

ZOOLOGISCHE MEDEDELINGEN

UITGEGEVEN DOOR HET

RIJKSMUSEUM VAN NATUURLIJKE HISTORIE TE LEIDEN

(MINISTERIE VAN CULTUUR, RECREATIE EN MAATSCHAPPELIJK WERK)

Deel 46 no. 21

10 april 1974

RECORDS AND DESCRIPTIONS OF SCHOENOTENINAE FROM THE BRITISH MUSEUM (LEPIDOPTERA, TORTRICIDAE)

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With 14 text-figures

After my 1960 synopsis of the peculiar subfamily Schoenoteninae from South Asia, I was able to bring together some additional material of these insects. In order not to postpone their identification too much, I intend to deal with diverse collections separately. The material collected by the Netherlands Stars Range Expedition, 1959, has been treated recently elsewhere (Diakonoff, 1972). The present pages deal with a part of the Schoenoteninae, picked out by me in 1972 from the vast collection of the unidentified material in the British Museum (Natural History) of London (BM). In total 21 species and one subspecies are recorded below, of which 10 species are described as new.

I am grateful to the Trustees, to Dr. Klaus Sattler and Mr. C. Moreby, of that Museum, for the opportunity to study this material and for the permission to retain a few duplicates for the collection of the Leiden Museum (LM).

The figures were made by Mr. A. C. M. van Dijk, The Hague.

***Rhabdotenes dacryta* spec. nov. (fig. 1)**

♀ 20 mm. Head white, vertex touched with grey. Palpus long; white, basal half of upper edge of median segment and entire upper edge of terminal segment grey. Thorax white. Abdomen snow-white.

Fore wing with raised scale-tufts; rather broad, costa moderately curved at base, very gently so beyond base, apex obtusely pointed, termen almost straight, hardly concave, little oblique. White, finely marbled with pale fuscous-grey. Costa with ten blackish-grey dots, first spot alternating with minute marks, suffused; other well-defined, gradually becoming larger, paler

and more vertical posteriorly, along apical half of costa: dentoid; three large spots of pale ashy-grey suffusion in disc, first transverse, faint beyond $1/6$ of wing, second subquadrate, larger, upper half dusted with jet-black; third spot largest, transversely oval, just beyond cell, lower half of posterior edge finely punctate with black; this spot preceded and followed by a minute but distinct pale grey line, anterior oblique, posterior strongly curved outwards, each line with two moderate pale grey spots: one subcostal, another subdorsal; a vertical, well-defined blotch, rising from termen above tornus, top clavate by vein 6, base cut by vein 3; a smaller but darker oblique subapical fasciate spot; a slender black strongly undulate subapical transverse line, descending along termen; pale grey dots along dorsum. Cilia snow-white, with a submedian series of black slender strigulae.

Hind wing and cilia glossy snow-white.

Female genitalia. Somewhat resembling those of *R. pachydesma* Diakonoff. Eighth segment dilated, sclerotized and partly aciculate, forming a huge oval sterigma, with upper edge deeply excavate in middle, excavation concealed by a roundish granulate lobe, protecting a tubular and rigid ostium bursae; two semioval, long-aciculate pocket-like folds flanking ostium; lower edge of sterigma with two small excisions. Colliculum funnel-shaped, darkly sclerotized. Edges of eighth sternite with a strong, dentate, elevated ridge. Ninth segment sclerotized, edges of ninth ventrite also dentate. Signum absent.

New Guinea, Buntibasa district, Kratke Mts., 4000-5000 ft, viii. 1932 (F. Shaw Mayer), 1 ♀, holotype, genit. slide 8634 (BM). Allied with *R. pachydesma* Diakonoff, from Snow Range.

***Rhabdotenes subcroceata* (Meyrick) comb. nov.**

Schoenotenes subcroceata Meyrick, 1938: 508 (♂ ♀, N. Guinea). — Clarke, 1955: 297. — 1958: 223, pl. 108 figs. 5-5b (lectotype design., ♂ wings, genit. figured). — Diakonoff, 1960: 48.

Distribution. New Guinea: Papua.

B[ritish] New Guinea, "Owgarra" (A. S. Meek), 1 ♀, without abdomen (BM). At present I am satisfied that the species belongs to *Rhabdotenes* Diakonoff.

***Schoenotenes synchorda* Meyrick (fig. 2)**

Schoenotenes synchorda Meyrick, 1908: 620 (♂, Assam). — Diakonoff, 1939: 214-217, figs. 11 K-J, 16 D (redescr., genit. figs.). — 1960: 48.

Distribution. Assam.

♀ 20 mm. Head and thorax whitish and light grey mixed with brownish. Palpus whitish-grey. Abdomen white.

Fore wing slightly broader than in the male, costa moderately curved towards extremities, almost straight in middle, apex subrectangular, termen gently sinuate, little oblique. Glossy snow-white, finely and sparsely dusted throughout with pale tawny specks, tending to form narrow, moderately oblique, parallel transverse lines; markings light grey-fuscous, marbled with deeper light tawny. Basal fourth of costa occupied by a triangular patch, limited below by fold, posterior edge gently convex and inwards-oblique; an erected-semioval spot on costa before middle, hardly reaching halfway towards upper edge of cell, top continued across wing by a faintest streak of tawny-greyish suffusion, to base of vein 4; a prostrate-semioval costal patch at about $3/4$, base shorter than $1/4$ of costa, top to middle of vein 8; dark dots on costa before apex, on ends of veins; a paler, prostrate-oval, horizontal spot before middle of termen, its darker fuscous edge just exceeding above and below veins 6 and 5, respectively. Cilia glossy snow-white, upper half with faint brownish dots opposite ends of veins.

Hind wing glossy white. Cilia snow-white.

Female genitalia. Lobus analis oblong, with a similar dorsal aciculate pad. Tuba analis conical, regularly aciculate. Eighth segment sclerotized throughout. Sterigma shaped as a large triangular plate, with a deep excision, making its top bicuspidate, lower edge of plate with a shorter excision, rounded on both sides of this; sterigma densely long-aciculate, except a submedian naked stripe; postapophyses forming acute triangles. Ostium, ductus, and corpus bursae simple.

India, Gapaldhara, ix. 1918 (Stevens), 1 ♀, apallotype, genit. slide 8625 A (BM). Mr. A. Watson, British Museum (Natural History), kindly informs me that the locality is in Rungbong Valley, Darjeeling, in Sikkim.

Very similar to the male holotype, but paler, which may be due to slight rubbing. Also similar to *S. pseudurga* Diakonoff, from Sunda Is., but slightly more tawny marked, and with quite distinct genitalia.

***Schoenotenes pseudurga* Diakonoff**

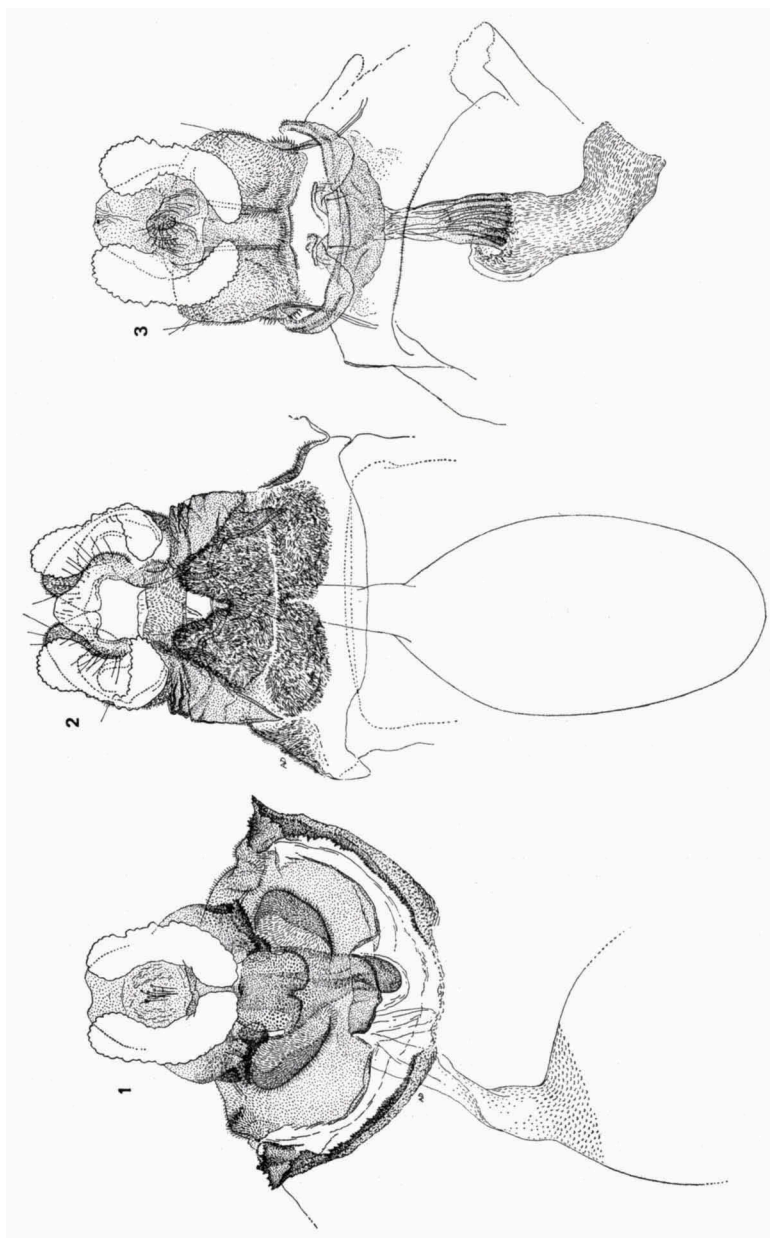
Schoenotenes pseudurga Diakonoff, 1960: 50, figs. 15, 33, 34, pl. fig. 4 (♂ ♀, Java).

Distribution. East and West Java.

East Bali, Batoeriti, 3500 ft, vi. 1935 (J. P. A. Kalis), 3 ♂, genit. slides 8666, 8675 (BM, LM). — West Celebes, Paloe District, Lindoe, 3700 ft, iv. 1937 (J. P. A. Kalis), 1 ♀ (BM).

***Schoenotenes decta* spec. nov. (fig. 3)**

♀ 18 mm. Head and thorax white, collar slightly mixed with grey. Palpus slender, long, pale grey, apical third of median segment and top of terminal white. Abdomen whitish.



Figs. 1-3. Female genitalia of Schoenoteninae. 1, *Rhabdotenes dacryia* spec. nov., holotype; 2, *Schoenotenes synchronda* Meyrick, apallotype; 3, *S. decta* spec. nov., holotype.

Fore wing oblong-suboval, costa gradually curved, more so at base, apex obtuse, termen gently curved, almost straight in middle, oblique. Glossy white with a slight creamy tinge. Costa with nine dark grey spots alternating with similar small points, double on anterior half; an irregular transverse blotch from first costal spot; central fascia narrow, from below fourth costal spot, rather irregular and narrow, dark grey, interrupted on upper edge of cell, darker and dilated below this and emitting an oblique branch towards third costal dot, not exceeding edge of cell; lower end of fascia becoming obliterate towards dorsum; this fascia preceded by several raised scale tufts of ground colour; a wide grey network across $1/4$ of wing; markings on posterior half of wing pale olive, edged and variably dusted with blackish; a brighter creamy raised tuft on closing vein; a pair of roundish interconnected spots below sixth costal spot, a small outwards-curved crescentic mark beyond cell and a vertical small blotch on end of dorsum; preterminal mark large, V-shaped, from vein 3 to 8, a thin stalk to end of vein 2, centre spotted with ground colour, anterior arm to vein 6; ninth costal dot small, apical; a series of minute black points along termen on ends of veins; dorsum dotted pale grey. Cilia glossy white, basal third dull creamy, a submedian series of black points.

Hind wing and cilia glossy white.

Female genitalia. Dorsum of ovipositor swollen. Ninth segment also swollen, darkly aciculate throughout. Sterigma, a dark transverse crescentic band, punctulate, wide, narrowed at the sides, with traces of denticulation or strong acicula. Ostium irregular, dilated with some folds. Colliculum sclerotized, a gradually dilated tube with longitudinal ribs. Ductus bursae dilated, moderately sclerotized and hatched. Corpus bursae simple.

British New Guinea, Biagi, Mambare River, 5000 ft, i. 1906 (A. S. Meek), 1 ♀, holotype, genit. slide 8626 A (BM). Judging from the genitalia nearest to *Schoenotenes trachygrapha* Diakonoff, from Snow Range, but pale coloured and quite distinct.

***Metachorista ursula* Meyrick**

Metachorista ursula Meyrick, 1938: 510 (♀, N. Guinea). — Clarke, 1955: 322. — 1958: 479, pl. 238 figs. 1-1e (holotype ♀: wings, head, neurulation, genit. figured). — Diakonoff, 1954: 25 (♂ ♀, genit. figured). — 1960: 56.

Distribution. New Guinea: Snow Range; Papua.

New Guinea, Papua, Mt. Tafa, 8500 ft, iii. 1934 (L. E. Cheesman), 1 ♂, genit. slide 8642 (BM).

Metachorista spermatodesma spec. nov. (fig. 12)

♀ 18 mm. (Head broken). Thorax and abdomen white.

Fore wing oblong-suboval, rather dilated and moderately broad, costa curved at base, less so at apex, straight in middle, apex pointed, termen gently sinuate, considerably oblique. Glossy white, marbled with very pale olive. Anterior half of costa with six black dots, four tolerably equidistant, two last close together, just before middle of costa; connected with a spot of denser olive suffusion below costa; posterior half of costa with five black dots, becoming smaller and less distant posteriorly; second of these spots at $3/4$ giving rise to a subsuffused fascia, more or less interrupted, so as to form a series of interconnected spots, running obliquely inwards to lower edge and before lower angle of cell, thence turning more abruptly upwards, to middle of upper edge of cell; a black streak just below and parallel to fold, from well beyond its base to $1/4$ of wing length. Cilia glossy white.

Hind wing and cilia glossy white.

Female genitalia. Ovipositor lobes long and slender, 9 + 10 segment sclerotized, rather high. Sterigma, a semicircular band, finely aciculate, much dilated in middle and elevated into a cone with paler triangular median piece. Ostium cup-shaped. Colliculum small, ring-like. Ductus bursae long, becoming wider along lower $2/3$, sclerotized, with an impression below its middle (no artefact!). Corpus bursae large, signum large, an oval flat body, with a rather large basal plate.

New Guinea, Papua, Mt. Tafa, 8,500 ft, iii. 1934 (L. E. Cheesman, BM 1934-321), 1 ♀, holotype, genit. slide 8656 (BM). Allied with *M. ursula* Meyrick and rather resembling it, but with quite distinct genitalia.

Saetotenes (Anthophallodes) dimorpha (Diakonoff)

Schoenotenes dimorpha Diakonoff, 1954: 72, figs. 374, 375, 460, 468 (♂ ♀, N. Guinea). *Saetotenes (Anthophallodes) dimorpha*; Diakonoff, 1960: 58.

Distribution. New Guinea: Snow Range.

New Guinea, Papua, Mondo, River Augara (Owgarra), 3000 ft, ii. 1934 (L. E. Cheesman), 1 ♀, genit. slide 8635A. "Owgarra, B.N. Guinea" (A. S. Meek), 1 ♀, genit. slide 8641 (BM, LM).

Saetotenes (Saetotenes) deterior spec. nov. (fig. 5)

♂ 13.5 mm. Head, antenna, palpus and thorax white. Abdomen silvery-white.

Fore wing rather broad, hardly dilated, costa curved at base, less so towards apex, straight in middle, apex pointed, termen straight, almost convex, little

oblique. Snow-white, except on basal third, as far as upper edge of cell, scattered with short tawny-grey transverse strigulae and faintly suffused dots, tending to form transverse series, more distinct and almost complete on posterior sixth of wing. Costa with some more dark ashy-grey dots, small and slightly submarginal, alternating with minute marks; four ultimate dots larger, paler grey, roundish, becoming smaller posteriorly, first and second of these almost interconnected by grey subcostal suffusion; ultimate dot just subapical; terminal sixth of wing (as said above), with about three slightly curved transverse dark grey lines, more or less interrupted, anterior line short, straight, rising from end of dorsum; indication of a moderate grey ring-like spot below middle of costa, another similar, but larger spot on dorsum beyond middle.

Hind wing and cilia glossy white.

Male genitalia. Tegumen rather long, crowned with four filamentous long spines, subapical hook long and slender. Socii oval, pending, semi-parietal, with a V-shaped transversely spreading sclerite above these. Gnathos moderate, inverted-V-shaped, top denticulate. Valva oval, concave, with a costal patch of stiff, strongly curling spines; sacculus with median prominence covered with broad, flat spines with truncate tips. Aedeagus long and slender, base curved. Cornutus, a single spine. Transtilla, a broad membrane, labis a slender, slightly curved hook.

New Guinea, [Territory of New Guinea], East Finisterre Range, Cromwell Mts., Zageheme, 4800 ft, 20.vi-7.vii.1931 (F. Shaw Mayer), 1 ♂, holotype, genit. slide 8655 (BM).

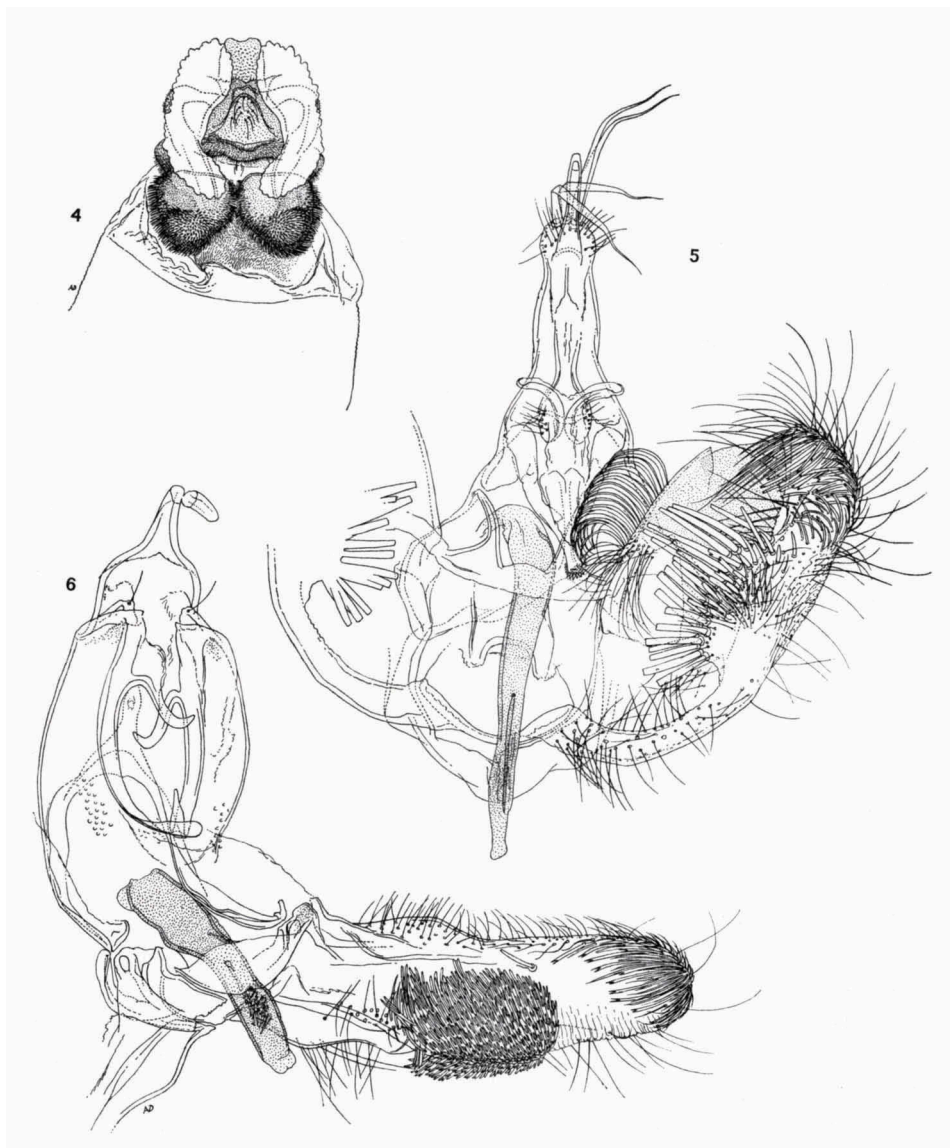
***Barygnathella seriographa* spec. nov. (fig. 4)**

♀ 16 mm. Head, antenna, palpus and thorax glossy snow-white; palpus rather long. Abdomen white.

Fore wing moderate, little dilated, costa curved at base, less so at apex, straight in middle, apex pointed, termen gently sinuate above, little rounded beneath, oblique. Glossy snow-white. Markings dark blackish-brown. Anterior half of costa with two transverse dark marks, beyond base and before 1/4, respectively, and a small dot in middle; sparse dark dusting between these marks; posterior half of costa with five dark round dots, becoming smaller towards apex; median costal dot with a roundish small spot below it, of blackish-fuscous dusting; another such spot under fifth costal dot; central fascia indicated by an oblique series of three discal marks: a larger oblique oval spot below and between second and third costal dots, followed by two small points, above and in fold, respectively; some dotting below fifth costal dot, with similar dotting on dorsum opposite; a subcrescentic, outwards-

concave preterminal spot: transverse, with extremities slightly suffused; minute marginal points on costa before, and on termen below apex. Cilia glossy white.

Hind wing and cilia glossy white.



Figs. 4-6. Genitalia of Schoenoteninae, holotypes. 4, *Barygnathella seriographa* spec. nov., ♀; 5, *Saetotenes (S.) deterior* spec. nov., ♂; 6, *Epitrichosma luteola* spec. nov., ♂.

Female genitalia. Terminal segment sclerotized throughout with an aciculate transverse thickening below anus, at the sides obtuse prominences. Sterigma coarsely aciculate, with two large, short-spined triangular and bladder-like thickenings. Ostium concealed. Ductus and corpus bursae simple.

New Guinea, Papua, Mt. Tafa, 8500 ft (L. E. Cheesman), 1 ♀, holotype, genit. slide 8657 (BM). Apparently nearest to *S. plagiostibus* Diakonoff, from Snow Range.

Barygnathella triangulum (Diakonoff) (fig. 8)

Schoenotenes triangulum Diakonoff, 1954: 43, fig. 423 (♀, New Guinea).

Barygnathella triangulum; Diakonoff, 1960: 54.

Distribution. New Guinea.

New Guinea, Saiko, Bubu River, Upper Waria River, 3500-6000 ft, ix.1936 (F. Shaw Mayer), 1 ♀, genit. slide 8640 (BM).

Epitrichosma hesperia Common

Epitrichosma hesperia Common, 1965: 695, figs. 19G, 19H, 22A; pl. 3 fig. 1.

Distribution. Western Australia: Perth, Geraldton.

Queensland, Huberton Hills, 4, 5, 8.xii.1910, 5, 9.x.1911 (Dodd), genit. slides 8814 (4.xii), 8816 (8.xii), 5 ♂ (BM, LM).

Until present known only from Western Australia.

Epitrichosma luteola spec. nov. (fig. 6)

♂ 17 mm. (Head lost). Thorax pale yellowish-olive. Abdomen pale ochreous.

Fore wing oblong-oval, little dilated, costa curved at base, gently concave about middle, obtusely prominent at 2/3, apex and termen rounded, termen little oblique. Pale yellowish, with slight clouds of a trifle deeper yellowish-olive. Markings suffused, dark brown and lighter brown. Basal half of costa with three dark dots along the rounding and two larger and more approximated dots just before middle; this pair slightly connected by some brownish dusting, so forming costal end of central fascia; this incomplete, broken into fragments hardly interconnected by brownish dusting, situated thus: a quadrate small blotch in upper half of cell, shifted basad, some irregular spots, below and beyond this blotch, merging into more spots along central part of fold, ending in a small line along vein 1a + b, but not reaching dorsum; posterior half of costa with four transverse small marks, becoming closer and much smaller posteriorly, followed by a slightly scalloped brown terminal line, narrowly interrupted on veins; a large, clavate and suffused

spot, obliquely arising from tornus, to middle of wing well beyond cell, brownish touched with olivaceous, posterior edge more defined, narrowly dark brown; terminal part of wing beyond this patch paler, almost white; a small round dark brown spot before termen below middle. Cilia (damaged) white, faintly yellowish-tinged, an ill-defined and narrow median band of dark dusting.

Hind wing glossy white with a faintest olivaceous suffusion, more distinct towards edge. Cilia very pale yellowish.

Male genitalia. Very similar to those of *E. hesperia* Common, but obviously distinct and differing thus. Uncus with a broader base. Gnathos arms longer (with tip uncurved, reaching base of tegumen) less narrower, but more gradually so, tips rounded, lateral branch sinuate and pointed, from upper 1/4 (in *hesperia* straight, not distinctly pointed, from close to middle), apical patch of bristles of cucullus larger; transtilla shorter and broader, semioval. Otherwise resembling *hesperia*.

Queensland, Cedar Bay, S. of Cooktown (Meek), 1 ♂, holotype, genit. slide 8633 (BM). Larger and more yellowish-olive tinged than *E. hesperia*.

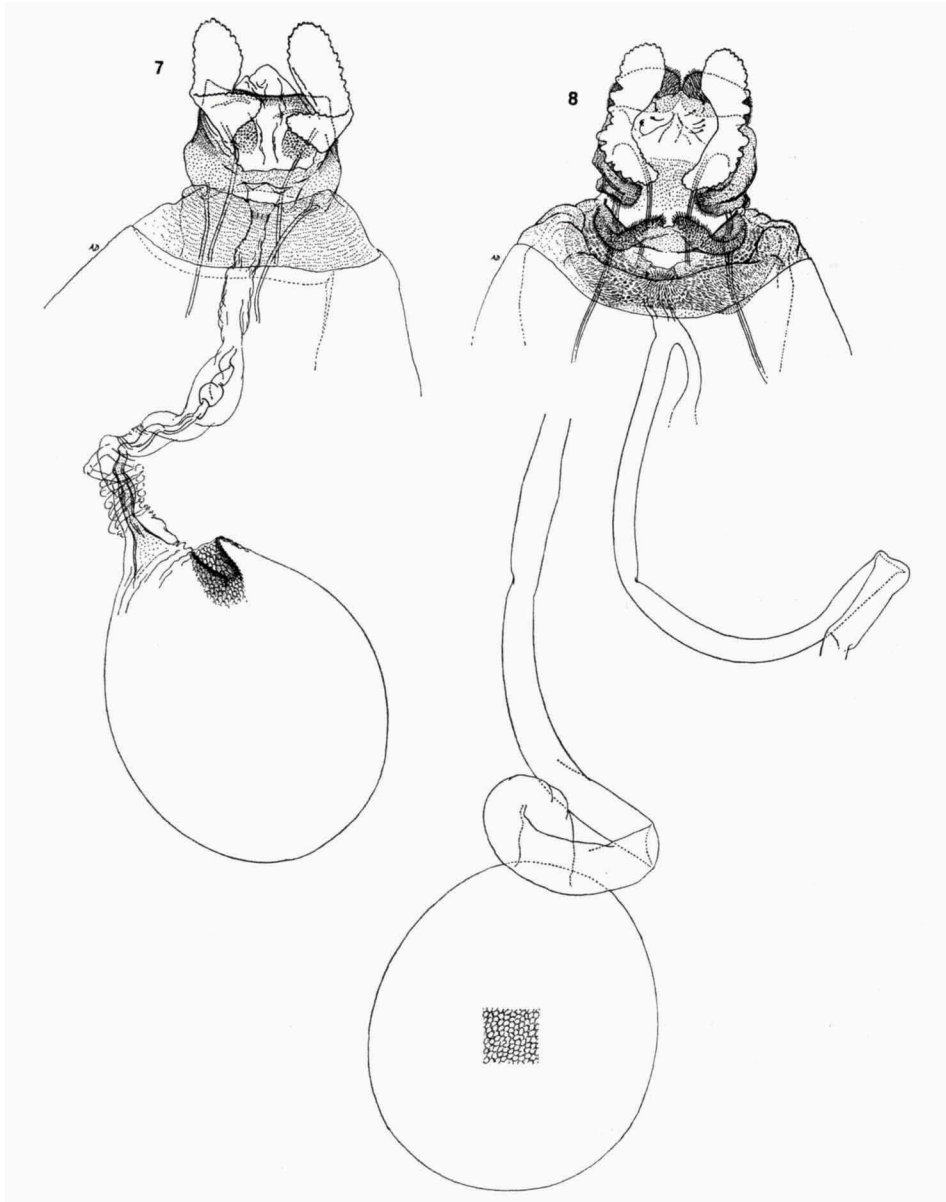
***Epitrichosma argenticola* spec. nov. (fig. 7)**

♀ 13 mm. Head and thorax pale ochreous. Palpus slender, acute, moderately ascending, terminal segment rather long, obliquely elevated, porrected; pale ochreous-tawny. Abdomen creamy.

Fore wing oblong-suboval, costa obliquely rounded at base, abruptly rounded before apex, apex rounded, termen rounded. Pale ochreous, evenly suffused, except on apex and termen, with light tawny-ochreous. Basal fifth of wing with a slightly deeper but very faint tawny basal patch, edge well-defined; central fascia indicated by a conspicuous light tawny sprinkled black oblique spot across costa before middle, to upper edge of cell, its posterior edge concave in middle; below and beyond this a large patch of very faint and pale tawny-olive suffusion, dilated downwards, occupying posterior half of dorsum, posterior edge very oblique and straight but hardly defined except below middle of disc, there darker brownish; an irregular dark brown mark on 3/4 of costa, a faintest brown subcostal marbling along posterior half; an erect-oval brownish-grey subterminal spot, submedian, narrowed above; traces of a row of terminal black points. (Cilia missing).

Hind wing glossy pale ochreous-greyish, cilia pale ochreous.

Female genitalia. Lamella postvaginalis with a pair of small crescentic structures above ostium; colliculum small, annular, with four vertical small ridges. Ductus bursae densely tortuous above corpus bursae. Signum, a short oval fold of reticulate structure.



Figs. 7-8. Female genitalia of Schoenoteninae. 7, *Epitrichosma argenticola* spec. nov., holotype; 8, *Barygnathella triangulum* (Diakonoff), ♀, genit. slide 8640.

Malay Peninsula, Perak, 18... (Doherty), 1 ♀, holotype, genit. slide 8676 (Walsingham Collection, BM).

A small, obscure species with the usual facies.

"Perak" (Malay) means silver (= "argentum", Lat.).

Protarchella nivis (Diakonoff)

Schoenotenes nivis Diakonoff, 1941: 429, pl. 20 fig. 8 (♂ genit.).

Protarchella nivis; Diakonoff, 1960: 68, figs. 41-43.

Distribution. East Java.

East Bali, Batoeriti, 3500 ft, vi.1935 (J. P. A. Kalis), 3 ♂, 7 ♀. — Bali Id., Sunda Is., Malaysia, 1896 (Doherty), 1 ♀. (BM, LM).

East Java, Tengger Mts., Singolangoe, 5000 ft, iv.1934 (J. P. A. Kalis), 1 ♀, genit. slide 8671 (BM). Larger than average specimens: 27 mm, and rather greyish-fuscos tinged all over, but otherwise exactly similar to the slightly smaller Javanese, and much smaller (15-19 mm), Balinese specimens.

Protarchella nivis protera Diakonoff

Schoenotenes paraptera Diakonoff, 1941 (nec Meyrick, 1910: 433; S. Sumatra). — 1947: 344 (Java).

Protarchella nivis protera Diakonoff, 1960: 69, figs. 44, 45, pl. fig. 5 (W. Java).

Distribution: Java, Sumatra.

West Sumatra, Korinchi, Sungei Kambang, 7300 ft, v.1914 (Robinson & Kloss), 1 ♂, genit. slide 8628 (BM).

Protarchella euschema spec. nov. (fig. 14)

♀ 19 mm. Head, thorax white, suffused with yellowish-creamy, face whitish-lilac. Palpus long and slender, light tawny, basal segment brownish, median with whitish base and tip, terminal segment tawny, pale-tipped. Abdomen white.

Fore wing rather broad, subtruncate, costa curved throughout, more so at base, apex obtuse, termen straight, little oblique. Glossy creamy-white, yellowish tinged, dusted throughout with minute brighter yellowish-ochreous specks, these partly condensed, so as to form patches of yellowish-ochreous suffusion, especially, on upper half of basal patch and in disc posteriorly, beyond cell. Markings blackish-fuscos. Edge of basal patch indicated by an irregular, slightly zig-zag fascia from costa well beyond base, pointing towards dorsum before middle, but not reaching far below fold; costa before this with two small points, beyond fascia, with eight inequal larger dots, penultimate of these double; a transverse series of slightly raised, inter-

connected blackish-brown dots, across disc at about $3/4$, from vein 9 to vein 2, rectangularly bent on vein 6, filled out anteriorly as far as upper half of cell to median branch, with brighter yellow-ochreous, lower half of cell not so suffused, distinctly of paler ground colour; a faint dark line just above and parallel to median branch and a round dot on middle of branch; an irregular mark in fold just beyond middle; a small group of raised dark dots below costa, slightly posterad of preceding; a subquadrate spot of 4-5 dark dots, filled out with brighter yellow-ochreous, below costa at $4/5$ and a similar, smaller mark opposite this well above tornus; two ill-defined, sinuate series of small dots before termen. Cilia glossy yellowish-white, paler than wing.

Hind wing semipellucent pale yellowish-white.

Female genitalia resembling those of *P. paraptera* (Meyrick) closely, but differing by a complete absence of a sclerotized, plate-like sterigma, or any parts of it, except the upper edge, shaped as subsinuate transverse rod; by a high, collar-like ninth sternite (narrow in *paraptera*), by the presence of an annular small colliculum (absent in *paraptera*) and by the absence of a signum.

British New Guinea, Biagi, Mambare River, 5000 ft, i-iv. 1906 (A. S. Meek), 1 ♀, holotype, genit. slide 8643 (BM).

Judging from the female genitalia, nearest to *P. paraptera*, but with entirely different colouring and distinct, elegant markings. Probably not too rare in the Papuan region, but all the specimens which turned up earlier were lacking the abdomens and therefore had to remain undescribed.

Protarchella coniopegma (Diakonoff) comb. nov.

Schoenotenes coniopegma Diakonoff, 1954: 109, fig. 490 (♀, New Guinea). — 1960: 54.

Distribution. New Guinea.

India, Sikkim, 7000 ft, vii.1895 (Pilcher), 1 ♀, genit. slide 8638 (BM).

Protarchella atalohypha spec. nov. (fig. 13)

♀ 24 mm. Head and thorax, and abdomen white. Palpus greyish-white, rather short.

Fore wing oblong-suboval, rather broad, costa little curved at base, rather straight in middle, apex and termen rounded. Glossy snow-white, with a finest network of very pale grey, veins throughout appearing elevated by raised scales, dull white. Anterior third of costa with three pairs of little approximated small black dots, a loose spot of elevated black scales below and

slightly beyond median pair in upper half of cell; a couple of jet-black specks below cell anteriorly; a subtriangular small patch on costa beyond $1/3$, formed by three jet-black marginal dots and a dark grey crescentic suffusion below costa, interconnecting extreme dots; dark grey and black minute specks (tips of elevated scales), descending from costal patch straight down and forming a dark grey suffused irregular spot on dorsum just beyond middle; a very pale ochreous-white spot of thick appressed scales in upper angle of cell, followed by a faint grey postcellular discal spot; costal patch indicated by a semicircular slender mark, larger than triangular spot, formed by 3-4 interconnected black dots anteriorly and by a fuscous-grey costal quadrate spot posteriorly; costal patch emitting downwards a couple of interrupted and very slender lines, more or less connecting with a small erect spot on dorsum before tornus and another, before middle of termen; this latter spot descending obliquely to termen above tornus; a faint subapical grey short streak. Cilia white.

Hind wing and cilia white.

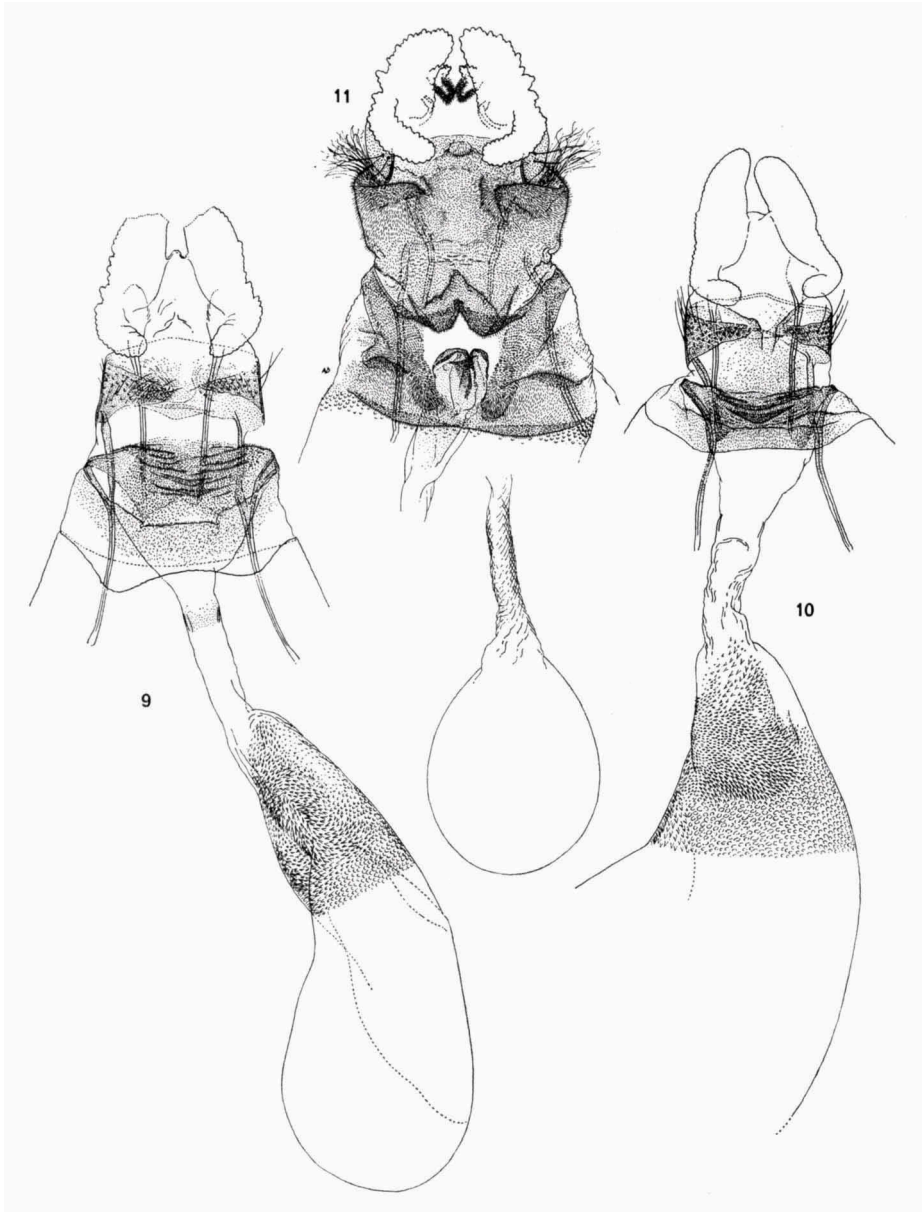
Female genitalia. Resembling those of *P. centrofracta* Meyrick (from New Guinea) closely, but with a short, cup-like colliculum in centre of the excision of lamella antevaginalis (this lamella excised rather in the same way as in *centrofracta*), with ductus bursae wide and moderately sclerotized throughout and also with a reticulate structure of the walls (in *centrofracta* entirely smooth and membranous). Corpus bursae finely denticulate throughout (in *centrofracta*, with long and delicate acicula).

Southwest Celebes, Mt. Lompobatang, Parang-Bobo Goa, 5000 ft, v.1938 (J. P. A. Kalis), 1 ♀, holotype, genit. slide 8815 (BM). Allied to *P. centrofracta* (Meyrick) and *P. conioptegma* (Diakonoff).

***Protarchella bebaea* spec. nov. (figs. 9-10)**

♀ 19 mm. Head white, slightly sprinkled with brownish. Palpus white, basal $2/3$ of median segment with a dark fuscous streak along upper half, top of streak continued obliquely across segment; terminal segment glossy white. Thorax and abdomen white.

Fore wing oblong-suboval, gradually dilated, costa moderately curved at extreme base, gently curved in middle, apex rounded, termen broadly rounded, little oblique. Snow-white, veins thickened by scales, small raised scale-tufts scattered over wing. Markings fuscous, tending to buff, rather pale except along costa. Anterior half of costa with some six dark fuscous dots or very short transverse marks, of rather diverse size, irregularly spaced, two ultimate of these more approximated and below costa connected by an oblong fuscous small spot, together forming top of central fascia; this fascia further in-



Figs. 9-11. Female genitalia of Schoenoteninae. 9, *Protarchella bebaea* spec. nov., holotype; 10, the same, paratype; 11, *Oligotenes antistita* spec. nov., holotype.

dicated by a thin sinuate vertical line, with lower half more distinct and inwards-convex, ending in top of a moderate triangular dark fuscous patch on middle of dorsum; posterior edge of central fascia very narrow, obtusely angulate in middle, only this angulation filled out with pale tawny; posterior half of costa with some five dark fuscous transverse marks, increasing in size posteriorly, ultimate mark subapical; a fascia beyond and parallel to posterior edge of central fascia, almost interrupted between veins 5-7; a clavate slightly oblique blotch before termen, resting on end of vein 2; some close dotting before termen below apex; a series of narrow, dark fuscous terminal dots on ends of veins. Cilia snow-white with a faintest submedian series of tiny dots.

Hind wing whitish-fuscous, veins slightly darker with strong golden gloss; edge of wing infuscated. Cilia white, with a golden gloss.

Female genitalia. Sterigma a membranous transverse band, lamella postvaginalis large, distinctly sclerotized and with some eight pairs of horizontal fine folds or streaks, short-aciculate. Colliculum annular, but indicated only at the sides. Corpus bursae cucumber-shaped, wall with concentric fine denticulations. Signum absent.

India, Assam, Khasis Hills, 1898-9 (Doherty) (Walsingham Coll.), 2 ♀, holotype, genit. slide 8629, paratype, genit. slide 8636 (rubbed specimen) (BM, LM). Belongs to the natural *P. paraptera* group, but is distinct by the well-defined and large lamella postvaginalis.

Protarchella cyclopa Diakonoff

Protarchella cyclopa Diakonoff, 1956: 646, figs. 1, 2, 4, 14 (♂ ♀, N. Guinea). — 1960: 65.

Distribution. New Guinea: Snow Range.

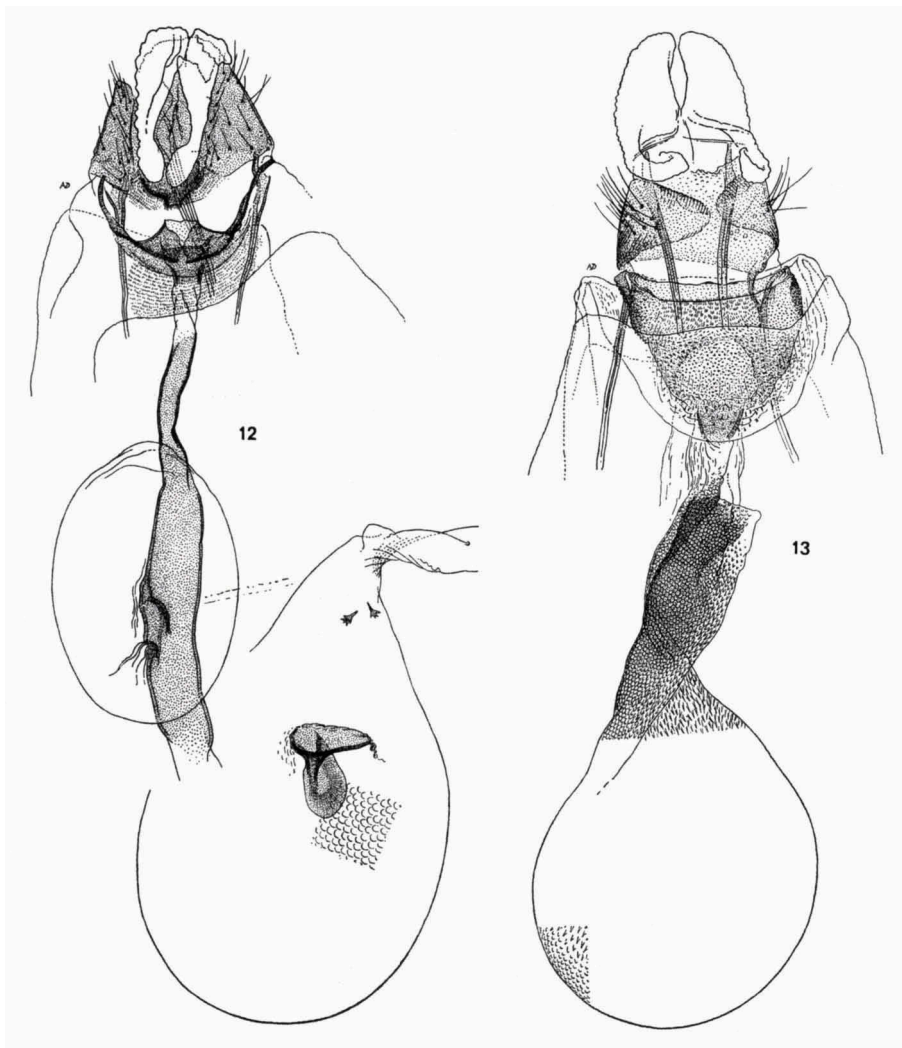
Central Dutch New Guinea, Cyclops Mts., about 139° long., Mt. Goliath, 5-7000 ft, 1.1911 (A. S. Meek), 1 ♂, genit. slide 8644 (BM).

Oligotenes antistita spec. nov. (fig. 11)

♀ 26 mm. Head whitish with a pale yellow-green tinge in certain lights. Palpus rather long, sinuate; light brown outwardly, whitish with yellow tinge inwardly. Thorax (rubbed) whitish-yellow, anteriorly suffused with pale greenish and slightly dusted fuscous. Abdomen whitish, anal tuft light grey.

Fore wing oblong-subtriangular, moderately dilated, costa moderately curved at extremities, straight in middle, apex subobtusely, termen gently sinuate above, moderately oblique. Pale olive-green-yellowish, edges to dark markings white, costa narrowly white between markings; markings deeper

olive-green, evenly suffused throughout with light brown. Basal patch to $1/4$, olive-green with dark brown markings: a series of close 5-6 blackish dots along costal edge, a suffusion in cell, below fold basal patch obliterate (or rubbed); edge of patch vertical and straight, except a slight prominence just about middle of wing; an obliquely-semioval spot on costa just before middle, wider posteriorly, with five dark dots along costa, preceded and followed by a larger dark dot; an inwards-oblique band from $3/4$ of costa, slightly nar-



Figs. 12-13. Female genitalia of Schoenoteninae, holotypes. 12, *Metachorista spermatothesma* spec. nov.; 13, *Protarchella atalohypha* spec. nov.

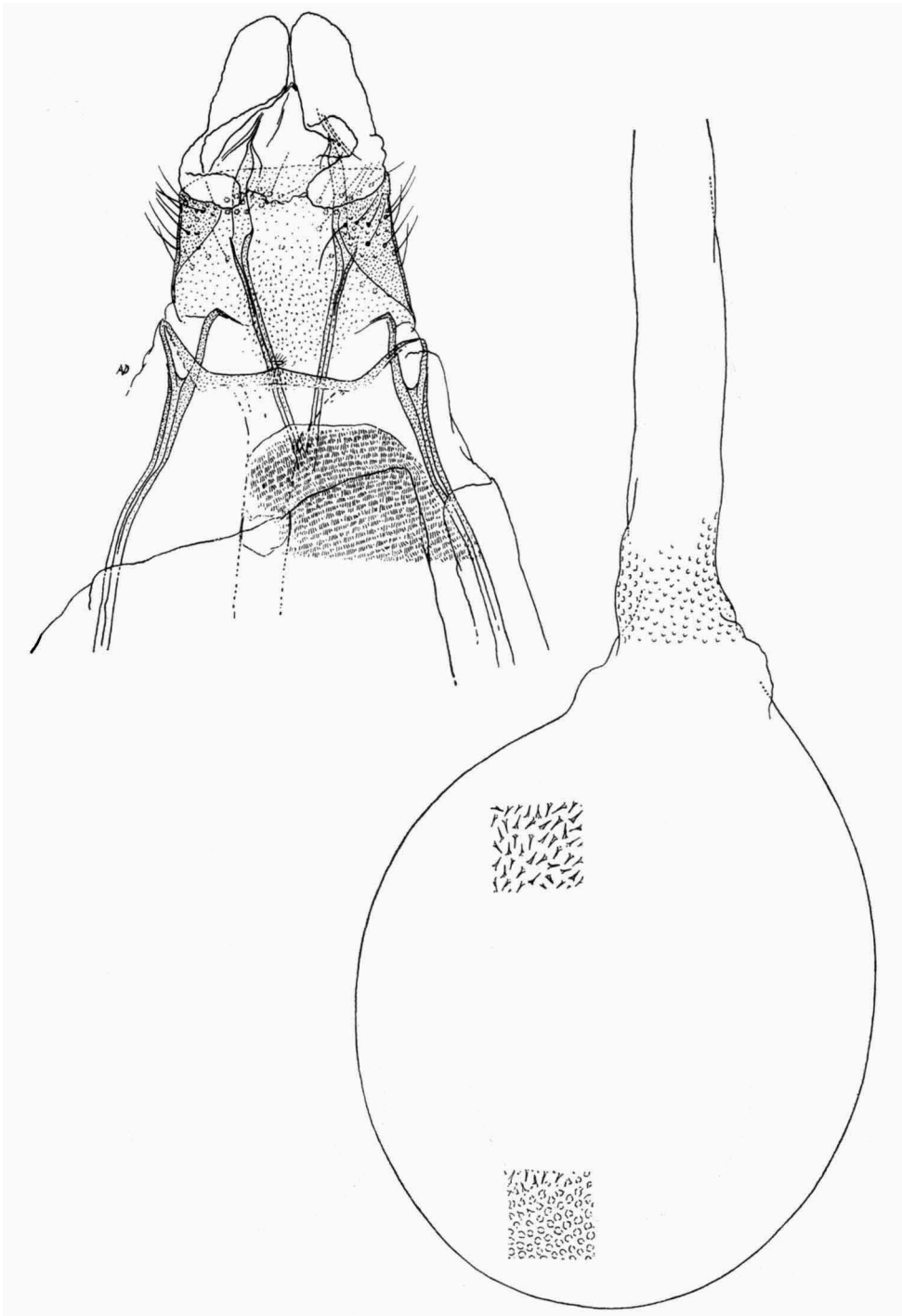


Fig. 14. *Protarchella euschema* spec. nov., holotype, ♀, genitalia.

rower than preceding spot, running downwards to middle of disc and along this to before middle of basal patch, slightly narrowed; with less defined edge along horizontal part and with a couple of raised tufts of scales; a moderate (rubbed) subtriangular or oblique mark on dorsum before tornus, not reaching preceding mark; two small costal dots before apex; a large, erect-oval preterminal spot, slightly dilated below, its lower posterior end connected by a vertical stalk with termen just above tornus; a narrow marginal brownish suffusion along termen, dilated on ends of veins; a series of round dots along dorsum (mostly rubbed). Cilia pale brown, with a submedian darker band and white bases, basal half of cilia narrowly barred with darker brown opposite ends of veins.

Female genitalia similar to those of *O. polylampes*, but denser sclerotized and also almost entirely aciculate; especially the seventh ventrite different, much higher, with two converging aciculate oblique bands; ostium much larger, dilated into a rosebud-like body, ductus bursae with reticulate small folds.

British New Guinea, Papua, Owgarra (A. S. Meek), 1 ♀, holotype, genit. slide 8661 (BM). Superficially rather similar to *O. polylampes* Diakonoff, striking by large size and distinct markings.

Diactenis pteroneura Meyrick

Diactenis pteroneura Meyrick, 1907: 980 (♂ ♀, Ceylon). — Meyrick, in Wagner, 1912: 50. — Meyrick, in Wytsman, 1913: 49, pl. 3 fig. 35, pl. 5 figs. 71a-b. — Diakonoff, 1939: 235 (bion.), figs. 19A-D (neur. genit. ♂ ♀). — 1960: 72. — Clarke, 1955: 263. — 1958: 95, pl. 47 figs. 1-1d (wing, neuration, head, genit. ♂).

Distribution. Ceylon.

Ceylon, Pundaloya, 3500-4500 ft, 189... (Green), 1 ♀, genit. slide 8677 (BM).

Commenting upon my 1939 paper, T. B. Fletcher wrote to me in that year about the species: "... the record from Australia (Meyrick, P.L.S.N.S. Wales 35, 281, 1910), was erroneous and really referred to *D. veligera* Meyrick, Ex. Micr. 4, 458, 1920. The figure of *D. pteroneura* in Wytsman's Genera Insectorum, Tortricidae, was taken from *pteroneura*, and not from *veligera*, as Meyrick informed me (in lit. 25.II.29)".

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