

NEW ASIATIC AND PAPUAN TORTRICIDAE WITH RECORDS OF OTHER SPECIES

(3d Communication on Indo-Malayan and Papuan Microlepidoptera) *)

by

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In 1938 I obtained for study a large collection of Tortricidae, chiefly from New Guinea, by the kind mediation of Prof. Dr. M. HERING, Berlin. By combination of circumstances results of this study could be published only in part (2nd Communication, vide note). No more it is possible to me at present to publish a complete list of this collection either. As further delay of publication of new species seems undesirable, I describe them below and add records on some other species from this collection, as far as it is possible to me now. Descriptions and figures of 11 new species and of their genitalia (except one) are given and of the genitalia of 3 other species are added. Although I prefer drawings of genitalia to photographs, by lack of time only the latter could be made.

The types, if not recorded otherwise, are preserved temporarily in my collection.

Cerace stipatana WALK., 1863

WALKER, List Lep. Het. Brit. Mus., vol. 28, p. 422. DIAKONOFF, Zool. Meded. Mus. Leiden, vol. 21, p. 130-131, fig. 1A-B (head, wing-neuration), fig. 2A-C (genitalia), 1939.

India, Darjeeling; Formosa, Polisha, VIII.1908. 1 ♂, 1 ♀.

Cerace guttana FELD., 1875

FELDER, Reis. Novara, pl. 139, f. 51.

India, Darjeeling (Coll. ATKINSON). 1 ♀.

Cerace sardias MEYR., 1907

MEYRICK, J. Bomb. Nat. Hist. Soc., vol. 17, p. 748.

Genital apparatus ♂ (pl. 3, fig. 2). Tegumen moderately broad, rather short, saccus rounded-angular. Valva elongate, the broadest at base, its edges parallel posteriorly, apex oblique, covered with long bristle-hairs along lower part of posterior half, anteriorly these bristles very strong. Costa indicated, rather

*) 1st and 2nd Communications have been published in Treubia, vol. 16, p. 399, 1938, and in Zool. Meded. Mus. Leiden, vol. 21, p. 111, 1939, respectively.

narrow, sacculus indefinite, with a few short hairs. Uncus narrowed below top, its base dilated triangularly, its top rounded-ovate, with two rows of bristles below. Socii rather long, with narrow base, dilated beyond middle, hairy, reaching to $\frac{2}{3}$ of gnathos, which is robust, moderately long, with strongly curved point. Transtilla moderate, dilated in middle. Anellus moderate. Aedoeagus short and broad, its top produced below, with oblique orifice. Cornuti not perceptible (broken off?). (Slide No. 144 D).

Upper Assam, 1888 (HERBERT). 1 ♂.

This species is allied to *stipatana* SNELL.

Cerace onustana WALK., 1863

WALKER, List Lep. Het. Brit. Mus., vol. 28, p. 423.

Genital apparatus ♂ (pl. 3, fig. 3). Tegumen rather narrow, saccus strong, rounded. Valva curved, elongate, somewhat narrowed at base, on apex and along lower $\frac{1}{2}$ covered with long bristle-shaped hairs, costa indicated, broad, sacculus represented by a fold at base, covered with very long, strong bristles. Uncus rather narrow and slender, long, its top obtuse-pointed, with long, recurved bristle-hairs below. Socii large, drooping, hairy, elongate-ovate, not reaching top of gnathos; the latter strong, rather long, acutely pointed. Transtilla rather broad, its upper edge emarginate in middle. Anellus broad, darkly chitinised. Aedoeagus moderately long, curved, with a short, rounded projection below orifice. Cornuti short, strong thorns. (Slide No. 143 D).

"Mssn. G" (no further data). 1 ♂.

Cerace ios nov. spec. (pl. 1, fig. 1).

ios = rust.

♀ 45.5 mm. Head yellow. Palpi black, with basal joint and the base of terminal joint yellow. Antennae black, yellowish ringed. Thorax (damaged) yellow with a round, ferruginous dot on each patagium and on middle of foremargin. Forewings with costa strongly but gradually arched to $\frac{1}{3}$, right posteriorly, gradually bowed beyond the middle, slightly convex before apex; apex bluntly rounded, termen convex beneath apex, then prominently rounded in cells 7-5, oblique beneath. Yellow-orange, retinated with ferruginous-violet: on basal half of wing ground-colour predominating, the yellow blotches being larger than ferruginous bands and stripes which separate them; on terminal half of wing and along dorsum the yellow colour is reduced to round spots, here ferruginous markings predominating; dark markings black along costa and dorsum; a row of transverse strigae on costa, reaching at base to $\frac{1}{3}$ of wing-breadth, decreasing in length towards apex gradually, but increasing in breadth; a round yellow dot before apex; below some eight longitudinal rows of round yellow blotches, diminishing towards termen; termen red in cells 7-3, cilia red, with some 6 black semicircular dots. (Underside yellow-orange, with a row of black dots along costa; terminal $\frac{1}{3}$ black, with round, yellow dots along costa and red blotches along termen in cells 7-4). Hindwings bright yellow-

orange, paler at base, with terminal $\frac{1}{3}$ black, the inner margin of this black area somewhat suffused, sinuate; black rounded dots on lower half of wing decreasing in size towards termen, cilia yellow, black around terminal $\frac{1}{3}$ of wing. (Underside yellow-orange, paler on middle of base, with round black dots along lower half of wing and along termen to $\frac{1}{2}$ of costa, in termen connected by blackish suffusion). Legs yellow, with articulations black: fore and middle tarsi black, yellow-ringed, hind tarsi with the base of first joint black.

North East Borneo, Mt. Kina-Balu, "95, WATSTR," 1 sp. (University Museum Berlin, ex Coll. STAUDINGER). Type in Berlin Museum.

Nearest to *triphaenella* SNELL., but with red termen in forewings and round dots in hindwings.

Genus *Zacorisca* (MEYR.)

Zacorisca MEYRICK, Proc. Linn. Soc. N. S. Wales, vol. 35, p. 220, 1910.

Megalodoris MEYRICK, Exot. Microl., vol. 1, p. 5, 1912.

Chresmarcha, DIAKONOFF nec MEYRICK, Zool. Meded. Mus. Leiden, vol. 21, p. 135-142, 1939.

In my above mentioned paper this genus has been sunk to the rank of a synonym of *Chresmarcha*, but more material studied since proves that both names are valid and refer to two quite distinct genera, which even show no direct relation to each other. They are used now in the sense quite different from that of MEYRICK. *Zacorisca* is a large genus to which belong blueish and other brightly coloured species as well as white and yellowish ones with dark terminal markings; the latter were referred by MEYRICK to *Chresmarcha*. The males of all of these species are in possession of a well developed costal fold separate veins 7 and 8 in forewings, and of a specialised genital apparatus. The subfamily name *Chresmarchidiï* mihi I propose to change in *Zacoriscides*.

To *Chresmarcha* (MEYR.) belong only two species: *sibyllina* MEYR. and *delphica* MEYR., both characterised by forewings without costal fold, with stalked veins 7 and 8, with vein 3 from before angle and by genitalia of Cacoeciad type. This genus is allied to *Adoxophyes* MEYR., and belongs to the subfamily *Cacoeciades* (= *Cacoecidiï* mihi).

Zacorisca plicata nov. spec. (pl. 1, fig. 3 ♂)

♂ 22 mm. Head and palpi pale yellow, terminal joint of the latter blackish; face white. Thorax white, anterior edge light yellow. Abdomen dark grey posteriorly (damaged anteriorly), whitish from below, anal tuft pale ochreous-yellowish. Thorax from below and legs whitish, tarsi suffused greyish above. Forewings with large costal fold reaching to beyond middle of wing, broad at base, gradually narrowed posteriorly, its edge little curved; costa shortly and abruptly curved at base, gently curved posteriorly to apex, apex rounded, termen straight, somewhat oblique. Cretaceous-white, slightly suffused grey towards tornus. Markings brownish-blackish: a streak along costa from its middle to apex, gradually dilated posteriorly, continued along termen by suf-

fused, acute, triangular spots on base of veins, reaching about $\frac{1}{5}$ towards cell, in tornus indistinct. Cilia white (damaged). Hindwings dark brownish-black, cilia snow-white.

Genital apparatus ♂ (pl. 3, fig. 4). Scopa ventralis very large, consisting of fine bristles, long hair-shaped scales and short, coiled, very dense hairs, situated on plicate and membranous dilatations of the 8th abdominal segment, which is supported by a large W-shaped mensis ventralis. Mensis dorsalis inverse T-shaped. Tegumen strong, long, club-shaped, with a very narrow lower half, auriculate above. Saccus strong, almost semispheroid. Valva rather large, of intricate structure, disc many-folded, showing two projections: towards apex of costa and in middle of disc, densely covered with two types of hair-scales: long, firmly fitted to valval surface and difficult to remove in mount, and short very dense, black hairs, which release easily (even in dried specimens, as found in other species of this genus); sacculus plicate, strong at base; valvula a small, bristled knob. Uncus large, quadrate, bristled at the sides, gnathos short, strong, curved, bluntly pointed: a transversely prolonged knob at each side, densely dentate above. Aedoeagus large, pistol-shaped, strong towards orifice. Cornuti a sheaf of long spines. (Slide No. 213 D).

North New Guinea, Base Camp at April River, IX.1912 (Kaiserin Augustafluss Expedition, LEDERMANN). 1 specimen.

Isotenes basalis nov. spec. (pl. 1, fig. 2 ♂)

♂ 17-19 mm. Head dark grey, mixed with dirty-whitish, face white. Palpi white at base and at the inner side, median joint dark grey at the outer side beyond base, terminal joint dark grey. Thorax dark grey, mixed with dirty whitish-ochreous, abdomen ochreous-whitish, glossy, anal tuft pale ochreous. Forewings elongate, dilated at $\frac{2}{5}$, narrowed posteriorly; costal fold rather broad, its edge curved, costa smooth and little curved along fold, shortly and roughly ciliate and slightly concave beyond fold, apex obtuse-pointed, termen slightly concave above, curved below, oblique. Cretaceous-white, scattered and strigulated with dark brown and lilac-grey, markings suffused, dark grey, dark brown and lilac-grey. Costal fold more or less suffused with blackish-grey, a triangular, dark brown costal spot on its posterior extremity, connected with $\frac{1}{3}$ of fold by an inwardly oblique, outwardly curved fascia of the same colour; a dark brown patch at this place, basal area before this fascia and above fold suffused with brown. An elongate-semiovate costal patch, beginning on costa beyond basal area, to before apex, suffused dark grey, with lilac tinge and scattered with blackish; a few dots on costa whitish; termen, tornus and dorsum irregularly suffused, strigulated and retinate with dark brown and lilac-grey; on $\frac{1}{2}$ of dorsum a more or less defined, dark greyish-brownish suffusion, its outer edge very oblique; a few dark brown marks beyond this on dorsum; some four, often indistinct narrow and undulate transverse fasciae, mostly beginning below costal patch: first from below its inner extremity to $\frac{1}{2}$ of dorsum, brown, two following irregular and indistinct on about $\frac{3}{4}$ of disc, dark brown, fourth

preterminal, from below the outer end of costal patch to tornus, dark brownish-blackish, curved outwardly in middle; veins beyond cell sharply defined, dark grey. Cilia light grey, base white, a broad blackish, antemedian line, regularly interrupted by light grey. Hindwings pale greyish-brownish, darker posteriorly, cilia light grey, with darker antemedian line.

Genital apparatus ♂ (pl. 3, fig. 5). Scopa present, large. Mensis ventralis long, narrow, gently curved. Tegumen long, very narrow at base, dilated and semispheroid apically; saccus broad, indented in middle. Valva plicate, densely covered with long hairs, sacculus long, membranous, acutely pointed (costa indistinct), valvula a rounded, vesicular plication. Uncus narrow at base, abruptly dilated, mushroom-shaped, with angularly projecting sides and rounded top, haired below. Socii broad, truncate, very densely covered with long hairs. Gnathos strong, curved. Transtilla paired: a curved dentate knob on each side, with narrow projections, touching each other centrally. Anellus moderate. Aedoeagus pistol-shaped, its orifice with a strong thorn above and a chitinised projection below. Cornuti a sheaf of long spines. (Slide No. 208 D).

North New Guinea, Hunsteinspitze, 1350 m, II-III.1913 (Kaiserin Augustafloss Expedition, BÜRGERS). 6 ♂.

Allied to *crobylota* MEYR. As I have stated elsewhere (Zool. Meded. Mus. Leid., vol. 21, p. 147, 1939), this genus is nearly allied to *Zacorisca*, in spite of modest colouring.

Adoxophyes thoracica nov. spec. (pl. 3, fig. 1 ♂)

$\vartheta\acute{\omega}\rho\alpha\xi$ = a cuirass.

♂ 15-17 mm. Head and palpi brownish-ochreous, face projecting in middle, suffused dark brownish. Scape of antennae brownish-ochreous above, dark brownish below. Thorax pale ochreous, faintly tinged greyish-violet. Abdomen and anal tuft light ochreous-yellowish. Forewings with costal fold moderate, reaching to before middle of costa, edge long-ciliate; costa moderately curved to beyond middle, straight posteriorly, apex rounded, termen straight, vertical. Pale whitish-ochreous, evenly suffused throughout with pale leaden-grey, tinged violet; markings bright brown, narrowly edged by pale ground-colour. An oblique, truncate-pyramidal, dark brown blotch, edged and interrupted above fold by pale ground-colour, its upper acute angle reaching to about $\frac{3}{5}$ across wing; its base reaching from $\frac{1}{5}$ to $\frac{2}{5}$ of dorsum, with an oval patch of leaden-greyish scales in middle; central fascia from $\frac{2}{5}$ of costa to $\frac{3}{4}$ of dorsum, sharply edged pale ochreous, with a small, dark brown patch on apex of costal fold, moderately broad along upper half, below middle of disc triangularly dilated posteriorly, reaching from $\frac{3}{4}$ of dorsum to before tornus, where its posterior edge is suffused; its inner edge rounded and slightly projecting on upper $\frac{1}{3}$ of disc, slightly curved, concave below, vertical on upper dorsal edge; its outer edge rounded-undulate and twice slightly indented along upper half, very oblique and straight below; apical area edged by a brown, undulate, posteriorly suffused fascia, preceded by a narrow, pale edge; it runs from $\frac{2}{3}$ of costa to

termen just above tornus, is vertical on costa, deeply concave in middle, slightly projecting on veins 4-5 and slightly convex below; apical area filled with rather dark leaden-grey-violet and bearing three narrow, transverse, brown marks on costa, the last of which is prolonged into a narrow strigula before upper $\frac{1}{3}$ of termen; costa edged light ochreous, termen minutely edged brownish. Cilia pale ochreous with brighter base. Hindwings light ochreous-brownish, somewhat darker posteriorly.

Genital apparatus ♂ (pl. 3, fig. 6). Scopa ventralis rather large. Tegumen large, broader below. Saccus rather broad, its top somewhat bluntly pointed. Valva semispheroid, with an auriculate projection at the top; sacculus: strong at base, a rather broad fold posteriorly. Uncus long, its hook narrowed at base and top, its apex truncate. Gnathos strong, with arms broadly dilated laterally, its point rounded. Socii elongate, moderate, drooping. Transtilla-knobs with short and broad medial projections fused together, elongate, rounded posteriorly, abruptly narrowed anteriorly, with some 14-15 strong thorns of variable size. Anellus moderate. Aedoeagus long, gradually curved, not dilated apically, cornuti not perceptible. (Slide No. 217D).

North New Guinea, Head Camp near Malu, I-II.1913 (Kaiserin Augustafluss Expedition, BÜRGERS). 3 specimens.

Adoxophyes fasciculana WALK., 1866

Tortrix fasciculana WALKER, List Lep. Het. Brit. Mus., vol. 35, p. 1785.

North New Guinea, Head Camp near Malu, VI-VIII.1913 (Kaiserin Augustafluss Expedition, BÜRGERS). 1 ♂.

Adoxophyes rufostriatana PAG., 1900

Tortrix rufostriatana PAGENSTECHER, Zoologica, vol. 29, p. 226.

North New Guinea, Head Camp near Malu, VI-VIII.1912. (Kaiserin Augustafluss Expedition, BÜRGERS). 1 ♂.

Adoxophyes perstricta MEYR., 1928

MEYRICK, Exot. Microl., vol. 3, p. 453-454.

North New Guinea, Head Camp near Malu, VI-VIII.1913 (Kaiserin Augustafluss Expedition, BÜRGERS). New Britain, Ralum (E. DAHL) 6 ♂, 1 ♀.

Exactly resembling specimens from Java. Distinct by ferruginous-brownish streak along fold, on base of disc, and by a small dentation of the inner edge of costal patch below costa.

Adoxophyes melichroa LOW., 1899

Tortrix melichroa LOWER, Proc. Linn. Soc. N. S. Wales, vol. 24, p. 92.

North New Guinea, Head Camp near Malu, I.X.1913 (Kaiserin Augustafluss Expedition, BÜRGERS). 1 ♀.

Adoxophyes ioterma MEYR., 1910

MEYRICK, Proc. Linn. Soc. N. S. Wales, vol. 35, p. 205-206.

North East New Guinea, Astrolabe Bay, Stephansort (THIELE). 1 ♂, 2 ♀.

Adoxophyes horographa MEYR., 1928 (pl. 1, fig. 6 ♂)

MEYRICK, Exot. Microl., vol. 3, p. 454 - 455.

♂ 11.5 mm. Head, palpi and abdomen brownish-ochreous. Thorax light ochreous. Forewings without costal fold, ovate-truncate, costa strongly arched at base, gradually curved over the whole length, apex rounded, scarcely projecting, termen straight above, broadly rounded beneath. Light whitish-ochreous, brighter yellowish-ochreous along costa and termen, markings orange-fuscous. Costa suffused orange-fuscous at base, short transverse streaks from base to apex of the same colour; a broad longitudinal streak on disc below fold from before base to $\frac{1}{2}$ of wing, not reaching dorsum; another such streak, angulated, from upper half of base to tornus, parallel to costa as far as $\frac{1}{2}$ of wing, angulated here, straight and oblique posteriorly; a third, somewhat sinuate streak from $\frac{3}{5}$ of costa to termen just above tornus; a few brown scales on base beyond middle. Cilia yellowish. Hindwings and cilia light whitish-ochreous. Legs ochreous.

New Britain, Alooove, Ralum, 28.VII.1896 (E. DAHL). 1 specimen, in Berlin Museum.

This species is known only from two female specimens, which I had the opportunity to compare in the British Museum with the present specimen. The longitudinal medial fascia is characteristic and unique in the genus; therefore I regard this male as conspecific.

Adoxophyes sanguinolenta nov. spec. (pl. 1, fig. 5 ♂)

♂ 9.5 - 12 mm. Head and thorax brownish-ochreous. Palpi brownish-ochreous or fuscous, mixed with dark brown at the outer side, except at apex of second joint. Antennae with long cilia. Forewings without costal fold, truncate, costa strongly arched anteriorly, straight posteriorly, apex oblique, little rounded, shortly projecting, termen concave above, obliquely projecting and broadly rounded beneath. Vein 3 considerably from before angle, 7 and 8 with a long stalk. Lilac-greyish and ochreous, markings greyish-ferruginous, edged light ochreous. Costa and termen suffused light ochreous; basal area indicated by a short oblique transverse streak in disc below fold and a fascia reaching from before $\frac{1}{3}$ of dorsum to vein 12 in disc, constricted or interrupted in fold, with two dentations at anterior edge: before fold and at the top; transverse fascia little oblique, narrow, gradually curved from before $\frac{1}{2}$ of costa to $\frac{3}{5}$ of dorsum, with a triangular projection at posterior edge below middle; in one specimen narrowed below costa; a vertical pointed fascia on dorsum before tornus reaching to vein 4, in one specimen shorter and truncate; instead of a costal patch a narrow curved oblique fascia from $\frac{3}{4}$ of costa to tornus; another such streak indicated at apex; all fasciae reddish-fuscous, sharply edged with dark brown scales and light ochreous strigulae, dark brown on costa; some 6 dark brown dots on basal $\frac{1}{4}$ of costa, elongate, indistinct dark brown dots along termen. Cilia ochreous-fuscous and lilac. Hindwings dark greyish-orange, or ochreous, lighter at base, suffused grey at apex. Cilia brownish-ochreous,

with an indistinct antemedian line. Abdomen reddish-brown, with grey-brown anal tuft. Legs whitish-ochreous.

Genital apparatus ♂ (pl. 3, fig. 7). Scopa and mensis ventralis present. Tegumen very broad and short, its dorsal wall deeply emarginate, saccus large, rounded. Valva small, broad, sacculus membranous, disc with very long hair-scales. Uncus broad and short, narrowed towards apex, which is rounded. Socii vestigial, represented by a minute plication on each side, bearing some 3 hairs. Gnathos moderate, with straight arms, its point shortly curved. Transtilla paired: a knob on each side, bearing long dentations on upper surface. Anellus moderate, membranous. Aedoeagus straight, cornuti 2 long bristles, coiled at the top. (Slide No. 168 D).

North New Guinea, Head Camp near Malu, VII-VIII.1912 and I-II. 1913 (Kaiserin Augustafloss Expedition, BÜRGERS). 2 specimens. Type in Berlin Museum. Allied to *templana* PAG.

Adoxophyes nebrodes MEYR., 1920

MEYRICK, Exot. Microl., vol. 2, p. 339.

North New Guinea, Head Camp near Malu, VI-VIII.1913 (Kaiserin Augustafloss Expedition, BÜRGERS). 1 ♀.

Adoxophyes aniara nov. spec. (pl. 2, fig. 1 ♀, 2 ♂)

ἀνιαρός = tiresome.

♂ 20 mm. Head, palpi and thorax pale ferruginous-ochreous, face and collar brighter ferruginous. Abdomen greyish-ochreous, anal tuft pale ochreous. Forewings broad with costal fold rather broad, its edge long-ciliated, semiovate; costa gradually curved from base to apex, apex obtuse-pointed, termen vertical, slightly sinuate above, broadly rounded and slightly projecting beneath. Rather dark and evenly ochreous-brownish, retinate by short, dark ferruginous-brownish transverse strigulae. Costal fold and a dense patch of scales on base of dorsum darker, the first transversely strigulated; an indistinct, darker suffusion on $\frac{1}{3}$ of dorsum, another larger suffusion from $\frac{2}{3}$ of dorsum to tornus, being the base of central fascia; its origin indicated by a small, dark ferruginous-brown spot just below the apex of costal fold; costal patch indicated by its edges being two oblique rows of small, dark, transverse strigulae between veins: the first of them from $\frac{3}{5}$ of costa to tornus, rather straight, the second from about $\frac{5}{6}$, running parallel to termen into the first streak on about vein 4; the third strigula less distinct, from costa before apex to before middle of termen; irregular curved series of transverse strigulae scattered over the wing, especially distinct on costa; termen narrowly edged dark fuscous. Cilia pale ochreous, grey above apex, with ferruginous posterior half from apex to $\frac{1}{2}$ of termen, grey with light base and dark grey median line in tornus. Hindwings light yellowish-ochreous, strigulated fuscous in apex.

♀ 24 mm. Head, palpi and thorax ochreous-brown. Abdomen pale ochreous, yellowish posteriorly. Forewings with costa moderately arched anteriorly, less

arched posteriorly, apex obtuse-pointed, somewhat projecting, termen sinuate above, rounded and somewhat projecting beneath, vertical. Glossy ochreous-brown, suffused greyish, markings indistinct, suffused darker, ferruginous, partially edged by rows of dark ferruginous-brown transverse strigulae between veins. Basal area indicated by a row of dark strigulae from $\frac{1}{5}$ of costa, curved outwardly to below fold, then forming an almost straight, slightly inwardly oblique, dark ferruginous-brown streak on dorsum, preceded by a ferruginous suffusion, which does not reach base of wing; central fascia moderately broad, sinuate: straight on costa to cell, outwardly curved in disc, straight again below fold, dilated below middle of disc, somewhat narrowed on dorsum again; its inner edge rather well defined, edged in middle of disc by a few dark scales, on dorsum by a dark strigula, its outer edge suffused; costal patch with inner edge formed by a row of dark dots, from before $\frac{3}{5}$ of costa, concave, to middle of disc above tornus, obsolete below, posterior edge suffused; suffused greyish-ferruginous, dotted dark between veins, the area in the furca of veins 7×8 lighter, apex with ferruginous dots. Cilia yellowish-ochreous, from apex to above tornus with posterior half ferruginous, basal half ferruginous in tornus; grey below tornus. Hindwings and cilia somewhat brighter yellow than in ♂, apex tinged ochreous, apical cilia dark grey.

Genital apparatus ♂ (pl. 3, fig. 8). Scopa ventralis large. Tegumen higher than broad, narrowed above, strong. Saccus strong, rounded. Valva moderately broad, ovoid, apex shortly produced, sacculus weak. Uncus strong, spatulate, somewhat narrowed before apex, apex truncate. Gnathos strong, with broad base and rounded point, socii moderate, haired only on inner surface. Transtilla knobs long, beaked, touching each other, curved, with blunt thorns from above, which decrease in size at the sides. Anellus moderate. Aedoeagus rather large, curved, truncate, socius a large thorn. Ductus ejaculatorius long (Slide No. 214 D).

Genital apparatus ♀ (pl. 3, fig. 9). Ovipositor lobes moderate, rather narrow, with rounded, truncate top. 9th segment broad, chitinised at the sides, anapophyses strong, rather long. Limen chitinised, ostium funnel-shaped, small, below this a trapezoid structure in ventral wall. Ductus long, bursa turned upside down, ovoid, signum an elongate, dentate plate. Spermatophore of the same shape as the bursa, with a long collum (present in allotype. Slide No. 215 D).

North New Guinea, Etappen Mt., 850 m, 30.IX.1912; Hunstein-spitze, III.1913. (Kaiserin Augustafloss Expedition, BÜRGERS). 2 ♂, 1 ♀.

Homona aestivana WALK., 1866

Ericia aestivana WALKER, List Lep. Het. Brit. Mus., vol. 35, p. 1803.

North New Guinea, Head Camp near Malu, III.1913 (Kaiserin Augustafloss Expedition, BÜRGERS). 1 ♂, 1 ♀.

Homona amphigona MEYR., 1936.

MEYRICK, Exot. Microl., vol. 5, p. 60.

East Borneo, Sultanate Koetei (Dr. SMIDT). 1 ♂.

Homona mermerodes MEYR., 1910

MEYRICK, Proc. Linn. Soc. N. S. Wales, vol. 35, p. 213.

North New Guinea, Etappen Mt., 850 m, X.1912; Head Camp near Malu, VI-VIII.1913 (Kaiserin Augustafluss Expedition, BÜRGERS). 1 ♂, 1 ♀.

Homona trachyptera nov. spec. (pl. 1, fig. 4)*τραχύς* = coarse, *πτερόν* = a wing.

♂ 23 mm. Head and thorax ochreous-brownish, palpi mixed with ferruginous. Abdomen and anal tuft bright ochreous, tinged orange. Forewings with very large and short, almost semispheroid costal fold, reaching to $\frac{2}{5}$ of costa, its edge regularly rounded, long-ciliate; costa moderately curved anteriorly, sinuate posteriorly, apex rounded, termen somewhat sinuate above, rounded and slightly projecting beneath. Light ochreous, suffused and regularly transversely strigulated ferruginous-greyish, markings dark ferruginous-brown. Costal fold lighter than the wing elsewhere; an indistinct, dark grey suffusion on $\frac{1}{4}$ of dorsum; a blackish-brown, slightly outwardly oblique, subquadrate patch on middle of costa, just beyond end of costal fold, its lower edge slightly emarginate; it is connected by ferruginous suffusion with lower part of central fascia, being a sharply edged, dark ferruginous-brown, angulate patch on dorsum, reaching from before $\frac{2}{3}$ to tornus, angularly narrowed above dorsum, with an angular projection posteriorly between veins 3-4, produced into a sharp, oblique point above fold anteriorly, which touches the inner edge of costal fold at $\frac{2}{3}$ of the length of the latter; costal patch sharply edged, elongate-trapezoid, from $\frac{3}{5}$ of costa to before apex, with a slightly curved, transverse, oblique streak posteriorly, running to termen above tornus; the entire wing distinctly transversely strigulated with ferruginous-grey, ferruginous-brown posteriorly; a dark ferruginous-brown suffusion along dorsal edge of transverse fascia. Cilia ochreous-brownish mixed with ferruginous (damaged). Hindwings yellow-orange, suffused with greyish-brown in tornus and along dorsum, cilia ochreous-orange (damaged).

Genital apparatus ♂ (pl. 4, fig. 1). Scopa ventralis large, planted on two thick, plicate lobes. Tegumen triangularly narrowed above, moderate. Saccus small, paired. Valva somewhat longer than broad, elongate-semisphaeroid, costa with a basal projection, sacculus broad, not bristled, with a short hook apically and a stronger and longer one beyond middle. Uncus with a broadly dilated apically, rounded-truncate hook. Gnathos rather long, with narrow arms and acute, curved point. Transtilla a broad band, curved and indented in middle. Anellus strong, with lateral projections. Small peniculi present. Aedoeagus pistol-shaped, strong, with a strong thorn above orifice. Cornuti a sheaf of long, strong spines. Ductus ejaculatorius long, vesicula seminalis with strong, dark coloured wall. (Slide No. 222 D).

North East New Guinea, Astrolabe Bay, Stephansort (THIELE). 1 specimen.

Nearly allied to *coffearia* NIETN., but much larger, with narrower forewings; sacculus in *coffearia* possesses two short apical hooks.

Genus **Tortrix** MEYRICK nec LINNÉ

In his revision of the family Tortricidae in *Lepidopterorum Catalogus* and in *Genera Insectorum*, MEYRICK placed numerous species in the genus *Tortrix* LINNÉ; later on he described many new species, which were also placed in this genus. The study of later years of the genitalia of Tortricidae revealed, however, that at least European species, regarded by this author to belong to *Tortrix*, were doubtlessly heterogeneous. Although some conservative authors do not accept a too far applied classification of this family, based on genital characteristics, nobody would deny that the separation of the British species in three subfamilies on account of these characteristics, as this is made by PIERCE (*Genitalia of British Tortricidae*, 1922), would not be a principally natural and important one.

Therefore it is unacceptable to join into one genus the species as *musculana* HB., *forsterana* FAB., *rusticana* TR., — possessing all characteristics, typical for the subfamily Archipsidii PIERCE (*Cacoeciades mihi*) — on one side, with e.g. *viridana* L. and *loeflingiana* L. belonging to the entirely different subfamily Peroneades, on the other side.

In my opinion the entire genus *Tortrix*, as understood by MEYRICK, needs a careful revision, whereby attention should be paid to the genital characteristics according to the experience of last years. There is little doubt that the genus would prove to consist of at least two (very probably more) entirely different groups of species, one belonging to *Cacoeciades*, another to *Peroneades*. The characteristics of head and of wing neuration seem to provide no sufficient points of difference between these two entirely different groups.

As regarding the Indo-Malayan and Papuan faunas, which are very rich of *Cacoeciad* elements, there is little doubt that most "*Tortrix*" species of these faunas will prove to belong to the subfamily *Cacoeciades* and to have no relation whatever to *Tortrix viridana* LINN., the type of that genus.

Now the difficulty arises, which generic name should be assigned to these? As the genotype of *Tortrix* LINNÉ (*Systema Naturae*, ed. X, vol. 1, p. 496, 1758), is *viridana* LINNÉ, a *Peronead*, the name *Tortrix* cannot be used. I therefore propose **Syndemis** HÜBNER nec HERRICH-SCHÄFFER (*Verzeichniss Europäischer Schmetterlinge*, p. 382, 1826), the genotype of which is *musculana* HÜBNER, a true *Cacoeciad*, as this is the earliest generic name, which can be applied on all the species of Tortricidae with the following characteristics:

1. Antennae ciliated in male. Palpi moderate or long, porrected, more or less dilated towards apex with projecting scales. Forewings with or without costal fold in male, all veins separate, 3 from angle, 7 to termen. Hindwings with veins 3 and 4 connate or shortly stalked, 5 approximated to 4, 6 and 7 closely approximated towards base — and at the same time possess the genital characteristics of the subfamily *Cacoeciades*, viz.:

2. Signum a single horn with bulbed base. Valvae broad, often with sacculus sharply pointed at apex. Uncus well developed, a conspicuous, curved hook. Gnathos also well developed, curved and sharply pointed. Socii moderate.

On the contrary, to the genus *Tortrix* LINNÉ should be attributed only the species, possessing the external characteristics mentioned under 1 and at the same time with the genitalia of the type of the subfamily Peroneades, distinguished as follows:

3. Signum a stellate plate. Ostium plate emarginate, bilobed. Digitus mostly present. Uncus often atrophied. Gnathos small. Socii often very large.

Syndemis HB. is closely correlated with *Cacoecia* HB.

Syndemis montivola nov. spec. (pl. 2, fig. 4 ♀, 5 ♂)

♂ 19 mm, ♀ 20.5-22 mm. Head, palpi and thorax ochreous-brownish, terminal joint of palpi sometimes tinged darker; abdomen light ochreous-brownish; in male dark grey, with a light ochreous anal tuft. Forewings narrow, elongate with a long and rather broad costal fold in male, reaching to beyond middle of wing; costa little curved at base, bent at $\frac{2}{5}$, straight posteriorly in ♂; moderately curved anteriorly, slightly sinuate posteriorly in ♀; apex obtuse-pointed, slightly projecting in ♀, termen slightly sinuate above, rounded beneath, almost vertical. Pale ochreous, rozy-tinged, scattered and strigulated with rozy-ferruginous-greyish, markings ferruginous-brown or greyish-brown. ♂: with costal fold suffused grey, strigulated with dark grey; a large semispheroid blackish-brown, sharply pale-edged patch in middle of wing, its base reaching along dorsum from $\frac{2}{5}$ to before tornus, and $\frac{3}{4}$ across wing, including a rounded-triangular patch of groundcolour on middle of dorsum, which reaches across $\frac{1}{3}$ of wing; costal patch from $\frac{3}{5}$ of costa to before apex, elongate triangular, brownish-greyish, with small light dots on costa; a curved, suffused, greyish preterminal fascia, beginning below costal patch, running into tornus and along this connected with blackish dorsal patch; anteriorly well-defined, posteriorly suffused; terminal area strigulated with dark grey, base of dorsum suffused greyish. Cilia light ochreous, with a dark grey antemedian fascia, a blackish patch on costa before apex, grey patches on apex and below tornus. ♀: markings brighter ferruginous; costa with a small patch beyond base and an outwardly oblique, sharply defined truncate patch at $\frac{1}{3}$, its lower edge suffused; a large ferruginous or greyish suffusion on dorsal $\frac{2}{3}$ of wing, not reaching tornus, semioval, its edge indistinct; a lighter, oblique mark on $\frac{1}{2}$ of dorsum. Costal patch and preterminal fascia as in ♂, the latter more suffused, sometimes less distinct. Cilia pale ochreous, suffused with ferruginous along upper half of termen, a brown, sometimes reddish basal line, with blackish dots on the end of veins, grey on apex and below tornus. Hindwings in both sexes pale greyish-brownish, darker posteriorly, in ♂ dorsum suffused light brownish.

Genital apparatus ♂ (pl. 4, fig. 4). Scopa dorsalis single: dark coloured long scales, scopa ventralis paired: long, narrow hair-scales. Mensis dorsalis peculiar: turned up V-shaped, with a rounded plate in middle. (In figure visible at the

right side); *mensis ventralis* bowed. Tegumen moderate, broader in lateral than in ventral view, short. Valva broad, short, rheniform, with a fringe of short black scales; costa rounded and projecting, sacculus little developed, with broad scales; valvula a peculiar, transversely striped plication. Uncus bent horizontally, densely haired below, stout. Gnathos short, curved, with acute point. Socii vestigial: rows of bristles. Transtilla obviously absent, a scobinate scaled plate on each side at base of tegumen. Anellus strong, bilobed, small peniculi perceptible. Aedeogagus pistol-shaped, with bulbed base, cornutus a single large spine. (Slide No. 221 D).

Genital apparatus ♀ (pl. 4, fig. 5). Ovipositor lobes elongate, slightly dilated above. Apophyses narrow, moderately long. Limen deeply bent, V-shaped, colliculum a moderate, chitinised dilatation of ductus. Below this the ductus is dilated considerably once more, its wall thickened. Bursa spheroid, signum moderate, curved, serrate, its outer projection knob-shaped. Spermatophore perceptible in specimen studied (Slide No. 220 D).

Darjeeling. "Coll. Atkinson". 1 ♂, 2 ♀. Distinct by rather narrow and long forewings.

Syndemis serpentinana WALK. 1863

Batodes serpentinana WALKER, List Lep. Het. Brit. Mus., vol. 28, p. 317.

North New Guinea, Head Camp near Malu, VI-VIII.1913 (Kaiserin Augustafluss Expedition, BÜRGERS). 1 ♀.

Epichorista samata nov. spec. (pl. 1, fig. 8).

sa mata (Malayan) = one eye.

♀ 14 mm. Head and abdomen light greyish-ochreous, anal tuft ochreous. Palpi greyish-ochreous, mixed at the outer side with dark brown. Thorax lighter, ochreous-greyish. Forewings elongate, costa moderately gradually curved anteriorly, straight posteriorly, apex subacute, termen straight, oblique, rounded beneath. Light ochreous-greyish, markings greyish-brown, mixed with blackish-brown. Four blackish-brown dots on base of costa, a few dark brown, somewhat raised scales on basal $\frac{1}{4}$ of disc and on dorsum; a broad oblique fascia from before $\frac{1}{2}$ of costa to dorsum before tornus, gradually delated below, its anterior edge well-defined, somewhat undulate, edged with dark brown scales, its posterior edge suffused except in tornus, where it is mixed with dark ferruginous-brown, well-defined and vertical; a quadrate, sharply edged greyish-brown patch in disc before middle of termen, edged with dark brown anteriorly and posteriorly, its top with a projection towards termen; costal patch indistinct, a greyish suffusion interrupted on costa by two semicircular patches of ground-colour, forming three brown teeth on costa. Cilia light ochreous-greyish. Hindwings brownish-grey, light whitish-ochreous along costa. Cilia greyish. Legs ochreous-greyish, tarsi blackish.

Genital apparatus ♀ (pl. 4, fig. 2, 3). Ovipositor lobes large, with somewhat erect top, apophyses narrow, moderately long. Ostium large, limen V-shaped,

membranous in middle. Ductus bursae long, narrow, colliculum moderate, thickened at the sides; bursa sphaeroid. Signum strong, curved; external projection rounded. Ductus bursae in the unique specimen contents a spermatophore, which has a thick wall and a very long collum.

North East New Guinea, Huon Gulf, Simbang, V. (THIELE). 1 Specimen. Type in Berlin Museum.

Cnephasia basipuncta nov. spec. (pl. 2, fig. 3 ♀)

♂ 10.5 mm, ♀ 11 mm. Head and thorax whitish, mixed with greyish. Palpi of the same colour, median joint white at apex. Vertex roughly scaled in male. Antennae grey, in male ciliate. Proboscis short. Forewings without costal fold, elongate, costa moderately arched anteriorly, straight posteriorly, apex acute, termen oblique, straight in ♂, sinuate in ♀, broadly rounded below. White, densely scattered with greyish-brown, markings greyish-brown, bright ochreous brown and dark brown. Two round dots on $\frac{1}{4}$ of disc dark brown edged with bright ochreous-brown, the upper one on vein 12 smaller, closer to base, the lower twice as large, just above fold; transverse fascia well-defined, straight, from before $\frac{1}{2}$ of costa to beyond $\frac{1}{2}$ of dorsum, rather narrow, with a greyish-brown patch on costa, narrowed below this, bright ochreous-brown, marked with dark brown in its middle: below costa in middle of disc and above dorsum; its edges somewhat suffused; costal patch small, rounded-triangular, greyish-brown, dark edged anteriorly; an oblique ochreous-brown streak below this running into tornus, interrupted above or connected with a narrow, costal patch by undulate ochreous striga in male, not interrupted and dilated below in female running to termen above tornus, another such streak on dorsum before tornus, vertical, indistinct; two oblique dark brown streaks on costa beyond costal patch, indistinct in female; transverse dark brown streaks on base of costa and a suffusion of the same colour: on base of dorsum and on dorsum beyond transverse fascia not reaching tornus. ♀ lighter, less suffused with greyish-brown. Cilia whitish mixed with brown in male, light ochreous with paler base in female. Hindwings with apex acute, considerably projecting, termen sinuate above, broadly rounded beneath, straight anteriorly; light grey in ♂, whitish in ♀, with grey apex. Cilia greyish with whitish base.

Genital apparatus ♂ (pl. 4, fig. 6). Scopae absent. Tegumen large, truncate with lateral projections apically, its dorsal wall with deeply indented base, saccus rather large, bow-shaped. Valva very narrow, curved, costa membranous, haired, sacculus strongly chitinised, with a large sharp hook at the top and a dentation in middle. Uncus very narrow, somewhat dilated below top, the latter obtusely pointed, with a few long bristles below. Gnathos obviously absent. Socii small haired plications. Anus broad, membranous, above this a strongly chitinised short hook curved downwards. Transtilla absent, two coiled bodies at each side at the base of tegumen, being, perhaps, the lateral parts of transtilla. Anellus large, trapezoid. Aedoeagus large, straight, tubular, with a serrate projection below orifice. Cornuti a group of long, straight spines. (Slide No. 170 D).

Genital apparatus ♀ (pl. 4, fig. 7). Ovipositor lobes rather broad, ovate. Ostium large, limen narrow at the sides, broadly dilated in middle. Ductus bursae moderately long, a small colliculum present. Bursa ovoid, signum acute, rather short, its outer process large. (Slide No. 171 D).

North New Guinea, Hunsteinspitze, 1350 m, II-III.1913. (Kaiserin Augustafluss Expedition, BÜRGERS). 5 ♂, 3 ♀. Holo- and allotype in Berlin Museum.

Schoenotenes centrostricta nov. spec. (pl. 2, fig. 6).

♂ 13-14.5 mm. Head roughly scaled, palpi long, porrected, median joint long, with rough projecting scales above, proboscis short. Head and antennae dirty whitish, thorax whitish mixed with ferruginous-brown or greyish. Palpi whitish, at the outer side, at base and along lower margin densely suffused and mixed with ferruginous-brown, basal joint ferruginous-brown. Forewings with costa little curved from base to before apex, more curved posteriorly, apex acute, projecting, termen sinuate above, oblique, rounded beneath. Whitish spotted with raised grey-brown scales; markings ferruginous. Basal half of costa with a ferruginous suffusion tinged pink beyond transverse fascia; an elongate, somewhat oblique streak on base of dorsum reaching to $\frac{2}{3}$ of base, sometimes interrupted on lower $\frac{3}{4}$, little extended along dorsum, dark ferruginous; transverse fascia beyond middle of wing, vertical, straight, triangularly dilated on costa, narrow on dorsum, almost interrupted twice: on $\frac{1}{3}$ of disc and below fold, angularly projecting posteriorly below these interruptions; its anterior edge well-defined, straight, its posterior edge somewhat suffused; ferruginous, edged dark brown on costa, mixed with dark brown below, a rounded patch of raised dark brown scales on first projection, extended into a ferruginous suffusion along dorsum below fold; another transverse fascia on about $\frac{5}{6}$ of wing, somewhat angulated in middle towards termen, dark ferruginous-brown, with a dark-brown suffusion posteriorly; dark ferruginous-brown dots in cells 8-5 in a vertical row; apex dark brown. In one specimen no dots, but a rather distinct semicircular costal patch, of which the anterior edge is formed by second fascia. A short transverse ferruginous streak on dorsum before tornus and another one twice as small in tornus, sometimes indistinct. Cilia whitish, brownish-grey around apex. Hindwings whitish-grey, shining, semipellucant, being but thinly clothed with scales. Abdomen light greyish with a darker anal tuft.

Genital apparatus ♂ (pl. 4, fig. 9). Scopae absent. Tegumen erect-triangular, deeply indent below, saccus short, rounded. Valva long, narrow, haired on posterior half, rounded and somewhat dilated at apex, costa narrow, sacculus with a rounded patch of thick bristles in middle, a row of bristles from this patch to costa posteriorly. Uncus with a long, narrow point; gnathos rather long, curved, its arms dilated below the top, top acute. Socii moderate, club-shaped, bristled apically. Transtilla an undulate, strong rod. Anellus large

circular. Aedoeagus slightly curved, with a blunt point above orifice; vesica covered with scobinations, other cornuti absent (Slide No. 219 D).

North New Guinea, Hunsteinspitze, 1350 m, 26.II, 3.III and II-III. 1913 (Kaiserin Augustafluss Expedition, BÜRGERS). 8 ♂. Type in Berlin Museum.

Schoenotenes spectralis MEYR. 1912

MEYRICK, Exot. Microl., vol. 1, p. 13.

North New Guinea, Hunsteinspitze I-II.1913 (Kaiserin Augustafluss Expedition, BÜRGERS). 2 ♀.

Schoenotenes neurobapta Low. 1909 (pl. 4, fig. 8)

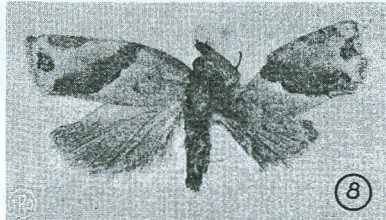
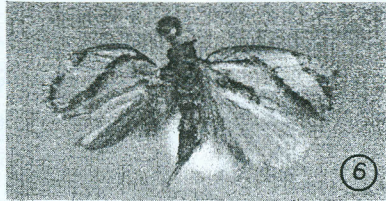
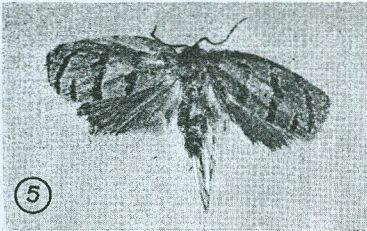
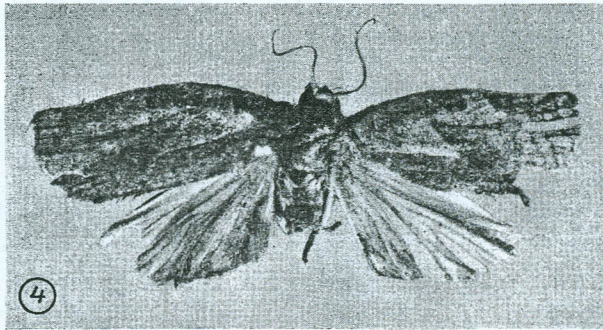
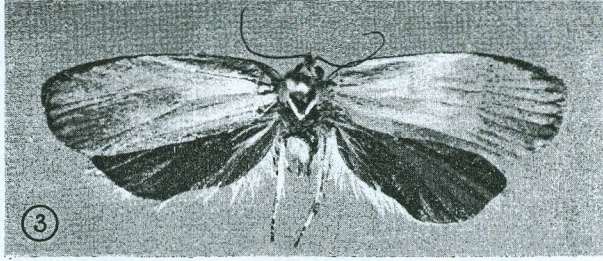
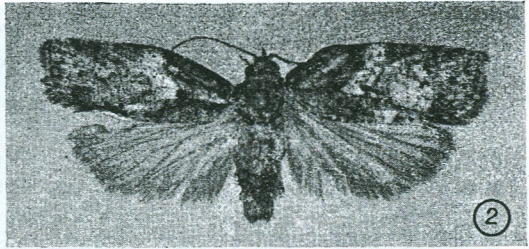
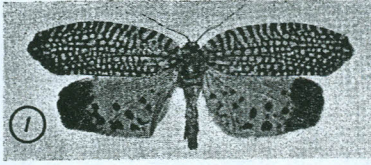
Endotrichosma neurobapta LOWER, Trans. Roy. Soc. South Austral., vol. 32, p. 320.

Genital apparatus ♀ (pl. 4, fig. 8). Ovipositor lobes deeply trilobed, upper lobe elongate-ovate, lower lobe transverse, both long-bristled; inner lobe short, punctulate. Apophyses moderately long, very narrow. Ostium large, limen broad, especially at the sides, a chitinised, broad median bar, produced to a very short point in middle. Ostium funnel-shaped, produced into a weak colliculum below. Cestum absent. Bursa spheroid, signum a peculiar, triangularly plicate chitination in bursal wall, with retinate surface.

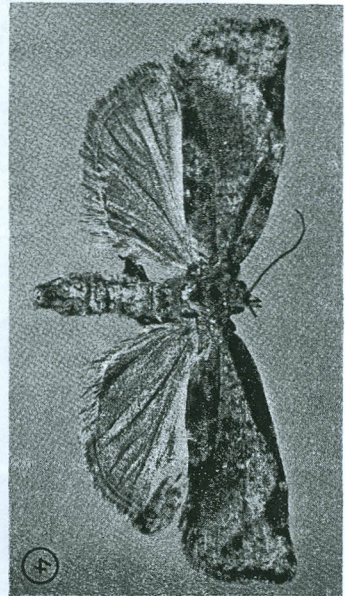
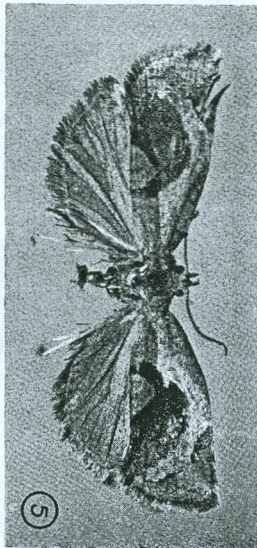
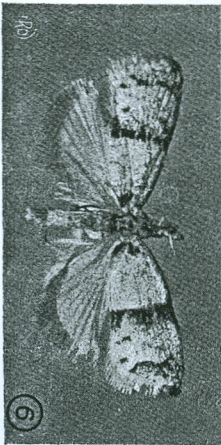
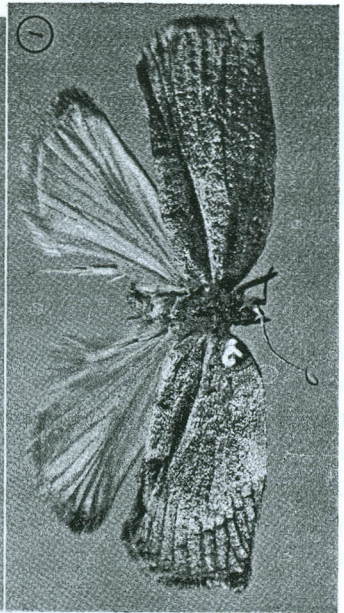
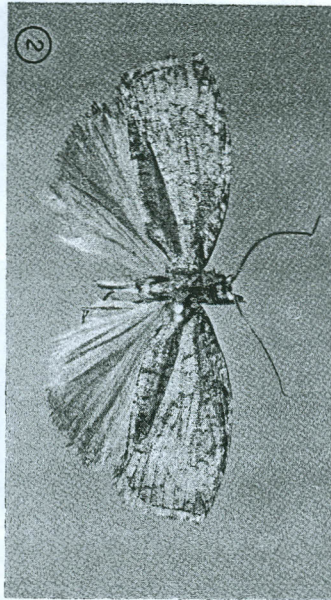
A spermatophore, filling up the bursa, is perceptible in one specimen studied. (Slides 209 and 210 D).

North New Guinea, Head Camp near Malu, VI-VIII, 1913 (Kaiserin Augustafluss Expedition, BÜRGERS). North East New Guinea, Huon Gulf, Simbang (THIELE). 4 ♀. The specimen from Simbang with markings very pale, but according to the genital characteristics, identical with other (in Berlin Museum).

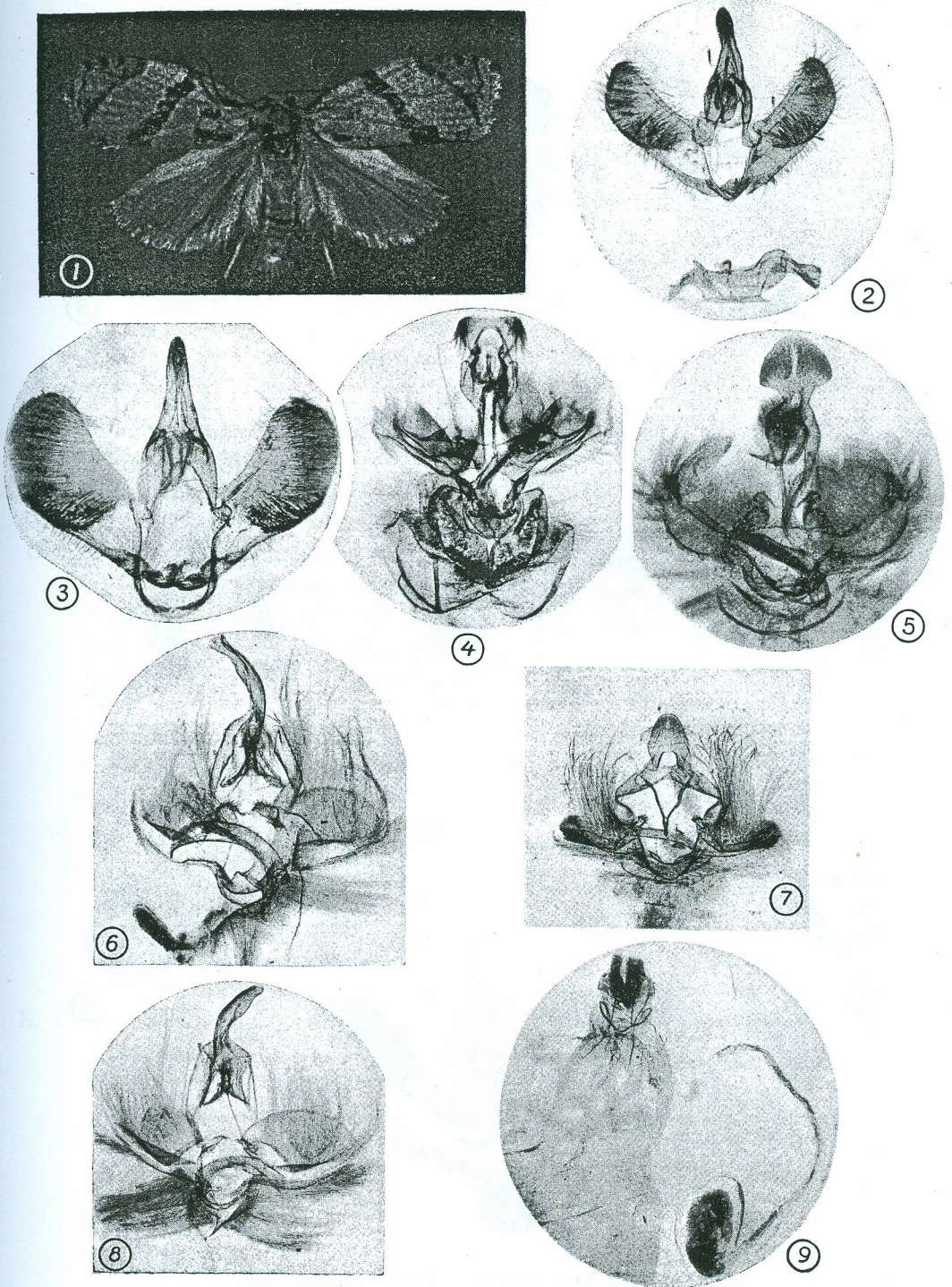
West Sumatra, Fort de Kock, 920 m, 1926 (Dr. E. JACOBSON). 1 ♀ (in Leiden Museum).



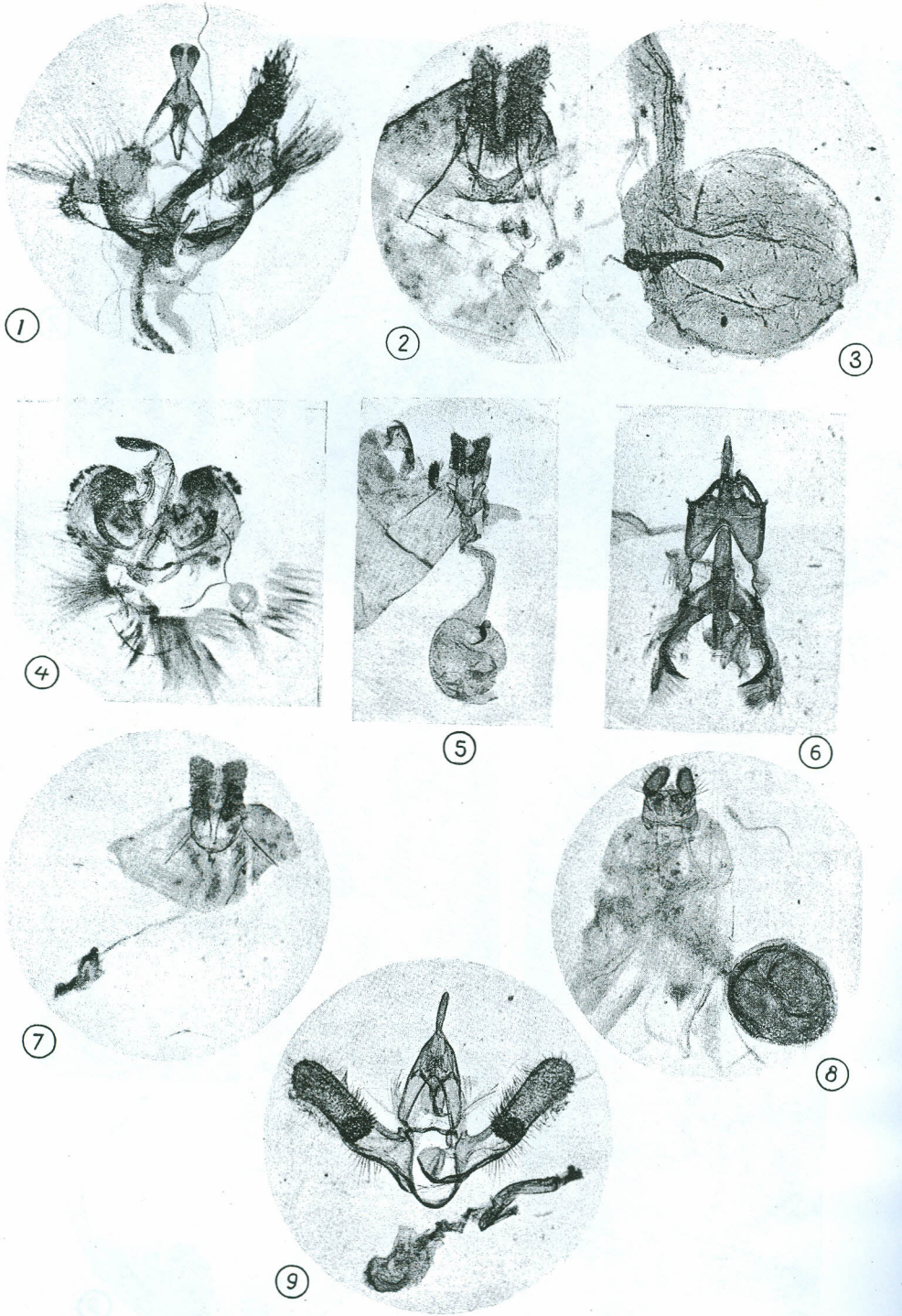
A. DIAKONOFF: *New Asiatic and Papuan Tortricidae.*



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