33, figs. 42, 47, 49. — Razowski, 1966: 491, figs. 744-747 (genit. ♂ ♀ figured).

Peronea compsoptila Meyrick, 1923: 56 (♀, Assam). — Diakonoff, 1939b: 233 (syn. of *enitescens*).

Acleris compsoptila; Clarke, 1958: 4, pl. 2 figs. 3-3c (wings, genit. ♀ figured). — Razowski, 1966: 487, figs. 735-738 (genit. ♂ ♀ figured; not figs. 736-737).

Distribution. Assam, Japan.

Kathmandu, Chauni, 1400 m, 28.v.1967 (Dierl-Forster-Schacht), 1 ♂; the same locality, 7.ix.1967 (Dierl-Schacht), 2 ♂, genit. slide 8839.

Kathmandu Valley, Godavari, 1600-1800 m, 31.vii., 1, 4, 6.viii.1967 (Dierl-Schacht), 4 ♀, genit. slide 8840.

At present I am still satisfied of the synonymy of *A. enitescens* and *compsoptila*, a view already expressed earlier. Furthermore, I am also of opinion that neither of the two additional specimens, figured by Razowski (1966, figs. 736-737 and 739, respectively), viz., a male from Likiang, China, and a female from Celebes, is conspecific, but belong each to a distinct species.

Another close relative is the lowland species *A. sagmatias* (Meyrick), from Ceylon: it differs by the tegumen and the socii, the former being distinct, the latter, differently arranged; and the female genitalia are very distinct indeed.

Male genitalia. Nearest to those of *A. sagmatias*, but differing thus. Upper part of tegumen with larger, truncate and prominent shoulders, each with a small dark oval thickening; tuba analis erect-oval, constricted under top which is strongly dilated; frontal, subapical process slender, not exceeding top of tegumen; socius $1/2 \times$ height of upper part of tegumen, oblong-triangular. Transtilla strong, conspicuous and refracting, top truncate. Valva moderate, costa and sacculus both curved, the latter sclerotized, top with a small, prominent and bristly harpe, digitus oval in circumference. Aedeagus larger, with two opposed rows of moderate cornuti, ventral twice as large as dorsal.

Acleris lucipeta Razowski

Acleris lucipeta Razowski, 1966: 493, fig. 248, pl. 37 fig. 8 (♀, Sikkim).

Distribution. Sikkim, 7000 ft.

Prov. Nr. 3 East, Khumjung, 3800 m, 14.vii.1964 (W. Dierl), 1 ♀, genit. slide 7069.

This is the second specimen of the recently described, very distinct species, also a female. The genitalia are in all respects similar to the above cited figure of those of the holotype.

Acleris monagma spec. nov. (figs. 60-61)

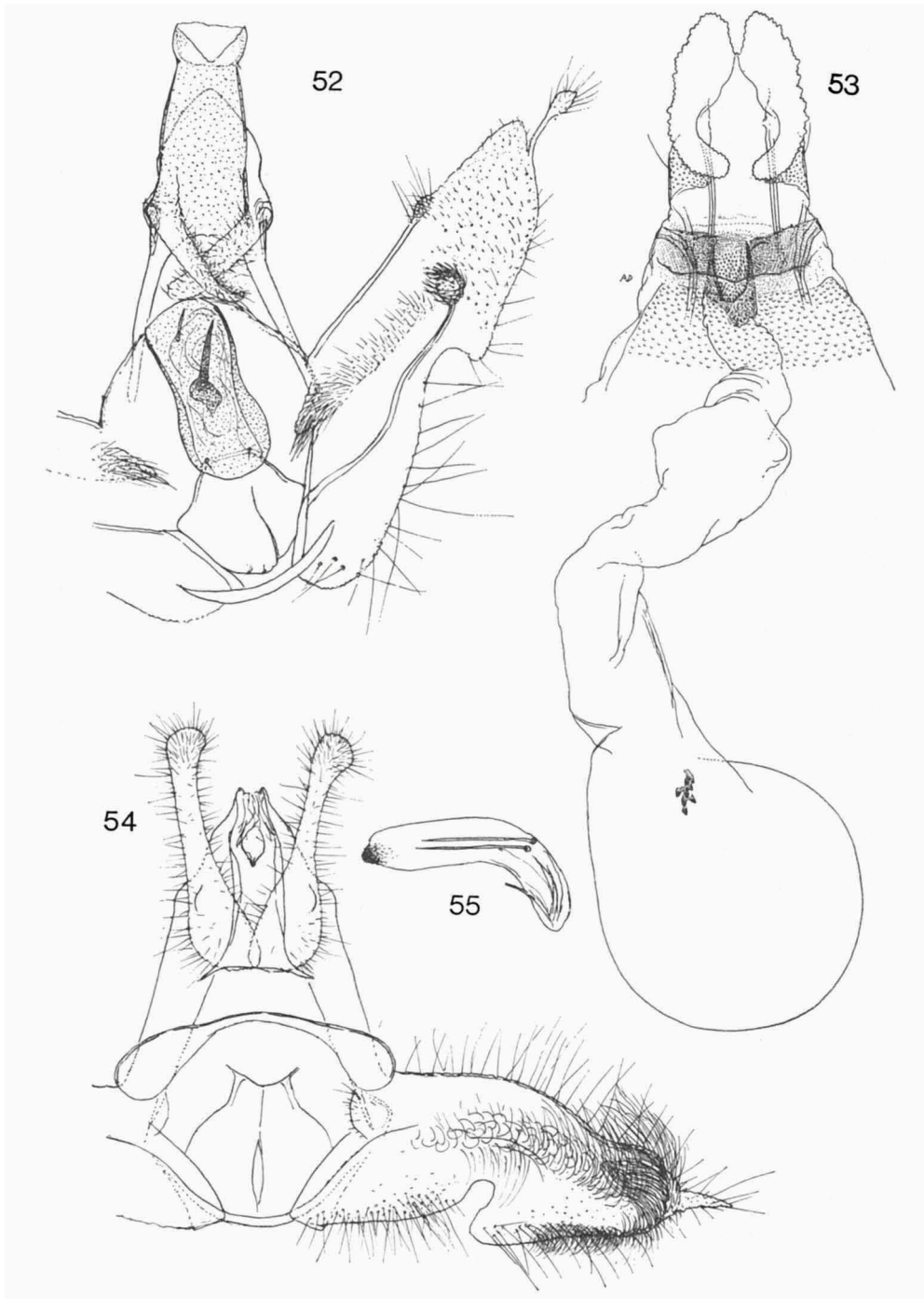
♂ 17 mm. Head, palpus pale ochreous. Thorax light tawny, rather infuscated. Abdomen glossy pale ochreous, dorsum greyish.

Fore wing oblong, sublanceolate, moderately broad, costa moderately curved anteriorly, straight in middle, apex pointed and produced, termen strongly sinuate, considerably oblique. Pale golden-ochreous, less than anterior half of costa infuscated; a darker fuscous suffused costal spot at $2/3$ subtriangular, surrounded by lighter, tawny suffusion, connected by another narrow fascia of light fuscous suffusion, indistinctly reticulated with darker fuscous, to $2/5$ of dorsum; this fascia containing several black, slightly raised dots in disc, largest in lower half of cell well beyond middle of wing, another, smaller, below fold at $3/5$; terminal fourth of wing with some 5-6 subparallel, curved transverse lines, posterior of these more strongly curved and reaching costa, the last line from costa to termen, more distinct, marked with blackish between veins; an irregular subapical band of fuscous reticulation to upper third of termen, followed by an ultimate short subapical streak; costa before apex, apex and termen to above tornus infuscated; middle of dorsum transversely strigulated with dark fuscous. Cilia (imperfect) rather bright ochreous with a suffused median fuscous band.

Hind wing semipelluculent pale fuscous, cilia concolorous.

Male genitalia. Tegumen with a rather quadrate upper half, tuba analis an erect, subsclerotized tube; socius occupying lower half of this part of tegumen, long-ciliate. Valva simple, cucullus with a moderate pointed process ("digitus", Diakonoff, 1939). Sacculus simple, moderately sclerotized throughout, with a blunt large tooth beyond its middle, lower angle of valva simply rounded. Bases of socii (apparently gnathos halves), with a small apical pencil of bristles. Aedeagus short, curved. Cornutti, four spines, and a patch of small denticles.

Thodung, 3100 m, 30.v.1962 (G. Ebert & H. Falkner), 1 ♂, holotype, genit. slide 8850.



Figs. 52-55. Genitalia of Tortricini. 52, *Spatalistis gerdia* sp. n., holotype, ♂; 53, *Acleris nectaritis* Meyr., metalotype, ♀; 54, *A. pallidorbis* sp. n., ♂, holotype; 55, do., aedeagus.

This obscure species resembles superficially *A. loxoscia* females rather closely, but the male genitalia are so distinct from those of that species, that I am not able to regard the present conspecific with the *loxoscia* females at hand.

***Acleris loxoscia* (Meyrick)**

Oxygrapha loxoscia Meyrick, 1907: 735 (♂ ♀, Ceylon). — Clarke, 1955: 192.
Peronea loxoscia; Meyrick, 1912b: 59. — 1913: 61. — 1937: 176.
Acleris loxoscia; Clarke, 1956: 11, pl. 5 figs. 4-4b (lectotype ♂ designated, wings, genitalia figured). — Razowski, 1966: 475, figs. 714-717 (genit. ♂ ♀), pl. 36 fig. 8 (adult).

Distribution. Ceylon (type locality). Assam, Punjab. China.

Thodung, 3100 m, 20.v.1962 (G. Ebert & H. Falkner), 1 ♀, genit. slide 8868.

Prov. Nr. 3 East, Khumjung, 3800 m, 17.vi.1964 (W. Dierl), 1 ♀; the same, 18.vi.1964 (W. Dierl), 1 ♀, genit. slide 8874.

Helmu-Gebiet, Gusum Banjyang, 2800 m, 1.ix.1967 (W. Dierl), 1 ♂, genit. slide 8895.

The last mentioned female has, instead of the usual narrow, inwards-oblique median fascia, a grey, suffused dorsal spot, reaching above middle of wing; the genitalia, however, are identical.

***Acleris nectaritis* (Meyrick) (fig. 53)**

Peronea nectaritis Meyrick, 1912a: 18 (♂, Nilgiris). — 1912b: 60. — 1913: 62. — Clarke, 1955: 214.
Acleris nectaritis; Clarke, 1958: 12, pl. 6 figs. 2-2b (wings, genit. ♀ type figured). — Razowski, 1966: 479, figs. 721-723 (genit. ♂).

Distribution. South India: Nilgiris, Palnis.

Prov. Nr. 3 East, Junbesi, 2750 m, 25-31.vii.1964 (W. Dierl), 1 ♀ met-allotype, genit. slide 8853.

The single specimen has slightly narrower fore wing than in the females of *A. loxoscia* and is uniform pale ochreous, with a very faint, somewhat deeper tawny-ochreous fine reticulation throughout, a trifle more distinct along costal and terminal edges; a jet-black small vertical dot slightly above and rather beyond middle of fold.

Female genitalia very similar to those in *A. loxoscia*, but sterigma and semitubular ostium higher, lower angles of sterigma less distinct, not pointed and curved, as in that species. Signum, a vertical series of a few not interconnected small thorns.

The slight differences of the genitalia, narrower wings and quite different colouring and markings do not allow of including this specimen in *loxoscia*,

neither in *monagma* spec. nov. I believe this female to be the sex partner of the unique male holotype of *nectaritis*.

Acleris atomophora spec. nov. (fig. 47)

♀ 12.5-16 mm. Head greyish or reddish-fulvous. Palpus light fulvous, tip ferruginous. Thorax reddish-fulvous. Abdomen glossy light grey, venter white.

Fore wing subtruncate, costa moderately curved anteriorly, straight posteriorly, apex pointed and moderately produced, termen strongly sinuate, little oblique. Bright fulvous or reddish-fulvous with a greasy gloss, anterior third of costal half of wing tinged fulvous-fuscous; posterior 2/3 of wing traversed by about five rows of brilliant, mercury-coloured series of round spots or irregular undulate fasciae, visible only in certain lights; these fasciae sometimes more or less confluent, to make the wing glossy all over in certain lights; sometimes a subcostal streak of the same gloss from base to 1/3; dull black raised dots and minute points, sparsely scattered over the wing, most of these white-edged, a large round black dot above fold in middle of wing, a smaller one before this above cell, some four or five minute points in an irregular row between the large dot and apex, sometimes some of these dots absent; in one specimen a dark fuscous-bronze semicircular spot on middle of dorsum, reaching lower edge of cell. Cilia bright fulvous on costa and apex, along dorsum and tornus fuscous with lower half, the rest of cilia: on termen from apex to above tornus with a well defined conspicuous pale yellow crescentic spot.

Hind wing light grey with a silky gloss, towards apex and along veins touched with bronze-fulvous. Cilia pale grey, touched with fulvous.

Female genitalia. Sterigma rather similar to that in *A. loxoscia*: a moderate finely granulate band with a twice concave lower edge and moderate, acute, lateral processes. Ostium small, cup-shaped, coarser granulate than the remainder, lamella postvaginalis similarly coarsely punctate as far as its upper edge. Colliculum large, peculiar, with thick, refracting walls, gently dilated downwards, inside filled out with fine, hair-like aciculi; at the end of colliculum, ductus bursae strongly sinuate. Corpus bursae oblong, aciculate. Signum, an oblong dentate sclerite.

Helmu-Gebiet, Gusum, Banjyang, 2600 m, 3.ix.1967 (W. Dierl), 1 ♀, holotype, genit. slide 8841; 1.ix.1967, 1 ♀, paratype, genit. slide 8842; 1.ix and 2.ix.1967, 2 ♀, paratypes.

A distinct species with the bicoloured cilia, resembling those in *loxoscia* closely, but smaller, darker, without the oblique median fascia.

Acleris pallidorbis spec. nov. (figs. 54-55)

♂ 17 mm. Head and palpus pale tawny. Thorax light tawny, brighter tawny anteriorly and on tegulae. Abdomen glossy pale tawny-grey.

Fore wing oblong-sublanceolate, moderately broad, costa strongly curved anteriorly, very gently, but traceably prominent at $\frac{1}{3}$, straight beyond this, apex rather pointed, termen gently sinuate above, rounded below, rather oblique. Basal patch to about $\frac{1}{4}$, pale tawny, marked with fuscous thus: a small triangular spot on base of costa and a rather suffused marginal band, anterior edge emitting an acute tooth below costa, deeply emarginate below this; on lower half edge forming a dark fuscous-grey, inwards-oblique conspicuous spot, parted above by jet-black raised scales, below extended along median third of dorsum and suffused; this basal patch followed by a whitish, semicircular rather broad fascia, parted with a light ochreous line; fascia rather abruptly dilated on both sides below fold; wing beyond these markings with upper part as far as lower edge of cell, upper half of discoidal and vein 7, dark fuscous; remainder of wing rather light tawny, with narrow dark lines along veins: anteriorly becoming suffused with vinaceous; a faint whitish suffused spot in disc beyond cell. Cilia pale tawny-bronze with a strong gloss, and a whitish-suffused base.

Hind wing light bronze-fuscous, with a silky gloss.

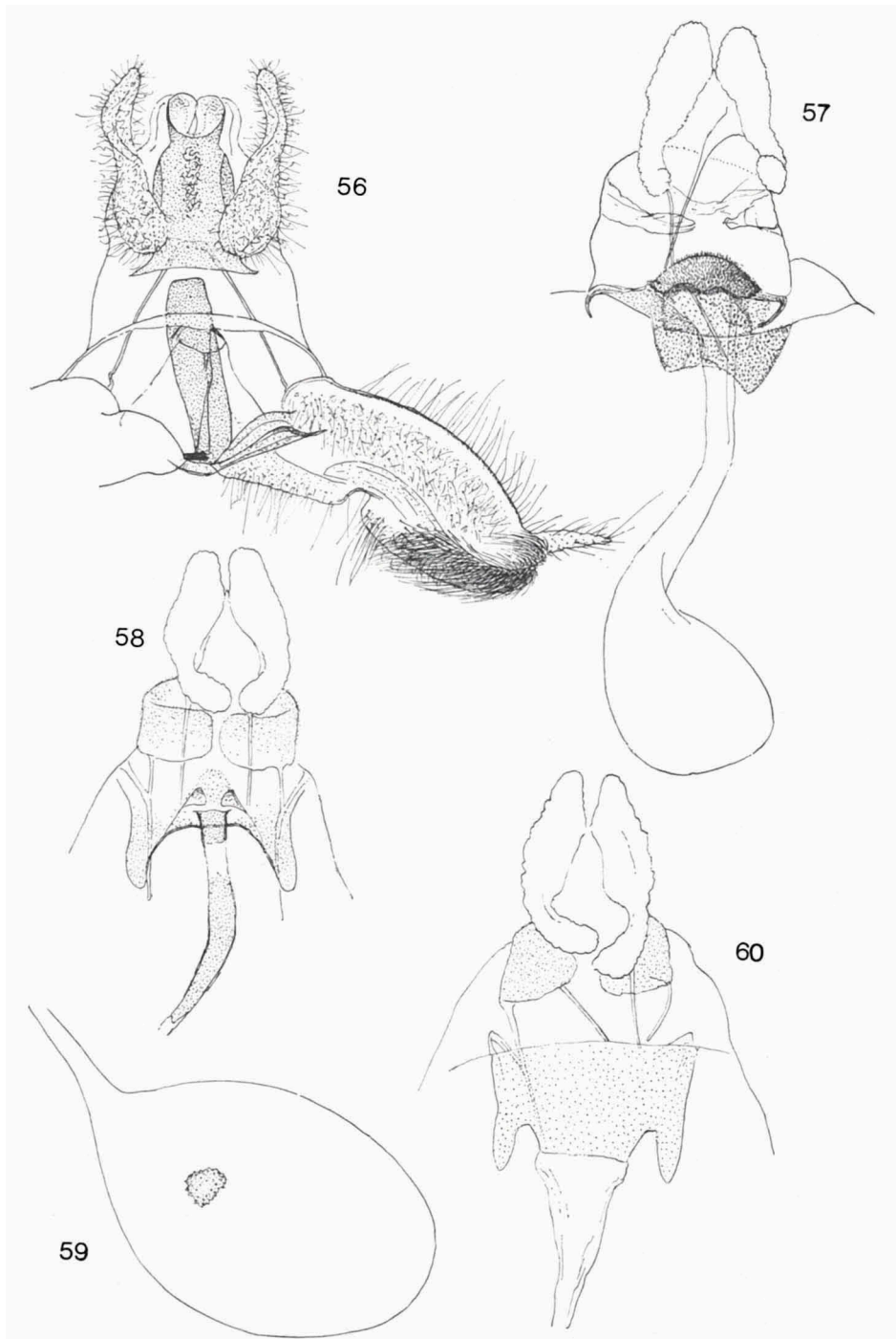
Male genitalia. Tegumen moderately conical, top shallowly emarginate. Gnathos and tuba analis forming an erect cylinder, not dilated in middle (as in *bengalica*), tip bilobed, lower end truncate at the sides with a horizontal acute process. Socius long, bases dilated and slightly overlapping, tops clavate. Transtilla distinct, semioval, narrow and simple, bases dilated and oval. Valva broad, rather curved, costa rounded, sacculus with a deep oblique median incision, followed by a short obtuse tooth, thence straight and hairy, top of cucullus rounded-prominent, process (*digitus*) very slender. Aedeagus short, curved, cornuti, two long and slender spines and a slightly prominent apical patch of denticles.

Thodung, 3100 m, i.iv.1962 (G. Ebert & H. Falkner), 1 ♂, holotype, genit. slide 8851.

The gaudy, polychrome species reminds one of Palearctic *Acleris variegana* Hübner. The male genitalia suggest a relationship with *A. bengalica* Razowski.

Acleris medea spec. nov. (fig. 62)

♂ 26.5 mm. Head white. Palpus with median segment dilated and bushy, pale tawny with a centro-lateral suffused fuscous spot; terminal segment slender, subobtuse, tawny-fuscous. Thorax glossy cream-colour. Abdomen glossy golden-white, tergum dusted with fulvous.



Figs. 56-59. Genitalia of Tortricini. 56, *Acleris fistularis* sp. n., ♂, holotype; 57, *Paratorna oenina* sp. n., ♂, holotype; 58, *Acleris denticulosa* sp. n., ♂, holotype; 59, *A. fistularis* sp. n., ♀, allotype.

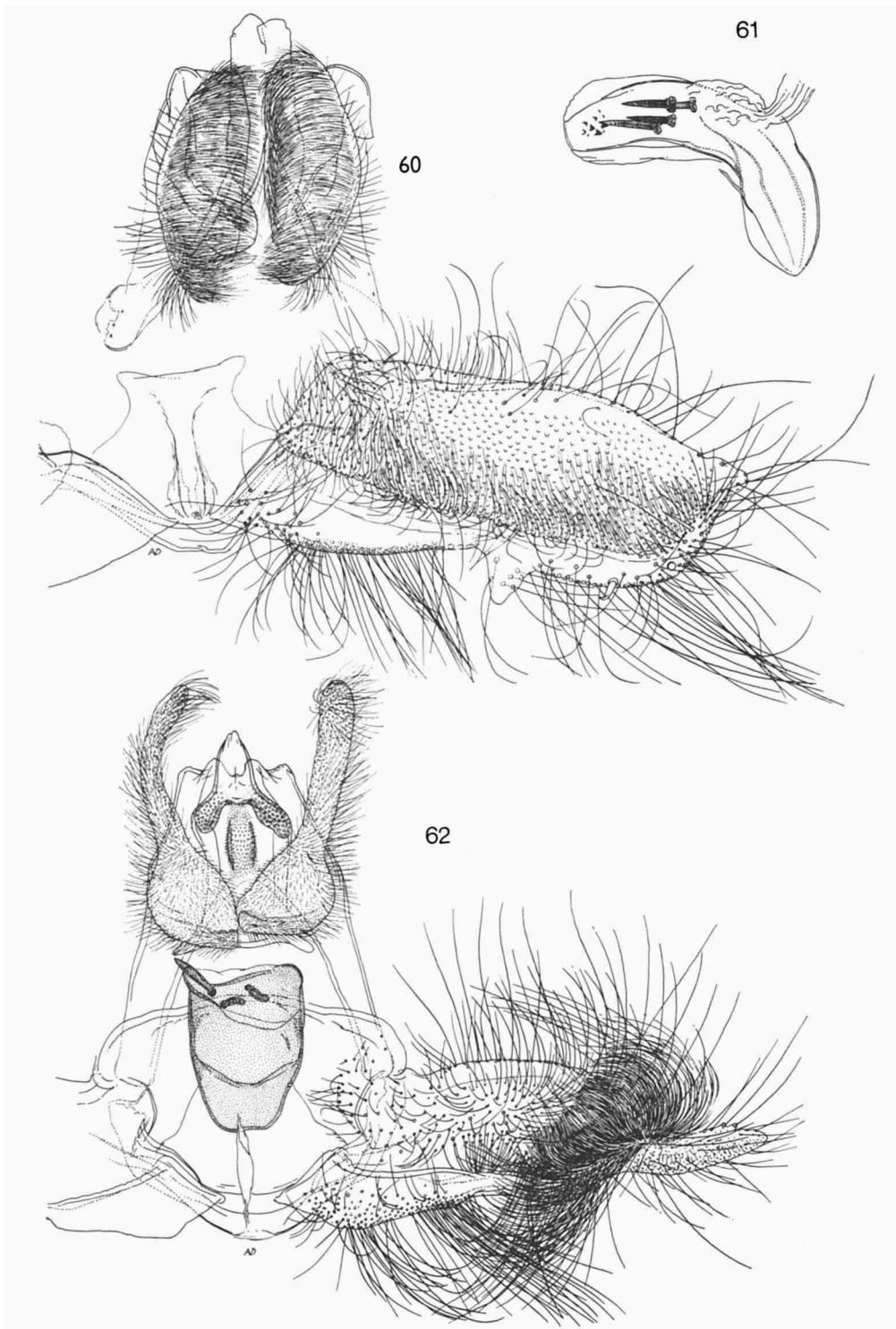
Fore wing oblong, not dilated, rather narrow, costa arched anteriorly, straight posteriorly, moderately curved before apex, pointed, termen sinuate above, broadly rounded below, moderately oblique. Pale creamy-ochreous, glossy, indistinctly suffused, except around costal patch, with slightly brighter tawny-ochreous, with a faintest pinky tinge. Markings dark fuscous. Costa with a large, oblong, subtriangular spot posteriorly, from beyond $1/3$ of costa to about $5/6$; anterior edge of spot concave, top clavate by median branch in centre of wing, posterior edge concave to about upper edge of cell, thence horizontal to halfway apex, with a slight tooth there and a smaller one just below costa, below these concave again; spot fuscous, along veins streaked darker fuscous, anterior edge on lower half with jet-black elevated crests; a fuscous, brushy tuft at $1/3$ of fold (absent in left wing); wing thinly reticulate with narrow dark fuscous lines: one median, horizontal, not reaching costal spot; another along fold, incomplete; a curved transverse line from $1/5$ of costa, preceded and followed in disc by scattered scales; some six interrupted, more or less sinuate lines or fragments of lines between costal spot and dorsum, first from its anterior angle, inwards-oblique, sixth from first tooth of spot to tornus, anterior third of wing rather denser suffused fulvous-pinkish. Cilia pale ochreous (imperfect), a median dark fuscous blotch between ends of veins 5 and 6.

Hind wing pale golden ochreous, becoming whitish golden and semi-pellucid towards base, edge around tornus narrowly fuscous. Cilia pale golden-ochreous, slightly infuscated towards and around tornus.

Male genitalia. Tegumen rather truncate, with four short apical lobes, but little narrowed apicad. Gnathos + tuba analis rather weak, cylindrical, with acute lower angles, top inverted-Y- shaped, sclerotized, characteristic. Socius with a broad, semicircular basal third, right and left touching, remainder rather slender, very faintly clavate. Transtilla subtrapezoidal, almost semioval, narrow, bases broad. Valva with costa strongly curved; sacculus little curved, obtusely prominent beyond base, edge subconcave, top of cucullus with a recurved, densely haired flap, with an acute anterior and a rectangular dorso-posterior angle; digitus rather large, narrowed. Aedeagus short and broad, inverted-conical, base truncate, top obliquely emarginate. Cornuti, a large and two small spines, widely spaced.

Prov. No. 3 East, Chialsa, Solu Khola Tal, 2700 m, 24.iv-1.v.1964 (W. Dierl), 1 ♂, holotype, genit. slide 8857.

A large species, very distinct by the genitalia. It is much larger than *A. extensana* Walker and has rather narrow, not dilated fore wings. The gnathos, the aedeagus and the cucullus are very characteristic.



Figs. 60-62. Male genitalia of *Acleris* Hübn., holotypes. 60, *A. monagma* sp. n.; 61, do., aedeagus; 62, *A. medea* sp. n.

Acleris fistularis spec. nov. (figs. 56, 60)

♂ 26 mm. Head pale ochreous. Palpus very long, pale ochreous, slightly infuscated, terminal segment slender, rather long, subtruncate. Thorax (rubbed) pale ochreous. Abdomen glossy pale ochreous, dorsum dusted with fuscous.

Fore wing oblong, rather dilated, moderately broad, costa strongly curved at base, hardly curved in middle, more so towards apex, apex pointed, termen sinuate, oblique. Rather uniform pale golden ochreous, throughout finely dusted with light grey and strewn with a few minute black specks; costa and dorsum with a dense row of slightly darker greyish dots, termen with a faint greyish marginal line. Cilia pale ochreous, dusted with pale tawny.

Hind wing and cilia rather dull pale golden ochreous, unicolorous.

Male genitalia. Tegumen slightly constricted in middle, apical fourth rather narrowed, top rounded. Gnathos + tuba analis gently sclerotized throughout, subconical, lower angles long and produced, median part rather conical, constricted at upper $\frac{1}{3}$, that upper third forming a darkly sclerotized funnel with deeply emarginate ventral edge. Socius with a moderately broad, oblong-oval lower half, upper half strongly concave, middle angular mesad, constricted laterad. Transtilla with upper edge regularly curved, lower submembranous and ill defined. Valva with costa strongly curved; sacculus moderately sclerotised, sinuate around incision, which is median and almost symmetrical, top of sacculus with a narrowed folded-over edge, ending in a slight, pointed and erected flap, digitus narrowed, rather long and slender. Aedeagus moderately long, bent before middle, moderately flattened dorso-ventrally, both ends truncate. Cornuti, two small apical spines.

♀ 23-26 mm. Head pale grey. Palpus whitish, dusted with pale grey. Thorax fuscous-grey, finely transversely striated with paler (pale bases of scales), strewn with darker grey dots. Markings formed by interrupted and suffused, darker grey transverse fasciae. Basal patch indicated by a curved fascia of grey dusting and suffusion beyond $\frac{1}{5}$, filled out by slightly darker grey, more distinctly dark-dotted; a suffused oblong spot above middle of wing, indistinctly connected with costa by an oblique line from before middle of costa, running along anterior edge of spot; an ill defined oblong-triangular patch of slightly darker dotting, from $\frac{3}{5}$ of costa to cell before apex, almost connected with tornus by a band of grey dusting, terminal edge narrowly darker grey. Cilia pale grey with a whitish base and a faint subbasal band of greyish blotches.

Hind wing pale grey, with a moderate silky-golden gloss, strewn throughout with faint pale grey points. Cilia pale ochreous, along termen to well before tornus with a subbasal greyish band.

Rather variable: one female (no. 720) similarly grey, but denser marked with rather raised blackish-grey scales, forming a spot at base, a more distinct edge to basal patch, with a crest below fold and an interrupted, erected narrow fascia from $1/3$ of costa to fold beyond middle, thence along fold to dorsum, and a more distinct costal patch and its connection with tornus by a series of three blackish interrupted lines. Another paratype (no. 8870) evenly rather light ochreous with blackish markings as described, but with an additional, oblong-trapezoidal (inverted) grey spot on middle of costa, but without transverse fascia from $1/3$. Finally three other female paratypes show different degrees of colouring and markings of the allotype.

Female genitalia. Sterigma simple, little sclerotized: a subrectangular plate, slightly broader than high, with upper angles faintly prominent, lower appendages moderate, hardly curved, almost symmetrical, slightly longer than colliculum, emarginations with rather rectangular bottom. Ductus bursae rather long and narrow. Signum absent.

Prov. No. 3 East, Khumjung, 4100-4300 m, 20.v.1964 (W. Dierl), 1 ♂, holotype, genit. slide 8869; the same, 19.v.1964, 1 ♀, allotype, genit. slide 8858. The same locality and collector, 3800 m, 20, 21 and 24.v.1964, 5 ♀, genit. slides 8870, 8871 and "ZSM, ♀, Genitalprep. No. 720".

An interesting species of high mountains, variable, but doubtlessly all conspecific, which is supported by the very similar, slightly dilated fore wing.

***Acleris denticulosa* spec. nov. (fig. 58)**

♀ 20 mm. Head light ochreous, scape of antenna fulvous, collar suffused with fulvous. Thorax fulvous. Abdomen light ochreous-tawny.

Fore wing oblong-subtruncate, costa strongly curved anteriorly, three times shallowly emarginate, first notch median, each following smaller; costa long-ciliate except along emarginations, cilia so forming tufts which strongly exaggerate notches, giving to costa appearance of being strongly serrate; costa before apex moderately rounded, apex pointed and prominent, termen sinuate, little oblique. Deep chestnut-fulvous, becoming lighter towards dorsum, with ill defined fuscous blotches and transverse fasciae, becoming obliterate on lower half of wing and on posterior half replaced by continuous curved fasciae or series of spots, pale silvery, glossy, traceable only in certain lights: a broader glossy fascia from first costal notch to upper angle of cell, thence more curved to termen; second fascia divided by veins into a series of intraneural round spots, from second concavity, subcostal, to before apex, thence along termen close to margin, to above tornus; costal edge along notches narrowly whitish, exaggerating these; an irregular blackish, silvery-centred round dot below fold at $1/4$ and an angulate series of six small

marks, formed by black dusting, from $2/5$ of costa to below upper edge of cell before middle of wing, thence towards middle of fold, ultimate spot subplical, shifted posterad; these marks centred with glossy grey; sometimes these dots absent or dull purplish. Cilia fulvous-fuscous.

Hind wing pale tawny fuscous, with a bronze gloss, cilia concolorous.

Female genitalia. Sterigma, a moderate band over $2 \frac{1}{2} \times$ as broad as high, lower angles produced, long, concave mesally, tips asymmetrically rounded, lower edge of sterigma deeply and regularly almost semicircular; ostium flanked by two small semioval stalked sclerites; lamella postvaginalis a semioval finely aciculate tumescence; edge of ostium simple. Colliculum long and slender, slightly bent in middle, lower half narrowed and sclerotized. Signum, a moderate denticulate plate.

Prov. Nr. 3 East, Junbesi, 2750 m, 25-31.vii.1967 (W. Dierl), 1 ♀, holotype, genit. slide 8859; 3 ♀, paratypes, genit. slide 8860.

A very conspicuous species, allied with *A. issikii* Oku, from Japan.

In even slightly rubbed specimens costal scale tufts disappear and the notches become so shallow as to be imperceptible. The large scale tuft before the first notch usually is folded over the upper side of wing, in the manner of a male "costal fold".

Judging from the genitalia nearest to *A. quadridentana* Walsingham, but in that species lamella postvaginalis is different, as is the signum, while the colliculum is much wider and spindle-shaped.

POLYORTHINI

Lopharcha iriodis spec. nov. (fig. 63)

♂ 12 mm. Head fuscous-whitish, tufts on vertex spreading, fuscous-bronze, collar blackish-bronze, scape of antenna blackish. Palpus anthracite-black, finely dusted with paler, in centre laterally and towards base above mixed with pale fuscous-whitish. Thorax glossy pale ochreous, with a greenish hue, partly infuscated anteriorly with three close anthracite-black dots, apex suffused anthracite-black. Abdomen fuscous, mixed with brownish and dark grey.

Fore wing oblong-suboval, costa anteriorly rather oblique but straight, gently curved from $1/3$, more so before apex, apex pointed, produced, termen rather sinuate, oblique, dorsum gently notched before end; posterior $2/3$ of costa, apex and termen rather roughly ciliate. Pale ochreous-grey, densely transversely strigulated and fasciate with narrow dark brown striae, strewn with blackish-grey, elevated scale tufts; upper half of $3/5$ of wing paler and tinged with light iridescent greenish, on posterior half this colour extending

over more than upper half of wing. Basal patch almost to $\frac{1}{3}$, edge with upper half oblique, well-defined, patch strongly mixed with anthracite black, with the above mentioned greenish tinge, lower half filled out with vinaceous-bronze, this colour extending to $\frac{4}{5}$ of dorsum, basal patch also with strongly raised scale tufts above and below fold, at about $\frac{1}{3}$ of disc; a



Fig. 63. *Lopharcha iriodis* sp. n., holotype, ♂, genitalia.

vinaceous-bronze hardly oblique transverse band beyond cell, edged on both sides and narrower parted by bronze-black, anterior edge also with two big blackish-grey, raised tufts, one on each angle of cell; a bronze-black mark in tornus; posterior part of wing paler, with two straight narrow transverse fasciae, slightly more oblique than preceding, blackish posteriorly, suffused with vinaceous-bronze anteriorly; posterior fascia extending and filling out apex. Cilia whitish, except base, densely dusted with anthracite colour, with a faint paler subapical line.

Hind wing and cilia glossy fuscous-bronze.

Male genitalia. Rather resembling those in *L. herbaecolor*, with the same tegumen and uncus, but with slightly larger socii. Transtilla also larger, transversely saddle-shaped. Vinculum more rounded. Valva much shorter and broader, but similarly cleft along costa throughout. However, aedeagus entirely different from any other species: moderately long, basal half not dilated, but broader and straight, apical half gently sinuate, apex moderately clavate, a short and acute subdorsal thorn upon a broad base before this thickening, extreme top of aedeagus rounded, with two long and acute terminal thorns, one below orifice, another lateral, on the right side. Cornuti absent.

Kathmandu Valley, Godavari, 1600-1800 m, 6.vi.1967 (Dierl-Forster-Schacht), 1 ♂, holotype, genit. slide 8845.

Superficially closely resembling *L. halidora* (Meyrick), except for the partial pale greenish tinge — but with very distinct genitalia.

SPARGANOTHIDINI

Lambertoides harmonia (Meyrick)

Capua harmonia Meyrick, 1908: 617 (♂ ♀, Sikkim, Darjeeling, Khasis). — 1912b: 10. — 1913: 15. — Clarke, 1955: 153. — 1958: 68, pl. 34 figs. 4-4b (lectotype designated, wings, genit. ♂ figured).

Epagage harmonia: Diakonoff, 1939b: 164.

Lambertoides harmonia: Diakonoff, 1959: 167, fig. 1, pl. 1 figs. 1-3 (Burma).

Distribution. Sikkim, Assam, Burma.

Prov. Nr. 3 East, Junbesi, 2750 m, 25-31.vii.1964 (W. Dierl), 4 ♂, 2 ♀.

Prov. Nr. 3 East, Carikhola, Dudh Kosi Tal, 2700 m, 14.v.1964 (W. Dierl), 1 ♂.

Prov. Nr. 3 East, Chialsa, Solu Khola Tal, 2700 m, 24.iv-1.v.1964 (W. Dierl), 1 ♂.

Bi Khola, 2300-2700 m, 13.v.1962 (G. Ebert & H. Falkner), 1 ♀.

Helmu-Gebiet, Gusum Bunjyang, 2600 m, 1-5.ix.1967 (W. Dierl), 15 ♂, 1 ♀, genit. slide 8902 ♂.

Tampa Khosi Tal, 2600 m, 10.v.1962 (G. Ebert & H. Falkner), 2 ♂.

Prov. Nr. 1 East, Pultschuk, 2300-2500 m, 12, 14 and 17.vi.1967 (Dierl-Forster-Schacht), 4 ♂, 2 ♀, genit. slide 8903 ♂.

Sin Khosi Tal, 2150 m, 1.v.1962 (G. Ebert & H. Falkner), 1 ♂.

Prov. Nr. 2 East, Jiri, 2000 m, 10.iv.1964 (W. Dierl), 1 ♂.

Kathmandu Valley, Godavari, 1600-1800 m, 14-16.vi.1967 (Dierl-Forster-Schacht), 2 ♂.

In total 31 ♂, 7 ♀.

CERACINI

Cerace semnologa spec. nov. (figs. 64-66)

♂ 17-18 mm. Head black, face with a large light yellow spot, collar pale yellow, brighter yellow on vertex. Palpus black, median segment with yellowish-white lower edge. Antenna black, ciliations over 1. Thorax black, with a chrome-yellow subapical transverse band, tegula with a large orange-red median spot; a few yellow hair-scales in centre of thorax; metathorax with yellow hairs. Abdomen black, posterior edges of segments with narrow yellow bands. Legs black above, pale yellow below.

Fore wing elongate-suboval-truncate, costa strongly curved anteriorly, less curved posteriorly, apex rounded-rectangular, termen strongly rounded-prominent in middle, obliquely rounded below. Costal fourth velvety jet-black, dorsal half, purple-black; less than second of wing breadth occupied by a rosy-crimson streak, brighter anteriorly becoming deeper and duller posteriorly, slightly curved, not dilated, strewn with blue-metallic points and ending in a transverse orangeish-crimson submarginal patch along terminal prominence; wing above fascia with about 12 citric-yellow transverse strigulae, some broken below middle and interrupted into series of dots shifted slightly posterad; a round dot in apex, in left wing with a smaller additional point; wing below red fascia with about four longitudinal rows of small round yellow dots anteriorly, posteriorly these dots becoming smaller, their rows following veins. Cilia black with a faint metallic subbasal line. Under-side black, with 14 broader yellow costal streaks, the 15th forming a pair of dots, cell filled out with light orange, a preterminal deep orange transverse spot.

Hind wing purple black, becoming slightly paler and dark-dotted towards base; a bright orange elongate spot below costa from 1/4 to beyond 3/4 of wing, paler anteriorly, gradually dilated, with strongly scalloped edges, and rounded; a moderate semioval bright orange spot in apex, followed by a second minute spot; a row of irregular small orange dots above lower edge of cell; series of somewhat irregular small orange dots below vein 1c, just above vein 1b and well above vein 1a. Cilia deep orange, barred with black opposite ends of veins from apex as far as vein 1c, black elsewhere, slightly tinged citric-yellow along base of dorsum.

♀ 30-37 mm. Similarly marked, but lighter than the male, the red fascia being slightly broader, the costal streaks much wider, partly wedge-shaped, 15-16 in number; yellow dots below red fascia rather larger, anteriorly, transversely fasciate, posteriorly, rounded.

Hind wing paler towards base, orange spot much larger, reaching to base

and containing a series of black round spots along basal half of its lower edge, there is an irregular bright orange fascia around apex, continued as a series of irregular spots along termen; dots below cell and vein 2 in some five rows subparallel to dorsum, moderate, irregularly transverse, forming an irregular continuous streak along posterior $1/4$ of fold. Otherwise similar to male.

Male genitalia. Tegumen, gnathos and socii similar to those of *C. anthera* Diakonoff, 1950, but valva shorter, cucullus decidedly more pointed, its outer edge less rounded, more sinuate. Sacculus less concave, but gradually so, along its entire length (not stronger concave at the end, as in *anthera*), its apical downwards process much shorter (but longer and more slender than in *tetraonis*); transtilla more curved, with upper edge more trapezoidal, the two upper angles slightly rounded-prominent. Aedeagus shorter, more curved, with two ridges of short cornuti (in *anthera* cornuti less numerous and some much longer).

Female genitalia. Entirely similar to those of *C. tetraonis* Butler, except that colliculum is less abruptly dilated.

Prov. Nr. 3 East, Junbesi, 2750 m, 25-31.vii.1964 (leg. W. Dierl), 1 ♂, holotype, genit. slide 6900; 1 ♀, allotype, genit. slide 6901; 3 ♂, 3 ♀, paratypes. Nearest to *C. tetraonis* Butler and *C. anthera* Diakonoff.

***Cerace stipatana birmensis* Diakonoff**

Cerace stipatana birmensis Diakonoff, 1950: 210. — 1970: 100.

Distribution. Burma: Ruby Mines District, Momeit, Karen Hills, Maymyo. "Burma", 1 ♀.

***Cerace stipatana nepalensis* subsp. nov.**

♀ 56 mm. Very similar to the nominate subspecies, but with differently coloured hind wing, black band occupying more than one-third of wing length (considered in middle of wing breadth), lower half of its edge dissolved in a group of isolated roundish dots (not forming obliquely-transverse bands, being slightly interconnected, as in *S. stipatana*); besides the black band not narrower, neither reaching one-third across wing.

Prov. No. 2 East, Tamba Kosi Tal, 1500 m, 7.x.1962 (Disselhorst), 1 ♀, holotype.

ARCHIPINI

***Isotenes inae* Diakonoff**

Harmologa miserana; Fletcher, 1921: 41 (nec Walker, 1863) (Assam).

Isotenes miserana; Diakonoff, 1941d: 390. — 1941e: 402 (Java, Sumatra). — 1947: 340 (Java, Sumatra, Celebes).

Isotenes inae Diakonoff, 1948b: 493, figs. 3, 18-21 (♂ ♀, genit., Java, Sumatra, Assam). — Simon Thomas, 1962: 36, 89.

Distribution. Java, Sumatra, Assam.

Kathmandu Valley, Godavari, 1600-1800 m, 10.v.1967 (Dierl-Forster-Schacht), 1 ♂.

Kathmandu, 1400 m, 22-30.viii.1964 (W. Dierl), 1 ♂, genit. slide 8904.

Adoxophyes parastropa Meyrick (pl. I fig. 1)

Adoxophyes parastropa Meyrick, 1912a: 3 (♂, Assam). — 1912b: 14. — 1913: 18. — 1929: 710 (Tonkin). — Clarke, 1955: 235. — 1958: 20, pl. 10 figs. 5-5a (lectotype design., wings, genit. ♂ figured).

Kathmandu Valley, Godavari, 1600-1800 m, 31.v.1967, 1 ♂, 14-16.vi.1967, 1 ♂, genit. slide 8913, 31.vii.1967, 1 ♀, 7.viii.1967, 1 ♀ (Dierl-Foster-Schacht).

This little known species resembles the common *A. privatana* Walker, but is larger, with longer and slightly narrower costal fold and with the central fascia and the edges of the costal spot markedly more slender; besides, the small preapical streak, representing the posterior edge of the costal patch runs into the anterior edge before its terminal end, while in *privatana* these two streaks converge exactly in one point. Apparently this is a constant difference.

Adoxophyes privatana (Walker)

Dichelia privatana Walker, 1863: 320 (India). — Cotes & Swinhoe, 1889: 697, no. 4752. — Swinhoe, 1891: 294.

Adoxophyes privatana; Walsingham, 1900: 481 (*cyrtosema* syn.; Java, China, Burma, SW Sumatra, SE Borneo, S Celebes, Moluccan Is., Fiji, Tonga). — Meyrick, 1910b: 209 (N. Guinea). — 1912b: 14. — 1913: 18. — 1914: 47 (Formosa). — 1929: 710 (Tonkin). — 1934: 29 (Kwantung). — 1935: 49 (Mokanshan, Hoengshan, Lungtan). — Du Pasquier, 1932: 405B, 407B, pl. 9. — Fletcher, 1921: 35 (bionomics; India, Burma, Ceylon, Korea to N. Guinea). — Caradja, 1925: 374 (Lienping). 1938: 111 (Tsilinshan; "*privata*") — Diakonoff, 1939a: 162 (food plants, India, Java). — 1939b: 231 (food plant, India). — 1941c: 213 (Buru). — 1941d: 378 (Java: food plants) — 1941e: 404, pl. 18 fig. 3, 8 (genit. ♂ ♀ descr., figured; Java, food plants). — 1947: 340. — 1948b: 343 (Indo-China). — 1952: 143 (Sumba). — 1968: 14, fig. 484 (Philippine Is., *euryomis* syn.). — Clarke, 1958: 20, 23 (*euryomis* syn.).

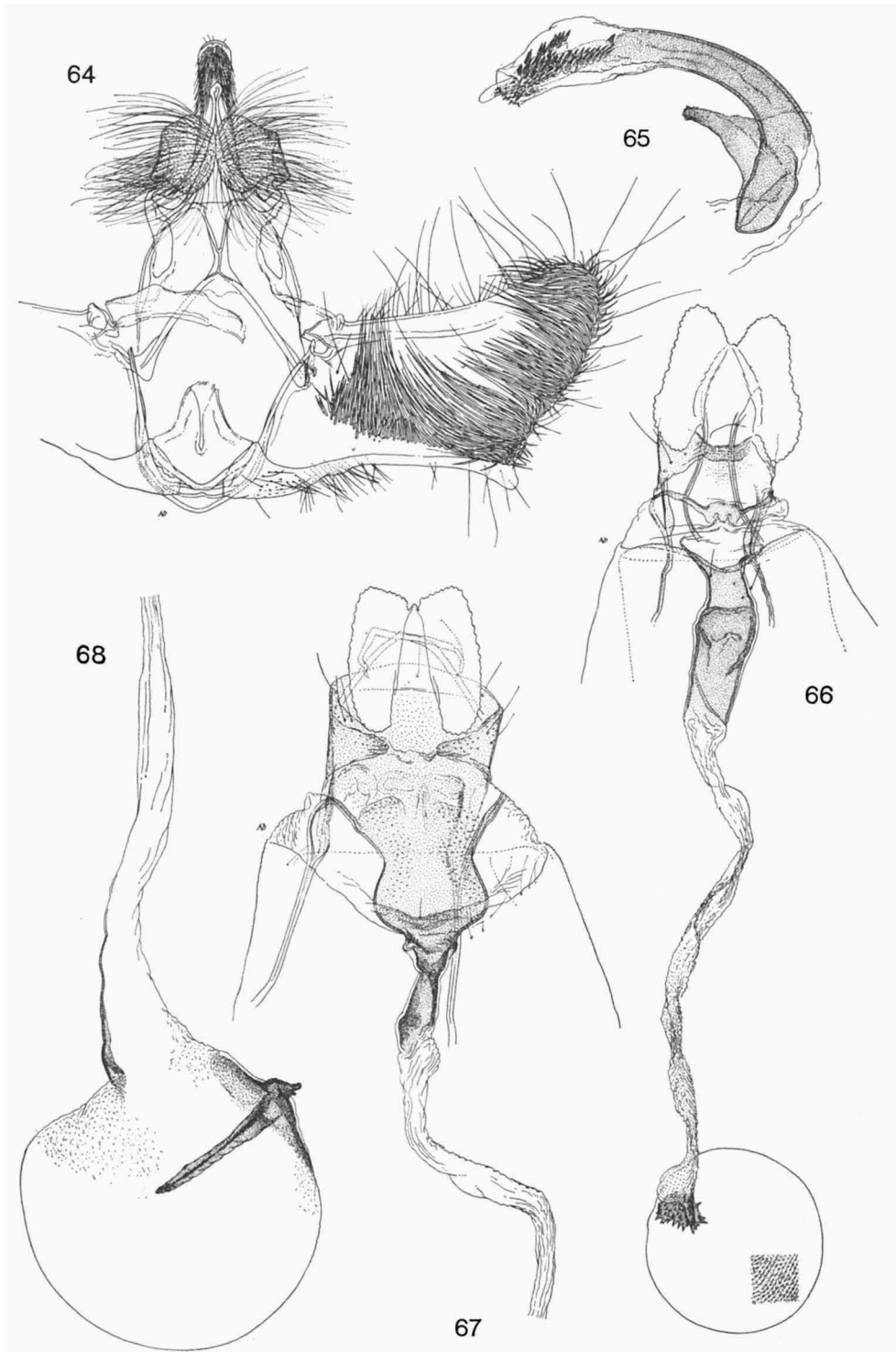
Adoxophyes euryomis Meyrick, 1902: 126 (Maldives Is., ♂ ♀). — Clarke, 1955: 136. — 1958: 20, 23 (syn. of *privatana*).

Distribution. Throughout tropical South Asia.

Food plants. Widely polyphagous.

Prov. Chisapani Garhi, Bhainse Dobhan, 730 m, 16-20.vii.1967 (Dierl-Schacht), 2 ♂, genit. slide 8914.

Rapti Tal, Monahari Kholā, Belwa, 350 m, 5-12.v.1967 (Dierl-Forster-Schacht), 2 ♂.



Figs. 64-68. Genitalia of Ceracini and Archipini 64, *Cerace semnologa* sp. n., holotype; 65, do., aedeagus; 66, do., allotype; 67, *Archips dierli* sp. n., allotype; 68, do., bursa.

Scotiophyes gen. nov. (fig. 81, pl. I fig. 2)

Head with closely appressed scales. Ocellus posterior. Proboscis very short. Antenna in male biciliate, ciliations under 1. Palpus moderate, with smoothly appressed scales, roughish only along lower edge, moderately dilated, terminal segment moderate, obtuse, exposed and subascending. Thorax smooth. Abdomen normal. Posterior tibia with smoothly appressed scales, slightly roughish only along underside.

Fore wing very broad, dilated throughout, costa arched at base, slightly sinuate posteriorly, apex obtusely pointed, termen gently sinuate above, rounded below. Cell shifted above middle of wing, vein 2 from beyond middle, 3 from halfway 2 and angle, 4 from angle, approximated to 5, 7 and 8 long-stalked, 7 to termen, 9 close to this stalk, 11 just from before middle of cell.

Hind wing without a pecten, broadly semioval, vein 2 from 3/5, 3 from about 2/3 distance 2 to angle, 4 from angle, 5 closely approximated at base, 6 and 7 very short-stalked.

Male genitalia. Tegumen broad, triangular. Uncus long and slender, hooked, extreme base dilated and thickened. Socius moderate crescentic, pending. Gnathos long, arms slender, hook rather short. Vinculum rather narrow, quadrate. Valva fleshy, membraneous, with a central, quadrate lobe-like harpe, with hairs on top; centre of disc densely haired; costa scalloped, cucullus cylindrical; sacculus with median third prominent, base rectangular, then deeply incised. Aedeagus short and thick, pistol-shaped. Ventral coremata dense and large, 8th tergite also with a dense corema, concave and forming a cap over the genitalia.

Type-species, *Adoxophyes faeculosa* Meyrick.

A remarkable form with unusually broad fore wings and the neurulation similar to that in *Adoxophyes* Meyrick, where the species has been placed by Meyrick. However, its entire facies is so different from that in all other *Adoxophyes* species known to me, the costal fold is almost absent and the genitalia differ so markedly from the type species, *A. heteroidana* Meyrick, that I prefer to separate *faeculosa* in a new genus.

Scotiophyes faeculosa (Meyrick) comb. nov. (fig. 81, pl. I fig. 2)

Adoxophyes faeculosa Meyrick, 1928: 453 (♂, India). — Clarke, 1955: 139. — 1958: 20, pl. 10 figs. 3-3a (lectotype ♂ design., wings, genit. figured).

This somewhat obscure species apparently gets rubbed quickly which makes the markings not at all discernible; Meyrick's description, consequently, is rather lacunary. Having now a nice series of males at hand I present a redescription of a fresh specimen.

As is said above, the species differs so considerably from *Adoxophyes* by the absence of a costal fold, aberrant markings and genitalia, that it deserves a place in a new genus.

16-20 mm. Head pale ochreous, face and vertex caudally suffused with dull purple. Antenna pale ochreous. Palpus pale ochreous, posterior half suffused with orangeish-tawny. Thorax dull purple (appearing greyish in certain lights). Abdomen pale ochreous with a median longitudinal fuscous stripe on dorsum, pregenital tergite fuscous.

Fore wing very broad, dilated throughout, costa arched at base, slightly sinuate posteriorly, apex obtusely pointed, termen gently sinuate above, rounded beneath. Light ochreous, tinged orangeish towards costa, markings rather confluent, deep purple and ferruginous. Costal edge pale ochreous-orange, with numerous suffused, equal purple transverse marks not reaching costal margins and arranged in groups thus: along basal patch, three marks at each end and a pair in middle, between basal patch and costal patch, three faint marks, along costal patch about six faint marks; basal patch reaching beyond $2/5$ of wing, edge oblique and well-defined to cell, thence irregular; central fascia suffused, only along its lower half, oblique, rather broad, not dilated, to end along middle of wing, so forming together a large dull purple patch, including a pale lilac dorsal patch, with strongly undulate and sub-parallel whitish edges, basad and posterad edged by ferruginous-red narrow suffusion; this spot subrectangular, strongly constricted just below fold, with top extended basad; base of dorsum deep purple; costal patch well-defined, suboval, light lilac-purple; apex and termen beyond central fascia finely reticulate; some small blackish marks along dorsum, ultimate in tornus. Cilia glossy pale ochreous, in apex suffused with ferruginous, in tornus, with dark grey.

Hind wing semipellucet, glossy light golden-ochreous, below cell and vein 3 rather infuscated and opaque. Cilia pale golden-ochreous with a strong gloss, along lower half of termen infuscated and less glossy.

Male genitalia, as described with the genus.

Kathmandu Valley, Godavari, 1600-1800 m, 4-12.vi.1967 (Dierl-Forster-Schacht), 6 ♂.

Prov. Nr. 2 East, Jubing, 1600 m, 5.v.1964 (W. Dierl), 1 ♂, genit. slide 8954; the same, 3 and 8.v.1964, 2 ♂.

Capua chloraspis (Meyrick)

Capua chloraspis Meyrick, 1924: 106 (♂, Bengal). — 1927: 369 (a second description, by mistake). — Clarke, 1955: 85. — 1958: 67, pl. 33 figs. 2-2b (holotype: wings and genit. figured).

Distribution. India: Bengal.

Helmu-Gebiet, Gusum Bunjyang, 2600 m, 5.ix.1967 (W. Dierl), 1 ♂.

Prov. Nr. 2 East, Bhandar unter Thodung, 2200 m, 2.viii.1964 (W. Dierl), 1 ♂.

Kathmandu Valley, Godavari, 1600-1800 m, 9.vi.1967 (Dierl-Forster-Schacht), 1 ♂.

Prov. Nr. 3 East, Jubing, 1600 m, 3.v.1964 (W. Dierl), 1 ♂.

Capua lissochrysa spec. nov. (figs. 72-73)

♀ 13-17 mm. Head light ochreous, face slightly darker. Palpus moderate, subporrect, little dilated with scales, roughish at apex of median segment; terminal segment short, obtuse, subconcealed; light grey, glossy, becoming light fuscous towards base. Thorax light ochreous. Abdomen greish-ochreous.

Fore wing oblong-truncate, moderately broad, costa curved at base, straight posteriorly, apex obtusely pointed, termen sinuate above, rounded beneath, almost vertical. Glossy light ochreous, a faint tawny shade along termen, costal edge posteriorly hardly similarly obscured. Cilia concolorous.

Hind wing light grey, on posterior half turning light ochreous, less glossy than fore wing, tornal third of wing finely grey-dotted. Cilia light ochreous, along lower half of termen, around tornus and along dorsum infuscated.

Female genitalia. Sterigma inverted-triangular, lamella postvaginalis large, moderately sclerotized, upper edge angulate in middle, size slightly constricted in middle, lamella antevaginalis, a low dark edge. Colliculum dark, obliquely cylindrical, hyaline in centre, lower end obliquely scalloped, edge refracting throughout. Ductus bursae very long, lower part coiled twice, cestium slender and very long, from below colliculum, penetrating into corpus bursae, very gradually dilated. Signum dagger-like, with distinct basal plate and capitulum.

Prov. Nr. 2 East, Bhandar unter Thodung, 2200 m, 4.viii.1964 (W. Dierl), 1 ♀.

Prov. Nr. 2 East, Jiri, 2000 m, 7.iv.1964 (W. Dierl), 1 ♀, paratype, genit. slide 8952; 12-13.viii.1964 (W. Dierl), 4 ♀, paratypes.

Kathmandu Valley, Godavari, 1600-1800 m, 31.vii.1967 (Dierl-Forster-Schacht), 1 ♀, holotype, genit. slide 8951; 31.v.-5.viii.1967 (same collectors) 6 ♀, paratypes.

Without the evidence of the male genitalia the systematic position of this species is not quite certain.

Homona cruenta spec. nov. (fig. 80)

♂ 23.5 mm. Head purple, suffused with deep ferruginous-vinaceous, face

pale ochreous. Antenna ochreous, scape purple. Palpus rather long, exceeding base of antenna; ochreous-fuscous, tip of median segment and terminal segment entirely, purple, basal segment tawny-ochreous. Thorax deep purple, dorsally suffused with deep ferruginous-vinaceous. Abdomen glossy fuscous, venter pale ochreous.

Fore wing oblong-suboval, moderately broad, broadest at $1/3$, costa obliquely arched anteriorly, deeply sinuate posteriorly, apex obtusely pointed, termen sinuate above, broadly rounded beneath, vertical. Rather pale fulvous-lilac, faintly clouded with fuscous, costal edge narrowly orange. Anterior third of costa with a series of minute dark grey transverse lines, ill defined; central fascia very oblique, indicated by a cloudy dark grey subquadrate spot before $2/5$ of costa, centred with ground colour, emitting a very faint shadow-like band, narrow above, gently narrowed below costa, thence strongly dilated posteriorly, so as to form a round fuscous-grey patch not reaching end of dorsum; anterior edge of fascia tolerably straight, in right wing angulate above fold, along lower half suffused with deep dull ferruginous-vinaceous; this colour extending over whole width of fascia on its lower fourth; a strongly suffused roundish deep ferruginous-vinaceous patch on base of dorsum, not reaching middle of wing breadth; costal patch reduced to a bright ferruginous narrow marginal streak from middle to well before apex; three approximated oblique black transverse marks on costa before apex; an irregular, interrupted oblique bright ferruginous line from below middle of costal patch, towards lower $1/3$ of termen; dorsal half and terminal fifth of wing slightly darker suffused with greyish, an oblong area below median part of costa paler fulvous-lilac. Cilia glossy pale ochreous, with a dark purplish median line along upper half of termen, extending basad and filling out lower half of cilia, cilia along lower half of termen with three slender black bars on lower half, cilia on dorsum dark grey.

Hind wing unicolorous rather light fuscous-bronze with golden reflections. Cilia glossy fuscous with a pale basal line.

Male genitalia. Of unusual shape. Tegumen very broad, not narrowed. Uncus, a laterally bristled triangular body. Socii absent. Gnathos robust, sclerotized, as long as arms. Transtilla spindle-shaped, middle deeply excised from below, above this a rising process. Valva twice as high as broad, truncate; sacculus well defined, straight, ending with a down-turned rounded process. Aedeagus straight, cylindrical, top finely aciculate, with a beak-like strong point at lower side of orifice. Cornuti, two spindle-shaped blade-like spines, two dense sheafs of short spines and a field of fine acicula.

Kathmandu Valley, Godavari, 1600-1800 m, 14-16.vi.1967 (Dierl-Forster-Schacht), 1 ♂, holotype, genit. slide 8989.

An interesting, novel species, suggesting generic distinction, except that facies and superficial structure show no difference from *Homona* at all.

Homona coffearia (Nietner)

Tortrix coffearia Nietner, 1861: 24 (Ceylon, pest of coffee). — 1872: 24. — 1880: 16. — Guérin, 1864: 64 (ref.). — Walsingham, 1887: 494 (Ceylon). — Cotes & Swinhoe, 1889: 696, no. 4747.

Homona coffearia; Meyrick, 1912b: 15. — 1913: 19, pl. 2 fig. 30. — 1932: 253 (structure ♂; *menciana*, *socialis* syn., geogr. forms). — Fletcher, 1914: 452, fig. 330. — 1917: 20, 28. — 1919: 143. — 1921: 35 (India, bion., food plants). — 1932: 14. — Du Pasquier, 1932: 406B, fig. — Diakonoff, 1939a: 124, 165, 168, figs. 4A, G, F, 6F-G (redescr.; head, neurulation, genit. ♂ ♀ figured). — 1939b: 231 (India, food plant). — 1947: 342 (Java, Sumatra). — 1948a: 344. — 1948b: 504, 506, figs. 22, 27 (genit ♂ ♀). — 1952: 208 (Sumba). — Matsumura, 1931: 1067, fig. (Japan). — Esaki, 1932: 1450 (Japan) — Inoue, 1954: 87 (Japan). — Kawabe, 1964: 17 seq. (Formosa, not Japan). — Issiki, 1957: 77, pl. 13 figs. 389-390 (Japan). — Okano, 1959: 265, pl. 177 figs. 5a, 6 (Japan). — Simon Thomas, 1962: 33, 89.

Homona fasciculana Walker, 1863: 427 (Ceylon, ♀).

Pandemis menciana Walker, 1863: 310 (Shanghai, ♀). — Cotes, 1896: 3, no. 4. — Meyrick, 1912b: 15. — 1913: 19. — 1932: 253.

Godana simulana Walker, 1866: 1801 (Java, ♀).

Cacoecia simulana; Warren, 1888: 337 (Punjab). — Cotes & Swinhoe, 1889: 695, no. 4741 (Punjab; Java).

Capua fasciculana; Walsingham, 1900a: 575.

Capua menciana; Walsingham, 1900b: 482 (India).

Homona menciana; Meyrick, 1910a: 432. — 1912: 15. — 1913: 19 (*simulana*?, *fimbriana*, *pullatana* syn.). — Fletcher, 1921: 37 (India, food plants). — 1932: 14.

Homona coffearia menciana; Meyrick, 1934: 29 (Kwantung).

Homona coffearia forma *menciana*; Meyrick, 1935: 49 (Mohanshan, Hoengshan, Lungtan). — 1937: 173 (Yulingshan).

[?] *Tortrix fimbriana* Walker, 1869: 101 (Benares).

Throughout tropical South Asia.

Prov. Nr. 2 East, Bhandar unter Thodung, 2200 m, 2.viii.1964 (W. Dierl), 1 ♂, genit slide 8977. A larger, distinctly grey-tinged specimen with purplish hind wings, but with identical genitalia.

Kathmandu, Chauni, 1400 m, 14.viii.1967, 1 ♂; 7.ix.1967, 1 ♂; genit. slide 8980 (Dierl-Forster-Schacht).

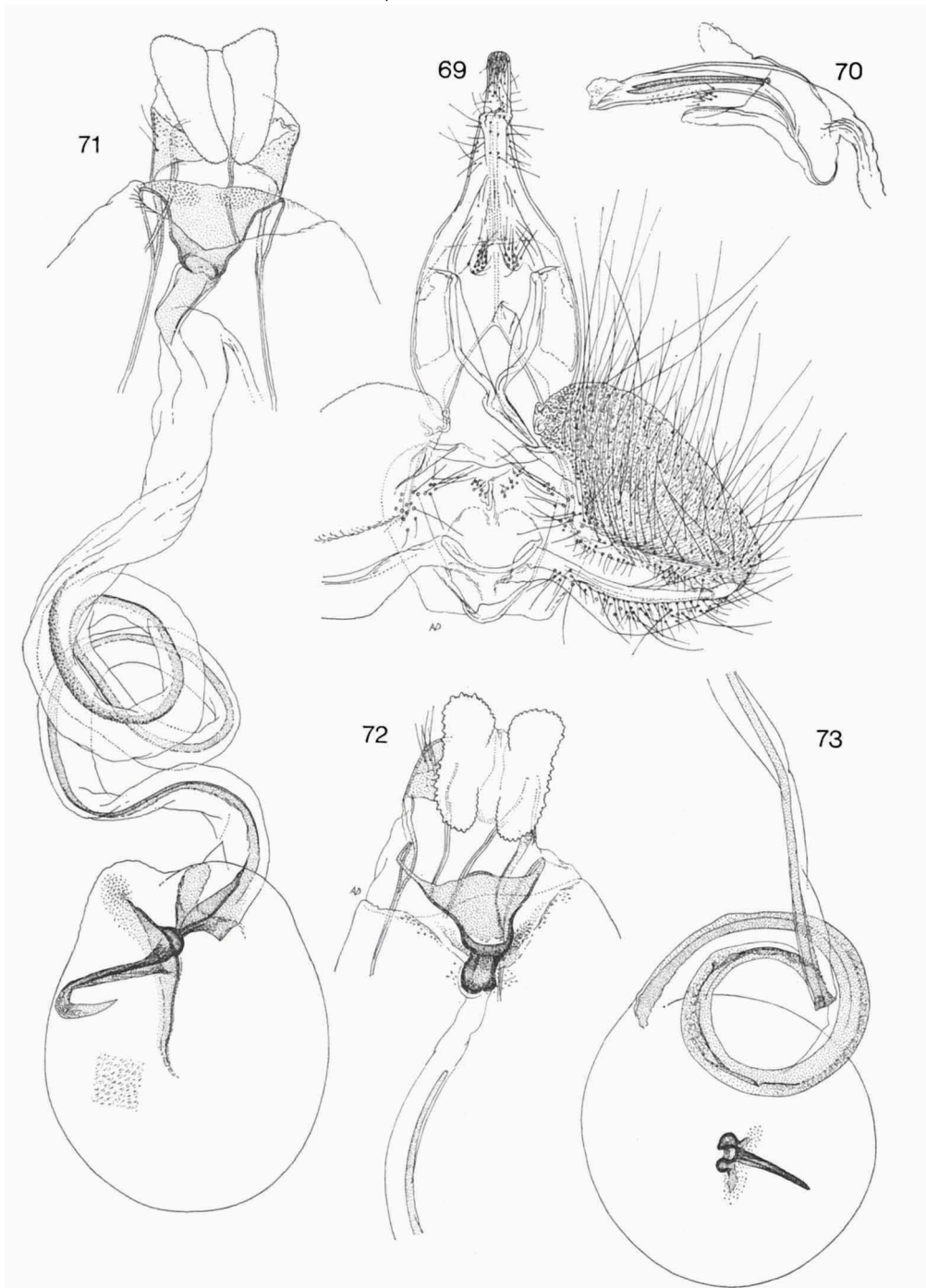
Prov. Chisapani Garhi, Bhainse Dobhan, 730 m, 16-20.vii.1967 (Dierl-Forster-Schacht), 4 ♂, genit. slide 8972.

Bhimpedi 400 m, 4-7.iv.1962 (G. Ebert & H. Falkner), 1 ♂, genit. slide 8963.

Rapti Tal, Monahari Khola, Belwa, 350 m, 5-12.v.1967 (Dierl-Forster-Schacht), 15 ♂, genit. slides 8973, 8974.

Rapti Tal, Jhawani, 200 m, 14-19.v.1967 (Dierl-Forster-Schacht), 2 ♂.

It appeared to be difficult to find reliable superficial differences separ-



Figs. 69-73. Genitalia of Archipini. 69, *Archips dierli* sp. n., holotype; 70, do., aedeagus; 71, *A. micaceana* (Walk.), ♀, slide 9073; 72, *Capua lissochrysa* sp. n., holotype; 73, do., bursa.

ating *H. nakaoui* from *coffearia*. After a long search I arrived upon a simple solution: there is a distributional gap between the two; while *nakaoui* does not descend below 1400 m altitude, does *coffearia* but seldom ascend above 750 m, viz. only two specimens originating from 1400 m and a single one from 2200 m of a total of 24 specimens available.

The two series so separated appeared to differ perceptibly, but I did not succeed in finding absolute individual distinction: each character applied to the greater part of the series, but not to every single specimen. These differences may be listed thus.

<i>nakaoui</i>	<i>coffearia</i>
Fore wing longer and narrower, with a more pronounced apex and an obliquely rounded termen. Larger, average over 20 mm; min. 18, max. 23.5 mm (a single specimen 17 mm).	Fore wing shorter, apex rather rounded, not prominent, termen strongly rounded, prominent in middle, so being less oblique. Smaller, average 18 mm; min. 16, max. 20 mm.
Darker:	Lighter:
Head mostly fuscous;	Head mostly light tawny or pale ochreous;
Thorax almost in every specimen purplish or dark fuscous, seldom with paler tegulae;	Thorax always pale tawny, pale tawny-lilac or pale ochreous, colour of tegulae never differing of that of middle of thorax;
Abdomen usually dark fuscous, greyish or brownish. Anal tuft greyish or fuscous;	Abdomen usually pale ochreous, seldom dorsum and anal tuft suffused with fuscous or brownish;
Hind wing often bright glossy golden-orange on its costal half, veins, at least 3-5, black.	Hind wing mostly unicolorous, never glossy golden-orange, extreme apex may be dull orangeish only, veins seldom greyish.

Alas, no Nepalese females of *H. coffearia* were available.

Homona nakaoui Yasuda

Homona nakaoui Yasuda, 1969: 168, pl. 1 figs. B, C, pl. 2 figs. 1-3 (♂ ♀, Nepal).

Distribution. Nepal: Prov. Taplejung, 2400 m.

Prov. Nr. 3 East, Junbesi, 2750 m, 25-31.vii.1964 (W. Dierl), 1 ♂, 1 ♀.

Tampa Khosi Tal, 2600 m, 9.v.1962 (G. Ebert & H. Falkner), 1 ♂, genit. slide 8975.

Prov. Nr. 1 East, Pultschuk, 2300-2500 m, 13-17.vi.1967 (Dierl-Forster-Schacht), 3 ♂.

Prov. Nr. 2 East, Bhandar unter Thodung, 2200 m, 1-5.vii.1964 (W. Dierl), 8 ♂, genit. slide 8959; 7 ♀, genit. slide 8978.

Sun Khosi Tal, 2150 m, 2.v.1962 (G. Ebert & H. Falkner), 1 ♀, genit. slide 8979.

Prov. Nr. 2, East, Jiri, 2000 m, 6.iv-12.viii.1964 (W. Dierl), 7 ♂, 6 ♀, genit. slide 8966.

Kathmandu Valley, Godavari, 1600-1800 m, 31.viii.1964 (W. Dierl), and 21.v-7.ix.1967 (Dierl-Forster-Schacht), 34 ♂, genit. slides 8960, 8971, 8981, 8999, 9000, 9001, 9002, 9003; 6 ♀, genit. slide 8970.

Prov. Chisapani Garhi, Chisapani Garhi, 1600 m, 11-15.vii.1967 (Dierl-Forster-Schacht), 1 ♂.

Prov. Nr. 3 East, Jubing, 1600 m, 3-8.v.1964 (W. Dierl), 4 ♂, 2 ♀.

Kathmandu, Chauni, 1400 m, 22.vii, 4 and 7.ix.1967 (Dierl-Schacht), 2 ♂, 1 ♀, genit. slides 8980 ♂, 9145 ♀.

Kathmandu, 1400 m, 22-30.viii.1964 (W. Dierl), 1 ♂.

The original description is based on five specimens, reared from spun leaves of *Artemisia* spec. The species is variable; therefore a redescription after the present long series may prove useful.

♂ 18-23 mm. Head purplish, vertex deep purple. Palpus appressed to face, tip hardly exceeding eye; tawny-purplish. Thorax fuscous-bronze, tegulae paler bronze or thorax entirely dark purplish. Abdomen and anal tuft dark fuscous-grey.

Fore wing oblong-subtruncate, somewhat variable, broader or narrower, with a more or less produced apex, termen convex above, more convex below, moderately oblique. Pale tawny-lilac with a whitish gloss. Costal fold strongly thickened, especially the straight caudal edge, otherwise semioval, dark brown, posterior half light tawny-lilac; basal patch reaching to middle of costal fold, dark brown, centred with paler; anterior half of disc with about four light tawny transverse lines; central fascia originating from an oblong-rhomboidal glossy deep leaden-grey spot, edged with dull dark brown; fascia below this strongly oblique as far as vein 3, thence angulate and running to 3/4 of dorsum, anterior edge of fascia well defined, with three rectangular notches, lower one formed by fold, thence edge straight, inwards-oblique; posterior edge obliterate along its second fourth, fascia being constricted there to half its width; lower half well defined, angulate on vein 3; end of dorsum and tornus with an oblong marginal black spot; costal patch along posterior third of costa, almost to apex, fasciate, fulvous, on costa with three deep ferruginous marks: first depressed, second triangular, third

slender and fasciate, vertical, just before angle; lower edge of costal patch marked with a slightly suffused deep brown streak, semi-crescentic, dilated in middle, curved and descending to end of vein 2. Cilia glossy pale ochreous, apical half mixed with ferruginous, except along lower third of termen, mixed with blackish around apex.

Hind wing rather deep fuscous-orange, with golden reflections, dorsal half as far as lower edge of cell and vein 2 suffused with brownish-fuscous, veins on upper half often deep brown, except discoidal vein. Cilia glossy fuscous-golden, with a subbasal darker fuscous band, cilia around apex with a red-coppery gloss.

♀ 24-30 mm. Head leaden-grey, collar whitish-grey. Palpus as in male. Thorax light fulvous dusted with purple, except on tegulae, a purple suffused median longitudinal stripe. Abdomen brown, pleurae ochreous.

Fore wing broad, oblong-subtruncate, costa strongly arched at base, sinuate posteriorly, apex prominent, termen sinuate above, rounded beneath, vertical. Pale whitish-fulvous, finely strigulated throughout with deeper fulvous zig-zag strigulae, only edges of markings indicated by fine fulvous lines. Basal patch with edge strongly convex to $1/4$, this edge rather straight and oblique from costa to cell, thence almost vertical to fold, concave below this; central fascia indicated by narrow edges and a faint purplish suffusion towards costa and a deeper suffusion on lower fourth; fascia gently dilated, edges curved, outwards-oblique to above fold, slightly inwards-oblique thence; costal patch indicated by a deep ferruginous marginal narrow streak along posterior third of costa to apex thence along upper third of termen; anterior edge of costal patch narrow, regularly curved, from anterior end of streak, obliquely to before $2/3$ of termen, thence submarginal, to end of dorsum; beyond this line wing filled out by a fulvous suffusion, only a trifle darker than ground colour; dorsum narrowly suffused with purplish, marginal tuft beyond base fulvous-purple. Cilia glossy fuscous, darker on end of dorsum.

Hind wing evenly light orange, extreme apex deeper orange, dorsum as far as vein 1b infuscated. Cilia glossy fuscous, paler along dorsum.

The species is considerably variable, especially the male as to the tinge and the extent of markings; both sexes may have a narrower or a broader fore wing. In the male the hind wing is characteristically golden-orange with red-coppery reflections and dark-streaked veins on the upper half of wing; but the hind wing may also be paler yellow-orange, with veins not darkened, or the wing seldom is evenly fuscous-grey. The females have much more uniform markings, only the extent of the suffusion of the central fascia varying to a moderate extent, but some specimens have a uniformly reticulate fore wing, without distinct edges of markings.

Archips encaustus (Meyrick)

Tortrix encausta Meyrick, 1907: 735 (Ceylon, ♂ ♀). — 1912b: 22. — 1913: 25. — Clarke, 1955: 125.

Archips encausta; Clarke, 1958: 59, pl. 19 figs. 4-4b (lectotype design., wings, genit. ♂ figured). — Diakonoff, 1968: 27, 28, fig. 44 (genit. ♂).

Distribution. Ceylon.

Rapti Tal, Monahari Khola, Belwa, 350 m, 11.v.1967 (Dierl-Forster-Schacht), 2 ♂.

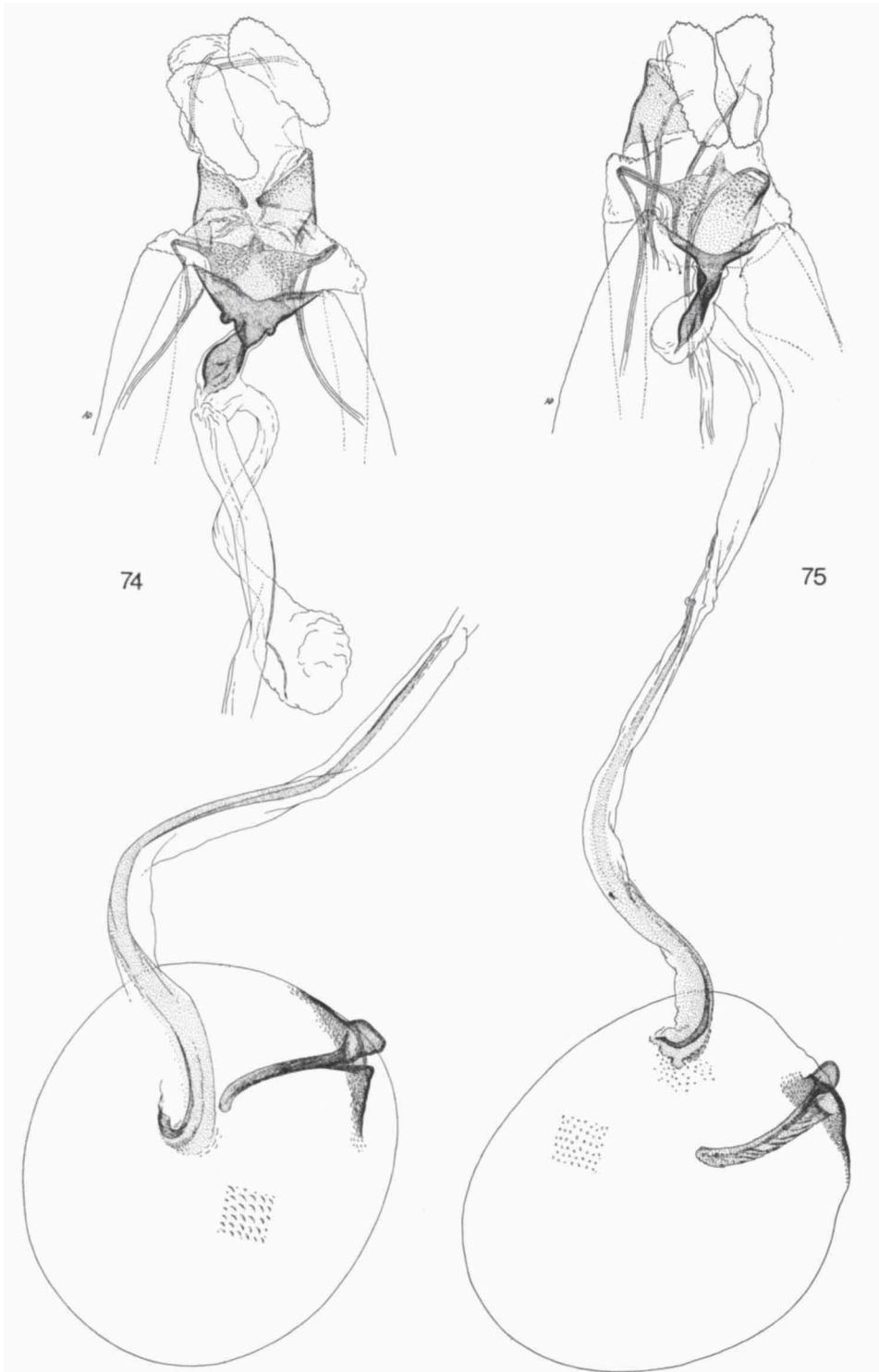
Archips dierli spec. nov. (figs. 67-70)

♂ 20 mm. Head and thorax bright reddish-fuscous, thorax centred with purplish-lilac. Palpus rather short, little dilated, porrect; tawny-fulvous. Abdomen dark brown, suffused with pale grey, anal tuft orange.

Fore wing oblong-suboval, a narrow costal fold to $2/5$, costa obliquely curved along fold, straight posteriorly, apex obtusely pointed, termen gently sinuate, little oblique above, rounded beneath. Bright reddish-fulvous, faintly spotted with deeper reddish-ferruginous, with an orange-golden gloss, irregularly spotted and banded with pale fulvous, with a strong silvery-whitish gloss in certain lights, except on costal fold. Basal patch indicated by three oblique, interconnected roundish spots, becoming larger posteriorly, from under costal fold, anterior beyond base not reaching dorsum, posterior at about $1/4$, to fold; these marks opposed by a sinuate vertical fascia from $2/5$ of dorsum, exceeding middle of wing, dilated dorsad, concave posteriorly, preceded by two small round spots on and above dorsum, followed by an oval longitudinal spot in centre of disc (in left wing connected with fascia, so making it clavate); central fascia indicated by three tolerably parallel and almost vertical transverse marks: first broad, postmedian, two interconnected round spots in cell before its end, with an anterior sub-costal furcate appendix; second fascia narrower, continuous, slightly inwards-oblique, just beyond cell, top from halfway costa and cell, gently rounded and curved basad, base of fascia on $4/5$ of dorsum; third mark fasciate-triangular, in tornus; costal patch formed by a slender curved fascia, narrowed below, to $2/3$ of termen, constricted and preceded by a round spot just above vein 7. Cilia fulvous-ochreous, infuscated towards tornus, glossy.

Hind wing fuscous-bronze, with a silky gloss. Cilia pale, ochreous-tinged, an ochreous basal line and a fuscous subbasal band.

Male genitalia resembling those of *A. oporana* but differing by the spine-shaped top of sclerotised rod along upper edge of sacculus being shorter and not exceeding the breadth of valva (not projecting) while the aedeagus



Figs. 74-75. Female genitalia of *Archips*. 74, *A. termias* (Meyr.), slide 9071; 75, *A. euryplinthus* (Meyr.), slide 9088.

is much shorter and broader, pistol-shaped, with an obliquely truncate top. Cornuti, moderate spindle-shaped blades.

♂ 24 mm. Very similar to male by the general colouring. Head more infuscated. Fore wing broader, with pale markings so much extended, as to fill out the wing, giving impression of a pale glossy colour, marbled with reddish-fulvous and ferruginous (being the actual ground colour, as in the male), except along reddish-fulvous anterior 2/3 of dorsal third of wing; costal spot represented by a posterad-shifted and almost terminal light fascia.

Hind wing as in male, but apical 1/5 paler, suffused with orange-pink.

Female genitalia distinct. Sterigma well-defined but little sclerotized, lower part rounded, slightly constricted towards top, more so at end which forms a sclerotized ring, separated from colliculum by a membranous narrow part. Colliculum dark, irregular, with refracting wall. Ductus bursae long, cestum short and slender. Signum somewhat shorter than in *oporana*.

Prov. Nr. 3 East, Junbesi, 2750 m, 25-31.vii.1964 (W. Dierl), 1 ♂, holotype, genit. slide 6921, 1 ♀, allotype, genit. slide 6922.

A gaudy coloured species, strongly resembling *Archips oporana* Hübner, but quite different by details of marking as well as by the genitalia in the two sexes.

Dedicated to the diligent collector of the present material, Dr. Wolfgang Dierl.

Archips micaceana (Walker) (figs. 71, 79)

Cacoecia micaceana Walker, 1863: 314 (Honkong, ♀). — Butler, 1883: 173 (Solun). — Walsingham, in Swinhoe, 1885: 881 (Poona, ♀). — in Moore, 1887: 492, pl. 208 fig. 1 (Ceylon). — Cotes & Swinhoe, 1889: 695 (India, ? China). — Meyrick, 1912b: 17. (India, Burma, China). — 1913: 23. — in De Joannis, 1930: 473 (Tonkin, food plants). — Fletcher, 1921: 38 (India, Burma, Ceylon, food plants). — 1932: 15. — Caradja, 1925: 374 (China). — 1932: 23 (Shanghai). — Du Pasquier, 1932: 405B, 407B, pl. 9 (stages, Indo-China). — Diakonoff, 1939a: 172-173 (food plants, — *epicyrta*, *machlopis*, *isocyrtia*, *transcutata*, *compacta* syn.). — 1941d: 387, fig. 1C-D, 2A (genit. ♂ ♀ figured; Java, food plants). — 1941e: 414 (Java, Sumatra, C E Borneo). — 1947: 343 (ref.). — 1948a: 343 (Tonkin). — Simon Thomas, 1962: 19, 33, 89.

Cacoecia micaceana var. *obscura* Diakonoff, 1939b: 231 (India, food plant). — 1941a: pl. 6 fig. 1 (♂ holotype). **Syn. nov.**

Cacoecia micaceana var. *compacta* Diakonoff, 1939b: 232 (India, food plants). (*micaceana*). 1941a: pl. 6 fig. 2-3. — 1941c: 387. — 1941d: 414. — 1947: 343 (Java, Sumatra). — 1948a: 343 (Tonkin). — 1958: 119 (S China, food plants).

Cacoecia micaceana var. *machlopis*; Diakonoff, 1939b: 233 (India, food plant). (*micaceana*). — 1941c: 414.

Archips micaceana; Clarke, 1958: 43, pl. 2 figs. 1-1b, 2, 3-3b (*epicyrta*, *isocyrtia*, *machlopis* syn.; lectotype design., ♂, ♀, resp., wings, genit. figured). — Diakonoff, 1971: 171 (S Thailand).

Cacoecia epicyrta Meyrick, 1905: 589 (Ceylon, ♂ ♀). — 1910a: 432 (Java). — 1912b: 17 (India, Ceylon, Java). — 1913: 23, pl. 5 fig. 69 (head). — 1930: 473 (Tonkin). —

1935: 50 (Hungshan). — 1937: 173 (Yulingshan). — Fletcher, 1921: 38 (India, food plants, bion.). — 1932: 15 (food plants). — Caradja, 1927: 419 (Szetschuan; "*epicyrtha*"). — Diakonoff, 1939a: 172-173 (syn. of *micaceana*). — Clarke, 1955: 128.

Archips epicyrta; Clarke, 1958: 43, pl. 21 fig. 1-1b (lectotype design., wings, ♂ genit. figured).

Cacoecia compacta Meyrick, 1918: 164 (Bengal, ♂ ♀). — Fletcher 1921: 39 (bion., India). — 1932: 14 (food plants). — Diakonoff, 1939a: 43 (syn. of *micaceana*). — Clarke, 1955: 96.

Archips compacta; Clarke, 1958: 39, 43, pl. 21 figs. 4-4c.

Cacoecia pensilis Meyrick, 1920: 339 (S India, ♀). — Fletcher, 1921: 39 (food plant). — 1932: 15 (food plant) — Clarke, 1955: 238. **Syn. nov.**

Archips pensilis; Clarke, 1958: 44, pl. 22 fig. 3-3c (type wings, genit. figured).

Cacoecia isocyrtia Meyrick, 1920: 340 (Bengal, ♀). — Fletcher, 1921: 39 (India, food plant). — 1932: 15 (food plant). — Diakonoff, 1939a: 173 (syn. of *micaceana*). — Clarke, 1955: 178.

Archips isocyrtia; Clarke, 1958: 40, 43, pl. 21 fig. 2 (Syn. of *micaceana*; lectotype design., wings figured).

In 1939 I have treated the genus "*Cacoecia*" at some length, taking the species *micaceana* as an example (1939a: 172). I wrote: "A large and very difficult genus to which the difficulties mentioned in the foregoing genus [*Homona*] fully apply; it shows considerable sexual dimorphism in many species, which in themselves are very variable. *C. micaceana* Wlk. (of which *C. epicyrta* Meyrick is a synonym), a widely distributed South Asiatic and Malayan species, is a striking example: it forms local varieties, which have rather constant superficial characters as, e.g., the markings and even the shape of forewings. Some of them were even described as distinct species, e.g., *C. compacta* Meyr. However, in spite of the very short and somewhat differently marked forewings, I consider this species to be conspecific with *micaceana* Wlk., as the genitalia show no differences at all, while on the other hand these are greatly different in other closely related species. In the same way as in *Homona* the females of allied species are rather uniform and difficult to distinguish while the females of the above mentioned varieties "... can scarcely be distinguished at all." Although 35 years have elapsed since, this statement still fully applies (except for the name of the genus).

Owing to the grant of the Munich Museum I had the opportunity to re-study several of Meyrick's types in the British Museum and to dissect some-females, in all probability sex partners of certain male holotypes. The results confirmed my above statement of 1939 and provided some more synonyms. Future study of long series and especially rearing of both sexes from larvae may provide means for subdivision of the present species in subspecies or varieties. But I do not expect that a change at the specific level will be necessary.

Kathmandu, Godavari, 1600-1800 m, 7.viii.1967 (Dierl-Schacht), 2 ♂.

Kathmandu, Chauni, 1400 m, 29.iv.-7.ix.1967 (Dierl-Forster-Schacht), 8 ♂, genit. slide 9089; 1 ♀, genit. slide 9140.

Kathmandu, 1400 m, 9-15.iv.1962 (G. Ebert & H. Falkner), 3 ♂, genit. slides 8988, 8996. — The same, 24.ix.1962 (Hellmich), 1 ♀.

Bhimpedi, 400 m, 4-7.iv.1962 (G. Ebert & H. Falkner), 2 ♂, genit. slide 9090; 2 ♀, genit. slide 9134.

Rapti Tal, Monahari Khola, Belwa, 350 m, 5-12.v.1967 (Dierl-Forster-Schacht), 1 ♂, genit. slide 9110, 1 ♀, genit. slide 9073.

Rapti Tal, Megouli, 300 m, 29.iii-4.iv.1962 (G. Ebert & H. Falkner), 1 ♂.

Rapti Tal, Jhawani, 200 m, 14-19.v.1967 (Dierl-Forster-Schacht), 1 ♂; 1 ♀, genit. slide 9107.

Note. As to the spelling of the name *micaceana*, I regard it a barbarism and not a Latin adjective (*micacea* would be correct); therefore I suggest leaving the spelling unchanged, in spite of the gender of the genus name *Archips* being masculine (cf. Diakonoff, 1973: 480-481).

Archips termias (Meyrick) (figs. 74, 78)

Capua termias Meyrick, 1918: 164 (Shillong, ♂). — 1920: 340 (Shillong, ♀). — 1937: 173 (Yulingshan). — Fletcher, 1932: 15 (India, Java, food plants). — Clarke, 1955: 305.

Arcinips termias; Clarke, 1958: 51, pl. 25 fig. 3-3b (lectotype design., wings, genit. ♂ figured). — Obraztsov, 1955: 206. — Yasuda, 1969: 168, pl. 1, fig. A (Nepal). — Diakonoff, 1971: 170 (Sikkim).

Cacoecia pomivora Meyrick, 1920: 340 (Himalaya, ♂ ♀). — Fletcher, 1932: 15 (India, food plants). — Diakonoff, 1939b: 233 (Bengal, food plant). — Clarke, 1955: 254.

Syn. nov.

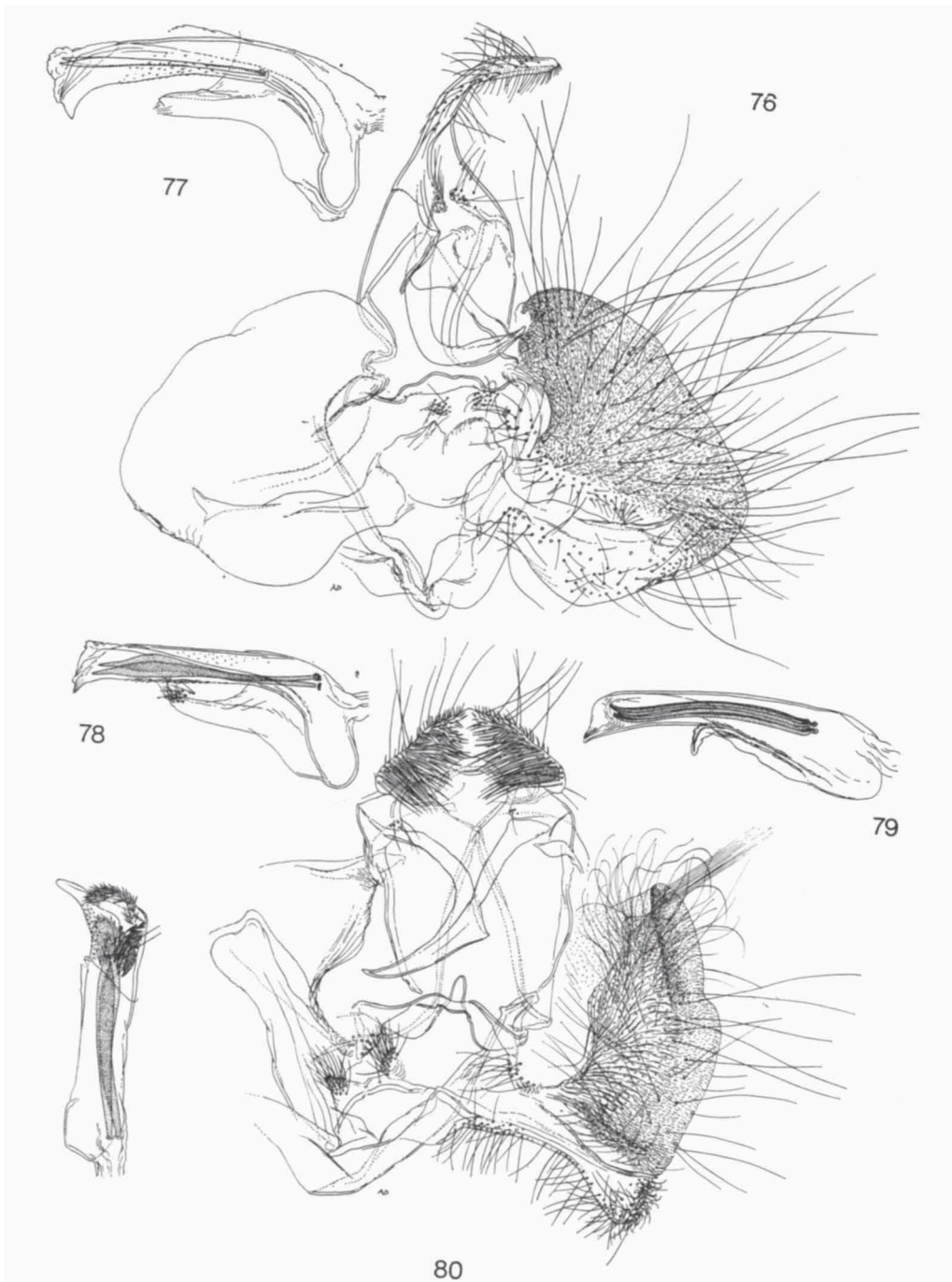
Archips pomivora; Clarke, 1958: 47, pl. 23 fig. 2-2b (lectotype design., wings, genit. ♂ figured).

Cacoecia sarcostega Meyrick, 1924: 107 (Kumaon, ♂). — Clarke, 1955: 276. **Syn. nov.**

Archips sarcostega; Clarke, 1958: 47, pl. 25 fig. 4-4a (lectotype design., wings, genit. figured).

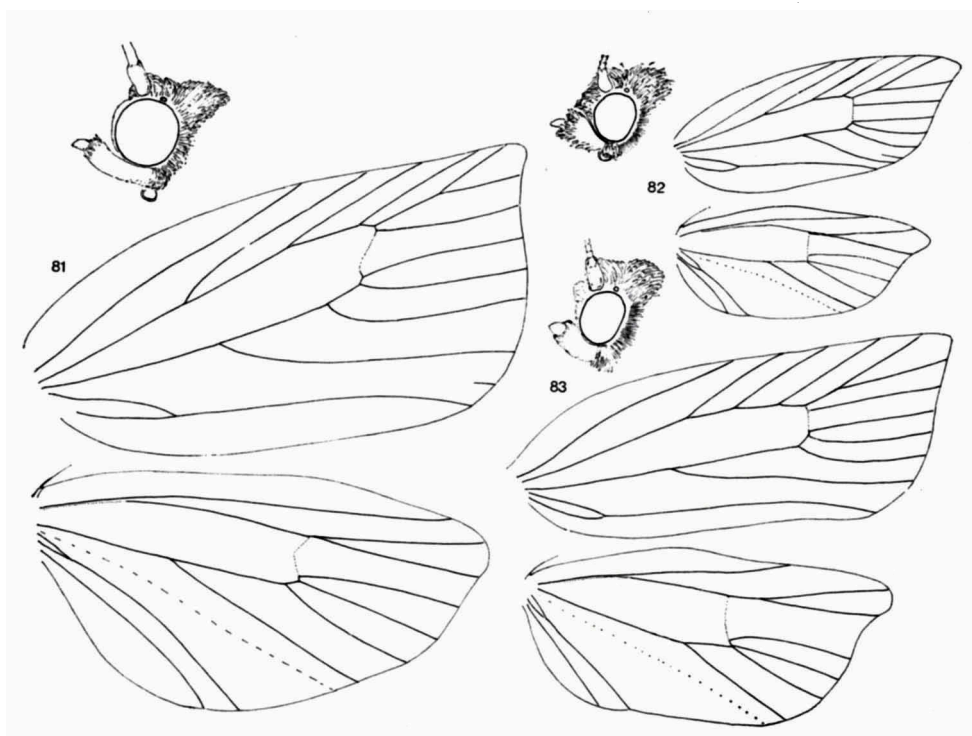
What is said of *A. micaceana* fully applies also to *A. termias*, even more so, because the present exceptionally rich and variable series shows a wide individual variation of colouring and markings, of the shape and width of the fore wings and of the colour of the hind wings. Attempts to separate apparent groups proved entirely unsatisfactory, the superficial characters being interconnected by diverse gradations, while the genitalia are completely similar.

As to the male genitalia, a critical study of several of Meyrick's types of South Asiatic *Archips* species provided no tangible differences for their separation at all, while the markings fit within the individual variation of the present excellent series of *termias*. Therefore I am satisfied that also "*Cacoecia*" *pomivora* Meyrick and *C. sarcostega* Meyrick are only two more synonyms.



Figs. 76-80. Male genitalia of Archipini, holotypes. 76, *Archips termias argutus* subsp. n.; 77, do., aedeagus; 78, *A. termias* (Meyr.), slide 8997, aedeagus; 79, *A. micaceana* (Walk.), do., slide 8996; 80, *Homona cruenta* sp. n., with aedeagus, left.

As to the female genitalia, at the beginning slight differences of structure seemed to exist. However, with further close study of the dissections before the use of a cover glass, the differences appeared to be spurious. The sclerotized colliculum being considerably compressed laterally proved to be responsible: when remaining in the mount in normal position, it appeared in frontal view as a moderate, slightly constricted longitudinal body. But with even



Figs. 81-83. Wing neuration and heads of Archipini, males. 81, *Scotiophyes faeculosa* (Meyr.) g. n.; 82, *Lumaria minuta* (Wals.) g. n.; 83, *Meridemis bathymorpha* g. et sp. n.

a slight pressure of the cover glass the colliculum turned around its longitudinal axis, and then, viewed in sublateral or lateral aspect, appeared as a broadly oval dark sclerite with strongly refracting edge (so closely resembling the colliculum of *A. subsidiarius*).

Male genitalia. Uncus slender, moderately curved, top variable as to length and width, but very slightly. Socius formed by a small group of irregularly placed weak bristles. Gnathos hooked, rather heavy, point about 3/4 length of arms. Transtilla, a simple band, gradually dilated in middle, upper edge being gradually strongly convex, usually in mounts transtilla laying flat and

showing as a U- or W-shaped rod. Valva sub-semioval, cucullus top rather obtuse, at lower $1/3$ of height of valva. Sacculus considerably convex, top of this before middle, posterior end of sacculus edge serrulate or wrinkled; inner edge of sacculus, a sclerotized straight bar, with upper edge smooth, top acute, rising, of a moderately variable shape. Aedeagus characteristic, almost rectangularly bent before $2/3$, straight part almost entirely with fine and sparse acicula (directed apicad), densest along lower edge, becoming sparser dorsad; orifice with one (seldom two) downcurved strong tooth at lower edge of orifice. Cornuti two, long slender spines, apicad dilated and gently curved, with long acute points.

Female genitalia. Ostium broadly funicular, moderately sclerotized and rather deep (high), lower edge on each side with a distinct ear-shaped small knob or tubercle of diverse size. Colliculum in frontal view about Y-shaped, upper third or half funicular, remainder much compressed laterally and downwards turned to the left (this is the natural position), this double, sclerotized wall showing as a broad spindle, or oval, with acute ends; edges of sclerites dark. Ductus bursae moderate. Cestum slender, sinuate, over $1/2$ length of ductus, lower part gradually but moderately dilated, end abruptly curved. Signum long, slender, basal plate large, capitulum strong, suboval.

Prov. Nr. 3 East, Bujan, Dudh Kosi Tal, 2900 m, 18-19.vii.1964 (W. Dierl), 1 ♂.

Prov. Nr. 3 East, Junbesi, 2750 m, 25-31.vii.1964 (W. Dierl), 1 ♂.

Prov. Nr. 3 East, Chialsa, Solu Khola Tal, 2700 m, 24.iv.-1.v.1964 (W. Dierl), 5 ♂.

Tampa Khosi Tal, 2600 m, 10.v.1962 (G. Ebert & H. Falkner), 1 ♂.

Helmu-Gebiet, Gusum-Banjyang, 2600 m, 2-15.ix.1967 (W. Dierl), 19 ♂, 2 ♀, genit. slides ♂ 8995, 9065, 9066; ♀ 9137.

Bi-Khola, 2300-2700 m, 13.v.1962 (G. Ebert & H. Falkner), 4 ♀.

Prov. Nr. 1 East, Pultschuk, 2300-2500 m, 12.vi and 16.vi.1967 (Dierl-Forster-Schacht), 3 ♂, 1 ♀.

Prov. Nr. 2 East, Ghandar unter Thodung, 2200 m, 2 and 4.viii.1964 (W. Dierl), 5 ♂, genit. slides 8996, 8998; 8 ♀.

Sun Khosi Tal, 2150 m, 2.v.1962 (G. Ebert & H. Falkner), 1 ♂.

Prov. Nr. 2 East, Jiri, 2000 m, 18.v.1962 (G. Ebert & H. Falkner), 1 ♂. — The same, 2-12.iv.1964 (W. Dierl), 26 ♂, genit. slide 8990. — The same, 8.vi.-12.viii.1964 (W. Dierl), 11 ♂, 2 ♀; genit. slides 8991, 8993 ♂.

Prov. Nr. 3 East, Jubing, 1600 m, 6.v.-31.vii.1964 (W. Dierl), 5 ♂, 2 ♀.

Kathmandu Valley, Godavari, 1600-1800 m, 31.v.-7.vii.1967 (Dierl-Schacht), 57 ♂, 21 ♀, genit. slides ♂: 8994, 8997, 9067, 9068, 9069, 9070, 9093; ♀: 9071, 9078, 9085, 9109.

Prov. Chisapani Garhi, Chisapani Garhi, 1600 m, 11-15.vii.1967 (Dierl-Schacht), 3 ♂, 1 ♀.

Kathmandu-Chauni, 1400 m, 29.v.1967 (Dierl-Schacht), 1 ♂.

Kathmandu, 1400 m, 10.iv.1962 (G. Ebert & H. Falkner), 1 ♂, genit. slide 8987.

Archips termias argutus subsp. nov. (figs. 76-77)

♂ 21-23 mm. Head and thorax purple. Palpus rather long, appressed to face, tip reaching base of scape; tawny. Abdomen light ochreous, dorsum infuscated, and tuft light ochreous.

Fore wing strongly dilated, narrow at base, broad posteriorly, costa with a narrow fold to beyond middle, obliquely curved along this, strongly sinuate posteriorly, apex prominent, termen strongly sinuate above, strongly rounded-prominent, somewhat prominent below, vertical, almost outwards-oblique. Costal fold deep purple-grey, along apex light ochreous. Ground colour pale lilac with a strong pale bluish gloss, markings dull ferruginous and purple. A strongly suffused, sinuate and dilated streak from base, hardly reaching 2/3; glossy leaden-grey oblong area along and below costal fold, finely reticulate with purple and partly penetrating into upper edge of suffused median streak along basal half of that edge; posteriorly streak limited above by cell, below, not distinctly, by fold; a deep purple transverse dot along bases of veins 5-8; costal patch represented by a fulvous-orangeish streak along costa from end of costal fold to 4/5, thence obliquely straight and but slightly narrowed, to end of vein 3, edges well defined; fine purple reticulation towards tornus; veins beyond cell narrowly dark purple; apex dusted with dark purple. Cilia glossy fulvous, in tornus suffused with grey, along upper part of wing and around apex, deep purple.

Hind wing pale whitish-ochreous, somewhat dull, extreme apex golden-ochreous, dorsal half of wing as far as lower edge of cell and vein 2, suffused with light fuscous-bronze. Cilia glossy pale ochreous-fuscous, around apex suffused dark fuscous.

Male genitalia. Very similar to those of *A. termias*, but with a shorter and broader uncus. Transtilla with a thickened accolade-shaped median part and straight extremities. Pulvinus hyaline, large and oval. Sacculus robust, its edge rather oblong-oval anteriorly, long. Aedeagus very similar to that in *termias*, but anterior part longer, posterior and coecum shorter.

Dudh Kosi Tal, 3500 m, 22.vi.1962 (G. Ebert & H. Falkner), 1 ♂, paratype.

Prov. Nr. 3 East, Bujan, Dudh Kosi Tal, 2900 m, 18-19.viii.1964 (W. Dierl), 1 ♂, holotype, genit. slide 8992; the same, 1 ♂, paratype.

Closely allied with *A. termias* Meyrick, but differing by darker colouring, characteristic glossy ground colour and stronger sinuate costa and termen of the fore wing. The elegant species is quite uniform. Apparently it is a high mountains endemic.

Archips subsidiarius (Meyrick) (fig. 89)

Capua subsidiaria Meyrick, 1924: 107 (Kashmir, ♂). — Clarke, 1955: 298.

Archips subsidiaria; Clarke, 1958: 51, pl. 25 figs. 1-1b (lectotype design., wings, genit. figured).

Distribution. India: Kashmir.

Female genitalia. Very similar to those of *A. termias*, viewed in lateral aspect! However, in the present species the broad, very dark and irregularly funicular colliculum, with a thick, refracting edge is a dorso-ventrally compressed sack, with a simple wide oval orifice, being the ostium proper, while a lamella antevaginalis is lacking altogether. Cestum shorter than in *A. euryplinthus* and in most *termias*. Signum slender, straight, with a wide base, capitulum narrowly oblong, depressed.

Material studied. Paralectotype, female, in the British Museum, labelled "co-type, Meyrick det. 1924/ Paralectotype/ Kashmir 5200 ft, Srinagar, 9.vi.1923/ Fletcher coll.". — Genitalia slide no. 19899, Diak. fec.

N W Karakorum, Gilgit, 1400 m, 1.ix.1959 (F. Lobbichler), 1 ♀, genit. slide 7422.

Archips euryplinthus (Meyrick) (fig. 75)

Cacoecia euryplintha Meyrick, 1923: 23 (Darjeeling, ♀). — Clarke, 1955: 36.

Archips euryplintha; Clarke, 1958: 40, pl. 20 figs. 2-2c (lectotype design., wings, genit. figured).

Distribution. Sikkim.

The species, of which only females are known, appears to be closely related to *A. termias*. The superficial differences are usually, larger size, broader and paler forewing and rather distinct markings, with a well-defined discal dot. However, I did not succeed in finding absolute superficial differences.

Female genitalia. Rather similar to those of *termias* and differing only thus: Lamella antevaginalis much shallower, but darker sclerotized, its shallow funicular lower part membraneous in front and seemingly open, fitting into slightly wider colliculum; laterally below lamella antevaginalis without ear-like small knobs, characteristic for *termias*, only with a refracting smooth edge; colliculum dark, narrow, being much compressed laterally, its lower part less turned to the left, therefore appearing narrow. Cestum sometimes

longer than in *termias*. Capitulum longer, semi-circular, not depressed. Signum as in *termias*.

Tampa Khosi Tal, 2800 m, 9.v.1962 (G. Ebert & H. Falkner), 1 ♀.

Prov. Nr. 3 East, Junbesi, 2750 m, 25-31.vii.1964 (W. Dierl), 1 ♀.

Helmu-Gebiet, Gusum-Banjyang, 2600 m, 1.ix.1967 (W. Dierl), 1 ♀, genit. slide 9088.

Prov. Nr. 1 East, Pultschuk, 2300-2600 m, 16.vi.1967 (Dierl-Forster-Schacht), 1 ♀, genit. slide 9094.

Prov. Nr. 2 East, Bhandar unter Thodung, 2200 m, 4.viii.1964 (W. Dierl), 1 ♀, genit. slide 9142.

Prov. Nr. 2 East, Jiri, 2000 m, 2-13.iv.1964 (W. Dierl), 7 ♀, genit. slides 9072, 9135, 9138, 9139, 9141, 9143, 9144.

Kathmandu Valley, Godavari, 1600-1800 m, 8-16.viii.1967 (Dierl-Forster-Schacht), 3 ♀, genit. slides 9075, 9108.

Prov. Nr. 3 East, Jubing, 1600 m, 11.v.1964 (W. Dierl), 1 ♀.

Also material present from the following localities outside Nepal:

NW Karakorum, Gilgit, Banidas, 2600 m, 36 11' ö. Br., 74 33' ö. L., 30.vi-2.viii.1959 (F. Lobbichler), 1 ♀, genit. slide 7425. — Gilgit, 1400 m, 1.ix.1959 (F. Lobbichler), 1 ♀ (BSM). — Bhutan, Gasa, 10000', 21-28.ix.1968 (Mary Ripley), 1 ♀, genit. slide 9136. Thimbu, 7700', 5-7.ix.1968 (Mary Ripley), 2 ♀, genit. slide 9076 (USNM).

Archips expansus (Diakonoff) comb. nov.

Cacoecia expansa Diakonoff, 1941e: 413, pl. 22 fig. 6 (Java, ♂). — 1968: 137 (lectotype designated; syn. of *machlopis*).

Distribution. West Java.

Material studied. West Java, Mts Gede-Panggrango, Tjibodas, 1400 m, viii.1950 (A. Diakonoff), 1 ♂, genit. slide 9158, 1 ♀, genit. slide 9159. — The same locality, 6.iv.1940 (L. J. Toxopeus), 1 ♀ (abdomen missing). — W. Java, Preanger, 5000 vt (Sythoff, Snellen Coll.). — Java occ., Gedeh, 2400 m, iii.1887, 1 ♀. All in LM.

The female genitalia closely compared with those of the lectotype of "*Cacoecia machlopis*" Meyrick [Khasi Hills, Assam, .10.06], genit. slide 6808.

Male genitalia. Tegumen moderate. Uncus longer than in *micaceana*, top distinctly clavate (not clavate in *micaceana*). Socius formed of a few very weak hairs. Gnathos with thin arms and a very long, strong and sclerotized hook. Transtilla strongly undulate. Valva with cucullus more pointed, sacculus base rounded (in fact, valva resembling that in *termias*), edge of sacculus sclerotized, top hardly elevated, an oblong-oval blade. Aedeagus gently and gradually dilated towards apex, sclerotized, orifice more oblique, lower angle

without a curved thorn, coecum penis shorter, less oblique, subtriangular (cornuti broken off).

Female genitalia. Rather similar to those of *A. micaceana*, differing thus. Stronger sclerotized. Lamella antevaginalis, a sclerotized cup with flat bottom (in *micaceana* f. *machlopis* distinctly and characteristically concave in middle, sides swollen into small hemispheres). Sides of lamella antevaginalis gently sinuate, middle of upper rim with a small sclerotized depression; lamella postvaginalis with an acute median point of upper edge, distinctly sclerotized throughout. Colliculum, a broad and long sclerite, but less sclerotized, without a strong, refracting wall, instead with several longitudinal folds, diverging from a point well below upper end. Ductus bursae with three coils. Cestum, a narrow smooth band (in *micaceana* broader, caudal third denticulate along edge, lower extremity semioval), its extremity dilated and truncate, with narrow, longitudinal folds.

The present species, described after two male specimens, is characteristic by the very strong curves of the costa and the termen, of the fore wing, in an exactly similar way as in the female of "*Cacoecia machlopis*". That species, however, proves to be only a forma of *Archips micaceana* Walker.

Having collected both sexes together in 1950, and judging from the great superficial similarity of the female *expansus* and the female *machlopis*, I concluded that my "*expansa*" ♂ was the missing sex partner of Meyrick's *machlopis* (females only) and sunk the former as a synonym of *machlopis*. However, in 1939 I decided that *machlopis* was a synonym of *micaceana*; Clarke (1958) supported this. Renewed close study of the genitalia of this lectotype of *machlopis* showed *expansus* to be a distinct species.

Ancyroclepsis gen. nov. (figs. 84-85, 90)

Head with appressed scales, loosely spreading on vertex. Ocellus posterior. Proboscis very short. Antenna in male moderate, subporrected, slightly sinuate and so appearing moderately ascending, little dilated posteriorly, median segment with appressed scales, roughish only along lower edge, terminal segment moderate, subobtuse, gently drooping, exposed. Thorax smooth. Posterior tibia slender, with roughish, bristly scales above and beneath.

Fore wing oblong-subtruncate, dilated, broadest at $2/3$, costa with a very narrow costal fold, indicated only by elevated extreme edge of median third of costa, costa gradually curved anteriorly, apex obtusely pointed, termen straight above, rounded beneath, little oblique. Vein 2 from before $3/4$, 3 from angle, 3-5 equidistant, 7 separate, to termen, 11 from before middle.

Hind wing about 1, semioval, moderately pointed; without a cubital pecten. Vein 2 from 2/3, 3 and 4 connate from angle, 5 closely approximated at base, 6 and 7 closely approximated towards base.

Male genitalia. Tegumen conical. Uncus long and slender, hooked. Socius very large, subprojected, thin and oval, with a projecting slender point. Gnathos with thin arms and a large and strong central part, emitting a slender erect hook, with a prominent base. Valva triangular, strongly plicate, with a dentate labis; sacculus ending in a slender spine. Aedeagus moderate, straight, slightly narrowed. Cornuti, a sheaf of long spines.

Female genitalia. Sterigma forming a quadrate frame to a wide ostium. Colliculum short, tubular, curved, with refracting wall. Ductus bursae narrow, with a strong cestum along lower 2/3, gradually dilated all the way down, base bent and passing into corpus bursae. Signum, a slender dagger, capitulum small.

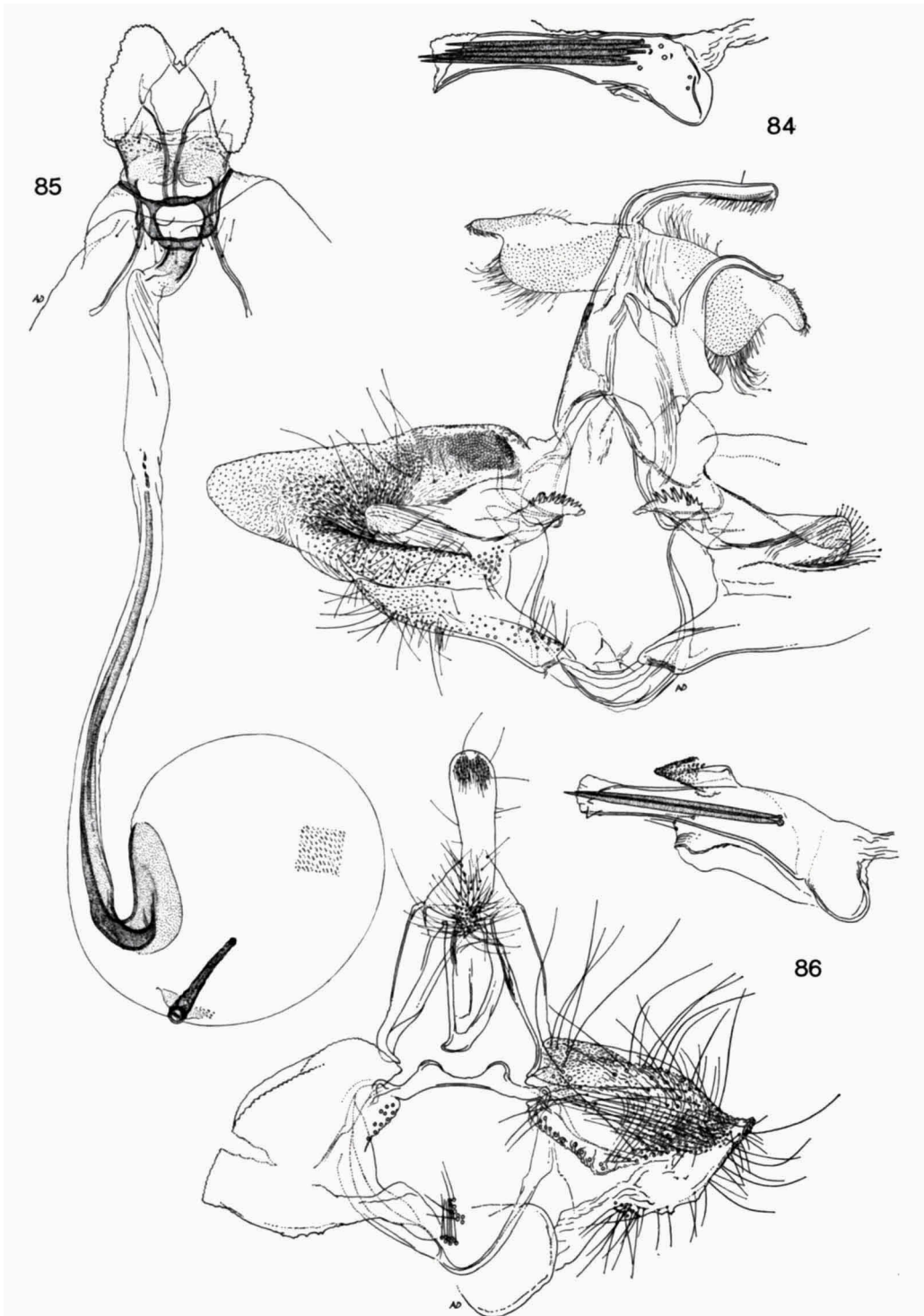
Type species, *Ancyroclepsis rhodoconia* spec. nov.

A peculiar form with novel shape of gnathos. Belongs to the large *Clepsis* group of genera.

Ancyroclepsis rhodoconia spec. nov. (figs. 84-85, 90)

♂ 16-18 mm. Head light ochreous. Palpus pale ochreous, slightly sprinkled with dark fuscous, terminal segment suffused dark fuscous except tip. Thorax light lilac-fuscous, broadly edged with darker purplish-fuscous, collar and tegula light tawny. Abdomen dark fuscous, basal third becoming pale ochreous, apical half with anal tuft, glossy fuscous-grey, anal tuft large, with smoothly appressed scales.

Fore wing oblong-subtruncate, dilated, costa curved along anterior 2/3, straight posteriorly, apex obtusely pointed, termen straight above, rounded beneath; costal fold open, very narrow, traceable only along central fourth of costa. Pale tawny-ochreous evenly dusted throughout, but less densely so posteriorly, with ferruginous-red (tips of scales). Markings ill-defined, darker ferruginous. Anterior half of costal edge suffused fuscous-grey; a broad subcostal pale ochreous streak from base to 1/3 of wing, narrowed posteriorly; basal patch not reaching 1/3, dusted deep ferruginous, edge much suffused, apparently straight and vertical; central fascia from middle of costa to end of dorsum, above ill-defined and merging in basal patch, anterior edge on lower half gently concave and oblique, posterior margin well-defined, with a broad notch in middle of wing, regularly convex above and below this, upper half of margin finely edged dark ferruginous, lower half prominent posterad, to tornus; costal patch rather infuscated, edged and transversely strigulated with narrow fuscous lines, semioval, its median



Figs. 84-86. Genitalia of Archipini. 84, *Ancyroclepsis rhodoconia* g. et sp. n., holotype, with above, aedeagus; 85, do., allotype; 86, *Meridemis furtiva* g. et sp. n., paratype, with above, aedeagus.

third of lower edge continued as a vertical faint fascia, darker edged and lined along veins, halfway across wing, thence ill-defined; a small crescentic blackish line before apex; a fuscous undulate subterminal line to end of vein 3. Cilia glossy pale ochreous-golden, on end of dorsum suffused with dark grey.

Hind wing semipelluculent light fuscous with a golden gloss, evenly dusted with slightly darker fuscous. Cilia glossy pale ochreous-golden, along lower half of termen and along dorsum, light fuscous with a darker fuscous sub-basal band.

Kathmandu Valley, Godavari, 1600-1800 m, 31.v.1967 (Dierl-Forster-Schacht), 1 ♂, holotype, genit. slide 8945; 13.vi.1967 (the same collectors), 1 ♂, paratype.

Prov. Nr. 2 East, Bhandar unter Thodung, 2200 m, 2 and 4.viii.1964 (W. Dierl), 2 ♂, paratypes.

Prov. Nr. 2 East, Jiri, 2000 m, 10.viii.1964 (W. Dierl), 1 ♂, 1 ♀, paratypes, genit. slide 8852 ♀.

Male genitalia, as described with the genus above.

♀ 17 mm. Similar to the male but palpus longer and fore wing as follows: light tawny-ochreous, evenly dusted throughout with fine fuscous specks (tips of scales). Markings strongly reduced. Basal patch faintly dusted darker fuscous, edge well-defined, angulate in middle, hardly concave above and below this; central fascia indicated by a much suffused fuscous-brown line from costa just before middle to dorsum before end, slightly concave on fold, along this convexity extended posterad as a small blotch of fuscous suffusion filling out tornus; posterior edge of fascia traceable only along its lower, convex, fourth; costal patch indicated by fuscous edges, dark lines along veins 7, 8 and 9, and some three serrate lines, converging on lower 1/3 of termen, so forming a triangle. Cilia. glossy ochreous, brighter than in male, dark grey on dorsum.

Hind wing somewhat darker than in male, less pelluculent, veins darker, apex tinged ochreous. Cilia glossy pale ochreous throughout, along lower half of termen with a fuscous subbasal band (cilia along dorsum worn).

Female genitalia, as described with the genus above.

Prov. Nr. 3 East, Pangpoche, 4000 m, 10.vii.1964 (W. Dierl), 1 ♀, allotype, genit. slide 8946. A second, darker female, without abdomen, Prov. Nr. 2 East, Bhandar unter Thodung, 2200 m, 2.vii.1964 (W. Dierl), may be conspecific. The allotype is more ochreous-fuscous and less reddish tinged and with reduced markings, but with cilia rather similar in characteristic minor points. Therefore I believe it to be conspecific, but I am dubious about the second female, without the abdomen.

Clepsis melissa (Meyrick) comb. nov. (pl. 2 figs. 3-5)

Capua melissa Meyrick, 1908: 613 (Assam, ♂). — 1912b: 9. — 1913: 14. — 1937: 172 (Yulingshan). — Clarke, 1955: 201. — 1958: 72, pl. 36 figs. 1-1b (lectotype design., wings, genit. figured). — Obraztsov, 1955: 224.

Capua epiclintes Meyrick, 1928: 452 (♀, Bengal). — Clarke, 1955: 128. — 1958: 64, pl. 34 figs. 2-2b (holotype: wings & genit. ♀ figured). **Syn. nov.**

Distribution. India: Assam, Bengal, Himal; Tibet, China.

A rather variable species, confusingly heterogenous-looking, the more so because of considerable sexual dimorphy. Therefore the larger number of dissections needed.

Prov. Nr. 3 East, Bujan, Dudh Kosi Tal, 2900 m, 18-19.vi.1964 (W. Dierl), 1 ♀, genit. slide 8950.

Prov. Nr. 3 East, Junbesi, 2750 m, 25-31.vii.1964 (W. Dierl), 1 ♀.

Prov. Nr. 3 East, Chialsa, Solu Khola Tal, 2700 m, 24.iv-1.v.1964 (W. Dierl), 8 ♂, genit. slide 7070 ♂.

Tampa Khosi Tal, 2600 m, 9.v.1962 (G. Ebert & H. Falkner), 1 ♀, genit. slide 8944.

Prov. Nr. 2 East, Bhandar unter Thodung, 2200 m, 3.viii.1964 (W. Dierl), 1 ♂.

Helmu-Gebiet, Gusum Banjyang, 2600 m, 1.ix-5.ix.1967 (W. Dierl), 15 ♂, 1 ♀.

Prov. Nr. 2 East, Jiri, 200 m, 2-7.iv and 13.viii.1964 (W. Dierl), 21 ♂, 1 ♀, genit. slides 7453 ♂, 8957 ♂, 8958 ♀.

Kathmandu Valley, Godavari, 1600-1800 m, 5.vi-31.vii.1967 (Dierl-Forster-Schacht), 4 ♂, genit. slides 8935, 8940; 2 ♀, slides 8942, 8949.

Prov. Chisapani Garhi, Chisapani Garhi, 1600 m, 11-15.vii.1967 (Dierl-Forster-Schacht), 1 ♀.

Prov. Nr. 3 East, Jubing, 1600 m, 3.v, 11 and 20-23.vii.1964 (W. Dierl), 1 ♂, 3 ♀, genit. slide 8943.

Clepsis insulata (Meyrick) comb. nov. (fig. 99)

Tortrix insulata Meyrick, 1908: 619 (Simla, ♂ ♀). — 1912b: 27. — 1913: 29. — Clarke, 1955: 172. — 1958: 243, pl. 121 figs. 3-3b (lectotype design., wings, genit. ♂ figured).

Distribution. Simla.

Bi Khola, 2300-2700 m, 13.v.1962 (G. Ebert & H. Falkner), 1 ♂, genit. slide 8961.

Prov. Nr. 2 East, Jiri, 2000 m, 2-10.iv.1964 and 13.viii.1964 (W. Dierl), 29 ♂, genit. slides 8893, 8956; 9 ♀, slide 8894.

Prov. Nr. 2 East, Bhandar unter Thodung, 2000 m, 4.viii.1964 (W. Dierl).
 1 ♀, genit. slide 8976.

Neocalyptis tricensa (Meyrick) comb. nov. (pl. 3 fig. 6, pl. 5 fig. 12)

Tortrix tricensa Meyrick, 1912a: 6 (♂ ♀, Assam). — 1912b: 33. — 1913: 33. — Clarke, 1955: 315. — 1958: 256, pl. 128 figs. 3-3b (lectotype ♂ design., wings, genit. figured).

Clepsis tricensa; Kawabe, 1965: 462 (Japan, ♂ ♀ descr., genit. figured).

Distribution. Assam. Japan.

Male genitalia. Eighth segment forming a pouch, when at rest, entirely enclosing genitalia: eighth tergite semispherical, with a cross-shaped central sclerotization; eighth sternite forming a pair of circular sacs upon a large and slender mensis ventralis. Tegumen moderate, with truncate shoulder. Uncus moderate, with a constricted base, dilated beyond base, top bent down, long and straight. Socius moderate, pending, with a narrow curved base. Gnathos rather long, arms slender, hook thin. Valva semicircular, rather short, labis long, rising, clavate and thorny; pulvinus large, projecting; sacculus strong, with a blade-like edge, but sclerotized only along upper rim. Vinculum quadrate. Aedeagus simple, little bent, rather short.

Female genitalia. Sterigma simple, ostium being a large, transversely-oval opening. Ductus bursae simple. Corpus bursae ovoidal. Signum large.

Kathmandu Valley, Godavari, 1600-1800 m, 2-8.vi.1967 (Dierl-Forster-Schacht), 33 ♂, 2 ♀, genit. slides 8906 ♂, 8907 ♀, 8908 ♂.

Neocalyptis affinisana (Walker) comb. nov. (pl. 3 fig. 7)

Tortrix affinisana Walker, 1863: 328 (Ceylon, ♂). — Walsingham, 1887: 493. — Cotes & Swinhoe, 1887: 696, no. 4746.

Capua affinisana; Meyrick, 1912b: 10 (emend.). — 1913: 15. — 1914: 47 (Formosa). — in De Joannis, 1930: 709 (Tonkin). — 1934: 29. — Caradja & Meyrick, 1935: 48 (Shanghai, Lungtan).

Epagoge affinisana; Diakonoff, 1941b: 213. — 1941d: 411. — 1947: 342. — 1948: 342. *Epagoge affinisana*; Diakonoff, 1952: 144. — Obraztsov, 1955: 224.

Distribution. Widely distributed over South Asia, but it is uncertain whether all records pertain to the same species.

Kathmandu Valley, Godavari, 1600-1800 m, 7.viii.1967 (Dierl-Schacht), 1 ♂, genit. slide 8926.

Rapti Tal, Monahari Kholā, Belwa, 350 m, 5-12.v.1967 (Dierl-Forster-Schacht), 1 ♂, genit. slide 8925.

Rapti Tal, ca. 20 Meilen westl. Hitora, 300 m, 23-27.iii.1962 (G. Ebert & H. Falkner), 2 ♂, genit. slide 8948.

Rapti Tal, 200 m, 14-19.V.1967 (Dierl-Forster-Schacht), 5 ♂, genit. slide 8934.

Meridemis gen. nov. (figs. 83, 86-87)

Head with appressed scales, forehead sometimes with dense, somewhat roughish hairs (*furtiva*) or smooth, with a pair of lateral hair tufts. Ocellus posterior. Proboscis weak. Antenna in male short-ciliate, in female simple. Thorax smooth.

Fore wing with a very narrow costal fold of diverse shape, or without fold, subtruncate, of slightly differing shape, narrower in female. Vein 2 from 3/5, vein 3 from angle, 4 closer to 5, 7 and 8 stalked, 7 to termen, 11 from middle.

Hind wing about 1, termen sinuate; without cubital pecten. Vein 2 from beyond 2/3, veins 3 and 4 connate from angle, 5 approximated at base, 6 and 7 connate.

Male genitalia resembling those of *Homona* Walker, but slender, less robust, with a longer uncus, small, diversely shaped socii, a moderate or long, slender hooked gnathos; transtilla slender, band-like, diversely dilated in middle. Valva semioval, fleshy, with sclerotized sacculus. Aedeagus little bent, sometimes with dorsal structures of the manica and small apical teeth. Cornuti, two long spines.

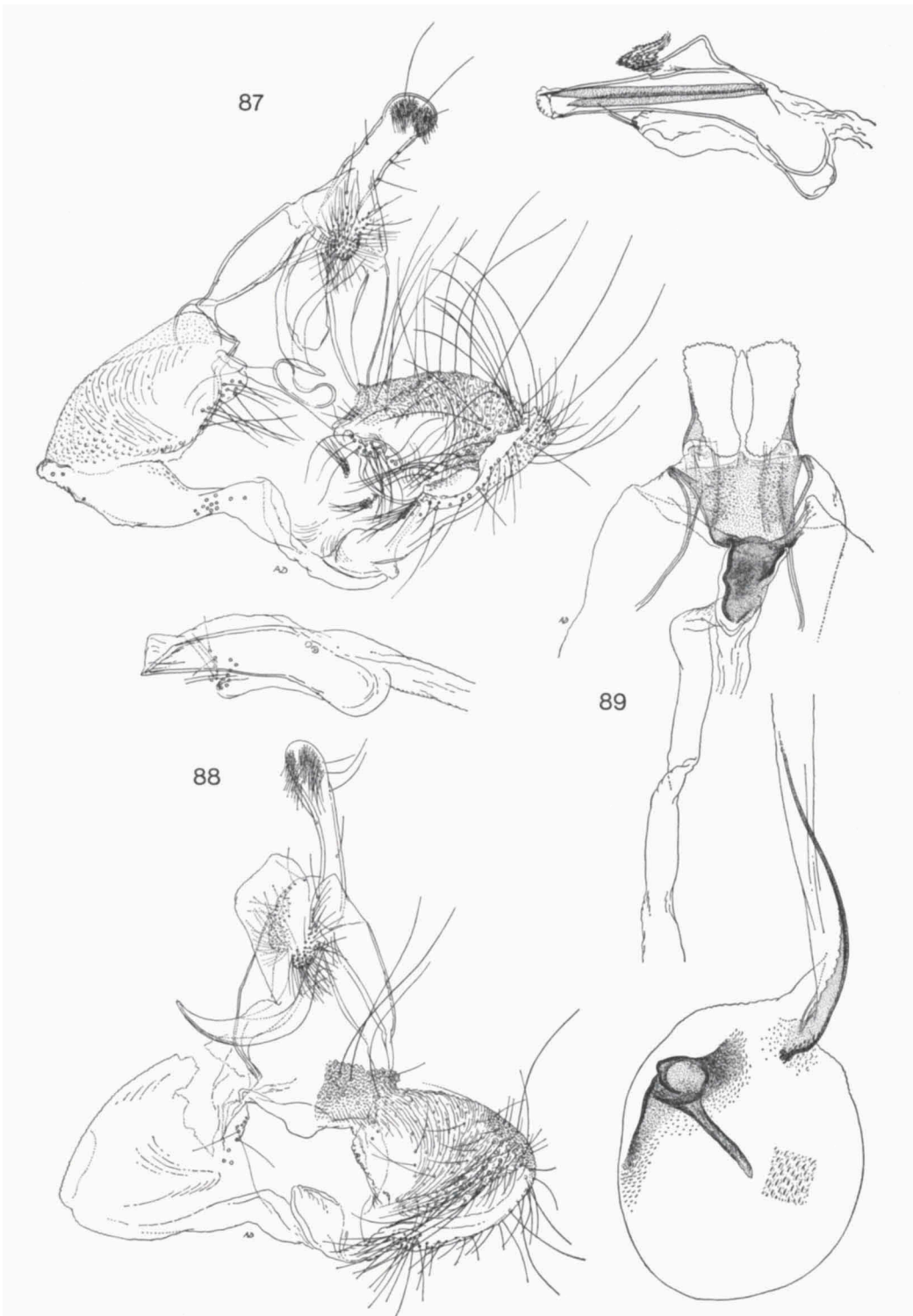
Female genitalia. Sterigma, a simple subquadrate cadre-like sclerite. Lamella postvaginalis, a transverse rod. Lamella antevaginalis semioval. Colliculum, a slender sclerotized cup. Ductus bursae long and slender, cestum, a long narrow band, coiled twice. Signum dagger-shaped, with capitulum.

Type species, *Meridemis furtiva* spec. nov.

The genus is characterized by the small size and the facies, resembling that of *Epagoge* Hübner most, but the male genitalia are remarkably close to those in *Homona* Walker, except for a much more slender build, corresponding with these small insects.

However, the palpi are longer, less appressed to face and less ascending, while the veins 6 and 7 in the hind wing are connate, a peculiar feature in this group of genera.

Hitherto the well known species, "*Tortrix*" *retractana* Walker (cf. below), has been attributed either to *Capua* or to *Epagoge*, but the male genitalia do not fit in either genus. Obraztsov was the first to detect the similarity with *Homona* and placed the species in that genus. But it does not fit at all in this group of large, robust species with an entirely different facies and often a pronged aedeagus.



Figs. 87-89. Genitalia of Archipini. 87, *Meridemis furtiva* g. et sp. n., paratype, slide 9006, with above right, aedeagus; 88, *M. bathymorpha* g. et sp. n., holotype, with above, aedeagus; 89, *Archips subsidiarius* (Meyr.), slide 7422.

The following two new species from Nepal are closely allied with one another and also with the Ceylonese *Meridemis* species, so closely, in fact, that it seems desirable to append remarks on those species from Ceylon, in order to facilitate the characterization of the present Nepalese species, and to present a key to all of them.

Key to the species of *Meridemis*

Males

1. Transtilla, a simple band, at the sides not or hardly narrower than in the middle 2
- Transtilla slender at the sides, in middle dilated, often with two prominences of the upper edge 3
2. Transtilla, a broad band, upper edge, convex; uncus rather broad *detractana*
- Transtilla narrow, upper edge concave, lower thickened; uncus rather slender *invalidana*
3. Transtilla moderate, upper edge with two rounded prominences, concave in between. Aedeagus with anellus forming above denticulate thick fold *furtiva*
- Transtilla slender laterally, with a small median dilatation, often with two small, rather approximated prominences. Anellus simple *bathymorpha*

Females

(Females of *furtiva* are unknown so far)

1. Colliculum funnel-shaped, very slender below *detractana*
- Colliculum, an oval flat sclerite 2
2. Lamella postvaginalis, a dark bow, sides not dilated; cestum with one coil, dark and broad *bathymorpha*
- Lamella postvaginalis, a lightly sclerotized narrow curved rod, sides similarly sclerotized, strongly dilated. Cestum slender, with one coil and a long, straight part along ductus, almost reaching colliculum *invalidana*

Meridemis furtiva spec. nov. (figs. 83, 86-87)

♂ 15 mm. Head dark fuscous, vertex becoming light ochreous, face and forehead rough-scaled, face pale ochreous. Palpus appressed to head, subporrect, moderately thick, dilated towards apex of median segment, terminal segment short, exposed, obtuse; palpus projecting beyond face over 1/2 eye breadth. Thorax light ochreous, slightly infuscated. Abdomen greyish-fuscous.

Fore wing oblong-truncate, moderately broad, gradually dilated, broadest at termen. Costal fold very narrow, often imperceptible, if present, then from beyond base to about $3/4$, nowhere dilated, usually of equal breadth throughout; costa moderately arched at base, straight posteriorly, apex slightly prominent and obtusely pointed, termen gently sinuate and vertical above, oblique and rounded beneath. Evenly light ochreous, moderately strewn with blackish-brown minute, somewhat irregular points, often elongate, usually more dense on costal half, sometimes a more distinct series before termen. Base of costal edge to less than $1/4$ greyish; central fascia indicated by an obliquely quadrate costal spot before middle, fuscous with somewhat darker edges, to upper edge of cell; and by a faint fuscous rounded suffusion below middle of wing, extending along posterior third of dorsum, somewhat darker centred above fold, including several faint darker dorsal dots; costal patch from before $4/5$ of costa to before apex, subtriangular, anterior edge slightly truncate. Cilia glossy pale golden ochreous.

Hind wing opaque but tending to become semipellucet, light grey and paler at base, gradually becoming deeper tawny-fuscous posteriorly; termen rather sinuate. Cilia glossy pale golden-ochreous, in tornus and on dorsum pale greyish.

Male genitalia. Tegumen moderate, narrowed, shoulders oblique. Uncus moderate, clavate, top rounded. Socius small, rounded, pending. Gnathos moderate, hook short. Transtilla, a straight rod with two sublateral rounded prominences of upper edge, each with a concave median ridge, and minutely denticulate along upper edge. Valva rather short, about as high as broad, sacculus 1, sclerotized, spindle-shaped; pulvinus small, little prominent. Juxta rather large, oval. Aedeagus moderately bent in middle, top with 1-2 sclerotized small teeth; a membranous, plicate and denticulate fold of manica dorsally in middle of aedeagus. Cornuti, two long spines.

Prov. Nr. 2 East, Jiri, 2000 m, 2, 8 and 10.iv.1964 (W. Dierl), 1 ♂, holotype, genit. slide 8922; 12 ♂, paratypes, genit. slide 8937.

Kathmandu Valley, Godavari, 1600-1800 m, 8.vi.1967 (Dierl-Forster-Schacht), 1 ♂, paratype, genit. slide 8891; 31.vii.1967 (Dierl-Schacht), 1 ♂, paratype, genit. slide 9004, 1 ♂, paratype.

Kathmandu, Chauni, 1400 m, 29.iv.1967 (Dierl-Schacht), 1 ♂, paratype.

Slightly variable as to the ground colour which may be of intenser yellowish or just pale ochreous. The dark dots and markings generally may be more or less obliterate. Characteristic is the costal fold which is always very narrow and long, from beyond base to well reaching costal patch — to being hardly perceptible, as a hardly elevated costal edge or absent altogether. Superficially extremely similar to *M. invalidana* (Walker), but well differing

by the male genitalia (there are no females available) and less distinctly, by the superficial characteristics.

Meridemis bathymorpha spec. nov. (figs. 88, 92-93, pl. 4 fig. 8,
pl. 5 figs. 10, 11)

♂ 13.5 mm. Head pale ochreous, face smooth, forehead with two small lateral tufts. Palpus slender, hardly dilated, subascending, closely appressed to face; pale ochreous tinged greyish, somewhat darker and tawny along lower edge. Thorax evenly dull pale ochreous. Abdomen pale ochreous.

Fore wing rather broad, truncate, not dilated, costal fold very small and short, slightly dilated before $1/4$ of costa, often turned up and therefore visible only in caudal aspect, or absent altogether. Costa arched at base, gently sinuate posteriorly, apex rounded-rectangular, not prominent, termen hardly concave above, straight, gently slanting outwards (over-vertical!), rounded beneath. Rather dull pale ochreous, lower half faintly clouded with tawny, a few purple or black minute irregular points, tending to form parallel oblique series, along median part of disc. Basal patch faint, darker ochreous-greyish than ground colour, obliterate on upper third, edge strongly outwards-oblique, finely serrulate, above with a few dark points; central fascia formed by a conspicuous, obliquely conical leaden-grey spot edged with purple-black, top to upper edge of cell; emitting a pale tawny strigula to $3/5$ of dorsum, slightly less oblique than edge of basal patch, strewn with sparse minute black points; lower half of strigula extended by a pale tawny suffusion, extending almost to tornus, fading out posteriorly; costal patch well defined, fuscous, semioval, only lower part of posterior edge suffused; traces of a strigula from patch towards tornus, indicated only by an irregular series of minute dark points. Cilia glossy pale ochreous, with posterior half from below apex to above tornus grey-fuscous.

Hind wing sub-semipelluculent light grey, rather glossy, on apical fifth becoming pale pinkish-ochreous; veins throughout somewhat darker grey-tawny. Cilia glossy pale fuscous with a grey subbasal band and a whitish base.

Male genitalia. Tegumen high, narrowed. Uncus with a slender base and strongly clavate top. Socius moderate, rounded and pending, above this top of tegumen with a sub-rigid corrugate ridge, reaching base of uncus. Uncus long, slender, hook rather short. Transtilla, a slender straight band, in middle abruptly dilated, with one ventral and two dorsal lobe-like extensions. Valva semioval, longer than high. Sacculus moderate, rather slender, gradually attenuated. Juxta subtriangular. Aedeagus gradually curved and narrowed apicad, anellus without separate fold dorsally (as in *furtiva*);

orifice sclerotized, with two small down-curved teeth. Cornuti, two long spines.

Rather variable, usually with the above described markings more or less reduced. There occurs also a denser marked, much less frequent form, the markings as described, but dark purple, and extended thus. Edge of basal patch complete, straight and narrow, from $1/6$ of costa, with a transverse larger dot at $1/3$ of disc; strigula of central fascia dark and distinct, as is its suffused posterior dilatation, reaching tornus; costal patch dark grey-purple, emitting a gradually curved row of dense larger purple dots; disc posteriorly with several transverse strigulae. The genitalia of this form are exactly similar to the described.

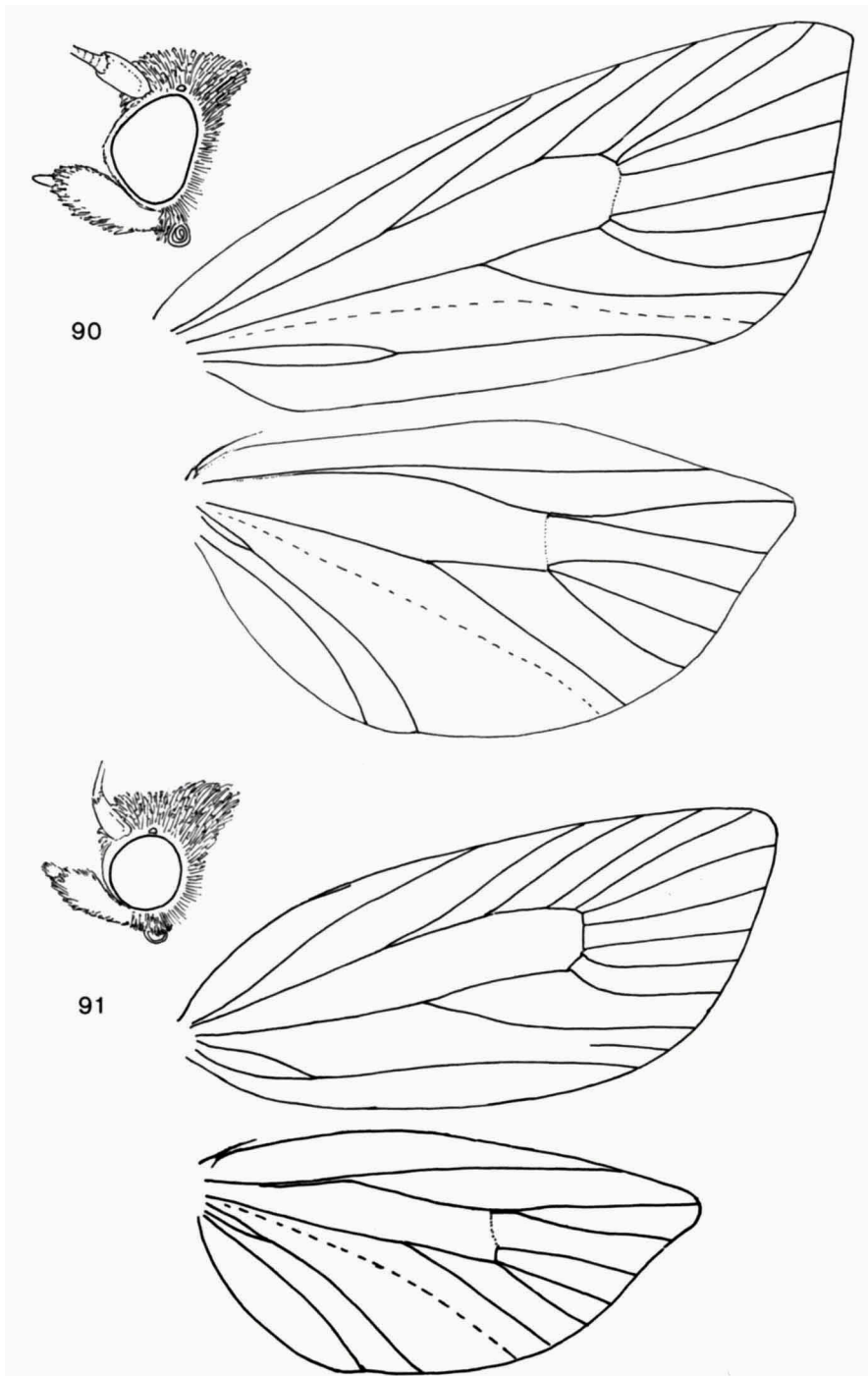
♀ 16 mm. Head and thorax fuscous. Palpus slightly longer and more dilated than in male, fuscous-grey, terminal segment truncate, dark fuscous. Abdomen pale ochreous, dorsum fuscous.

Fore wing oblong-truncate, slightly narrower than in male, costa more abruptly and strongly arched at base, gently sinuate posteriorly, apex sub-obtuse, slightly prominent, termen sinuate above, rounded below, vertical. Dull pale ochreous, strigulated on upper half throughout with interrupted deep purple strigulae, oblique and curving down below. Lower third of wing evenly infuscated, this suffusion dilated at $3/4$, indicating lower part of central fascia; upper part of this fascia indicated by an oblique, rather narrow leaden-grey blotch with parallel purple edges, from costa well before middle, to upper edge of cell before its angle; costal patch elongate-semioval, leaden-green. Cilia glossy pale ochreous, apical fourth from below apex to above tornus, purple.

Hind wing tawny-grey, more tawny tinged towards apex, with darker tawny-brown veins. Cilia glossy whitish-fuscous, basal half darker grey-fuscous with a whitish basal line.

Female genitalia. Resembling those of *M. invalidana* (Walker) from Ceylon, but differing thus. Cestum broader but shorter, about $3/4$ length of ductus, as against almost 1 in *invalidana*; signum longer. These characters already allow of a rather easy discrimination of the two species. Besides, the sterigma is widely cup-shaped, with lamella postvaginalis hardly sclerotized (as against distinctly sclerotized throughout, in *i.*), the border of lamella postvaginalis and ostium formed by a distinct dark semicircular rim (absent in *i.*); lamella antevaginalis represented by a long, strongly curved edge, thick in the present species, slender in *invalidana* (cf. pl. 5 fig. 10 and pl. 6 fig. 14).

The females are rather variable, with the described markings more or less reduced, usually unicolorous, with fuscous costal markings strongly suffused, dorsal suffusion absent.



Figs. 90-91. Wing neuration and heads of Tortricinae, males. 90, *Ancyroclepsis rhodoconia* g. et sp. n., ♂; 91, *Electraglaia isozona* (Meyr.), g. n.

Kathmandu Valley, Godavari, 1600-1800 m, 25.vi-7.viii.1967 (Dierl-Forster-Schacht), 1 ♂, holotype (7.viii.1967), genit. slide 9175; 12 ♂, paratypes, genit. slide 8936; 4 ♀.

Kathmandu Valley, Chauni, 1400 m, 14.vi-7.ix.1967 (Dierl-Forster-Schacht), 16 ♂, paratypes, genit. slides 8892, 9005; 5 ♀, genit. slides 9008, 9009.

Kathmandu, 1400 m, 15-22.iv.1962 (G. Ebert & H. Falkner), 1 ♀, allotype, (15.iv.1962), genit. slide 9165; 1 ♂, 2 ♀, paratypes.

Prov. Chisapani Garhi, Bainse Dobhan, 730 m, 16-20.vii.1967 (Dierl-Schacht), 5 ♂, genit. slide 9007, paratypes.

Bhirmpedi, 400 m, 4-7.iv.1962 (G. Ebert & H. Falkner), 3 ♂, genit. slide 9010; 3 ♀, paratypes.

Rapti Tal, Jhawani, 200 m, 14-19.v.1967 (Dierl-Forster-Schacht), 2 ♂, 1 ♀, paratypes.

Meridemis invalidana (Walker) comb. nov. (pl. 6 figs. 13-14)

Tortrix invalidana Walker, 1863: 327 (Ceylon, ♂, recte ♀). — Walsingham, 1887: 493 (Ceylon). — Cotes & Swinhoe, 1889: 696, no. 4750.

Epagoge invalidana; Meyrick, 1908: 617 (redescr., Ceylon, India). — Diakonoff, 1941d: 410 (Java). — 1947: 341 (Java, Sumatra). — 1948a: 343 (Tonkin, India, Ceylon, Malay Archip.).

Capua invalidana; Meyrick, 1912b: 9. — 1913: 14. — 1934: 29 (Kwantung). — Fletcher, 1917: 300 (India). — 1921: 34 (food plant). — Caradja, 1925: 374 (Lienping).

Dichelia retractana (nec Walker) Walsingham, in Swinhoe, 1885: 881 (Bombay). — 1887: 192, pl. 208 fig. 11 (Ceylon). — Cotes & Swinhoe, 1889: 697 (India, Ceylon, Australia). — Meyrick, 1934: 29 (Kwantung). — Caradja & Meyrick, 1935: 51 (Shanghai).

Epagoge retractana (nec Walker) Walsingham, 1900: 483. — Diakonoff, 1939a: 165 (India to China; biol.). — 1941c: 379.

Capua retractana (nec Walker) Meyrick, 1912b: 9. — 1913: 14. — Caradja, 1925: 374 (Lienping).

Homona retractana (nec Walker) Obraztsov, 1954: 176, 180, figs. 56-58, 67-69 (head, neuration, genit.). — 1955: 208. — 1957: 312.

Distribution. India, Ceylon, Tonkin, Malaya, Malay Archipelago, China, Korea (possibly more than one species). Not in Australia.

There existed a considerable confusion about the identity of the present species, ended only by the study of the genitalia, partly of types, partly of other old and authentic material in the British Museum, by Bradley and by Obraztsov. The untimely death of the latter author prevented the publication of his results.

Meyrick thought that "*Tortrix*" *retractana* Walker, 1863, with the holotype, a female from Australia, subsequently attributed by various authors to "*Dichelia*", "*Epagoge*", "*Capua*" and even "*Homona*", was the male sex of

"*Tortrix*" *invalidana* Walker, 1863, from Ceylon. Bradley (1956) has shown that this *retractana* was one more synonym of the Australian species, *Austrotortrix postvittana* (Walker) which I believe to be only remotely allied and not congeneric with *invalidana*.

Furthermore, there is another confusing name, "*Teras retractana*" Walker, 1863, but this is North American and not allied at all.

Actually Meyrick has recorded the above mentioned synonymy already (1912b: 32), but apparently by oversight he used as a synonym of *postvittana* the name "*Teras retractana*" Walker (1863: 288), instead of "*Tortrix*" *retractana* Walker (1863: 322!), what he undoubtedly meant.

Finally "*Tortrix detractana*" Walker, 1863, also from Ceylon, was regarded by Meyrick as a probable synonym of *invalidana*; the female holotype of the latter, a female and not a male, as recorded by Walker, labelled: Ceylon, Templeton, 1852-1862, lacks the abdomen. However, there is also a couple, ♂♀, of an identical species in the British Museum from Ceylon, Nawalapitiya, 2000 ft, June, 1890 (Pole), Walsingham Coll., nos. 14066 and 14070, respectively. It was Obratzsov who studied the genitalia of these specimens (slides nos. 6284 and 6269, respectively) and stated that the species must be identical with the holotype of *detractana* but is distinct from that of *invalidana* (in litt.; he never published these data). That species may be termed now ***Meridemis detractana*** (Walker) comb. nov. (pl. 6 fig. 15), apparently a species of moderate and low altitudes, pale ochreous, not infuscated, with two pronounced costal dark brown spots in the fore wing.

This leaves us with the name ***Meridemis invalidana*** (Walker) comb. nov. (pl. 6 figs. 13-14), the second Ceylonese species, with narrower fore wings, more or less irrorated and/or infuscated all over; the females have darker costa and dorsum, but seldom well developed discal markings.

The fact that the genus *Meridemis* comprises so closely related species of probably a "recent" origin, suggests to us the necessity of a thorough re-study of the genitalia of the available material of *detractana* and *invalidana* from other localities, before the references and the distribution, communicated at the head of this chapter can be ascribed to *M. invalidana* with any certainty.

Diplocalyptis gen. nov. (fig. 94)

Head with appressed scales, vertex smoothly long-scaled. Ocellus posterior. Proboscis short. Palpus rather short, less than twice diameter of eye, almost porrected, gently subascending, median segment dilated with slightly roughish scales, short below, long towards apex above, terminal segment short,

subobtuse, exposed and drooping. Thorax smooth. Abdomen and posterior tibia normal

Fore wing sublanceolate, moderately broad, with a large costal fold in male to beyond middle, costa obliquely but little curved anteriorly, straight posteriorly, apex pointed, termen almost straight (hardly sinuate), considerably oblique above, little rounded below. Vein 2 from 3/5, 3 from angle, 4 closer to 5, 7 separate, to termen, 11 from slightly before middle, veins in cell indefinite.

Hind wing 1, oblong, sub-semioval, pointed, without a cubital pecten. Vein 2 from 3/4, 3 and 4 short-stalked from angle, 5 closely approximated at base, 6 and 7 stalked.

Male genitalia approaching those of *Neocalyptis*, but with a deeply furcate uncus and an extended vinculum, with a high valva of seemingly two layers, inner edge of sacculus distinct, moderately sclerotized. Socius free but very small. Gnathos hooked, slender. Labis very strong, with a medio-ventral appendix, representing pulvinus. Aedeagus little curved, anterior half dilated, a curved spike at lower edge of orifice. Cornuti, a sheaf of spines.

Type-species, *Diplocalyptis apona* spec. nov.

Belongs to the *Clepsis* Guenée (1845) -group of genera and is nearest to *Neocalyptis* Diakonoff, 1941, described from Java, differing chiefly by the furcate uncus and modified, extended vinculum portion.

***Diplocalyptis apona* spec. nov. (fig. 94)**

♂ 11.5-12 mm. Head, palpus and thorax light ochreous-tawny, thorax also tinged brownish. Abdomen dark fuscous, genitalia large.

Fore wing rather narrow, sublanceolate, costa with a large fold to beyond middle, moderately curved along this, little curved posteriorly, apex pointed, termen straight, oblique. Light tawny-fulvous, partly pinkish-tinged, partly dusted with dark brown. Markings well defined, deep ferruginous mixed with blackish-brown. Costal fold paler, pinkish, with a few faint pale tawny, transverse marks; wing before central fascia except on costal fold moderately dusted with dark brown; central fascia from just before middle, narrow above, gradually dilated all the way to dorsum, anterior edge straight to just beyond middle of dorsum, posterior edge slightly serrate, gently concave throughout, to tornus; some three dark brown specks beyond lower half of fascia, included in a grey suffusion, reaching above middle of wing and touching costal patch; this patch deep blackish-brown, centred with leaden-grey of the same density; it is strongly constricted in middle and so almost separated in a costal, semioval spot and an irregularly rhomboidal spot, resting on dorsum above tornus; apex and termen pale golden-ochreous,

with a few black points. Cilia ochreous, in tornus and along dorsum, blackish.

Hind wing grey-fuscous with a golden gloss. Cilia darker grey, with a subbasal grey band and pale basal line.

Male genitalia: very similar to those of *D. operosa*, but with labis more robust, thicker; vinculum more distinctly extended downwards, so that the ventral part of the sacculus is much wider. Aedeagus more pistol-shaped, apical half wider, cornuti shorter and much less numerous. Furthermore, as described with the genus above.

Prov. Chisapani Garhi; Chisapani Garhi, 1600 m, 11-15.vii.1967 (Dierl-Schacht), 1 ♂, holotype, genit. slide 8927; 1 ♂, paratype.

Kathmandu, 1400 m, 11.v.1962 (G. Ebert & H. Falkner), 1 ♂, paratype.

Closely allied with *D. operosa* (Meyrick), described from Ceylon and now recorded from Sumatra (cf. below). Except for the genital characters, this species differs superficially thus: less tawny-pinkish, more pale ochreous-tinged. Stronger strigulated by minute dark strigulae, especially in apex and along termen; fold not reaching middle of costa; markings less contrasting. Hind wing slightly darker.

Diplocalyptis operosa (Meyrick) comb. nov. (pl. 4 fig. 9)

Cacoecia operosa Meyrick, 1908: 616 (♂ ♀, Ceylon). — 1912b: 33. — 1913: 33. — Clarke, 1955: 225.

Tortrix operosa; Clarke, 1958: 248, pl. 124 figs. 2-2b (lectotype design., wings, genit. ♂ figured).

Distribution. Ceylon.

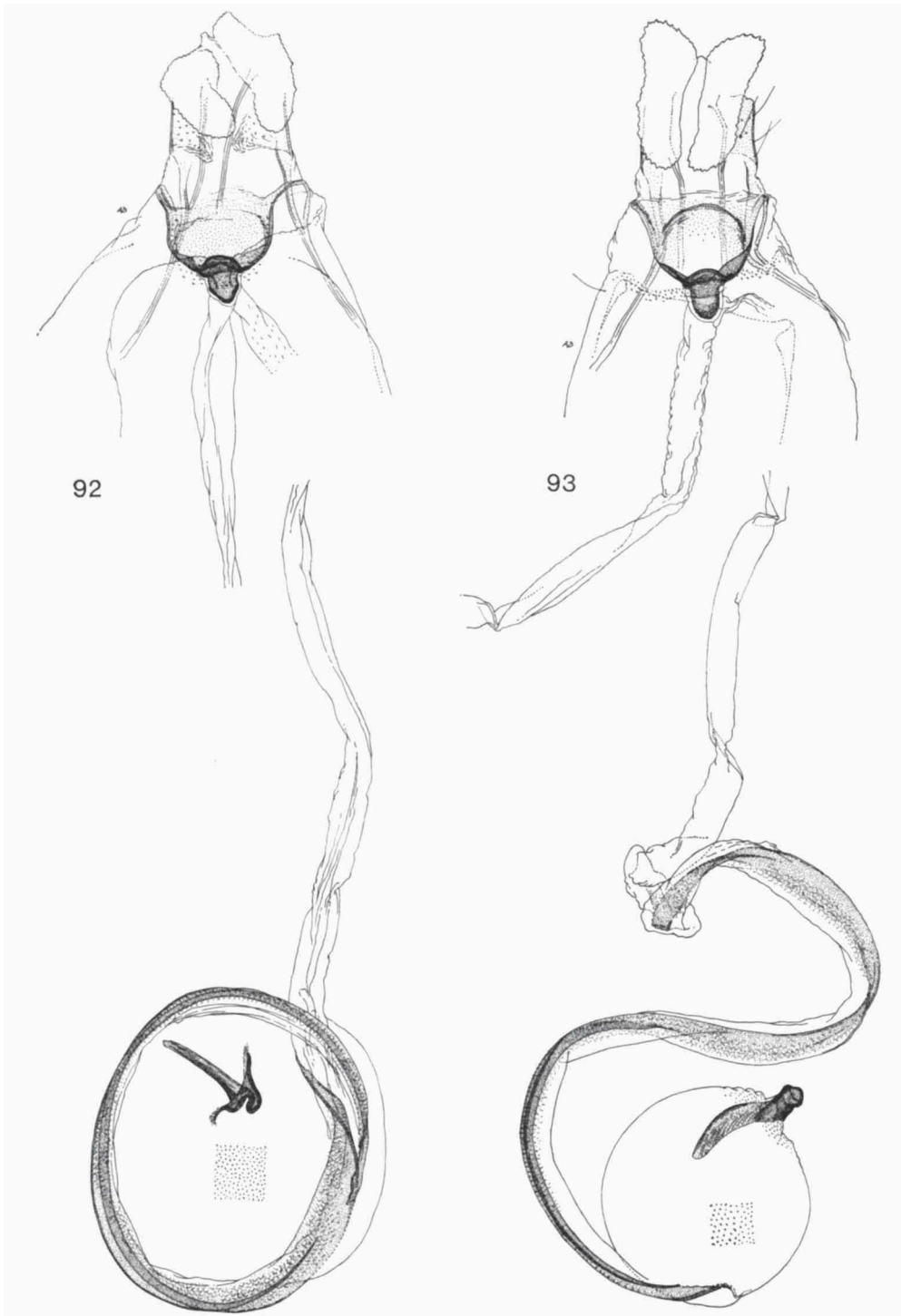
East Sumatra, Deli, Dolok Meranaïr, 150 m, xi.1967 (W. Dierl), 1 ♂, genit. slide 8939.

Lumaria gen. nov. (figs. 82, 95, 97)

Head with appressed scales. Ocellus posterior. Proboscis short. Palpus porrected, about twice diameter of eye, at base slender, median segment strongly dilated, triangular, almost as high as eye, terminal segment short, smooth, drooping, almost completely concealed. Antenna in male short-ciliate. Thorax smooth. Abdomen and hind tibia normal.

Fore wing without a costal fold in male, subtruncate, moderately broad, costa moderately curved throughout, apex pointed, termen gently sinuate above, rounded beneath, oblique. Vein 2 from beyond middle, 3 from angle, 4 closer to 5, 7 and 8 stalked, 7 to termen, 11 from 1/3, veins in cell indefinite.

Hind wing subtrapezoidal, slightly over 1, vein 2 from 2/3, 3 and 4 connate from angle, 5 approximated at base, 6 and 7 stalked.



Figs. 92-93. Female genitalia of *Meridemis bathymorpha* g. et sp. n. 92, allotype; 93, paratype, slide 9008.

Male genitalia resembling those of *Epagoge*, but with more clavate uncus; socius free and very small, gnathos slender, long and hooked, vinculum almost circular, arms broad; valva small, semioval, sacculus rather broad, flat and sclerotized, a dense row of spines along upper edge, of longer spines along lower ridge-like edge. Aedeagus strongly curved, lower "lip" pointed. Cornuti, a sheaf of spines.

Female genitalia. Sterigma rather large, cup-shaped, moderately sclerotized, more so at the sides, lamella antevaginalis with a strong dark upper rim and below this, a semicircular opening. Ductus bursae slender and long, tortuous. Corpus bursae simple.

Type-species, *Capua minuta* Walsingham.

Allied with *Epagoge* group of genera but very distinct by the peculiar spinose sacculus.

Lumaria minuta (Walsingham) comb. nov. (figs. 82, 95, 97)

Tortrix pusillana Walker, 1863: 328 (Ceylon; nec *Phalaena Tortrix pusillana* Denis & Schiffermüller, 1777; nom. praecoc.). — Walsingham, 1887: 493 (Ceylon). — Cotes & Swinhoe, 1889: 697, no. 4751.

Capua minuta Walsingham, 1900a: 484 (♂ ♀, Japan). — Meyrick, 1912b: 9. — 1913: 24.

Capua probolias Meyrick, 1907: 977 (♂ ♀, Ceylon, Travancore, Palni Hills, Coorg).

Capua pusillana; Meyrick, 1912b: 9. — 1913: 24 (*probolias* syn.).

Epagoge pusillana; Diakonoff, 1941: 410 (Java, Sumba). — 1947: 342. — 1948: 499 (*minuta*, *exalbescens* syn.; Bali).

? *Epagoge minuta*; Obraztsov, 1955: 224 (valid name; *pusillana* praecoc.). — 1957: 318, no. 61.

Distribution. Ceylon, India, Java, Bali, Japan.

Dudh Kosi Tal, 3000 m, 27.vii.1962 (G. Ebert & H. Falkner), 1 ♂, genit. slide 8928.

Prov. Nr. 3 East, Junbesi, 8750 m, 25-31.vii.1964 (W. Dierl), 1 ♂.

Prov. Nr. 2 East, Bhandar unter Thodung, 2000 m, 4.viii.1964 (W. Dierl), 1 ♀.

Kathmandu Valley, Godavari, 1600-1800 m, 19.iv-14.viii.1967 (Dierl-Forster-Schacht), 30 ♂, 1 ♀.

Kathmandu Valley, Chauni, 1600 m, 19.iv-14.viii.1967 (Dierl-Forster-Schacht), 12 ♂, 6 ♀.

Kathmandu, 1400 m, 17.iii, 20-30.viii.1964 (W. Dierl), 3 ♀.

Prov. Nr. 2 East Jiri, 1900 m, 18.v.1962 (G. Ebert & H. Falkner), 1 ♀. — 2000 m, 10, 13.viii.1964 (W. Dierl), 2 ♂, 3 ♀.

Prov. Nr. 3 East, Jubing, 1600 m, 3, 5, 8.v and 20-23.vii.1964 (W. Dierl), 14 ♂, 20 ♀, genit. slides 8909 ♂, 8910 ♀, 8912 ♂.

Rapti Tal, Jhawani, 250 m, 17.v.1967 (Dierl-Forster-Schacht), 1 ♂.

A comparison of the genitalia of the male holotype of "*Capua*" *exalbescens* Meyrick, 1922, from Java, with the present material, revealed that it is a closely allied, but distinct species, contrary to my previous opinion (1948, etc.).

Lumaria exalbescens (Meyrick) comb. nov.

Capua exalbescens Meyrick, 1922: 81 (Java, ♂). — Diakonoff, 1947: 342. — 1948: 499 (syn. of *pusillana* Walk.).

Distribution. Java.

The unique male holotype (LM), labelled: "Java, Tegal, Simpar, 3000 vt., Lucassen", "type" (pink, print, in cadre), genitalia slide 3760, is very similar to *L. minuta*, but the genitalia prove to be distinct. The uncus is longer, its top hardly clavate, in profile notched in front, valva broad and cucullus broadly rounded; spines along the inner (upper) edge of sacculus fine and less clustered, bristles along the outer (lower) edge long. Aedeagus broader, with a more curved coecum penis.

Parasyndemis leptograptia (Meyrick) comb. nov.

Tortrix leptograptia Meyrick, 1924: 115 (♂, Kashmir). — 1927: 369 (the same specimen described a second time). — Clarke, 1955: 184. — 1958: 244, pl. 122 fig. 3 holotype, ♀, fig.; abd. missing).

Distribution. India: Kashmir.

Khumbu, Khumdzung, 3900 m, 5.vi.1962; 18, 20, 22.vii.1962 (G. Ebert & H. Falkner).

Prov. Nr. 3 East, Kumjung, 3800 m, 15-30.vi, 20-21.v.1964 (W. Dierl).

Ting-Sang-La, 3800 m, 5.v.1962 (G. Ebert & H. Falkner).

Dudh Kosi Tal, 3500 m, 22.vii.1962 (G. Ebert & H. Falkner).

Dudh Kisi Tal unter Tangpoche, 3400 m, 29.v.1964 (W. Dierl).

Thodung, 3100 m, 23.v-1.vi.1962 (G. Ebert & H. Falkner).

Altogether 30 ♂, 6 ♀.

Inclusion of the present species extends the concept of the genus *Parasyndemis* Obraztsov slightly, as follows: the palpi more slender and porrected; transtilla absent; valva narrow, with costa and cucullus completely membranous; cestum absent.

Isodemis illiberalis (Meyrick) comb. nov.

Tortrix illiberalis Meyrick, 1918: 168 (♀, Sikkim). — Clarke, 1955: 167.

Cacoecia interjecta Meyrick, 1922: 496 (♂, locality omitted). — Clarke, 1955: 173.

Syn. nov.

Syndemis montivola Diakonoff, 1941a: 40, pl. 2 fig. 4, pl. 14 fig. 4, 5 (genit. ♂ ♀, Darjeeling).

Isodemis montivola; Diakonoff, 1952: 148 (referred to new genus).
Isodemis interjecta; Diakonoff, 1964: 44 (*montivola* syn.).

Distribution. Darjeeling.

Prov. Nr. 2 East, Bhandar unter Thodung, 2200 m, 2.viii.1964 (W. Dierl), 2 ♂.

Prov. Nr. 2 East, Jiri, 2000 m, 10.iv.1964 (W. Dierl), 1 ♂.

Kathmandu Valley, Godavari, 1600-1800 m, 31.v and 8-10.vi.1964 (W. Dierl), 3 ♂.

Prov. Nr. 3 East, Jubing, 1600 m, 11.v.1964 (W. Dierl), 1 ♀, genit. slide 8953.

I came to the realization that "*interjecta*" is simply the male of *illiberalis* which takes the precedence.

Electraglaia gen. nov. (figs. 91, 96, pl. 7 figs. 16-18)

Head with loosely appressed scales, roughish on forehead. Ocellus posterior. Proboscis very short. Antenna thickened along basal half, flattened laterally along apical fourth, fasciculate-ciliate, ciliations under 1 in male, filiform, short-ciliate in female. Palpus subporrect, moderately sinuate, median segment dilated towards apex, roughish towards apex above and along lower edge, terminal segment exposed, subobtuse, rather short. Thorax without a crest.

Fore wing oblong, little dilated posteriorly, with a costal fold in male to middle, costa moderately curved anteriorly, almost straight posteriorly, apex obtusely pointed, termen gently convex, being almost straight above, rounded beneath, oblique. Vein 2 from middle of cell, 3 from angle, 3-5 distant, 4 closer to 5, 7 separate to termen, 8 from angle, 10 from 4/5 distance 9-11, 11 from middle.

Hind wing with vein 2 from before 2/3, 3 and 4 connate from angle, 5 closely approximated at base, 6 and 7 stalked.

Male genitalia. Tegumen robust, rather broad. Uncus broadly spatulate, with a slightly constricted base, gently narrowed towards top which is flatly rounded. Socius hardly perceptible. Gnathos robust, with strongly curved arms and a dark, porrect, laterally-flattened point with a bifid top: a dorsal and a ventral point. Transtilla absent. Valva semioval and simple: costa simple, sacculus hardly sclerotized, disc of valva with a deep impression in which a dark double longitudinal fold. Aedeagus simple, pistol-shaped. Cornutus, one straight spine.

Female genitalia. Ninth tergite markedly sclerotized. Sterigma, a wide, rather shallow funnel with a flat bottom, lamella antevaginalis simple,

moderately sclerotized, upper edge concave. Colliculum, a short cylindre. Ductus bursae with a characteristic, rectangular bend on left side in middle, being a dilatation, darkly sclerotic on the left. Corpus bursae rather small, signum a single dagger, with a round capitulum.

Type of the genus, *Tortrix isozona* Meyrick, 1908 (Assam).

The genus is chiefly characterized by the genitalia in the two sexes. The broad uncus points towards a relationship with the *Clepsis* group of genera, but the absence of labides separates it at once. The peculiarly built gnathos and ductus bursae indicate an isolated position.

Electraglaia isozona (Meyrick) comb. nov. (figs. 91, 96, pl. 7 figs. 16-18)

Tortrix isozona Meyrick, 1908: 615 (♂, Khasis). — 1912b: 33. — 1913: 33. — Clarke, 1955: 179. — 1958: 244, pl. 122 figs. 2-2b.

Tortrix segnis Meyrick, 1918: 168 (♂ ♀, Sikkim). — Clarke, 1955: 282. — 1958: 255, pl. 127 figs. 1-1c (lectotype ♀ selected, wings, genit. figured). — Meyrick, 1935: 51 (Yunnan). **Syn. nov.**

Distribution. — India: Assam, Sikkim. China: Yunnan.

Helmu-Gebiet, Gusum Banjyang, 2600 m, 1, 2, 3, 5.ix.1967 (W. Dierl), 5 ♂, 13 ♀, genit. slide 8877 ♀.

Prov. No. 2 East, Bhandar unter Thodung, 2200 m, 2.viii.1964 (W. Dierl), 1 ♂, 2 ♀, genit. slide 6997 ♀.

Sun Khosi Tal, 2150 m, 1.v.1962 (G. Ebert & H. Falkner), 1 ♀.

Prov. No. 2 East, Jiri, 2000 m, 9 and 13.v.1964 and 12.viii.1964 (W. Dierl), 2 ♂, 1 ♀.

Kathmandu Valley, Godavari, 1600--1800 m, 31.v.1967; 2, 3, 4, 6 and 8.vi.1967 (Dierl-Forster-Schacht), 7 ♂, 5 ♀.

Prov. No. 3 East, Jubing, 1600 m, 3, 5 and 8.v.1964; 20-23.vii.1964 (W. Dierl), 6 ♂, 8 ♀, genit. slides 6996 ♂, 8876 ♂.

Ulodemis trigrapha (Meyrick) (pl. 8 figs. 19-21)

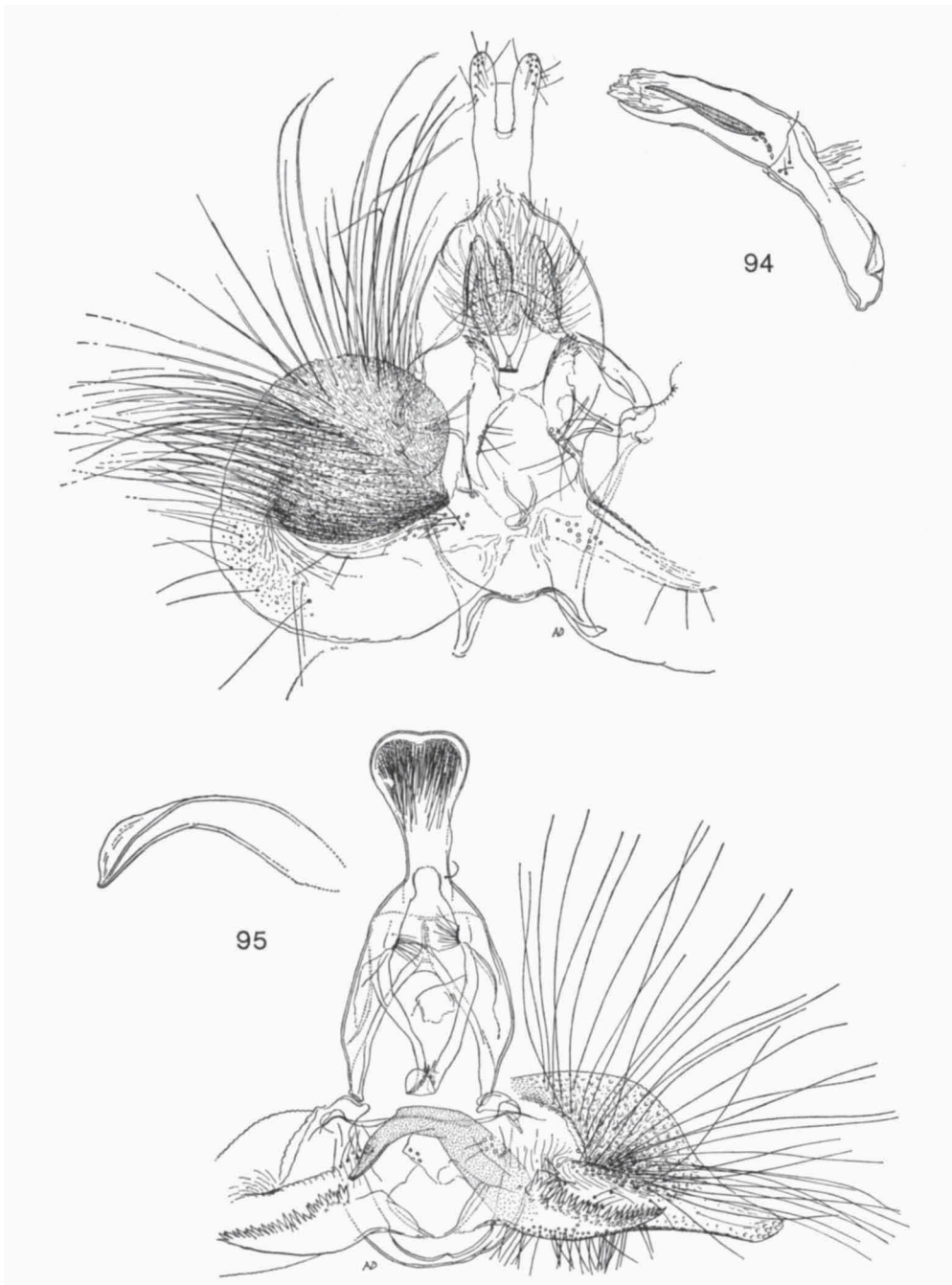
Ulodemis trigrapha Meyrick, 1907: 736 (♂ ♀, Bhotan). — Fernald, 1908: 49, 63. — Meyrick, 1912b: 23 — 1913: 26. — Meyrick, in De Joannis, 1930: 713. — Fletcher, 1929: 233. — Diakonoff, 1939a: 176, 179 (*U. falsa* Meyr. syn.). — Clarke, 1955: 316. — 1958: 260, pl. 30 figs. 1-1a (*U. falsa* Meyr. distinct). — Simon Thomas, 1962: 36, 89.

Distribution. Bhotan (= Butan).

Ting Sang-la, 3800 m, 3.v.1962 (G. Ebert & H. Falkner), 2 ♂.

Prov. Nr. 2 East, Jiri, 2000 m, 12, 13.vii-17.viii.1967 (W. Dierl), 1 ♂, genit. slide 6923, 3 ♀, genit. slide 6924.

Kathmandu Valley, Godawari, 1600-1800 m, 31.v, 1-7.vi, and 1-7.viii.1967 (Dierl-Forster-Schacht), 22 ♂, 9 ♀.



Figs. 94-95. Male genitalia of Archipini. 94, *Diplocalyptis apona* g. et sp. n., holotype, with above, right, aedeagus; 95, *Lumaria minuta* (Wals.), g. n., slide 8928, with above left, aedeagus.

Kathmandu, Chauni, 1400 m, 1 and 28.v, 13 and 22.vii.1967 (Dierl-Forster-Schacht), 6 ♂.

Prov. Chisapani Garhi, Bainse Dobhan, 730 m, 11-20.vii.1967 (Dierl-Forster-Schacht), 6 ♂, 1 ♀.

Note. The species from Java, bred on *Citrus*, *Linum* and *Thea* is not the present species, but *U. falsa* Meyrick, originally described from Nilgiris in India and also found in Ceylon.

Mochlopyga humana (Meyrick) (pl. 9 figs. 22-24)

Tortrix humana Meyrick, 1912a: 6 (♂, Sikkim). — 1912b: 27. — 1913: 29. — Clarke, 1955: 163. — 1958: 240, pl. 120 figs. 3-3b (type wings, genit. figured).

Tortrix noseropis Meyrick, 1928: 458 (♀, Bengal). — Clarke, 1955: 218. — 1958: 248, pl. 124 figs. 1-1b (holotype, wings, genitalia figured). **Syn. nov.**

Mochlopyga humana; Diakonoff, 1964: 44, fig. 1, pl. 25 figs. 5, 7-8. — Yasuda, 1969: 169, pl. 1, pl. 3 fig. 9.

Mochlopyga khola Yasuda, 1969: 170, pl. 1 fig. H, pl. 3 figs. 10-12. **Syn. nov.**

Distribution. India: Sikkim, Bengal. Nepal: Prov. Taplejung.

Prov. Nr. 3 East, Pangpoche, 4000 m, 4.vii.1964 (W. Dierl), 1 ♂.

Prov. Nr. 3 East, Dudh Kisi Tal, unter Tangpoche, 3400 m, 29.v.1964 (W. Dierl), 3 ♂, 3 ♀, genit. slides 6903 ♂, 6904 ♀.

Prov. Nr. 2 East, Thodung, 3200 m, 14.iv.1964 (W. Dierl), 2 ♂.

Prov. Nr. 3 East, Bujan, Dudh Kosi Tal, 2900 m, 18-19.vii.1964 (W. Dierl), 2 ♂, 2 ♀, genit. slides 8879 ♂, 8885 ♀.

Prov. Nr. 3 East, Junbesi, 2750 m, 25-31.vii.1964 (W. Dierl), 14 ♂, genit. slides 6901A, 8878, 8880, 8 ♀, genit. slides 6902, 8882.

Prov. Nr. 3 East, Chialsa, Solu Khola Tal, 2700 m, 24.iv-1.v.1964 (W. Dierl), 1 ♂, 1 ♀, genit. slides 8883 ♀, 8884 ♂.

Helmu-Gebiet, Gusum Banjyang, 2600 m, 1-4.ix.1967 (W. Dierl), 4 ♂, 3 ♀, genit. slides 8881 ♂, 8886 ♀.

Prov. Nr. 2 East, Bhandar unter Thodung, 2200 m, 2 and 4.viii.1964 (W. Dierl), 2 ♀.

Prov. Nr. 2 East, Jiri, 2000 m, 2, 6, 7 and 10.iv.1964 and 13.viii.1964 (W. Dierl), 7 ♂.

The species is rather variable, as the nice series of the present collection shows. It seemed easy to separate two types: one smaller, deeper coloured, with a narrow, elongate, orange costal spot; this agreed with the male holotype of *humana*. The other type was larger and paler, with a subquadrate, dark costal spot; this seemed to agree with "*khola*". However, when trying to assign less marked and paler specimens to these groups, one soon realized that they merged in one another completely.

To my surprise the male genitalia of the typical "*khola*" did not provide any differences from those of *humana*. *M. khola* Yasuda, 1969, has been described after males only. Judging from the nice original photographs of the male *khola* and *humana* side by side, and by sketches of fragments of *khola* genitalia, beside the genitalia of *humana*, the species seemed quite distinct.

Now, the male genitalia in the present genus have an enlarged, bladder-like, almost spherical tegument part which is difficult to get flattened out. Under pressure of the cover glass this part quickly changes its appearance. The contour of the broad, hooked uncus, initially looking exactly as figured by Yasuda (fig. 9), while my own figure (1964: pl. 25 fig. 7) for *humana*, gradually changes to that of "*khola*" (Yasuda, 1969: fig. 10). As to the gnathos, the top is rounded in dorso-ventral aspect (Yasuda, fig. 9) and pointed in lateral aspect (fig. 11). Also the surmised differences in the shape of transtilla, as illustrated by Yasuda, are only due to difference in position in the mounts.

The female genitalia appeared identical with Clarke's figure of those of "*Tortrix*" *noseropis* Meyrick which name therefore also is a junior synonym. I am in the possession of the following material of "*noseropis*":

"Calcutta, Atkinson, 1865", 2 ♂, genit. slide 5869, 2 ♀. This material proves to be identical with that from Nepal.

Leontochroma Walsingham (pls. 10-12)

Leontochroma Walsingham, 1900a: 466 (type species, *L. aurantiacum* Walsingham). — Fernald, 1908: 47, 62. — Meyrick, 1912b: 55. — 1913: 55. — Fletcher, 1929: 124. — Diakonoff, 1939a: 154, figs. 10A-C (redescr., genit., neurat. figured). — Obratzov, 1954: 218, figs. 25, 28, 198.

Except for its large size and elegant but strongly suffused markings, the genus is characterized by its archipine facies, together with a not at all archipine feature, viz. the stalked veins 3 and 4 of the fore wing. Besides, the original description records the obliteration of the discoidal between the bases of 7 + 8 and 6 as a generic character.

The opportunity to re-study this little known genus with the extensive material now at my disposal was very welcome and proved instructive. The above mentioned obliteration of a part of the discoidal, not only between the mentioned veins but also of the larger part between 5 and 6 is in diverse stages of progress within the both species and has no generic nor specific value. Neither are the colouring, markings, wing shape, nor size. In fact it is almost impossible to separate the two species re-described below, either males or females, with these superficial characters alone.

A simple and trustworthy method is partial denuding of the uncus in the males which is very easy; after removing of the dorsal part of the anal tuft, the large convex uncus and its posterior profile becomes distinctly visible, truncate in *suppurpuratum*, arrowhead-shaped in *viridochraceum*.

The females need hardly any denuding: the region of the ostium bursae is visible as a large single transverse naked split with an oval median opening, in the first, as a double transverse split, in the second species; besides, the posterior edge of the eighth tergite is simple in *suppurpuratum*, and has an ear-shaped latero-dorsal small extension on each side, in *viridochraceum*. (The female of *L. aurantiacum* is still unknown).

The study of the genitalia slides of Walsingham's types revealed several new synonyms. The species appear to be surprisingly variable which is most confusing. So in *L. viridochraceum* males from Nepal a darker central fascia or traces thereof, is always present; while in *L. suppurpuratum* this fascia is lacking. In material from China it is *suppurpuratum* which mostly is in possession of the central fascia. The females with their limited markings are even more confusing.

It was Dr. Yasuda (1969) who recorded the food of the larva of *suppurpuratum* to be diverse: he found these stages in spun leaves of *Rhododendron* and *Senecio*.

As to the systematic position of *Leontochroma* Wals., together with *Mochlopyga* Diak. it forms a small natural group within the Archipini, characterized by the strongly sclerotic, large and spherical male genitalia. All the species seem to be natives of high mountains, except *Mochlopyga humana* (Meyr.) which, suprisingly, occurs also in Ceylon at lower elevation.

That *Leontochroma* would have anything to do with *Gnorismoneura* Issiki & Stringer, as presumed by earlier authors, is a delusion. The latter genus is monotypic and its type, *G. exulis* Issiki & Stringer, from Formosa, is a slender species, very similar to *Neocalyptis nematodes* Meyrick, from the Philippine Islands, and is without doubt of the *Clepsis* relationship. The peculiar male genitalia and the unusual feature of the male hind wing bear out its generic distinctness.

The genus *Leontochroma*, on the other hand, comprises of usually large, long-winged species with strongly suffused markings upon a pale reddish or tawny ground colour or with hardly any markings. The distinct genus forms, together with *Mochlopyga* Diakonoff, a natural group of genera from high mountains in Asia. The main characteristic is the strongly curved, broad and almost semispherical uncus + tegumen part of the genitalia.

It is surprising that *Leontochroma* species now appear to be limited in number: there are only three species, two of them variable to a high degree,

as is already said, with regard to general colour, markings, even shape and breadth of the fore wing. No wonder that several synonyms have been created, in spite of the study of the male genitalia. This study, in fact, has been a source of errors: the strongly spherical genitalia, when mounted, are liable to considerable change of aspect, due to gradual depression under a cover glass.

Finally it should be stipulated that my synonymizing *Rhapsodica* Meyrick, 1927, with *Leontochroma* is erroneous. That generic name is simply a synonym of *Homona* Walker.

Leontochroma aurantiacum Walsingham (fig. 100)

Leontochroma aurantiacum Walsingham, 1900a: 467 (Sikkim, ♂). — Meyrick, 1912b: 55 (*aurantiaca*). — 1913: 55 (*aurantiaca*). — Diakonoff, 1939a: 154, 155, figs. 10A-C (head, neurulation, genit. ♂ figured) (*aurantiaca*). — Obraztsov, 1954: 157, 216, 218.

Distribution. Sikkim.

Material studied. Sikkim, 9000 ft, vi.1895; 7000 ft, vi.1895 (Pilcher), 2 ♂, genit. slide 9113 (BM).

Male genitalia. Uncus arrowhead-shaped, but more obtuse than in *viridochraceum* and without a longitudinal dorsal depression. Aedeagus extremely large with top long-bicuspidate.

The fore wing has rather well-defined usual archipine markings of darker reticulation, viz., a basal patch, a central fascia and a fasciate, transverse costal patch.

Leontochroma suppurpuratum Walsingham (pl. 10 fig. 25, pl. 11 fig. 27, pl. 12 figs. 29-30)

Leontochroma suppurpuratum Walsingham, 1900a: 467 (Sikkim, ♂ ♀). — Meyrick, 1912b: 55 (*suppurpurata*). — 1913: 55 (*suppurpurata*). — Diakonoff, 1939a: 154 (*suppurpurata*, neurat.). — Obraztsov, 1954: 218 (ref.). — Yasuda, 1969: 169, pl. 1 fig. F (Nepal, ♀).

Leontochroma lebetanum Walsingham, 1900a: 468 (China, ♂). — Meyrick, 1912b: 55 (*lebetana*, emend.). — 1913: 55 (*lebetana*). — Caradja, 1927: 375 (*lebetata*, sic; China Oc.). — Diakonoff, 1939a: 154 (*lebetana*, neurat.). — Obraztsov, 1954: 218. — 1955: 225.

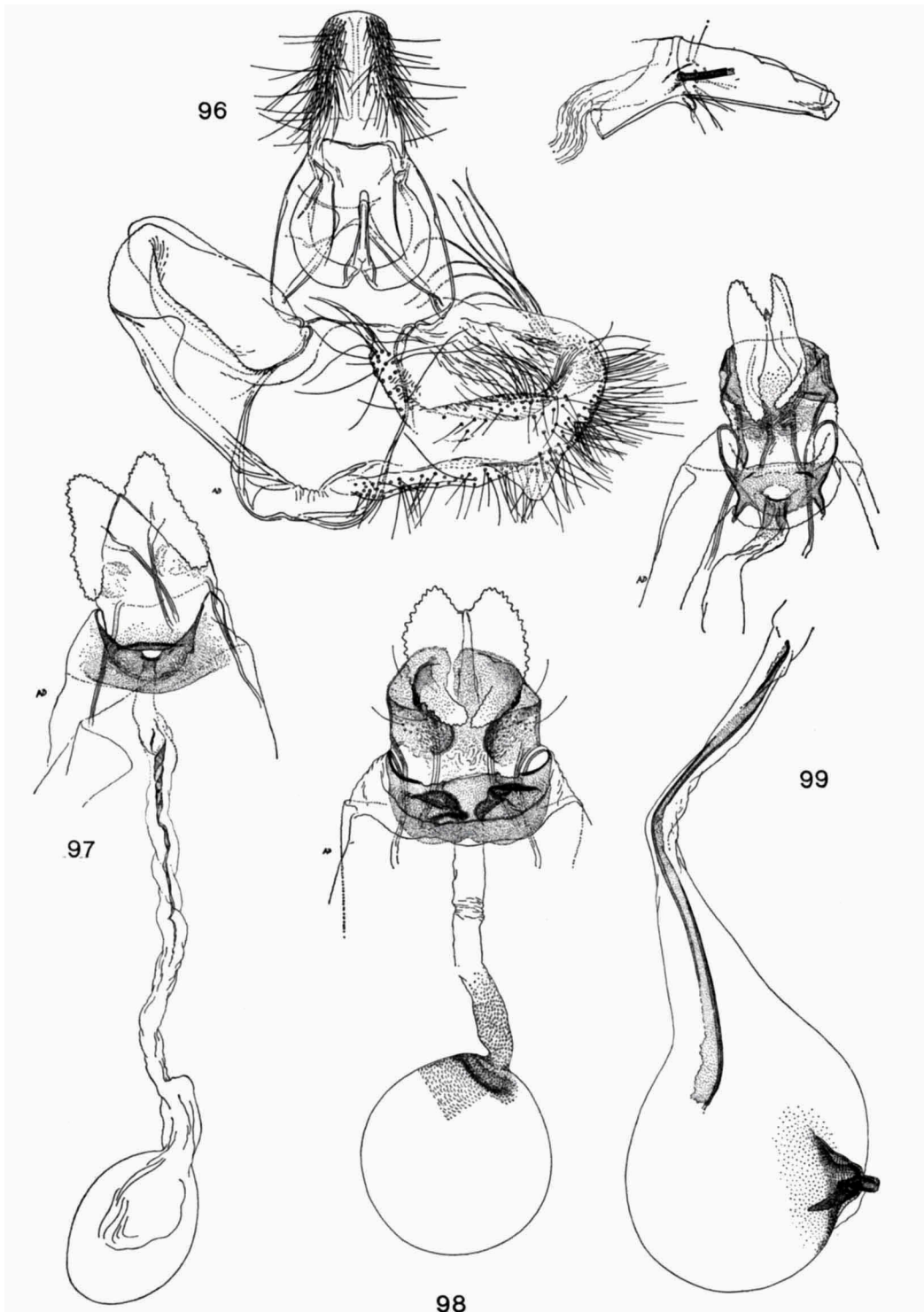
Syn. nov.

Gnorismoneura violascens Meyrick, 1934: 525 (China, ♂ ♀). — 1937: 172 (China). — Obraztsov, 1955: 227 (ref.). — Clarke, 1958: 144, pl. 72 figs. 1-1b (lectotype ♂ design., wings, genit. figured). **Syn. nov.**

Gnorismoneura heliadopu Meyrick, 1937: 172 (China, ♂). — Obraztsov, 1955: 227 (ref.). — Clarke, 1955: 154. **Syn. nov.**

Distribution. Sikkim. Nepal. China.

The species has been described after four specimens. The present long series of excellently preserved material shows considerable variation as to



Figs. 96-99. Genitalia of Tortricinae. 96, *Electraglaia isozona* (Meyr.) g. n., slide 8876, with above, right, aedeagus; 97, *Lumaria minuta* (Wals.), slide 8912; 98, *Terthreutis bulligera* Meyr., slide 8901; 99, *Clepsis insulata* (Meyr.), slide 8894.

size, shape of fore wing, colouring and markings, however limited the latter are. Therefore it seems useful to redescribe the species.

♂ 22-24 mm. Head light tawny-ochreous. Palpus reddish-fulvous. Antennal ciliations over 1, fasciculate. Thorax light tawny-ochreous, with a golden gloss. Abdomen pale ochreous, dorsum except at base slightly infuscated, anal tuft pale ochreous.

Fore wing oblong-suboval, costa considerably curved throughout, prominent at $2/3$, apex obtusely pointed, not produced, termen slightly convex above, rounded below, moderately oblique. Light orangeish-ochreous; basal third with a moderately attenuated, rather broad light yellow streak, at base reaching to lower edge of cell, posterior end rather abruptly rounded; a ferruginous dusting, filling out entire wing as far as end of cell, deeper anteriorly and along dorsum, upper edge ill-defined, broadly rounded, not reaching costa, posterior edge rather truncate; costal patch formed by a marginal streak of deep olive-ferruginous suffusion, extending slightly more than apical fourth of costa including apex, lower edge rather suffused; a few dark purple points scattered over posterior half of wing, sometimes entirely absent. Cilia glossy tawny-olive, basal third deeper reddish-olive, opposite apex: cilia black, along tornus, grey. This is the most numerous colour form.

Hind wing light golden-yellow, becoming pale towards base, suffused with orange towards apex, apex deep orange, a faint dotting of grey spots, arranged in transverse rows supparallel to upper half of termen, being the markings of under side. Cilia pale ochreous-orange, around apex cilia dark grey.

Another colour form, male, with palpi, head and thorax greyish-fulvous. Fore wing throughout rather deep reddish-ferruginous, darker at base, with a much dilated pale oblique transverse band of the original ground colour: pale orangeish-fulvous, glossy, veins narrowly lined with dull reddish-ferruginous; this band actually representing space between the central fascia (which is hardly perceptible, only slightly deeper ferruginous, below twice as broad as above), and the costal patch which is more extended and more suffused than in the preceding colour form. Cilia darker. Otherwise similar to the preceding.

♀ 24-28 mm. Very similar to the male. Antenna short-ciliate. Thorax somewhat infuscated. Abdomen fuscous-grey above, ferruginous-grey below, anal tuft pale orange.

Fore wing narrower, costa abruptly curved at extreme base, gradually and slightly curved along anterior $2/3$, prominence at $2/3$ broad and more marked, posterior $1/3$ gently sinuate, apex obtusely pointed and prominent,

termen as in male but shorter. Dull pale ochreous-fulvous-whitish, paler on and below costa and beyond cell. Base of costa infuscated along edge; upper part of central fascia represented by a reddish-ferruginous, narrow subtriangular spot on middle of costa, anterior edge short, subconcave, posterior long, straight, along end of vein 12; lower part of central fascia indicated by a fuscous oblique fasciate shadow from centre of disc to and along dorsum before tornus; a subtriangular large ill-defined darker fuscous suffusion on less than anterior half of dorsum, not reaching vein 12, becoming paler and suffused posteriorly; indistinctly connected with top of fasciate part of central fascia, extended along dorsum to tornus as a deeper and more brownish suffused streak; costal patch ferruginous touched with fuscous, shaped as in male, but longer, from $2/3$ of costa to apex; veins from cell thinly lined with fuscous-brown, more so posteriorly, but not reaching termen; a fuscous small dot in lower angle of cell. Cilia light fulvous-grey, with a deeper fulvous basal third.

Hind wing light orange, dusted with light grey below cell to dorsum as far as vein 3 but not reaching edge of wing; an ill-defined grey suffusion in apex; grey dotting of underside showing through towards middle of termen, less so above this; cilia light yellowish-orange, with a deep orange subbasal line, cilia around apex dark grey, subbasal line blackish.

Male genitalia. Tegumen strongly concave, almost semispherical, sclerotized. Uncus strong, clavate, in circumference dilated-cordiform, with a truncate broad pending plate below, when depressed, forming the truncate apical edge of uncus. Socius small, subcylindrical, porrect, long-bristled. Gnathos very strong, V-shaped hook portion obliquely curved upwards, top oblong-oval, moderately constricted below middle, lower surface deeply excavate. Transstilla, a strong rounded-quadrate sclerite, upper edge impressed in middle, lower edge deeply notched, with a more or less thickened edge. Valva strong, thick, rather short, with a triangular lobe-like processus basalis. Cucullus obliquely truncate, with a double edge and obtuse apex. Sacculus broad, sclerotized, narrowed at $2/3$, top forming a triangular blade, turning dorsad, lower edge of sacculus darkly sclerotized, narrow, under 1. Aedeagus rather long, pistol-shaped, gradually more sclerotized and narrowed to an acute point, without cornuti.

Female genitalia. Ninth tergite sclerotized, subspheroidal. Sterigma a sclerotized, transverse broad plate, with upper halves of lateral edges produced and rounded. Ostium transversely triangular, rather elongate; lamella postvaginalis, a narrow dark rim, along middle third dilated and broadly notched; lamella antevaginalis very narrow, unmodified. Colliculum sclerotized, conical, moderately flattened dorso-centrally, its orifice simple,

circular, slightly constricted, shape of colliculum slightly asymmetrical (so giving diverse aspects when slightly out of position in mounts), with a few small folds against obtuse end, outer layer thick and hyaline, refracting. Ductus bursae over $4 \times$ length of lobus analis, with lower half rather wide. Corpus bursae moderate, ovoid. Signum, a moderate hook with a longitudinal basal plate and a moderate capitulum.

Khumbu, Khumdzung, 3900 m, 19.vi-25.vii.1962 (G. Ebert & H. Falkner), 5 ♂, genit. slide 6911, 2 ♀, genit. slide 8947.

Prov. Nr. 3 East, Khumjung, 3800 m, 30.vi-15.vii.1964 (W. Dierl), 8 ♂.

Gosainkund Lekh, Tarke Banjyang, 3600 m, 30.viii.1967 (Dierl-Schacht), 2 ♀, genit. slide 8921.

Dudh Kosi Tal, 3500 m, 22-23.vi.1962 (G. Ebert & H. Falkner), 4 ♂, 3 ♀, genit. slide 6912.

Thodung, 3100 m, 24.v-1.vi.1962 (G. Ebert & H. Falkner), 2 ♂, genit. slide 6910.

Bi Khola, 2300-2700 m, 13.v.1962 (G. Ebert & H. Falkner), 1 ♂.

Prov. Nr. 3 East, Junbesi, 2700 m, 25-31.vi.1964 (W. Dierl), 1 ♂.

Prov. Nr. 3 East, Carikhola, Dudh Kosi Tal, 2700 m, 14.v.1964 (W. Dierl), 2 ♂, genit. slide 8919.

Besides, I was able to study the following material from China, owing to the kindness of the U. S. National Museum, Washington, D.C.

China, nr. Mupin, 2000-8000 ft, 1 ♂, genit. slide "A.B. Febr. 10, 1930".

Mt. Omei, Szechuan, China, 4400 ft, 65 ♂, 2 ♀, genit. slides 5425, 5426, 5931 ♀, 8049.

9 miles South of Tatsienlu, 9000-12000 ft (D. C. Graham), 1 ♂, genit. slide 5757.

Finally, two specimens in the British Museum were from:

Tibet, Yatung (A. E. Hobson, 98-201), 2 ♂, genit. slides 9013, 9014.

In the collection of the British Museum one specimen of "*Gnorismoneura viridescens* Meyrick" has been separated by Obraztsov under the name "*Gnorismoneura subviolascens*". The specimen is a male of the same species, *L. suppurpuratum*. Obraztsov's name apparently has never been published and is a "collection name".

Through the courtesy of the Trustees of the British Museum (Natural History), London, I was able to study Walsingham's type specimens and illustrate their genitalia slides:

Plate 12 fig. 29 shows *Leontochroma suppurpuratum* Wals./"Tonglo, Sikkim, 10,000 ft, July, H. T. Elwes, no. 9131 Wlsm.", type ♂, genitalia slide no. 53.

Plate 12 fig. 30 depicts "*Leontochroma lebetanum* Wals." /"Omei-shan,

Sze-chuen, W. China vi-vii.1892 (Pratt) Leech/61145 Wals.”: type ♂, genitalia slide no. 52.

Plate 12 fig. 31 shows *Leontochroma suppurpuratum* Wals./” Tonglo, Sikkim, 10,000 ft. July 1886, H. T. Elwes, no. 9132 Wlsm.”; fig. 32, the same, bursa copulatrix, genitalia slide no. 54.

The outline of different parts of the genitalia in these photographs, especially of the uncus and the valva, might seem to be different; but this is a delusion, entirely due to the degree of pressure upon the cover glass of these quite bulky mounts, as is pointed out in the previous pages.

Leontochroma viridochraceum Walsingham (pl. 10 fig. 26, pl. 11 fig. 28, pl. 13 fig. 33)

Leontochroma viridochraceum Walsingham, 1900: 468 (Sikkim, ♀). — Meyrick, 1912b: 55 (*viridochracea*, emend.). — 1913: 55 (*viridochracea*). — Diakonoff, 1939a: 154 (*viridochracea*, neurat.). — Obraztsov, 1954: 218. — 1955: 225.

Leontochroma attenuatum Yasuda, 1969, pl. 1 figs. D-E (Nepal, ♀ ♂). **Syn. nov.**

Distribution. Sikkim. Nepal.

The species, described after a single, apparently greenish-tinged female specimen, remained obscure for a long time; the study of the genitalia of the type specimen shows that the recently described new species from Nepal, *L. attenuatum* is conspecific; Dr. Yasuda, probably not having the opportunity to study Walsingham's type, failed to recognize the confusingly variable species with the original description.

Also this species is variable to a great extent, as to the size, shape of the fore wing and less so, to the colouring. The present large series, when put beside that of *L. suppurpuratum*, does show the differences of the superficial characters, but not too clearly. Discrimination of these two species is hazardous without a check of the external genitalia, as is indicated under the genus *Leontochroma*, above.

The species may be redescribed as follows.

♀ 22-29 mm. Head and palpus evenly ferruginous with an orange tinge. Antennal ciliations slightly over 1, fasciculate. Thorax ferruginous, becoming orange laterally towards end, tegula tawny-fuscous. Abdomen pale ochreous, becoming paler towards base, gently tinged fuscous in middle of dorsum, becoming bright golden ochreous-orange towards apex.

Fore wing suboval, gradually and gently dilated, broadest at 2/3, costa strongly curved at base, less curved posteriorly, with a faint prominence at 2/3, making posterior third appear almost straight, apex pointed and slightly prominent, termen gently sinuate and vertical above, broadly rounded below. Anterior half of wing dull tawny, with a faint yellowish-tawny suffusion over upper third, lower 2/3 deeper ferruginous-tinged; a slender dark

ferruginous marginal strigula along base of costa; central fascia suffused, gently outwards-curved, reddish-ferruginous, becoming deeper coloured downwards; lower $1/3$ of fascia from the middle of its width extended posterad by a large and faint, grey, shady, strongly suffused spot, not reaching tornus, rounded posteriorly; central fascia preceded along lower half by a faint pale dilated streak of ground colour; posterior half of wing pale fulvous-whitish with a silky gloss, becoming paler and more glossy towards costa anteriorly; costal patch deep reddish-ferruginous, narrowly semioval, edge along its posterior half more suffused. Cilia along posterior fourth of costa to apex blackish, along upper half of termen deep orange, along lower half and tornus gradually becoming paler tawny-olive with an orange basal third and a pale ochreous base, on end of dorsum cilia suffused dark grey with a blackish basal third.

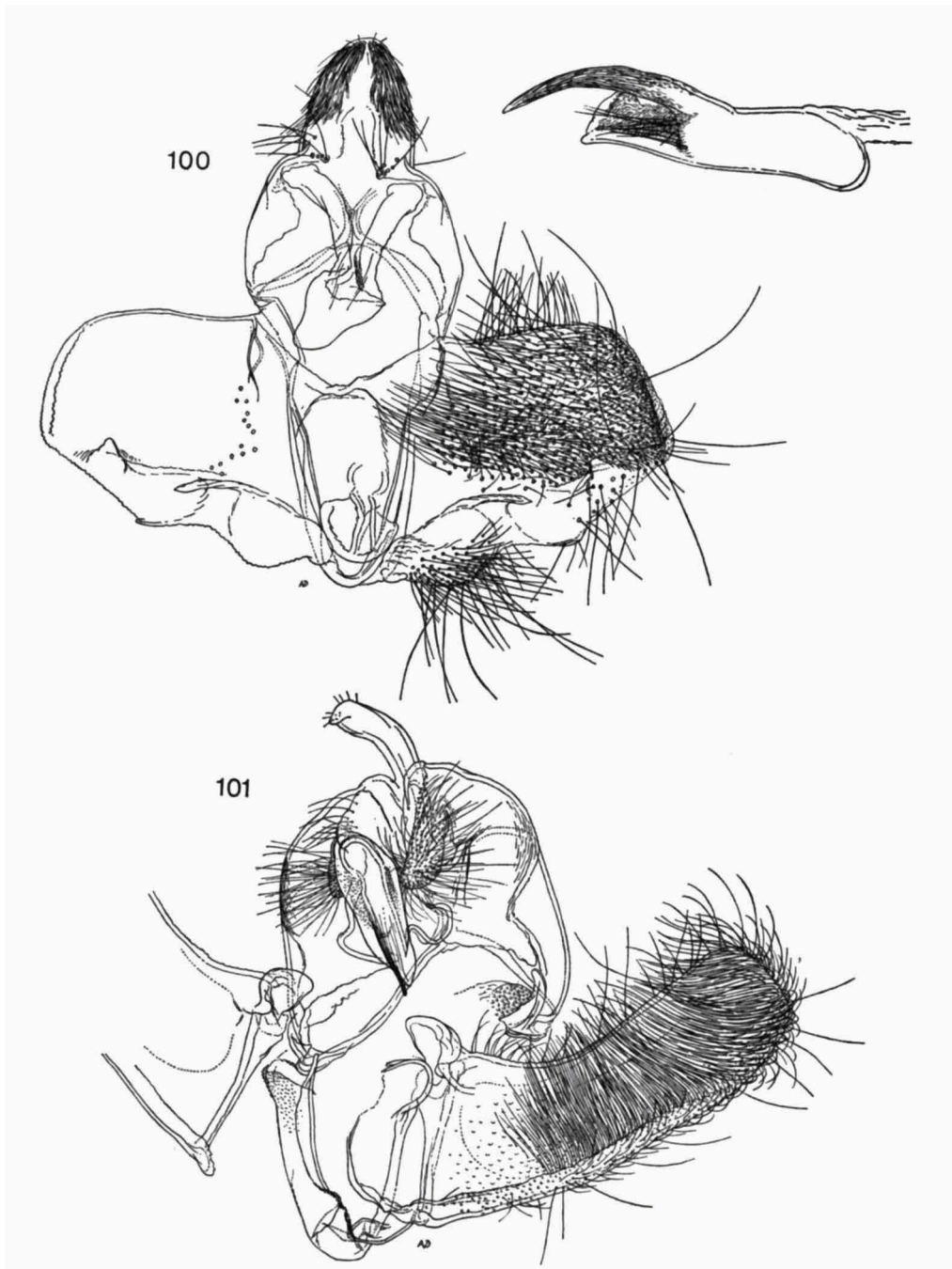
Hind wing glossy pale yellow, suffused with light ochreous towards apex, becoming slightly paler towards dorsum. Cilia concolorous, around apex and along upper third of termen rather dark grey.

♀ 21-30 mm. Head and thorax tawny-fulvous. Abdomen paler than in male, not infuscated above. Fore wing longer and narrower, costa curved throughout, but more so at base, very gently prominent at $3/4$ (sometimes the prominence lacking), apex moderately pointed, termen as in male, slightly less oblique. Evenly tawny-olive, with an orange tinge, washed with reddish along dorsum, as far as cell and vein 2, along discoidal vein and with a faint round spot in middle of cell; costal patch suffused, reddish-ferruginous, along more than posterior $2/5$ gradually dilated, lower edge much suffused; veins faintly lined with ferruginous. Cilia fulvous-golden, becoming paler towards tornus, ferruginous towards apex; a ferruginous subbasal band.

Hind wing pale orange, anterior half subpellucet, posterior half evenly deeper orange-pinkish, opaque. Cilia concolorous.

Another, rather frequent colour form: with head and thorax deeper ferruginous, abdomen slightly infuscated. Fore wing evenly dull deep ferruginous-red, with a paler glossy whitish-fulvous marginal band from apex to tornus. Cilia as in preceding, but subbasal band deep ferruginous-red. Hind wing as in preceding, but paler anterior half suffused with lilac-grey.

Male genitalia. Tegumen (when flattened) longer than in *L. suppuratum*. Uncus strong, arrowhead-shaped, point slightly produced. Socius free, minute, finely long-bristled. Gnathos with very broad arms, laterally broadly rounded, hook, oval, less strong. Transtilla, a broad band, upper edge somewhat irregular and straight, lower thickened, notched in middle, gently convex right and left. Valva robust, short, costa with a rounded



Figs. 100-101. Genitalia of Tortricinae. 100, *Leontochroma aurantiacum* Wals., slide 9113, with above, aedeagus; 101, *Terthreutis bulligera* Meyr., slide 6707, metalotype.

processus basalis, below this a rising small ear-like harpe. Sacculus under 1, with basal part (under 1/2) oval, apical part, a narrow sclerotized roll, along its caudal surface a row of unequal variable teeth and blades, basal tooth largest. Cucullus semioval, edge gradually convex, double at apex. Aedeagus strongly sclerotized, straight, base T-shaped, side arms deeply excavate, orifice obliquely truncate ventrally, dorsally with several unequal flat thorns, apical one largest, turned laterad. No cornuti.

Female genitalia. Ninth tergite sclerotized, extended so as to form a wide collar, on each side of the ovipositor forming a kind of pocket, open caudally. Sterigma broader than in *L. suppurpuratum*, but less sclerotized, sometimes with a median transverse gulley throughout, sides simply convex, upper edge gradually concave, lower edge gradually convex, seldom modified. Ostium transverse-triangular, lamella postvaginalis very narrow, simple or with a narrow thickened rim, lamella antevaginalis with a slender accolade-shaped dark rim along upper-edge, lower edge with broader, less darkened rim, gradually convex. Colliculum shorter, subcylindrical, with upper half bulbous, slightly asymmetrical, edge hyaline. Ductus bursae narrower, over 5 × as long as lobus analis. Corpus bursae similar, signum smaller, a slender, pointed thorn and a large capitulum with a small basal plate.

Khumbu, Khumdzung, 3900 m, 16.vi-20.vii.1962 (G. Ebert & H. Falkner), 8 ♂, 5 ♀, genit. slides 6913, 8916, 8920.

Prov. Nr. 3 East, Khumjung, 3800 m, 16.vi-11.vii.1964 (W. Dierl), 52 ♂, genit. slide 6908, 11 ♀, genit. slide 6914.

Dudh Kosi Tal, 3500 m, 22-23.viii.1962 (G. Ebert & H. Falkner), 1 ♂, 2 ♀.

Prov. Nr. 3 East, Dudh Kosi Tal, under Tangpoche, 3400 m, 29.v.1964 (W. Dierl), 5 ♀, genit. slides 8917, 8918.

Thodung, 3100 m, 20.v-3.vi.1962 (G. Ebert & H. Falkner), 20 ♂, genit. slide 6909.

Prov. Nr. 3 East, Bujan, Dudh Kosi Tal, 2900 m, 18-19.vii.1964 (W. Dierl), 1 ♂.

Prov. Nr. 3 East, Junbesi, 2700 m, 25-31.vii.1964 (W. Dierl), 3 ♀.

Finally, I was able to study the type specimen of the present species in the British Museum and figure its genitalia slide:

Plate 13. *Leontochroma viridochraceum* /"Tonglo, Sikkim, July 1886/H. T. Elwes, no. 9135 Wlsm.". Genitalia slide 5641 (in Obraztsov's hand).

CNEPHASIINI

Terthreutis bulligera Meyrick (figs. 98, 101)

Terthreutis bulligera Meyrick, 1928: 459 (♀, Bengal). — Clarke, 1955: 68. — 1958: 231, pl. 115 figs. 2-2b (holotype, ♀, wings, genit. illustrated).

Distribution. India: Bengal.

Bi Khola, 2300-2700 m, 13.v.1962 (G. Ebert & H. Falkner), 1 ♂ metallothype, genit. slide 6907.

Prov. Nr. 1 East, Pultschuk, 2300-2500 m, 13.vi.1967 (Dierl-Forster-Schacht), 1 ♀, genit. slide 8901.

♂, metallothype 20 mm. Similar to the female, but fore wing slightly narrower.

Male genitalia. Closely resembling those of *T. spherocosma* but with valva less abruptly narrowed, beyond base, much more gradually so, in fact similar to the valva in *T. xanthocyclus*. From that species differing by the shape of the aedeagus, which is longer, more dilated at anterior end, with coecum penis truncate, even slightly concave, by a different gnathos with a longer hook and by the markings of the fore wing. Characteristic feature is that round spots are well-defined, finely white-edged.

Pandurista regressa spec. nov. (figs. 102-103, 106-107)

♂ 16 mm. Head and palpus light tawny-ochreous, palpus rather long, projecting width of eye beyond face, sinuate, dilated. Thorax fuscous mixed with glossy fuscous-grey. Abdomen glossy pale ochreous-grey.

Hind wing moderately broad, dilated, costa curved throughout, apex pointed, termen rather long, sinuate, oblique. Pale tawny-orange, densely strewn throughout with numerous ochreous-silvery round spots, on markings turning bluish, making wing appear pale silvery-ochreous with a fine orangeish marbling. Basal patch light ferruginous, rather suffused with dark fuscous, not reaching 1/5 of wing, edge well-defined, angulate in middle, concave above and below this; central fascia moderately broad, little dilated, from before middle of costa to 3/4 of dorsum, ferruginous, spotted with light glossy leaden, and dusted with dark brown especially on costa; second fourth of fascia rather lighter orangeish; costal patch deep brown, semioval, narrowed posteriorly, with a few less bright glossy spots, three pale ochreous marks on costal edge posteriorly; two blackish small dots on costal edge: between basal patch and fascia and between fascia and costal patch; an almost vertical series of blackish dots between veins before termen, to tornus. Cilia glossy light ochreous.

Hind wing semipellucent pale grey, with pale ochreous veins. Cilia light ochreous, glossy, a faint dark grey marbling posteriorly, being fuscous marks of the underside showing through.

♀ 18 mm. Similar to male, but ground colour light fulvous, glossy silvery spots extended and partly confluent. Markings less defined, especially central fascia, being reduced and twice interrupted in middle; dark dots before

termen extended, larger, in several undulating rows, posterior submarginal. Otherwise as male.

Hind wing similar to that in male, but more marbled with pale grey (also markings of the underside).

Male genitalia. Tegumen robust. Uncus rather short, moderately curved, top not dilated, little curved. Socius rather large, semioval, pending. Gnathos very broad, arms laterally bent rectangularly, with a long and strong pending process at the angle, point rising, moderate, oval. Transtilla, a slender straight rod. Valva simple, semioval, cucullus hardly dilated. Sacculus 1/3, thickened, top obtusely pointed and projecting. Aedeagus straight, top spoon-shaped.

Female genitalia. Sterigma sclerotized, long-aciculate, W-shaped, dilated laterally, upper edge convex in middle, concave at the sides. Lamella antevaginalis sclerotized and aciculate in paratype (6998), ill-defined in allotype. Colliculum ovoid, moderately sclerotized. Ductus bursae simple and rather short. Signum, a hollow thorn. Edge of seventh segment in middle forming a rounded, smooth lobe.

Prov. Nr. 3 East, Bujan, Dudh Kosi Tal, 2900 m, 18-19.vii.1964 (W. Dierl), 1 ♂, holotype, genit. slide 8955; 1 ♀, allotype, genit. slide 6999; 17 ♂, 12 ♀, paratypes, genit. slide 6998 ♀.

A very distinct species, rather of an archipine appearance, with a characteristic glossy ground colour. It does not resemble the type-species at all, but the neuration and the genitalia are decidedly congeneric.

Dicellitis nigrītula Meyrick (pl. 13 figs. 33-37)

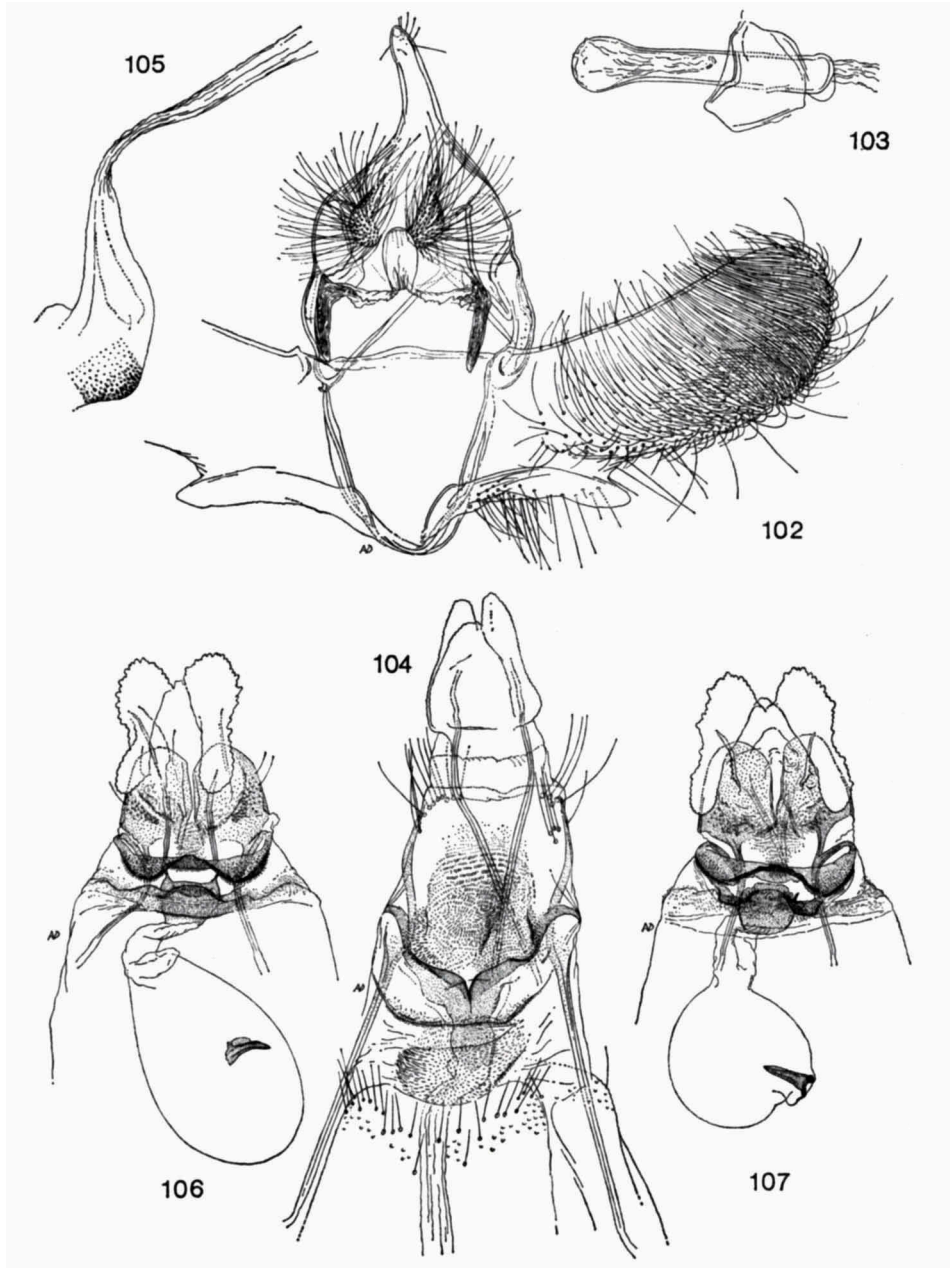
Dicellitis nigrītula Meyrick, 1908: 616 (♀, N Coorg). — 1912b: 53. — 1913: 52, pl. 4 fig. 59. — Diakonoff, 1939a: 213, figs. 11R-S, 16B-C (wing neuration, genit. ♂, ♀ figured). — Clarke, 1955: 217. — 1958: 96, pl. 48 figs. 1-1d (lectotype, ♀ design., wings, genit. figured).

Distribution. India: N. Coorg.

Kathmandu Valley, Godavari, 1400-1600 m, 31.v-6.vii.1967 (Dierl-Forster-Schacht), 14 ♂, 5 ♀, genit. slides ♂: 8923, 8933 and ♀: 8924, 8938.

Pseudargyrotoza conwagana (Fabricius) (figs. 104-105)

- Pyralis conwagana* Fabricius, 1775: 655. — 1787: 235.
Phalaena conwayana Fabricius, 1794: 277 (change of spelling).
Phalaena Tortrix montana Denis & Schiffermuller, 1777: 127.
Phalaena Tortrix conwayana; Gmelin, 1788: 2511. — Villers, 1789: 412.
Tortrix hofmanseggana Hübner, [1796]-[1810], pl. 24 fig. 50.
Tortrix hoffmanseggiana Haworth, 1811: 405.
Tortrix spixiana Frölich, 1828: 76, no. 117.
Cochylis hofmanseggana; Treitschke, 1830: 287.



Figs. 102-107. Genitalia of Tortricinae. 102, *Pandurista regressa* sp. n., holotype, ♂; 103, do., aedeagus, ventral view; 104, *Pseudargyrotoza conwagana* (Fabr.), ♀, slide 8838; 105, do., part of ductus and bursa; 106, *Pandurista regressa* sp. n., ♀, allotype; 107, do., paratype, ♀, slide 6998.

- Argyrotoza subaurantiana* Stephens, 1829: 190, no. 7115 (nom. nud.).
Commophila subaurantiana; Stephens, 1834: 174.
Tortrix, *Argyrolepis hoffmanseggana*: Duponchel, 1835: 119, 241.
Tortrix graphitana Eversmann, 1844: 496.
Argyrotoza conwayana; Wilkinson, 1859: 148.
Tortrix (*Heterognomon*) *conwayana*; Wocke, 1871: 238.
Tortrix conwayana; Snellen, 1882: 214. — Meyrick, 1895: 536. — 1912b: 52. — 1913: 51. — 1928: 518. — Rebel, 1901: 89, no. 1569. — Kennel, 1910: 172, pl. 9 fig. 6. — Amsel, 1936: 349.
— *conwayana*; Pierce & Metcalfe, 1922: 16, pl. 6 (non binom.).
Pseudargyrotoza conwagana; Obratsov, 1954: 88, 228, 231, figs. 236-240; 1954: 227; 1957: 319; 1961: 238; 1965: 4. — Swatschek, 1958: 58, fig. 58 (larval characters). — Hanneman, 1961: 32, figs. 49-49b, pl. 2 fig. 1. — Bradley, 1972: II 35.

Distribution. Throughout the Palearctic region.

Kathmandu Valley, Godavari, 1600-1800 m, 2.vi, 12-14.vi.1967 (Dierl-Forster-Schacht), 25 ♂, 19 ♀, genit. slide 8838 ♀. The above list of references is by far not complete.

CHLIDANOTINAE

Gnaphalostoma gen. nov. (figs. 108-109)

Head roughish, with loosely appressed scales. Ocellus posterior. Proboscis vestigial. Palpus long, curved and ascending, median segment obliquely ascending, exceeding base of antenna, terminal segment vertically rising; median with smoothly appressed silky hair-scales, lower edge with a long fringe twice the breadth of segment; terminal segment smooth, pointed, $2\frac{1}{2}$ × median. Thorax smooth. Abdomen normal. Posterior tibia smooth.

Fore wing oblong-suboval, rather narrow, apex rounded, termen deeply emarginate and concave above, obliquely cut off below. Vein 2 from beyond $1\frac{1}{2}$, 3 strongly curved, 4 absent, 7 free to termen below apex, 8 and 9 stalked, 11 from middle of cell.

Hind wing over 1, oblong-trapezoidal, apex produced, obtuse, termen sinuate above. Vein 2 from $2/3$ of cell, 3 and 4 connate, 5 gently approximated at base, 6 and 7 long-stalked, upper edge of cell obliterate on basal half, 8 free from base.

Female genitalia with a simple sterigma, ductus bursae sclerotized along upper half, moderately coiled. Signum, a bunch of spines. Additional sac of corpus bursae present.

Type of the genus, *Gnaphalostoma nivacula* spec. nov.

Differing from all other genera, except *Leurogyia* Common, by the long, fringed palpi, and from the last mentioned genus, by neuration, broader hind wing, and genitalia.

Gnaphalostoma nivacula spec. nov. (figs. 108-109)

♀ 15 mm. Head and palpus white, vertex laterally mixed with light tawny-fuscous. Thorax white, a large suffused dark grey patch on shoulder, apical half of thorax light grey. Abdomen pale ochreous-fuscous.

Fore wing oblong-suboval, moderate, costa arched at base, straight posteriorly, apex rounded and prominent over one half of wing breadth, termen deeply notched below apex, vertical above, very obliquely cut off below.

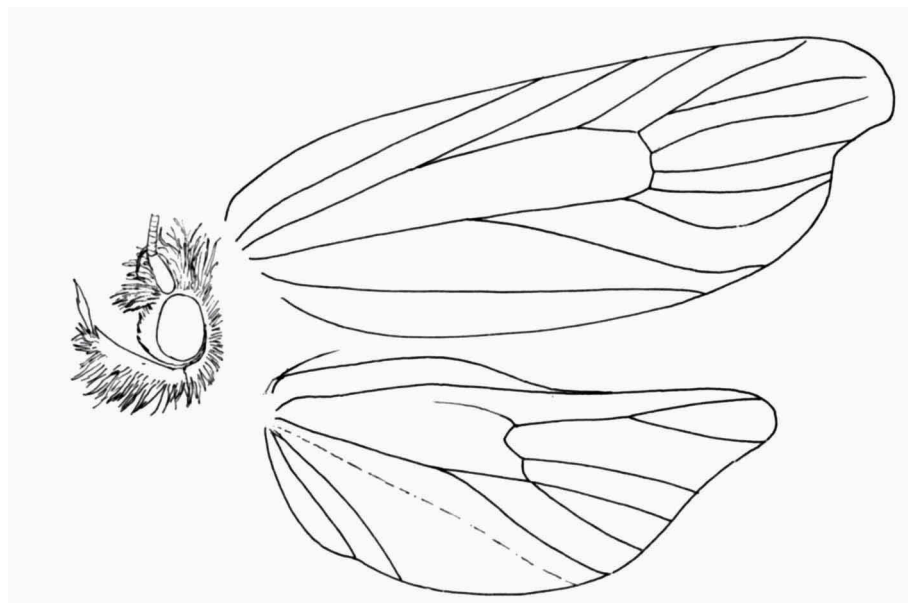


Fig. 108. *Gnaphalostoma nivacula* g. et sp. n., holotype, ♀, head and wing venation.

White. Basal patch with upper half as far as fold dark fuscous, centred with slightly paler, reaching only to $1/5$, edge suffused, concave, lower half of patch to $1/4$, dark fuscous, marbled with white, edge well-defined, inwards-oblique; an oblique dark fuscous wedge-shaped transverse spot on costa before middle, reaching $1/3$ across wing, top truncate; over posterior $2/5$ of wing fuscous-orange, its anterior edge well-defined, oblique; this colour extending $1/3$ across wing, cut by three well-defined, white, blackish-edged oblique costal marks and a slender similar strigula, crossing lower half of apical prominence, to tornal notch, preceded by a white, dark-edged dot; this orangeish area adjacent to a large fuscous patch, occupying about posterior $3/5$ of more than lower half of wing, anterior edge moderately inwards-oblique, with a rectangular notch just above fold; beyond this edge horizontal and slightly suffused light ochreous; this patch somewhat paler

towards termen, irregularly marbled with small white spots; terminal edge narrowly white, preceded by two round black spots; dorsum with a row of fuscous spots; three parallel vertical fuscous lines in disc beyond basal patch.

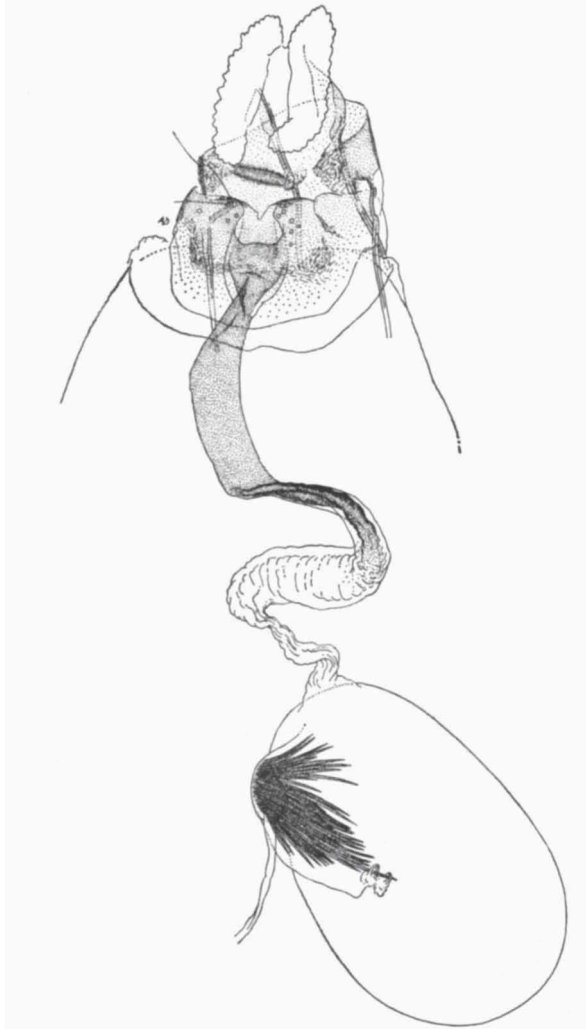


Fig. 109. *Gnaphalostoma nivacula* g. et sp. n., holotype, ♀, genitalia.

Cilia around apex golden and black, with a white basal line, cilia elsewhere fuscous (imperfect).

Hind wing light fuscous-tawny, tinged light ochreous. Cilia concolorous, lighter.

Female genitalia. Sterigma, a robust, convex band. Ostium formed by an

U-shaped median excision of its upper half. Lamella postvaginalis sclerotized, with a smaller triangular notch of upper edge. Colliculum, a short, sclerotized funnel, with a refracting wall. Ductus bursae broadly undulate, upper half sclerotized. Corpus bursae ovoid, large. Signum, a bunch of long spines, its base forming a truncate prominence of the outer wall, with an additional sac on a long, slender stalk.

Helmu-Gebiet, Gusum Bunjyang, 2600 m, 2.ix.1967 (W. Dierl), 1 ♀, holotype, genit. slide 8896.

APPENDIX 1

Matsumuraeses species from Nepal treated elsewhere

In my 1972 paper the following species of *Matsumuraeses* (Laspeyresiini), belonging to the present collection, have been treated.

Matsumuraeses xantholoba Diakonoff, 1972, p. 245, fig. 1 (Prov. Nr 3 East, Jubing, 1600 m, 6-11.v).

Matsumuraeses metacritica (Meyrick, 1922), p. 246, fig. 4 (Prov. Nr 2 East, Jiri, 2000 m, 2.iv).

Matsumuraeses tetramorpha Diakonoff, 1972, p. 247, fig. 2, pl. 5 (Khumbu; Pangpoche; Khumdzung; Prov. Nr 3 East, Kumjung Bujan; Prov. Nr 2 East, Junbesi; Jiri; Kathmandu. 4000-1400 m, 30.vi-31.vii).

Matsumuraeses melanaula (Meyrick, 1916), p. 248, fig. 3 (Kathmandu, 1800-1400 m, 5 and 18.ix).

Matsumuraeses ochreocervina (Walsingham, 1900), p. 250, pl. 6 figs. 1-2 (Prov. Nr 3 East, Khumjung, 3800 m, 18.vi).

APPENDIX 2

A recent publication

After having sent the manuscript of the present paper to the Editors, I received an important paper on the Nepalese Lepidoptera from the author, Dr. C. Wilkinson (1972). It is a study of the representatives of the family Drepanidae in Nepal, originating chiefly from the same expeditions of the Bavarian State Museum, as the Tortricoidea treated here, but also of a recent Canadian Expedition and of the Japanese expedition of 1962, referred to by me in the Introduction above.

In this paper an interesting account is given of the general occurrence of species of Lepidoptera in that region and remarks on the collecting localities with several photographs of the impressive scenery.

It is noteworthy that Dr. Wilkinson could not find any vertical zonation when studying the distribution of the Drepanidae. These insects apparently

are better flyers or are less dependent of temperature than the smaller Tortricidae. Although several species of the latter also show rather wide amplitude of vertical distribution, the main group is decidedly bound either to the hot lower country or to the high mountains.

APPENDIX 3

Description of a new *Leontochroma* species from China

Leontochroma percornutum spec. nov. (fig. 110)

♂ 28 mm. Head tawny-grey. (Palpi and antennae missing). Thorax vinaceous-tawny.

Fore wing suboval, rather broad, moderately dilated, costa curved, gently prominent at 1/5 and again at 3/4, apex obtusely pointed and gently produced, termen sinuate above, rounded below, little oblique. Pale orange, posteriorly tinged pinkish, central and dorsal part of wing from base of dorsum, in

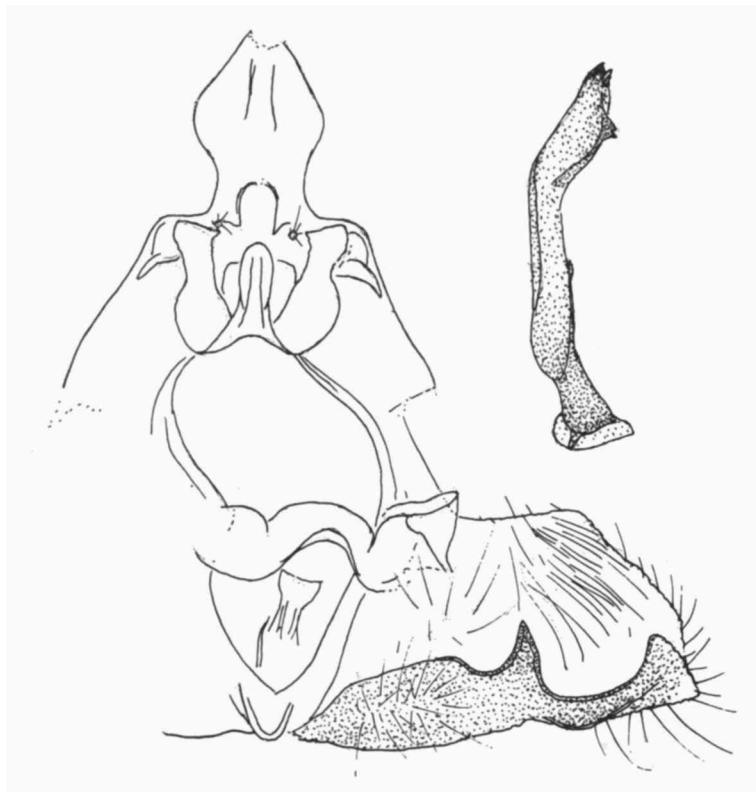


Fig. 110. *Leontochroma pericornutum* sp. n., ♂, holotype, genitalia.

cell and along dorsum almost to its end, suffused with fuscous; basal patch ill-defined, hardly to $1/3$, suffused with bright orange-fulvous, edge strongly angulate in middle; central fascia from slightly before middle of costa to end of dorsum, interrupted over its third fourth, edge strongly suffused throughout; orange, suffused with deeper orange-fulvous and pinkish; costal patch oblong, ill-defined, over more than anterior $1/4$ of costa and extending below to the course of vein 7; deep pinkish-fulvous, narrowly suffused along edges of wing and in apex, with fuscous. Cilia (strongly rubbed) pale ochreous, towards apex and dorsum infuscated.

Hind wing pale golden-yellow. Apex between veins 5-7 suffused with light orange, slightly extending basad. Cilia concolorous.

Male genitalia. Resembling those of *L. viridochraceum*, but specifically distinct. Uncus arrowhead-shaped. Gnathos shorter, arms narrower, externally emarginate above middle. Transtilla, a broad band, frontally with a median emargination, limited by an elevated edge. Valva rather short, trapezoidal, cucullus little curved, oblique and convex, lower end little projecting; sacculus very strong, broad, sclerotized, gradually dilated from base, upper edge in middle with a moderate emargination, followed by a strong pointed cusp, then broadly and deeply emarginate to before its apex which is dilated. Aedeagus curved and asymmetrical, obliquely spoon-shaped top with two groups of short teeth on the right side.

Female unknown.

China, near Mupin [Kwangsie], 2-8000 ft (print) ♀ genitalia on slide AB Febr. 10, 1930 (ink, in A. Busck's hand), 1 ♂, holotype (Nat. Mus. Nat. Hist. Wash.).

The single rather rubbed and compressed specimen resembles *L. viridochraceum* Walsingham closely, but only superficially. The shape of the sacculus is quite beyond the specific variability of that species.

Since the genus has been revised in the present paper, addition of this description seems well in place here.

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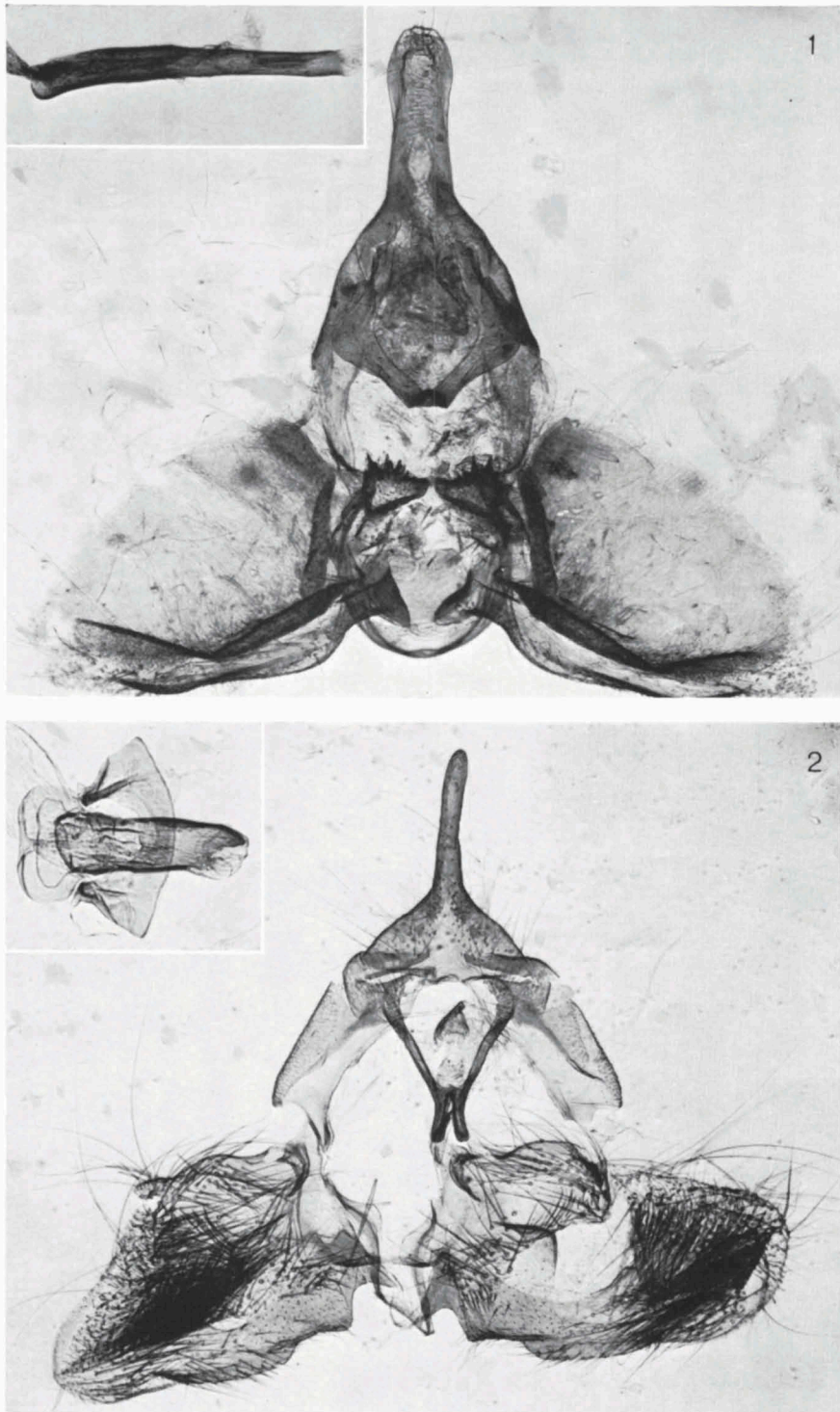
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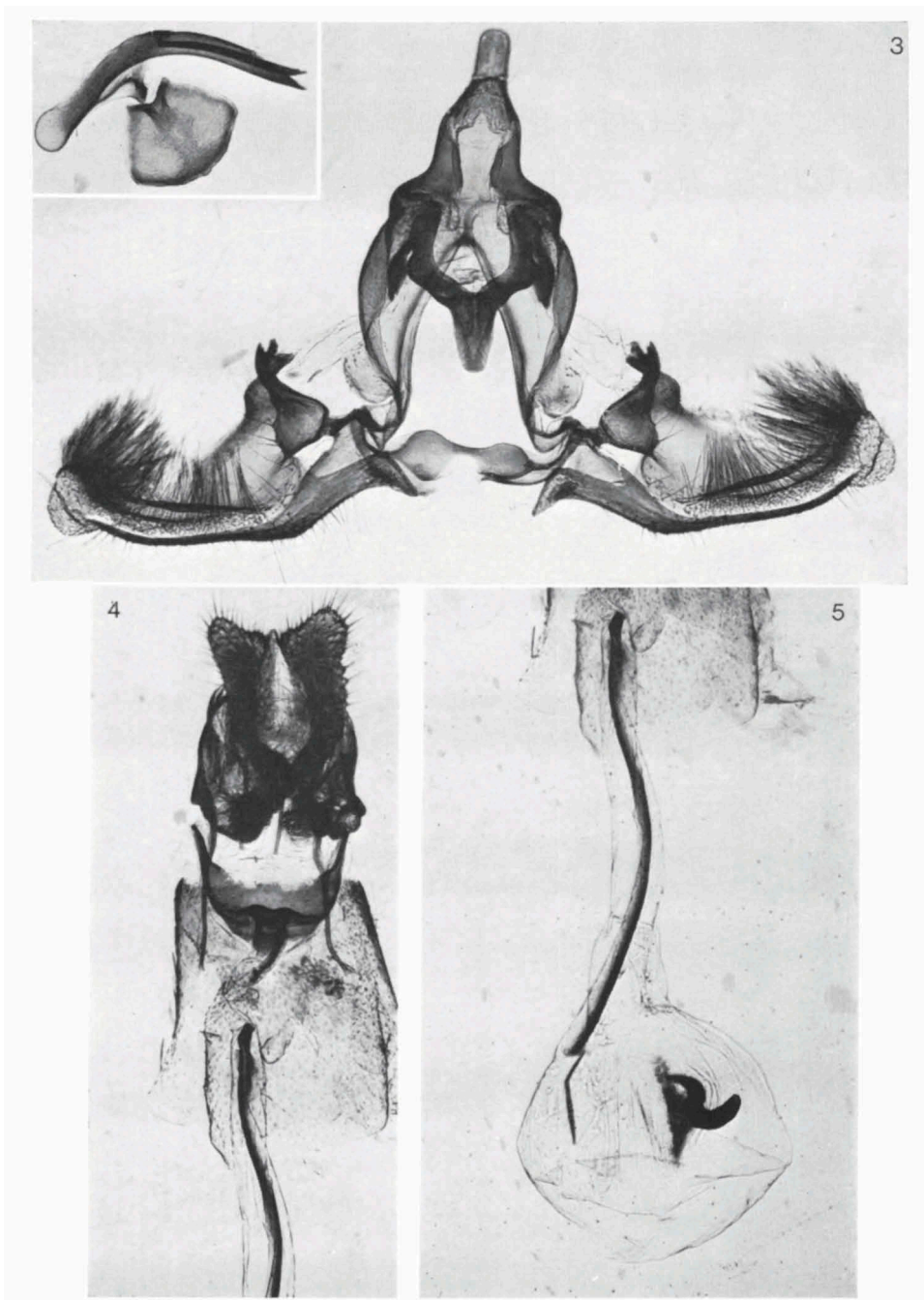
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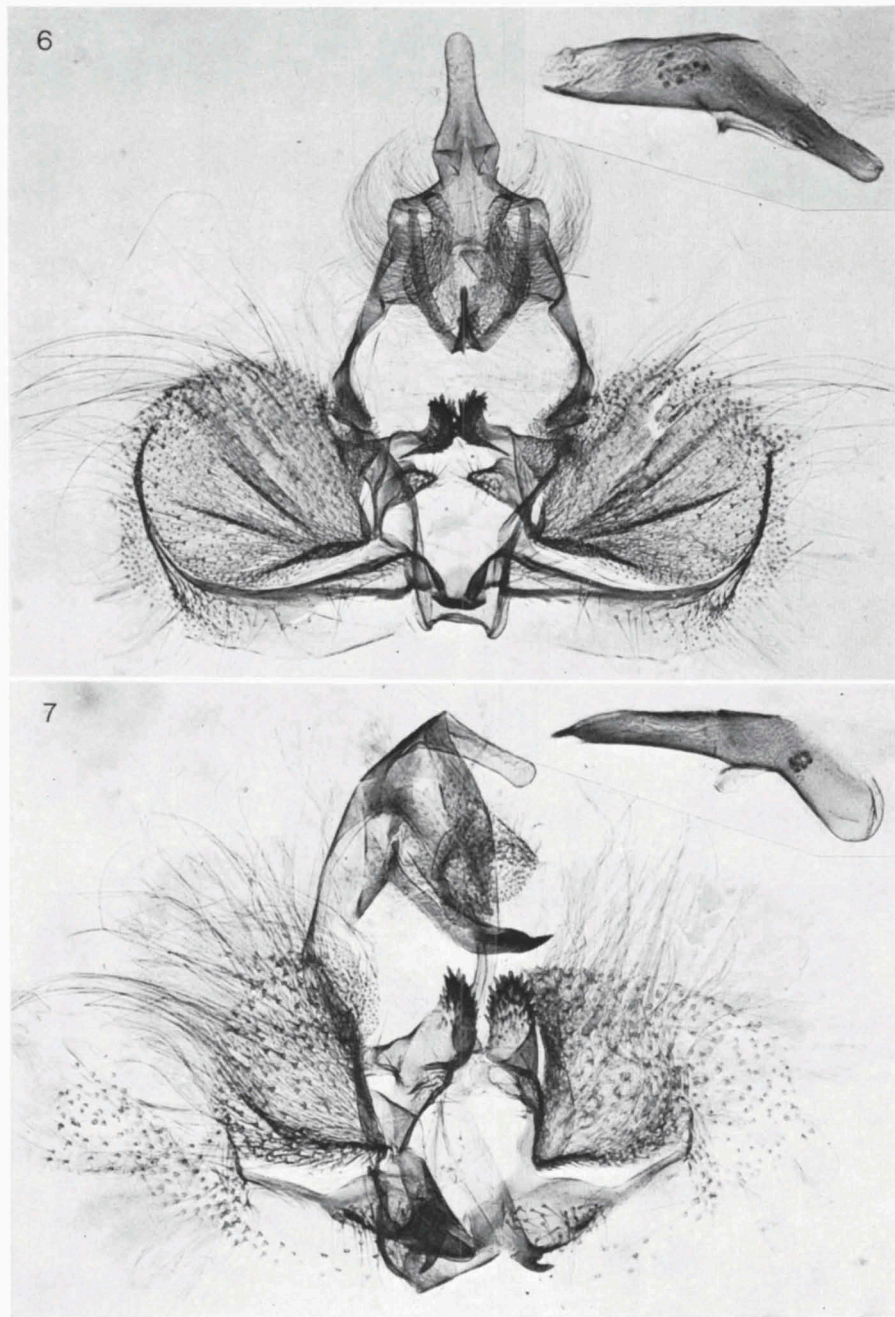
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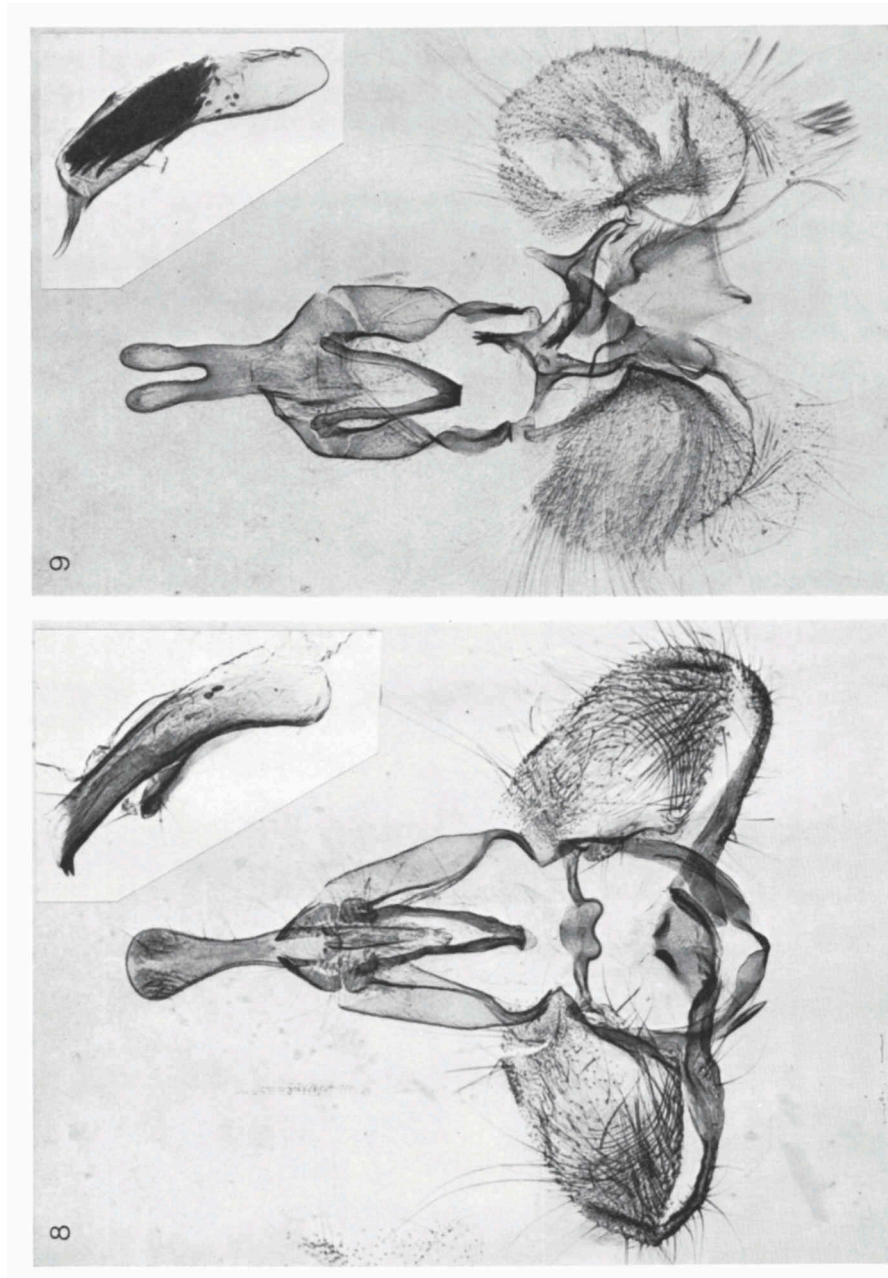
Male genitalia of Tortricinae. Fig. 1. *Adoxophyes parastropha* Meyr., with left, above, aedeagus, slide 8913. Fig. 2. *Scotiophyes faeculosa* (Meyr.) comb. nov., with left above, aedeagus and juxta, slide 8954.



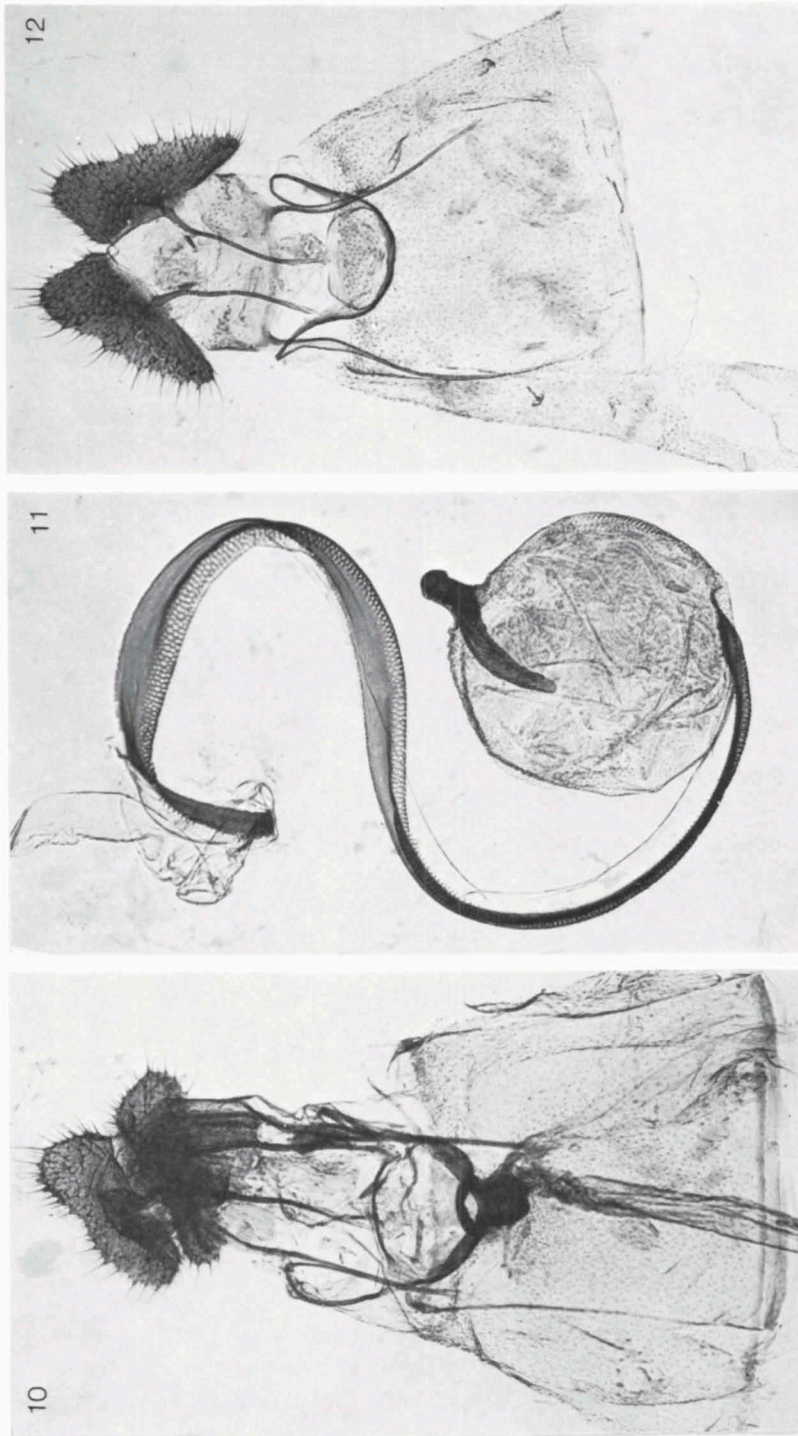
Genitalia of *Clepsid melissa* (Meyr.) comb. nov. — Fig. 3. Male, with above, aedeagus and juxta, slide 8949. Fig. 4. Female, slide 8950. Fig. 5. Do, bursa.



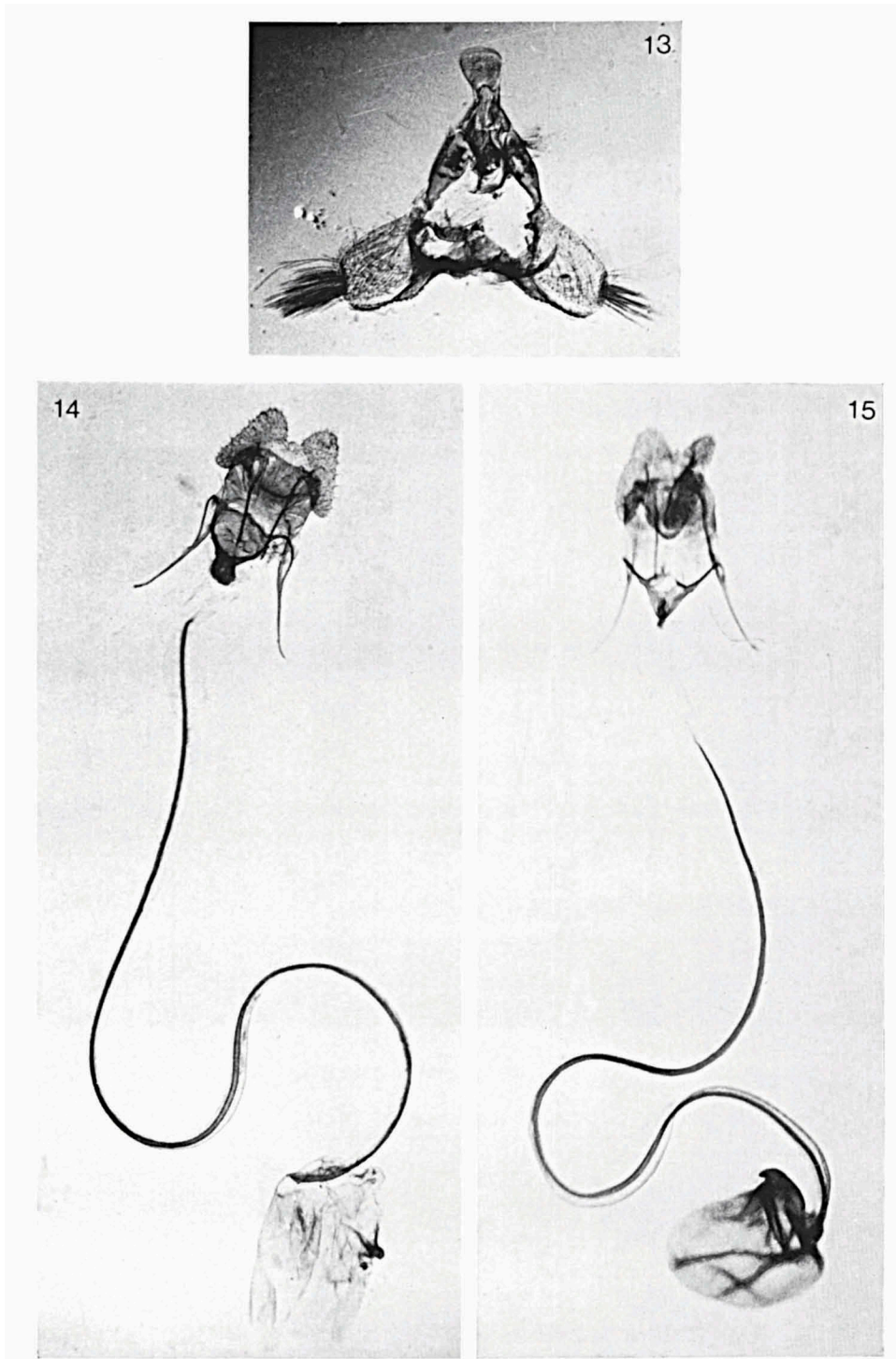
Male genitalia of *Neocalyptis* Diak., with right, aedeagus. — Fig. 6. *N. tricensa* (Meyr.), slide 8908. Fig. 7. *N. affinisana* (Walk.), slide 8925.



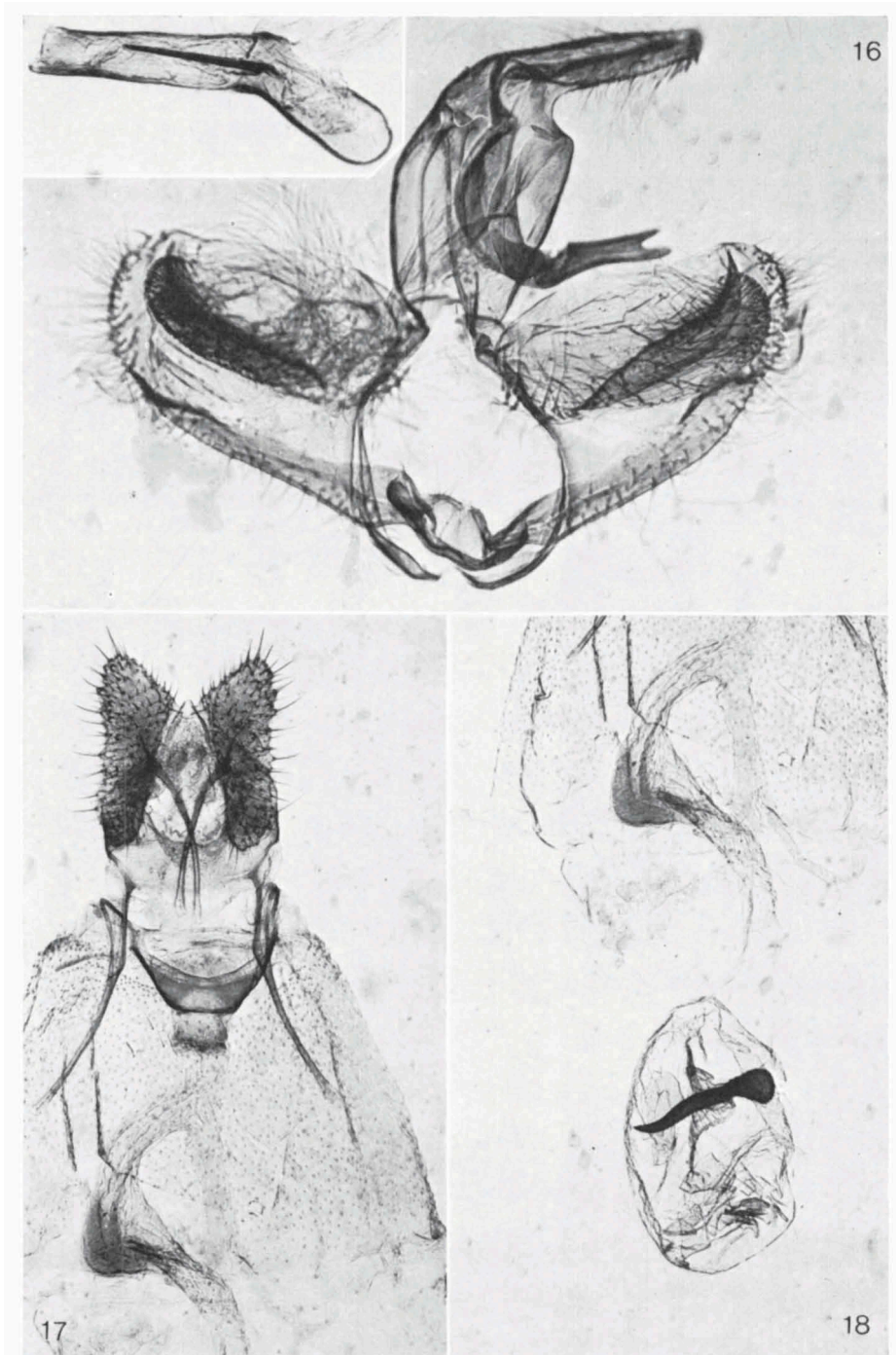
Male genitalia of Archipini, with right, aedeagus. — Fig. 8. *Meridemis bathymorpha* sp.n., slide 8936. Fig. 9. *Diplocalyptis operosa* (Meyr.) comb. nov., slide 8939.



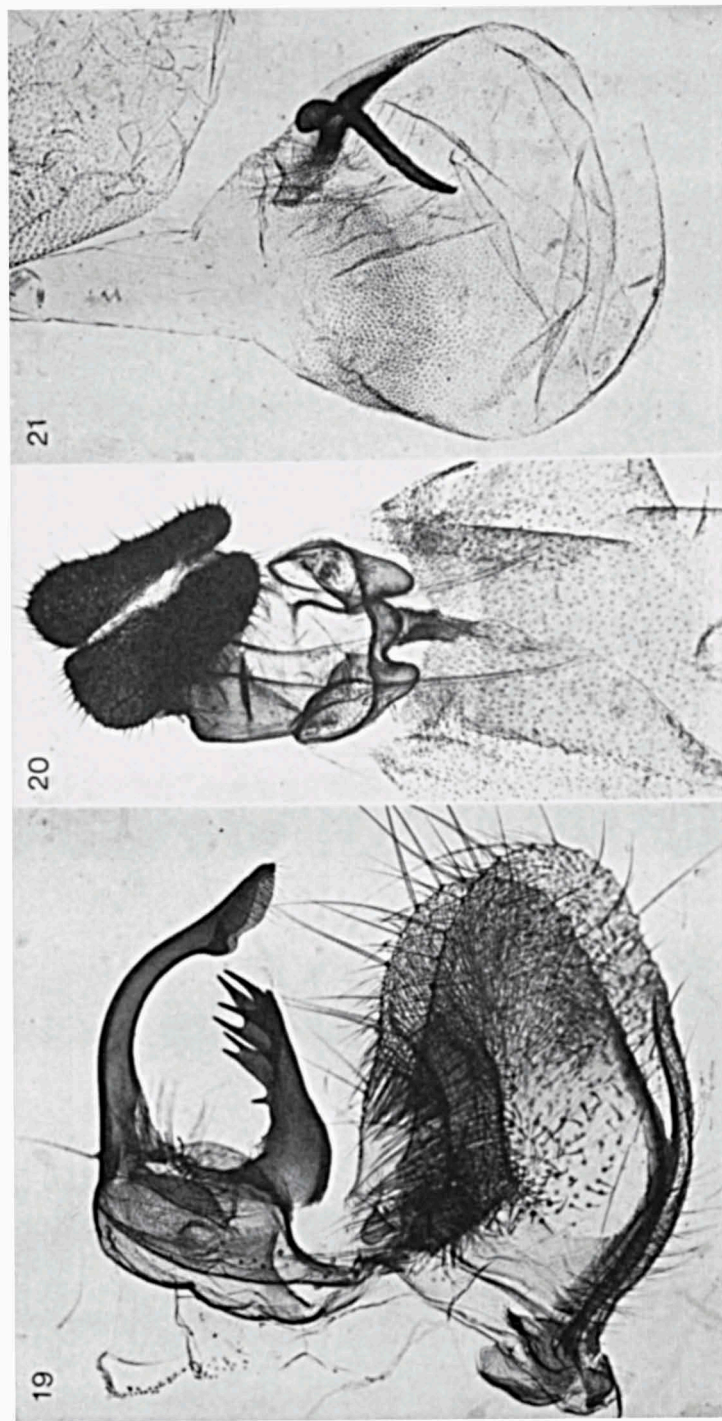
Female genitalia of Archipini. — Fig. 10. *Meridemis bathymorpha* sp. n., paratype, slide 9009. Fig. 11. Do., bursa and ductus bursae. Fig. 12. *Neocalypitis tricensa* (Meyr.) comb. nov., slide 8907.



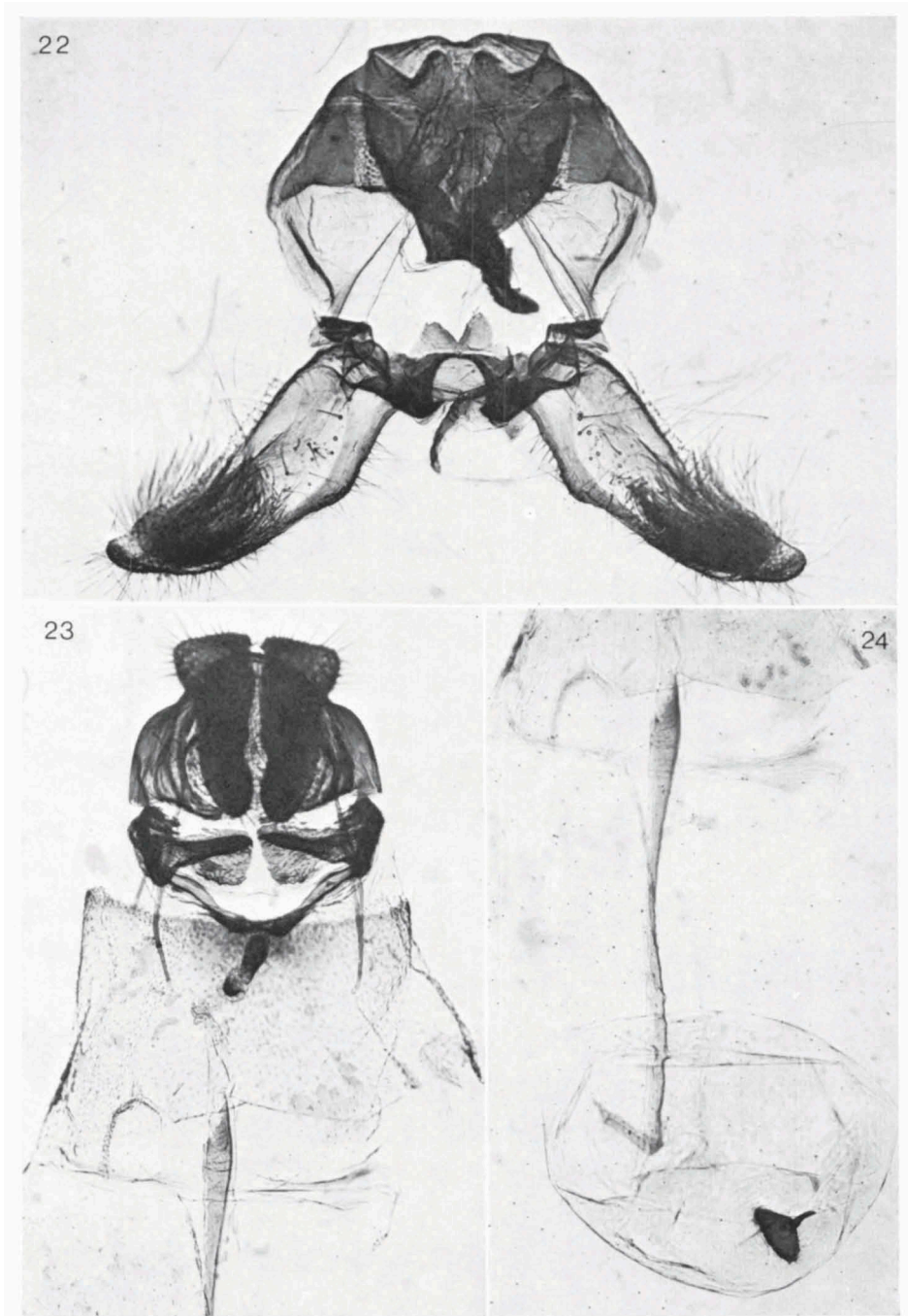
Genitalia of *Meridemis* species from Ceylon (after photographs by N. S. Obratsov). —
 Fig. 13. *M. invalidana* (Walk.) comb. nov., ♂, slide 6284. Fig. 14. Do., ♀, slide 6270.
 Fig. 15. *M. detractana* (Walk.) comb. nov., ♀, slide 6269.



Genitalia of *Electraglaia isozona* (Meyr.) comb. nov. Fig. 16. Male, with aedeagus, uncus and gnathos in profile, slide 6996. Fig. 17. Female, slide 6997. Fig. 18. Do., bursa.



Genitalia of *Ulodermis trigrapha* Meyr. — Fig. 19. Male, slide 6023. Fig. 20. Female, slide 6024. Fig. 21. Do., bursa.



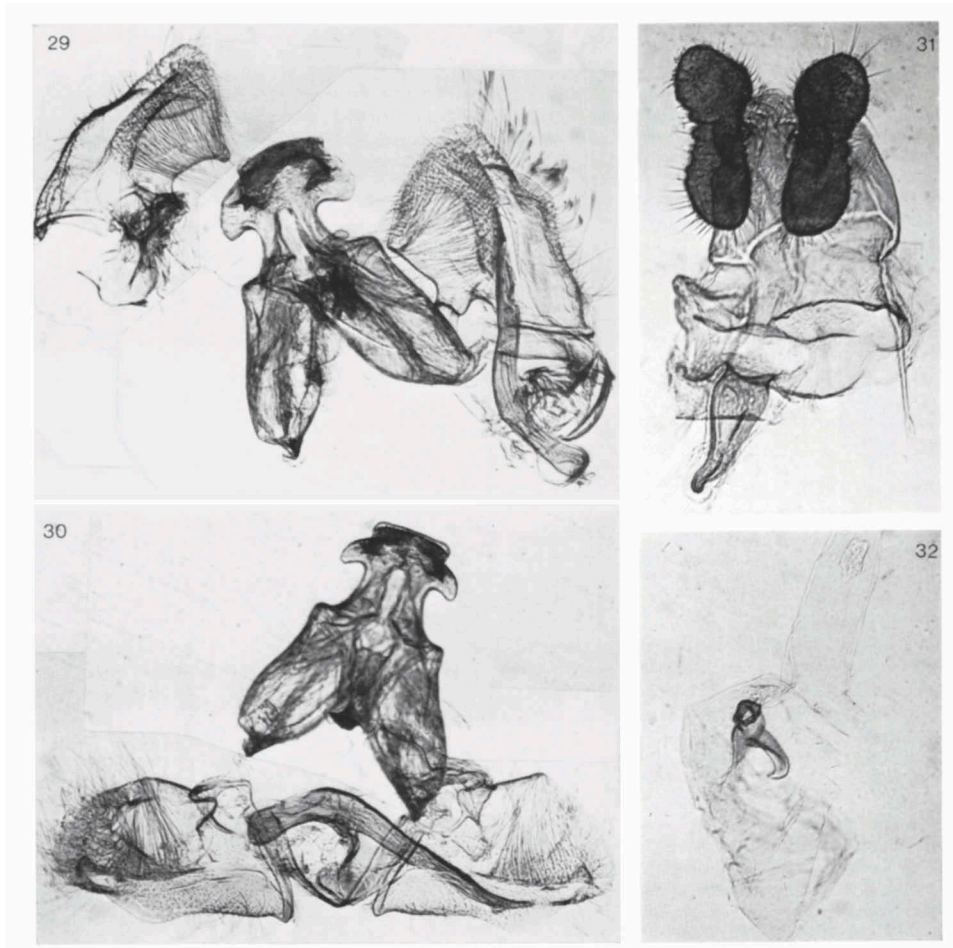
Genitalia of *Mochlopyga humana* (Meyr.) — Fig. 22. Male, slide 6901. Fig. 23. Female, slide 6902. Fig. 24. Do., bursa.



Male genitalia of *Leontochroma* Wals. — Fig. 25. *L. suppurpuratum* Wals., slide 6910.
Fig. 26. *L. vividochraceum* Wals., slide 5757; above, left, aedeagus in rostro-ventral view.



Female genitalia of *Leontochroma* Wals., with below., bursa. Fig. 27. *L. suppurpuratum* Wals., slide 6912. Fig. 28. *L. viridochraceum* Wals., slide 6914.



Genitalia of *Leontochroma* Wals., types. Fig. 29. *L. suppuratum* Wals., ♂. Fig. 30. *L. lebetanum* Wals., ♂. Fig. 31. *L. suppuratum* Wals., allotype, ♀. Fig. 32. Do., bursa.

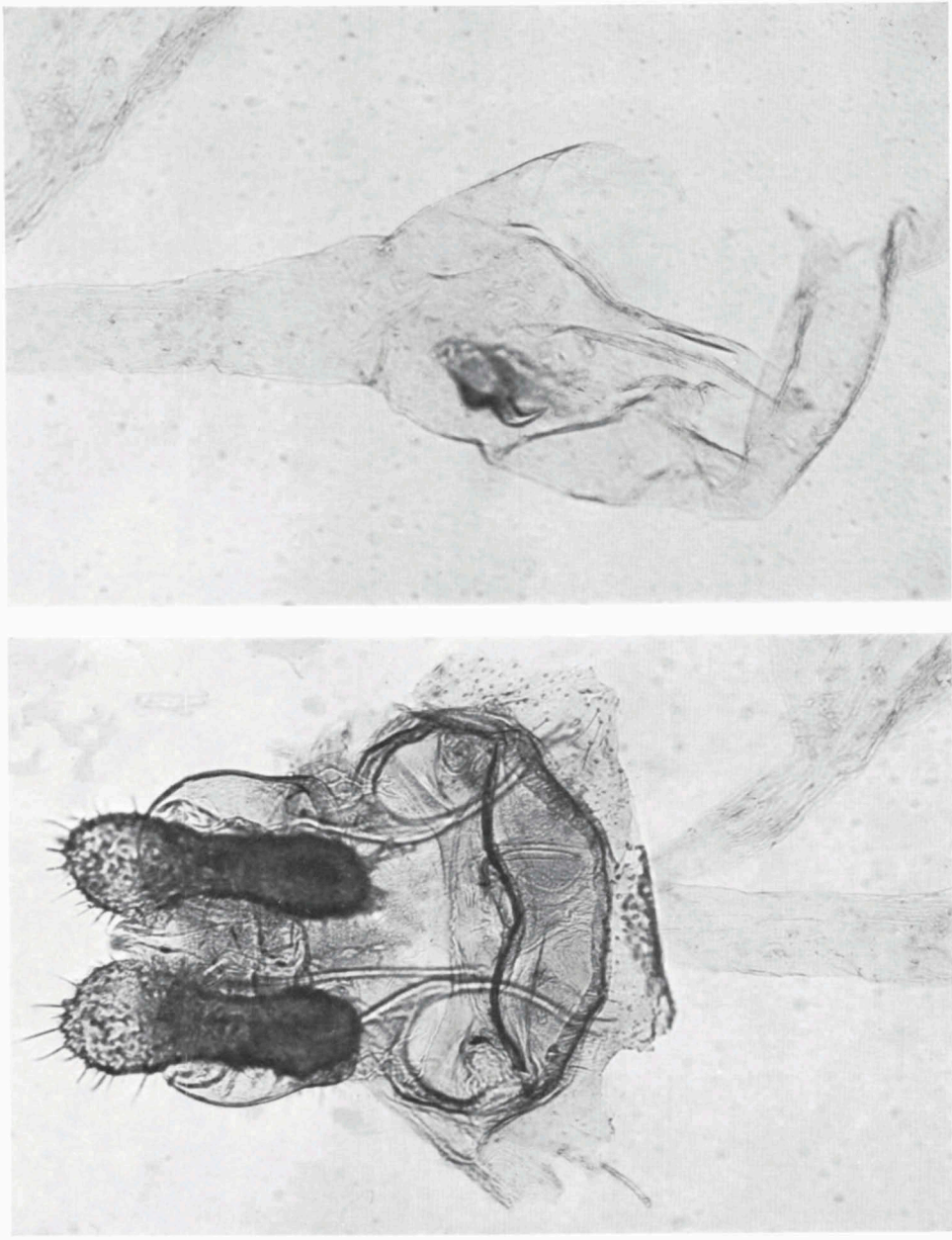
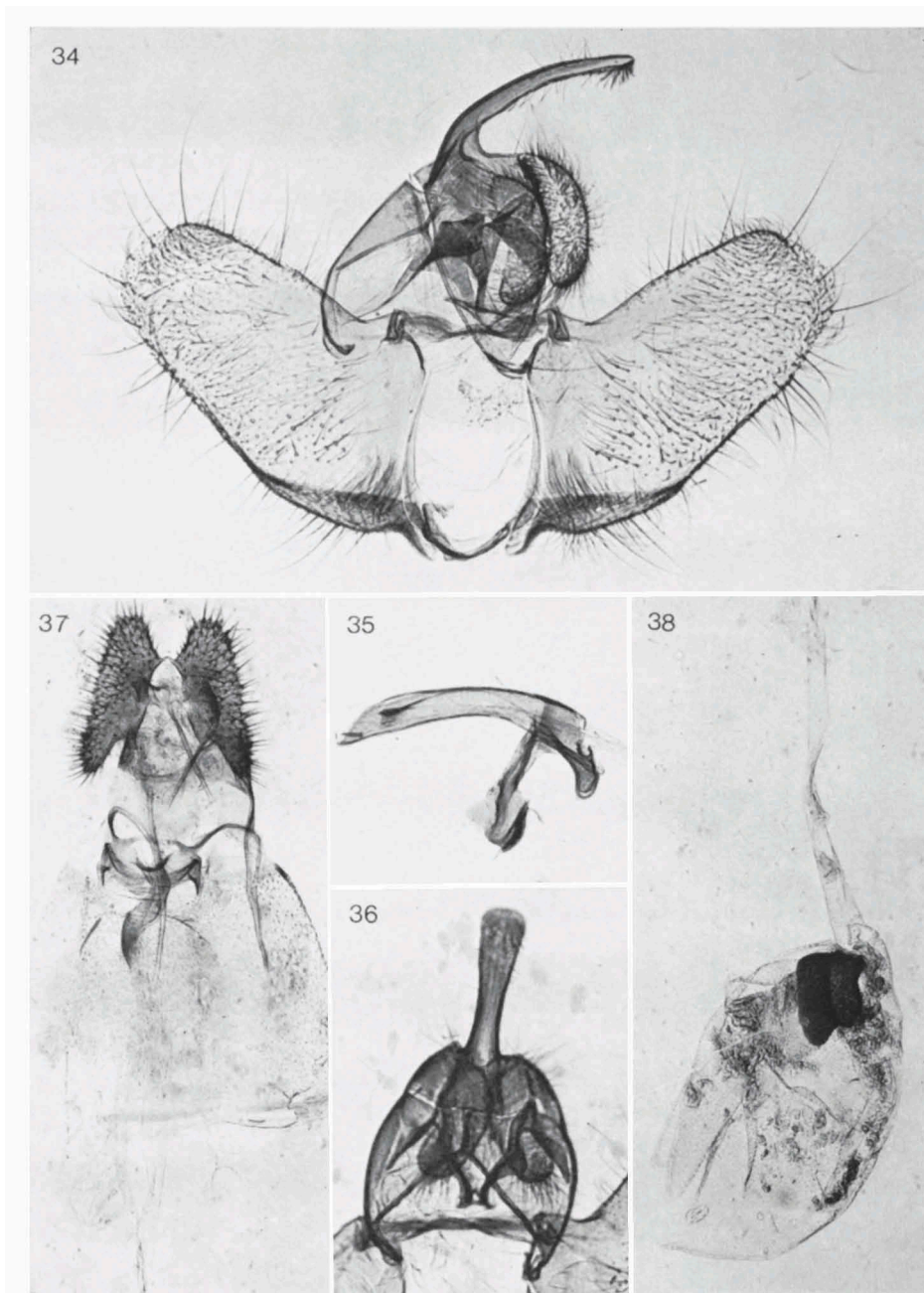


Fig. 33. Genitalia of *Leontochroma viridochraceum* Wals., holotype, ♀. By the courtesy of the Trustees of the British Museum (Natural History).



Genitalia of *Dicellitix nigritula* Meyr. — Fig. 34. Male, slide 8923. Fig. 35. Do, aedeagus. Fig. 36. Do., uncus in ventral aspect, slide 8933. Fig. 37. Female, slide 8938. Fig. 38. Do., bursa.