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SYNOPSIS AND DESCRIPTIONS OF NEW SPECIES OF THE SOUTH ASIATIC COCHYLINAE (LEPIDOPTERA: TORTRICIDAE), WITH AN APPENDIX

by

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Diakonoff, A. Synopsis and descriptions of new species of the South Asiatic Cochylinae (Lepidoptera: Tortricidae), with an appendix.

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Key words: Cochylinae; survey; taxonomy; distribution; foodplants; *Stenodes*; *Scotiophyes*; Archipini.

A survey of South Asiatic Cochylinae (Lepidoptera, Tortricidae), comprising 50 species, belonging to ten genera, is given. Five new species are described: *Stenodes hapala*, ♂ (E Borneo, Hong Kong), *Phalonidia datetis*, ♂ ♀ (Thailand), *P. pista*, ♂ ♀ (Hong Kong), *Eupoecilia coniopa*, ♂ ♀ (N. Borneo) and *E. thalia*, ♀ (N. Borneo). *Phalonidia sphaenophora* (Diakonoff) is transferred to *Aethes* Billberg, *Aethes taneces* Diakonoff, to *Eupoecilia* Stephens, *Phalonia glycitis* Meyrick, to *Aprepodoxa* Meyrick. Of *Eupoecilia armifera* Razowski a ♂ metallotype is described (Nepal). Of *E. engelinae* (Diakonoff), *wegneri* Diakonoff and *scythalephora* (Diakonoff) elaborate figures of the genitalia are presented. Four old apocryphal cochyline species are referred to Tortricini, Pyralidae, Lithosiinae and Arctiidae. In an Appendix *Scotiophyes nebrias* spec. nov., ♂ ♀ (N. Borneo), is described (Tortricinae, Archipini).

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The species of the tortricoid group Cochylinae, usually regarded as a separate family Cochylidae, but currently tending to be included as a subfamily, or even as a supertribe, into the large family Tortricidae, are quite distinct insects, easy of recognition. They are numerous in the Holarctic Region, but curiously scarce in the Asiatic Tropics.

It is noteworthy that several species of the tropical Cochylinae are smaller than their Holarctic confraters, but have quite similar markings, that vary to the same, often confusing, extent. The South Asiatic Cochylinae may represent a comparatively recent invasion from the Palaearctic into this tropical region, as they all, with very few exceptions, belong to the few Palaearctic genera and apparently have not yet developed new genera of their own. The species possess clear-cut genital characters in the two sexes, that provide va-

luable, and often the only, means for trustworthy identification.

While the Palaearctic representatives of the Cochylinae received a considerable amount of attention in the recent literature (Hannemann, 1964, Razowski, 1968a-1968c, 1970a, 1970b, 1977), those of the Indo-Papuan Region have been rather neglected. The only compilative study, a catalogue of the Indian species (Fletcher, 1931) is already over 50 years old and its nomenclature is quite out of date. The present critical list may therefore be of some use.

In later years the Indo-Papuan Cochylinae have been studied only by a couple of authors (Meyrick, chiefly in 1928, 1930; Diakonoff, chiefly in 1941). Later Razowsky published separate revisions of several genera, e.g., of the genus *Eupoecilia* Stephens (1968b), *Agapeta* Hb. (1968a), etc., with accurate drawings of the male and female genitalia of most of the species.

In order to complete our early descriptions of 1941 that have been illustrated only with small-size photographs of the genitalia, we now present three genitalia drawings and partial redescriptions of some of those species.

As said above, the material of Cochylinae from South East Asia is extremely scanty. We therefore acknowledge with gratitude the loan of recently collected material by colleagues at the British Museum (Natural History), during their expeditions to interesting localities: Nepal, North Borneo, Malaysia and Hong Kong. Their well preserved material forms a most welcome addition to this survey.

In it 50 species, belonging to ten genera, are recorded, of an arbitrary region, ranging from India to the Himalaya, through Malaysia, the Sunda Islands, as far as New Guinea, with a few records from Hong Kong. Five species are described as new, two are transferred tentatively to three other genera, while four apocryphal cochylid species are referred tentatively to three other families. The types of new species are in the Leiden Museum, those of the borrowed material in the British Museum (Natural History) of London.

The author is greatly indebted to the Trustees and to Dr. G. S. Robinson and Mr. K. R. Tuck, of that Museum, for the loan of material, for the checking of our list of species against their catalogue and for providing us with remarks on certain dubious old names. To the Uyttenboogaart-Eliasen Stichting of Amsterdam our thanks are due for a grant, covering the costs of the illustrations made by Mr. A. C. M. van Dijk (The Hague).

Stenodes Guenée

Stenodes Guenée, 1845, Annls. Soc. ent. France (2) 3: 298. Type-species: *Cochylis elongana* Fischer von Röslerstamm, 1839, by monotypy.

Cochylimorpha Razowski, 1959, Polskie Pismo ent. 29(22): 440.
Substenodes Razowski, 1960, ibid. 30(17): 298.
Parastenodes Razowski, 1960, ibid., 298.
Eustenodes Razowski, 1960, ibid., 298.
Bipenisia Razowski, 1960, ibid., 299.
Euxanthoides Razowski, 1960, ibid., 302.
Bleszynskiella Razowski, 1960. ibid., 303.
Paraxanthoides Razowski, 1960, ibid., 304.

Stenodes hapala spec. nov.
[ἁπαλός = delicate]
(figs. 1-2)

♂ 7.5 mm. Head, palpus and thorax whitish-ochreous or white, glossy. Abdomen whitish.

Fore wing oblong-suboval, costa gently curved, apex rather pointed, termen hardly sinuate above, straight below, oblique. White, with a delicate pale golden-orange marbling, except a triangular pure white area along posterior half of costa; a dark fuscous suffused streak along anterior half of costa, below with a denser orange suffusion; slightly deeper colour above middle of dorsum; a sub-rhomboidal small blackish dot, slightly inwards-oblique, on closing vein; a few dark specks on dorsal margin below apex, and along dorsum. Cilia with a broad basal band, narrow in apex, gradually dilated towards tornus, and an undulating purple parting line; beyond this cilia densely dusted with purplish.

Hind wing with veins 3 and 4 stalked, from angle, stalk moderate, 5 little curved at base, from lower 1/4 of discoidal vein, this weak, oblique, obliterate on upper half, media well-developed in cell, traceable 3/4 beyond cell, 6 and 7 stalked, stalk almost as long as free veins. Hind wing whitish, touched with fuscous, apex gently infuscated (sometimes hind wing white). Cilia whitish with a faint pale fuscous median band.

Male genitalia. Tegumen semispheroidal, top truncate, socii apical, flatly depressed pads with minute hairs. Transtilla little sclerotic, with large spherical bases and slender median part, with a median pending and slender appendix. Valva with straight costa, oblique outer edge, cucullus slender, clavate and thinly bristled, sacculus 1/3 width of disc, but weakly indicated, except a sclerotic, apical crochet. Aedeagus moderate, slightly curved at basal 1/3, top obliquely truncate and acute below; cornutus, a moderate, gently bent spike.

East Borneo, Balikpapan, Mentawir River, 50 m, x.1950 (A. M. R. Wegner), 1 ♂, holotype, genit. slide 10460, 11 ♂, paratypes, genit. slide 10461 (two specimens damaged).

Hong kong, Tai Mo Shan, 5.viii.1981 (Oxford Far East Exp., BM 1981-493), genit. slide. 22692, 1 ♂, paratype (with cilia damaged).

A small pale, distinct species, with delicate markings and elegantly adorned cilia of the fore wing, by which it differs from all other allied species, as well as by distinct ♂ genitalia, that suggest a relationship with *S. lungtanensis* Razowski but are considerably more apomorphic.

Phalonidia Le Marchand

Phalonidia Le Marchand, 1933, Amat. Papill. 6: 242. Type-species: *Cochylis affinitana* Douglas, 1846, by original designation.
Piercea Filipjev, 1940, Trav. Inst. Zool. Acad. Sci. U.R.S.S. 6: 171.
Brevisociaria Obraztov, 1943, Mitt. münch. ent. Ges. 33: 96.

Phalonidia contractana (Zeller)

Cochylis contractana Zeller, 1847, Isis 10: 744.
Conchylis manifestana Kennel, 1900, Iris 13: 232; 1913, Zoologica 21: 255, pl. 12 fig. 9.
Phalonia exaequata Meyrick, 1923, Exotic Microlep. 3: 52.
Phalonia thermoconis Meyrick, 1925, Exotic Microlep. 3: 139.
Phtheochroa thermoconis; Clarke, 1963, Meyrick's Types 4: 35, pl. 17 figs. 3-3b.
Phalonidia contractana; Razowski, *in* Amsel, Gregor & Reisser, 1970, Microlep. Pal. 3: 212, pl. 11 fig. 122, pl. 62 fig. 122, pl. 133 fig. 122; 1970, Acta zool. cracov. 15: 365.

Distribution. — S. Europe. Malta. Lebanon. C. Asia, Kashmir.

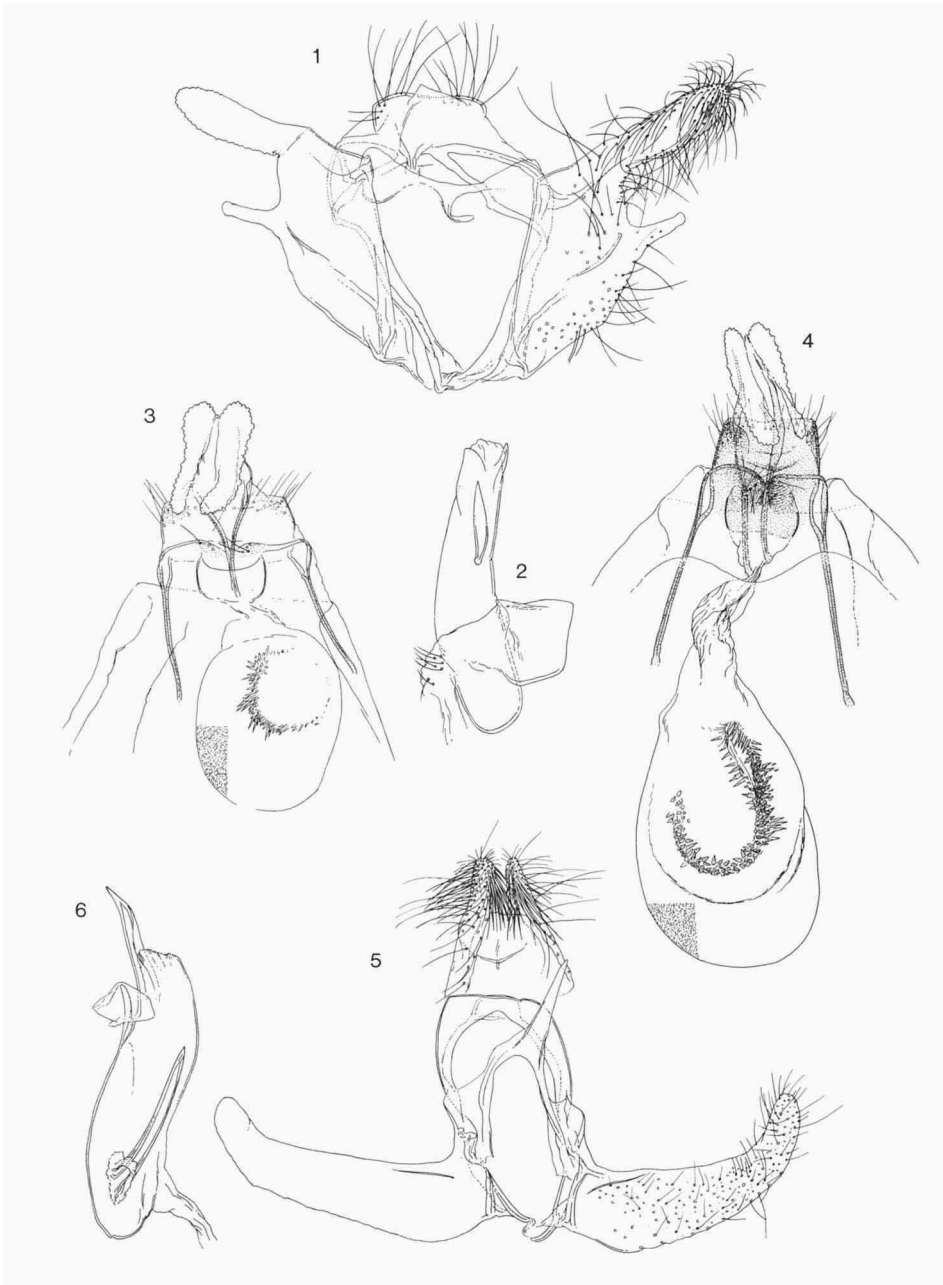
Phalonidia datetis spec. nov.

[δατετίς = divider]

(figs. 3–6)

♂ 8 mm. Head ochreous-white, face glossy white. Antenna rather thickened in male, pale ochreous, ciliations under 1. Palpus moderate, projecting well beyond face, not sinuate, pale ochreous, terminal segment short, triangular, subacute, white. Thorax pale ochreous, touched with greyish. Abdomen pale fuscous, anal tuft whitish.

Fore wing oblong-suboval, little dilated, costa rather straight, gently curved towards apex, less so at base, apex pointed, termen hardly curved, oblique. Silvery-ochreous, with a strong gloss, markings dull ochreous, along costal edge partly infuscated, tawny. Basal patch not reaching 1/4, edge rather convex, slightly inwards-oblique, with a small notch above dorsum, patch more



Figs. 1–6. Genitalia of S. Asiatic Cochylinae. 1, *Stenodes hapala* spec. nov., ♂, holotype; 2, the same, aedeagus; 3, *Phalonidia datetis* spec. nov., ♀, paratype, genit. slide 2588; 4, the same, ♀, allotype, genitalia; 5, the same species, ♂, holotype; 6, the same, aedeagus.

or less interrupted above middle; costal fascia moderately broad, from middle of costa to well before middle of dorsum, slightly spindle-shaped, edge slightly irregular and serrulate; costal fourth of fascia vertical; on costal edge preceded and followed by a tawny and a fuscous dot, respectively; a triangular spot on dorsum, narrowly divided from fascia, top to lower edge of cell before its end; a pale ochreous, less distinct narrow suffused streak, from posterior 1/4 of fascia, bowed and descending to dorsum before tornus; a second transverse fascia, starting from a dark fuscous spot on 4/5 of costa, outwards-oblique, running to tornus, rather irregularly narrowed downwards and outwards-convex between vein 5 and tornus (in holotype); sometimes a fuscous small dot on end of cell, in middle of wing (absent in holotype). Cilia silvery-ochreous.

Hind wing with apex acute, termen sinuate above; pale silvery-fuscous. Cilia concolorous.

Male genitalia. Tegumen rather high, slender. Uncus conical, distinctly separated, bifid, tops rounded, with strong bristles on inner side, directed anterad. Tuba analis rather spherical. Bases of pedunculi of rather complicated structure. Transtilla long, with an acute point rising halfway to top of socii. Valva slender, longer than tegumen, narrowed at base and, more gradually so, towards apex. Aedeagus large, spindle-shaped and sinuate, with two large cornuti.

♀ 9 mm. Similar to male, but fore wing slightly narrower and more pointed; central fascia narrower; so is the posterior fascia; other markings indefinite (probably rubbed). Otherwise as male.

Female genitalia. Sterigma quadrate and broad, with slightly thickened upper edge; a slight notch in middle, surrounded by fine corrugated structures, with on each side, a curved series of four bristles. Lamella postvaginalis with a slight transverse wrinkle. Colliculum formed by a large, darker transverse sclerite, with rounded sides. Ductus bursae moderate, strongly folded lengthwise, gradually dilating into corpus bursae; this large, spinulose throughout, with a semicircular lamina dentata, broader at right upper end, surrounded by a round fold.

Thailand, Bangkok, 24–27.xi.1957 (L.D. Brongersma), at light, 1 ♂, holotype, genit. slide 2586, 1 ♀, allotype, slide 2587; 4 ♂, paratypes, Cheng Mai, 9.xii.1957 (same collector), 1 ♀, paratype, genit. slide 2588, a much larger specimen (11 mm), with broader wings, but with identical genitalia.

Superficially the species resembles *Aethes sphaenophora* (Diakonoff) but differs by stronger gloss of the ground colour in the fore wings. In fact it belongs in the vicinity of the Palaearctic *P. permixtana* Denis & Schiffermüller, but can be easily separated by the narrowed base of the valva, with hardly any trace of a sacculus and by the robuster socii.

Phalonidia pista spec. nov.
[πιστός = trustworthy]
(figs. 7, 8, 17)

♂ 9.5 mm. Head and palpus glossy ochreous-white. Thorax whitish-ochreous (partly denuded). Antenna fuscous-tawny, ciliations 1.

Fore wing oblong, moderatly broad, gradually dilated, costa straight anteriorly, gently curved along posterior third, apex rounded, termen hardly convex, moderately oblique. Glossy pale ochreous, markings dull brighter ochreous and brownish. Costa narrowly suffused with blackish-brown along anterior third. Basal patch indicated by a rather faint ochreous spot at 1/6 of dorsum, inwards-oblique and limited above by fold, and a smaller similar spot below costa; transverse fascia before 3/5 of costa, to dorsum before middle, ochreous, rather dusted with brownish, followed by a rounded-triangular dorsal spot below end of fold, connected with fascia by an irregular patch of dark brown dusting over and around lower angle of cell; a pale faint transverse fasciate costal patch before apex, with small brown points along costa, continued by a quickly narrowed appendix with termen above tornus; a similar oblong spot beyond cell, halfway between costal and dorsal patch; a few dark brown irregular marginal points along termen and dorsum. Cilia dullish light ochreous.

Hind wing pale golden greyish-ochreous, with a silky gloss, veins faintly darker. Cilia concolorous, with a suffused fuscous subbasal band.

♀ 11 mm. Very similar to the male. Thorax whitish-ochreous, sides of vertex and tegulae finely touched with pale tawny. Markings slightly deeper ochreous, more extended, costal streak broader and paler, tawny; patch beyond cell larger, costal patch including a dot of ground colour on costa; apex with some four black dots; otherwise marginal dots ill-defined.

Hind wing moderately dusted with fuscous. Otherwise as in male.

Male genitalia. Tegumen strongly concave, rather blown up spherically. Uncus simple, apparently parallel-sided, clothed except at base, with fine, long hairs, top with moderate, stiff spines. Valva narrow, base moderately dilated, posterior 3/4 narrowly band-like, sparsely haired, top of valva hardly exceeding uncus. Aedeagus gradually narrowed, rectangularly bent, top upcurved, short-furcate.

Female genitalia. Sterigma weak, a transparent, ovate disc with truncate top, on each side of top a minute vertical ridge or groove. Lamella postvaginalis with several long, strong bristles. Ductus bursae simple, a long, weak tube, not exceeding base of anapophysis. Corpus bursae transparant, with hyaline spines forming a complete circular series, with a small stalk-like extension above.

Hong Kong, Sek Kong (Control), 4.viii.1981 (Oxford Far East Exp., BM 1981-493), 1 ♂, holotype, genit. slide 55693, 1 ♀, allotype, genit. slide 22690; 1 ♂, 1 ♀, paratypes.

The species differs from those of the *permixtana* group by the rather hooked top of the valva that does have a dilated sacculus, by the densely spined tops of the socii and by a long apical process of the aedaegus.

Phalonidia permixtana (Denis & Schiffermüller)

Phalaena Tortrix permixtana Denis & Schiffermüller, [1775], Schmett. Wiener Gegend: 129.
Cochylis musschliana Treitschke, 1835, Schmett. Eur. 10(3): 141.
Cochylis dymotana Treitschke, 1835, ibid., 142 (nom. praeocc.).
Phalonia permixtana; Kennel, 1913, Zoologica 54: 281, pl. 12 fig. 80. Diakonoff, 1982, Zool. Verh. 193: 5.
Phalonidia permixtana; Razowski, *in* Amsel, Gregor & Reisser, 1970, Microlep. Pal. 3: 227, pl. 12 fig. 138, pl. 64 fig. 138, pl. 134 figs. 138, 138_2; 1970. Acta zool. cracov. 15: 366, no. 138. Diakonoff, 1982, Zool. Verh. 193: 5.

Distribution. Europe from England to Ural except the high North. Asia Minor. E. Afghanistan. Central Asia. Manchuria. China. Ceylon.

Phalonidia definita (Meyrick)

Phalonia definita Meyrick, 1928, Exotic Microlep. 3: 438. Fletcher, 1931, Catal. Indian Ins. 22: 3. Meyrick, *in* Caradja & Meyrick, 1935, Mater. Chin. Prov.: 47. Clarke, 1963, Meyrick's Types 4: 24, pl. 12. figs. 4–4c.
Phalonidia definita; Razowski, *in* Amsel, Gregor & Reisser, 1970, Microlep. Pal. 3: 214.

Distribution. — Assam. China: Kwangtung.

Phalonidia mellita (Meyrick)

Phalonia mellita Meyrick, 1926. Exotic Microlep. 3: 438. Fletcher, 1931, Catal. Indian Ins. 22: 4. De Joannis, 1931, Ann. soc. ent. France 99: 109. Meyrick, *in* Caradja & Meyrick, 1934, Iris 48: 29.
Phalonidia melitta (sic); Razowski, Cochylidae, *in* Amsel, Gregor & Reisser, 1970. Microlep. Pal. 3: 244, 245.
Phalonidia melissa (sic); Razowski, 1982, Nota lepid. 5: 173.

Distribution. — Ceylon. China: Kwangtung.

Aethes Billberg

Aethes Billberg, 1820, Enumeratio ins.: 90. Type-species: *Pyralis smeathmanniana* Fabricius, 1781, by subsequent designation of Fernald, 1908: 51.
Chlidonia Hübner [1825], Verz. bekannt. Schmett.: 393.
Phalonia Hübner, ibid.: 393.
Dapsilia Hübner, ibid.: 394.
Phelonia Stephens (sic), 1834, Illustr. Br. Ent., Haust. 4: 177 (laps.)
Lozopera Stephens, 1834, ibid.: 287.
Argyridia Stephens, 1852, List Spec. Br. Anim. Br. Mus.: 83.
Loxopera Walsingham, 1900, Ann. Mag. nat. Hist. (7)6: 444.
Lozopera Caecaethes Obraztsov, 1943, Mitt. münch. ent. Ges. 33: 99.
Aethes Cirraethes Razowski, 1962, Acta zool. cracov. 7: 414.

Aethes irmozona Diakonoff

Aethes irmozona Diakonoff, 1976, Zool. Verhand. 144: 8, fig. 4a.

Distribution. — Nepal.

Aethes conomochla (Meyrick)

Phalonia conomochla Meyrick, 1933, Exot. Microlep. 4: 372. Clarke, 1963, Meyrick's Types 4: 24, pl. 12 figs. 1–1b (holotype, genit. fig.).
Aethes conomochla; Razowski, *in* Amsel, Gregor & Reisser, 1970, Microlep. Pal. 3: 346, pl. 12 fig. 218; 1970, Acta zool. cracov. 15: 379.

Distribution. — Kashmir.

Aethes geniculata (Meyrick)

Phalonia geniculata Meyrick, 1930, Exotic Microlep. 3: 591. Fletcher, 1931, Catal. Indian Ins. 22: 3.
Aethes geniculata; Clarke, 1963, Meyrick's Types 4: 3, pl. 1 figs. 2–2b (holotype, genit. fig.).

Distribution. — Assam.

Aethes lateritia Razowski

Aethes lateritia Razowski, Cochylidae, *in* Amsel, Gregor & Reisser, 1970, Microlep. Pal. 3: 355, pl. 21 fig. 225, pl. 91 fig. 225, pl. 15 fig. $225_{1, 2}$; 1970, Acta zool. cracov. 15: 380.

Distribution. — SE. Iran. Pakistan: Quetta.

Aethes bilbaensis (Rössler)

Conchylis francillana var. *bilbaensis* Rössler, 1877, Stett. ent. Ztg. 38: 372.
Phalonia loxopteroides Walsingham, 1903, Ent. month. Mag. 39: 184.
Lozopera mediterrana Rebel, 1906, Berlin. ent. Ztg. 50: 302.
Phalonia reclusa Meyrick, 1923, Exotic Microlep. 3: 53.
Aethes Lozopera bilbaensis Razowski, 1962, Acta zool. cracov. 7: 409, figs. 50–52, 54–56.
Aethes bilbaensis; Razowski, Cochylidae, *in* Amsel, Gregor & Reisser, 1970, Microlep. Pal. 3: 353–355, figs. 224_1–224_2 21, 91, 150.

Distribution. — S. Europe. Asia Minor. Iran. Afghanistan. W. Turkestan. Turkmenia. C. Asia. Pakistan. NW. Africa. Israel.

Aethes sphaenophora (Diakonoff) comb. nov.

Phalonia sphaenophora Diakonoff, 1941, Treubia 18: 397, pl. 17 figs. 1–2.
Phalonia sphenophora; Diakonoff, 1948, (nom. emend.), Treubia 19: 483.
Phalonidia sphaenophora; Diakonoff, 1968, Ent. Ber. Amst. 28: 139 (lectotype designated).

Distribution. — Indonesia: E. Java.

Aprepodoxa Meyrick

Aprepodoxa Meyrick, 1937, Iris 51: 171. Razowski, Cochylidae, *in* Amsel, Gregor & Reisser, 1970 (Sept.), Microlep. Pal. 3: 440; 1970 (Dec.) Acta zool. cracov. 15: 349, 391. Diakonoff, 1974, Ann. Soc. ent. France (N.S.) 10: 219. Type-species. *Aprepodoxa mimocharis* Meyrick (by monotypy).

This interesting genus is distinct by its peculiar male genitalia, viz., the armature of the valva, with the basal edge forming a separate, partly free digitoid, densely spined process, originating from about the middle of this edge, partly appressed, directed posterad. This development may only be compared with the spiny processes in the two known species of the Palaearctic genus *Ceratoxanthis* Razowski, 1960, where these processes, however, originate from the base of the sacculus of the valva. In other respects the male genitalia of *Aprepodoxa* differ considerably: by the shape of the valva, the long transtilla, and especially, by the voluminous, strongly armed aedaegus.

It seems probable that the present genus is a plesiomorphous phylogenetic stage of the same monophyletic transformation series of the male genitalia

that, along a circumvious route, terminated in the apomorphous situation in *Ceratoxanthis*.

A second, S. Asiatic, species, belonging to this genus is *Phalonia glycitis* Meyrick, judging from the male genitalia, as illustrated by Clarke (cf. below).

Aprepodoxa mimocharis Meyrick

Aprepodoxa mimocharis Meyrick, *in* Caradja & Meyrick, 1937, Iris 1951: 171. Clarke, 1963, Meyrick's Types 4: 7, pl. 3 figs. 1–1d (type, genit. figured). Razowski, *in* Amsel, Gregor & Reisser, Microlep. Pal. 3: 440, 441, pl. 27, pl. 161 fig. 290; 1970, Acta zool. cracov. 15: 390, no. 291. Diakonoff, 1948, Bull. Mus. Hist. Nat. (2) 20: 343; 1974, Ann. Soc. ent. France (N.S.) 10: 219, figs. 1–2.

Distribution. — China: Likiang. Tonkin: Cha-Pa.

It should be noted that in my 1974 paper the location of the unique male specimen of this species is indicated erroneously: it is not in the Leiden Museum but in the Museum National d'Histoire Naturelle, Paris.

Aprepodoxa glycitis (Meyrick) comb. nov.

Phalonia glycitis Meyrick, 1928, Exotic Microlep. 3: 438. Fletcher, 1931, Catal. Indian Ins. 22: 4. Clarke, 1963, Meyrick's Types 3: 27, pl. 13 figs. 4–4b (type, genit. figured).

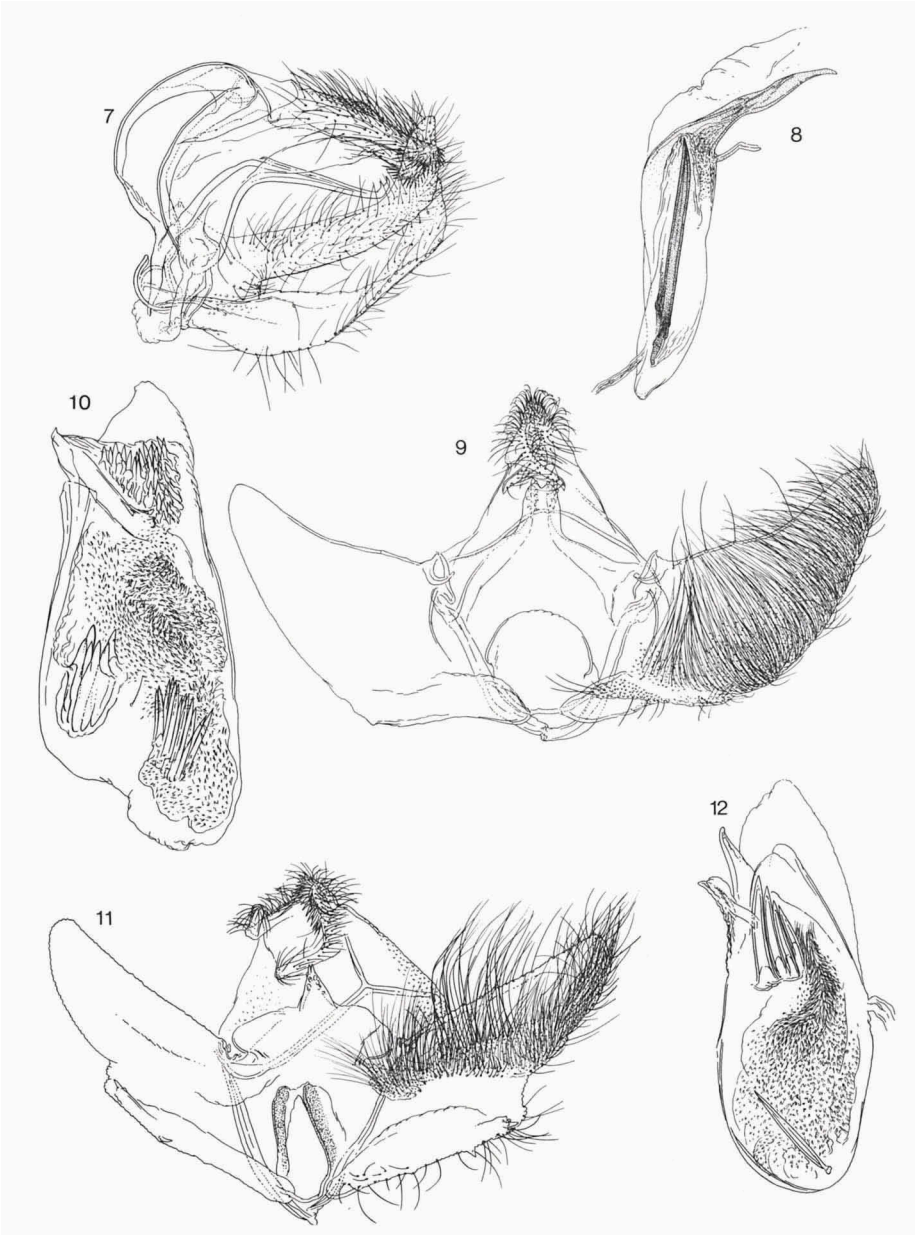
Distribution. — Assam.

Agapeta Hübner

Agapeta Hübner, 1922, Syst.-alphab. Verz.: 58. Type-species: *Phalaena Tortrix zoegana* Linnaeus, 1767, by subsequent designation of Hübner [1825]: 98.
Agapete Hübner [1825], Catal. Lep. Collect. Franck: 98 (emendation).
Euxanthis Hübner [1825], Verz. bekannt. Schmett.: 391.
Xanthosetia Stephens, 1829, Syst. catal. Br. Ins. 2: 192.

Agapeta hamana (Linnaeus)

Phalaena Tortrix hamana Linnaeus, 1758, Syst. Nat., ed. 10: 530.
Phalaena Tortrix diversana Hübner, 1793, Vogel & Schmett. 9: 40.
[*Tortrix*] *diversana* Hübner, [1799], Samml. eur. Schmett., Tortr.: pl. 22 fig. 139.
Euxanthis hamana; Kennel, 1913, Zoologica 21: 322, pl. 14 fig. 23.
Agapeta hamana; Razowski, 1968, Acta zool. cracov. 13: 91, 93, figs. 22, 23, 24. Cochylidae, *in* Amsel, Gregor & Reisser, 1970. Microlep. Pal. 3: 243, pl. 14 figs. 151_1–152_2, pl. 136 fig. 151_1–152_2; 1970, Acta zool. cracov. 15: 368.



Figs. 7–12. Genitalia of S. Asiatic Cochylinae, males. 7, *Phalonidia pista* spec. nov., holotype; 8, the same, aedeagus; 9, *Eupoecilia engelinae* (Diakonoff, 1941), holotype; 10, the same, aedeagus; 11, *E. wegneri* (Diakonoff, 1941), holotype; 12, the same, aedeagus.

Distribution. — Europe, up to Sweden (probably not Spain and Greece), Hebrides, Ukraine, as far as Ural. Probably not in Rumania and Bulgaria. Asia Minor. C. Asia. Himalaya: Kashmir.

Agapeta innotatana (Warren)

Xanthosetia innotatana Warren, 1888, Proc. Zool. Soc. London 1888: 337.
Xanthosetia innotana; Cotes & Swinhoe, 1889, Catal. Moths India: 697, no. 4754 (lapsus).
Pharmacis Xanthosetia innotatana; Walsingham, 1900, Ann. Mag. Nat. Hist. (7)5: 488.
Euxanthis innotatana; Fletcher, 1931, Catal. Indian Ins. 22: 7.

Distribution. — Punjab. Kashmir.

Eupoecilia Stephens

Eupoecilia Stephens, 1829, Syst. Catal. Br. Ins. 2: 100. Type-species: [*Tortrix*] *angustana* Hübner [1799], by subsequent designation of Westwood, 1840, Synopsis: 109.
Eupecilia Herrich-Schäffer, 1851: 179 (emend.).
Clysia Hübner [1825], Verz. bekannter Schmett.: 409.
Clysiana Fletcher, 1940, Entomologist's Record J. Var. 52: 17.
Arachniotes Diakonoff, 1952, Verh. Kon. Ned. Akad. Wet., Natuurk. (2)49(1): 24.

As is said above, the species show clear-cut differences of the genitalia in the two sexes and are often distinct, not only from island to island, but even from mountain range to mountain range, as e.g. in Java, where *E. engelinae* seems to be characteristic for the Gedé-Panggrango complex of mountains, while *E. tenggerensis* is this for the large Tengger Range.

Eupoecilia turbinaris (Meyrick)

Clysia turbinaris Meyrick, 1928, Exotic Microlep. 3: 435; 1931, Acad. Rom., Bull. Sect. Scii. 14: 4, no. 3–5.
Clysiana turbinaris; Fletcher, 1931, Catal. Indian Ins. 22: 5. Clarke, 1963, Meyrick's Types 4: 11, pl. 5 figs. 4–4b (lectotype design., genit. fig.).
Clysia ambiguella (nec Hübner) Walsingham, 1900, Ann. Mag. Nat. Hist. (7)5: 488. Fletcher, 1921, Mem. Ind. Agric., Ent.: 34.
Eupoecilia turbinaris; Razowski, 1968, Acta zool. cracov. 13: 109. figs. 1–3; 1970, Cochylinae, in Amsel, Gregor & Reisser, Microlep. Pal. 3: 420, pl. 26 fig. 274.

Distribution. — India: Assam. ? W. Sumatra: Padang Rengas.

Nepal, Kathmandu, Godaveri, 1700 m, vii.1982 (H. G. Allen), BM 1982–482, genit. slide 22655 ♂. Kakani, secondary pine & oak forest, 3.vii.1983 (M. G. Allen), BM 1983–261, 1 ♂.

This Nepalese specimen shows minor discrepancies from the type, as figured by Razowski (1968b): the transtilla is broader at ends, the top of valva is slightly narrower, the terminal thorn of sacculus is double, stronger and obtuse.

Eupoecilia engelinae (Diakonoff)
(figs. 9, 10)

Clysiana engelinae Diakonoff, 1941, Treubia 18: 399, pl. 17 fig. 4.
Eupoecilia engelinae; Razowski, 1968, Acta zool. cracov. 13: 110.

Distribution. — Indonesia: Java.

The male genitalia of the still unique (type) specimen upon my original photograph did not came out in sufficient detail. I remounted my over 40 years old slide*) and am reproducing it again (figs. 9–10). The genitalia resemble those of *E. tenggerensis* Diakonoff slightly, but differ as follows. Tegumen in *engelinae* more narrowed and pointed. Socii slightly shorter. Transtilla longer, more slender, bases more abruptly dilated, median process shorter, thicker, top less narrowed, coarser dentate and emarginate. Valva differently shaped, sacculus weak, without sclerotic edge; top of valva narrower, outer edge long, oblique, costa concave. Aedeagus shorter and broader, orifice below with only one process. Cornuti: two well-separated, smaller basal sheafs, apical patch compacter, spines of different size, but of equal shape (slide no. 258).

The species is distinct and nearest to *E. tenggerensis*.

Eupoecilia sumatrana Diakonoff

Eupoecilia sumatrana Diakonoff, 1983, Zool. Verh. 204: 9, 10, 128. figs. 3–4, pl. 4 fig. 1.

Distribution. — Indonesia: N. Sumatra, Atjeh.

*) The genitalia were originally enclosed in Venetian turpentine; after this having been dissolved, they were soft and ready for handling, as if just dissected: a great tribute to this simple method of mounting, that I cannot recommend enough.

Eupoecilia anebrica Diakonoff

Eupoecilia anebrica Diakonoff, 1983, Zool. Verh. 204: 10, 11, 125, figs. 5–6, pl. 4 fig. 2.

Distribution. — Indonesia: N. Sumatra, Atjeh.

Eupoecilia wegneri Diakonoff
(figs. 11, 12)

Clysiana wegneri Diakonoff, 1941, Treubia 18: 401, pl. 17 figs. 8, 9; 1952, Verh. Naturf. Ges. Basel 63: 143; 1968, Ent. Ber. Amst. 28: 140 (lectotype designated).
Eupoecilia wegneri; Razowski, 1968, Acta zool. cracov. 13: 120, fig. 27.

Distribution. — Indonesia: Java; Sumba.

Razowski suggests that the species is very close to *E. neurosema* Meyrick. Again my early photograph is rather small, as to details. I remounted the genitalia of a male paratype and depict them on figs. 11 and 12. The differences with Razowski's figure of *neurosema* ♂ are now evident and may be summarized thus. Socii long en slender, from top of tegumen to their tips with a row of stiff, erect bristles. Transtilla with the median process longer, triangular, transtilla arms broad, gradually dilated, ventral excision large, triangular. Valva top more pointed, angulations of sacculus shorter. Aedeagus much shorter, basal spine more slender, apical sheaf consisting of four large spikes, gradually decreasing in size. Orifice narrowed, with a smooth subapical lip, a second spiny lip below this (slide no. 10553).

Eupoecilia tenggerensis Diakonoff

Clysia reliquatrix Diakonoff, 1941 (nec Meyrick, 1928), Treubia 18: 399, pl. 17 figs. 6–7 (err. ident.); 1968, Ent. Ber. Amst. 28: 138 (lectotype designated).
Clysiana tenggerensis Diakonoff, 1949, Bijdr. Dierk. 28: 133.
Eupoecilia tenggerensis; Razowski, 1968, Acta zool. cracov. 13: 110, figs. 4–6; 1968, Ent. Ber. Amst. 28: 138 (lectotype designated).

Distribution. — Indonesia: East Java, Tengger Range.

West Malaysia, West Pahang, Genting Tea Estate, at MV lamp, 2000 ft, 22–31.x.1981 (K.R. Tuck), BM 1981–549, genitalia slide 22659 ♂, 22657 ♀, 1 ♂, 1 ♀.

Eupoecilia sumbana (Diakonoff)

Clysiana sumbana Diakonoff, 1952, Verh. Naturf. Ges. Basel 63: 139– 140, figs. 3, 4, 8.
Eupoecilia sumbana; Razowski, 1968, Acta zool. cracov. 13: 112, figs. 7–9.

Distribution. — Indonesia: Sumba.

Eupoecilia reliquatrix (Meyrick)

?*Clysia ambiguella* Walsingham, 1900 (nec Hübner, 1796), Ann. Mag. Nat. Hist. (7)5: 488.
Clysia ambiguella Meyrick 1921 (nec Hübner, 1796), Zool. Meded. 6: 145.
Clysia reliquatrix Meyrick, 1928, Exotic Microlep. 3: 436 (nom. nov.).
Clysiana opisthodonta Diakonoff, 1941, Treubia 18: 398, pl. 17 figs. 3, 5.
Clysiana reliquatrix; Diakonoff, 1948, Treubia 19: 484; 1949, Bijdr. Dierk., 28: 133; 1963, Verh Naturf. Ges. Basel 63, figs. 1, 2, 9.
Eupoecilia reliquatrix; Razowski, 1968, Acta zool. cracov. 13: 114, figs. 10–12.

Distribution. — Indonesia: Java; Sumatra; Sumba.

Eupoecilia coniopa spec. nov.
[κόνια = dust, ὄψ = eye]
(figs. 13–15)

♂ 14 mm. Head white. Antenna grey. Labial palpus rather long, slightly sinuate, porrected, median segment dilated towards apex with roughish scales above and beneath; creamy, dusted except at apex with light ochreous, terminal segment creamy. Thorax glossy pale golden-ochreous. Abdomen glossy grey-fuscous, anal tuft pale ochreous.

Fore wing oblong, narrow, costa slightly concave in middle. Pale glossy golden-ochreous, somewhat less than anterior 3/5 with a moderate pale grey streak, indistinctly marbled with light chestnut and darker grey, at about 1/3 of costa extended into a light grey glossy triangular patch, edged with black laterally and continued to well beyond 1/3 of dorsum by a rather straight dull chestnut fascia, gently narrowing downwards, more or less suffusedly edged with black, ending in roundish dark-brown dorsal spot, broader than end of fascia; costa posteriorly with a pale brownish wedge-shaped mark before apex, preceded by two narrow and short faint transverse lines; a diversely shaped group of irregular spots and scales of black dusting before median third of termen (in right wing almost connected narrowly with preapical costal dot), a series of closely approximated black points along median third of dorsum. Cilia pale whitish ochreous, above apex sometimes slightly infuscated.

Hind wing pale bronze with a silvery gloss. Cilia dull creamy, with a faint tawny subbasal shade.

♀ 13 mm. A trifle brighter ochreous than male, with the three posterior costal marks all linear, deeper chestnut. Otherwise entirely similar to the male.

Hind wing darker grey along marginal fourth.

Male genitalia. Very similar to those of *E. reliquatrix* Meyrick, differing thus. Aedeagus with two moderately large, spike-like cornuti, with bases more distant (in *reliquatrix* three thicker spikes, dilated basad, closer together); basal part with two small clusters of short thorns (in the other, a large field of small spines above base and a few asiculations at the extreme base); a column of very dense, small spines along apical 2/3 of aedeagus (in *reliquatrix* this group band-like, of a single row of quite long, thin spines); the apical wreath of crochets similar in both species, as are the other parts of the genitalia.

Female genitalia. Differing from those in *reliquatrix* by sterigma having narrow oblong-triangular lateral sclerites (in the other, much broader and larger), with below these another, sublateral, pair of small, darker sclerites, denticulate delow (absent in *reliquatrix*). Bursa filled out entirely by very dense transparent spines, with, left, a group of strong, dark spines, right, two long strips of smaller such spines (in *reliquatrix* bursa sparsely strewn with slender, uniform spines).

North Borneo, Brunei, Bukit Pagon, 5520', LP 308, upper montane forest, 15–20.ii.1982, holotype, ♂, genit. slide 22650 (G.S. Robinson BM 1982–156); allotype ♀, genit. slide 22649; 4 ♀, paratypes.

Eupoecilia lata Razowski

Eupoecilia lata Razowski, 1968, Acta zool. cracov. 13: 115, figs. 13, 14.

Distribution. — Sikkim.

Eupoecilia thalia spec. nov.

[θαλία = flowering]

(fig. 16)

♀ 12.5 mm. Head white. Antenna ochreous, dark rings towards base above. Labial palpus whitish, ochreous laterally. Thorax glossy pale golden ochreous.

Fore wing oblong-subtriangular, long and rather narrow, broadest at 4/5.

Glossy pale golden-ochreous. Anterior half of costa suffused with dark brown, lower edge not reaching cell, suffused with bright chestnut, posterior end truncate, well defined; posterior half of costa with four brownish oblong-rectangular marks, anterior paler, minute, others larger; a large anthracite-black spot in apex, extending over cilia, anteriorly edged with jet-black; a suffused, and slightly outwards-convex, light chestnut transverse band from end of costal streak to an oblong-oval dark brown spot on 2/5 of dorsum, suffusedly extending left and right along dorsum; a large rather ill-defined light tawny, dull, triangular patch, occupying about lower half of wing beyond fascia and extending with upper angle to vein 7 halfway between cell and apex, lower angle in tornus, outer edge faintly convex; black irregular spots: one on lower angle of cell, another, smaller, below this on dorsum; four roundish spots of black dusting between veins along termen quickly decreasing in size downwards. Cilia pale ochreous, black around apex.

Hind wing semipellucent bronze-grey, becoming opaque darker grey towards margin. Cilia whitish, tinged greyish, with a subbasal fuscous band and creamy basal line.

Female genitalia. Eighth segment, a wide membraneous cup, deeply notched in front, notch flanked by concave sclerites with denticulate edge, below passing in sclerotic ductus bursae, without distinct margins; lamella postvaginalis with papilla large, round, hyaline, with wrinkled surface. Ductus bursae with greater part of wall sclerotic, densely and irregularly denticulate. Corpus bursae stuffed with transparent slender spines, its caudal ("upper") edge formed by a dark band of sclerotic spines, forming a projection into corpus bursae to the right from the middle. Ductus bullae, a thick tube, its origin encircled by radiating spines in bursal wall.

Brunei, Bukit Pagon, 5520', LP 308, upper mountain forest, 15–20. ii.1982 (G. S. Robinson), BM 1982–156, genit. slide 22651, 1 ♀, holotype.

Eupoecilia dentana Razowski

Eupoecilia dentana Razowski, 1968, Acta zool. cracov. 13: 118, figs. 22–23.

Distribution. — Indonesia: W. Sumatra.

Eupoecilia armifera Razowski
(fig. 20)

Eupoecilia armifera Razowski, 1968, Acta zool. cracov. 13: 117, figs. 19–21.

Distribution. – Assam.

Nepal, Kathmandu Dist., Kakani, 6800', 1–2. vii.1983, mixed secondary scrub (Allen, Brendall, Robinson, Tuck), BM 1983–223 genit. slides 22654 ♂, 22652 ♀, 4 ♂, 1 ♀. — Kathmandu Dist. Godawari, 5800', mixed primary forest (Allen, Brendall, Robinson, Tuck), BM 1983–222, 1 ♂.

This and the preceding, *E. dentana* Razowski, are very similar and might be one and the same species, but without the evidence of the female genitalia of that species we prefer to leave them separated for the time being.

♀ metallotype, 15 mm. Exactly similar to the male, only the hind wing is a trifle darker.

Female genitalia. Seventh and eighth segments forming a smooth naked cylindre, membraneous on lower, submembraneous on upper part, with a band in between, subsclerotic in front. Ductus bursae vestigial, corpus bursae ovoidal, with a wart-like papilla at the right side; spines in a large cluster inside of this, occupying more than upper quarter of corpus bursae, a small cluster opposite, radiating around orifice of ductus bullae; a few small thorns, strewn between two clusters.

Eupoecilia amphimnesta (Meyrick)

Euxanthis amphimnesta Meyrick, 1928, Exotic Microlep. 3: 436. Fletcher, 1931, Catal. Indian Ins. 22: 7. Clarke, 1963, Meyrick's Types 4: 15, pl. 6 figs. 2–2b (type, genit. figured).
Eupoecilia amphimnesta; Razowski, 1968, Acta zool. cracov. 13: 119, figs. 24–26.

Distribution. — India : Kumaon.

Eupoecilia neurosema Meyrick

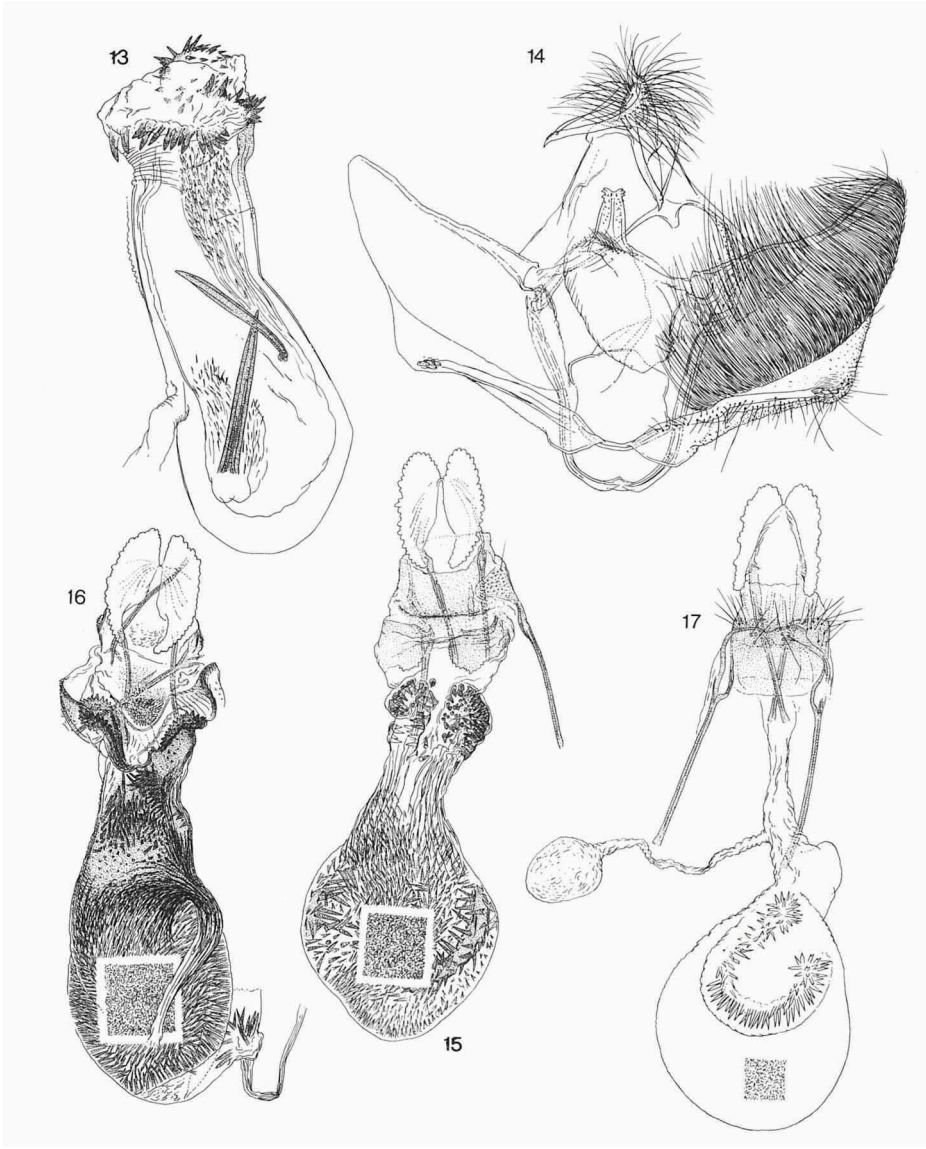
Clysia neurosema Meyrick, 1938, Trans. ent. Soc. London 87: 504.
Clysiana neurosema; Clarke, 1963, Meyrick's Types 3: 11, pl. 5 figs. 3–3b (type, genitalia figured).
Eupoecilia neurosema; Razowski, 1968, Acta zool. cracov. 13: 121, figs. 28, 29.

Distribution. — Papua.

Eupoecilia dactylota (Diakonoff)

Arachniotes dactylota Diakonoff, 1952, Verh. Kon. Ned. Akad. Wet., Natuurk. (2)49(1): 24, figs. 10, 11.
Eupoecilia dactylota; Razowski, 1968, Acta zool. cracov. 13: 123 (*Alachniotes*, lapsus); 1970, Cochylinae, in Amsel, Gregor & Reisser, Microlep. Pal. 3: 271. Diakonoff, 1969, Proc. Kon. Ned. Akad. Wet., Natuurk. [C]72: 152.

Distribution. — Indonesia: N. New Guinea, Snow Range.



Figs. 13–17. Genitalia of S. Asiatic Cochylinae. 13, *Eupoecilia coniopa* spec. nov., ♂, aedeagus of holotype; 14, the same, general view; 15, the same, ♀, allotype; 16, *E. thalia* spec. nov., ♀, holotype; 17, *Phalonidia pista* spec. nov., ♀, allotype.

Eupoecilia taneces (Diakonoff) comb. nov.

Aethes taneces Diakonoff, 1973, Proc. Kon. Ned. Akad. Wet. (C)76: 536, figs. 1, 2.

Distribution. — New Guinea.

The author is satisfied that this species should be transferred to *Eupoecilia.*

Eupoecilia ochrotona Razowski

Eupoecilia ochrotona Razowski, 1968, Acta zool. cracov. 13: 124, figs. 34–36.

Distribution. — India: Pura.

Eupoecilia diana Razowski

Eupoecilia diana Razowski, 1968, Acta zool. cracov. 13: 123, figs. 30–33.

Distribution. – Solomon Ids.

Eupoecilia anisoneura Diakonoff

Eupoecilia anisoneura Diakonoff, 1982, Zool. Verh. 193: 6, fig. 1.

Distribution. – Ceylon.

Nearest to *E. eucalypta* Meyrick (Ceylon), but with larger, clavate socii, narrower valva, and with a long cornutus.

Eupoecilia charixantha (Meyrick)

Clysia charixantha Meyrick, 1928, Exotic Microlep. 3: 435. Fletcher, 1931, Catal. Indian Ins. 22: 5.

Clysiana charixantha; Clarke, 1963, Meyrick's Types 4: 11, pl. 5 figs. 1–1b (lectotype designated, genitalia figured).

Eupoecilia charixantha; Razowski, 1968, Acta zool. cracov. 13: 127, figs. 41–43. Diakonoff, 1982, Zool. Verh. 193: 5.

Distribution. – Ceylon. India: Coorg.

Eupoecilia eucalypta (Meyrick)

Clysia eucalypta Meyrick, 1928, Exotic Microlep. 3: 436. Fletcher, 1931, Catal. Indian Ins. 22: 2.
Clysiana eucalypta; Clarke, 1963, Meyrick's Types 4: 11, pl. 5 figs. 2–2b (type, genitalia figured).
Eupoecilia eucalypta; Razowski, 1968, Acta zool. cracov. 13: 129.

Distribution. – Ceylon.

Food plant. Larva in case upon *Scaevola koenigii* (Meyrick, 1928).

Eupoecilia cracens Diakonoff

Eupoecilia cracens Diakonoff, 1982, Zool. Verh. 193: 6, pl. 1 figs. 1–3.

Distribution. – Ceylon.

Somewhat similar to *E. reliquatrix*, but with stronger, hairy socii, longer, narrower valva, with a single cornutus.

Eupoecilia scytalephora Diakonoff

Clysiana scytalephora Diakonoff, 1952, Verh. Kon. Ned. Akad. Wet. Natuurk. (2)49(1): 27, fig. 12.
Eupoecilia scytalephora; Razowski, 1968, Acta zool. cracov. 13: 129.

Distribution. – Indonesia: N. New Guinea, Snow Range.

A more elaborate, stronger magnified figure of the genitalia of the holotype (fig. 12) may facilitate the identification of this species.

Cochylidia Obraztsov

Cochylidia Obraztsov, 1956, Mitt. münch. Ent. Ges. 46: 14. Type-species: *Tortrix subroseana* Haworth [1811], by original designation.

Cochylidia altivaga Diakonoff

Cochylidia altivaga Diakonoff, 1976, Zool. Verh. 144: 5, figs. 1–2.

Distribution. – Nepal.

Cochylis Treitschke

Cochylis Treitschke, 1829, Schmett. Eur. 7: 233. Type-species: [*Tortrix*] *rubellana* Hübner [1823] = *Tortrix roseana* Haworth [1811], by subsequent designation of Curtis, 1934: 491.
Conchylis Sodoffsky, 1837, Bull. Soc. imp. Naturalistes Mosc. 6: 93 (emendation).
Pontoturania Obraztsov, 1943, Mitt. münch. ent. Ges. 33: 97.
Acornutia Obraztsov, 1944, Iris 57: 68.
Cochylichroa Obraztsov & Swatschek, *in* Swatschek, 1958, Abh. Larvalsyst. Ins. 3: 233.
Longicornutia Razowski, 1960, Polskie Pismo ent. 30: 314.
Cochylis Neocochylis Razowski, 1960, ibid.: 316.
Cochylis Paracochylis Razowski, 1960, ibid.: 116.
Cochylis Brevicornutia Razowski, 1960, ibid.: 117.

Cochylis hybridella (Hübner)

Tinea hybridella Hübner, 1813, Samml. eur. Schmett., Tin.: pl. 51 fig. 351.
Phalonia hybridella; Walsingham, 1900, Ann. Mag. Nat. Hist. (7)5: 486.
Cochylis hybridella; Razowski, *in* Amsel, Gregor & Reisser, 1970, Microlep. Pal. 3: 411; 1970b, Acta zool. cracov. 15: 387.

Distribution. – Walsingham (1900) records this species from Punjab (Dharmsala). Razowski (1970) doubts this record.

Cochylis apricana Kennel

Cochylis apricana Kennel, 1899, Iris 12: 27, pl. 1 fig. 24. Razowski, *in* Amsel, Gregor & Reisser, 1970, Microlep. Pal. 3: 407, pl. 25 fig. 264_1 244_2; 1970, Acta zool. cracov. 15: 369.
Cochylis amoenana Kennel, 1899 (nec Walker, 1863), Iris 12: 26, pl. 1 fig. 23. Razowski, 1960, Polskie Pismo ent. 30: 316, fig. 103; 1968, Acta zool. cracov. 13: 136; 1970, Acta zool. cracov. 15: 386.

Distribution. — Caucasus. Tadzhikistan. Afghanistan. Iran. Pakistan. C. Asia.

Cochylis aethoclasma Diakonoff comb. nov.

Cochylis aethoclasma Diakonoff, 1976, Zool. Verh. 144: 7, fig. 3.

Distribution. — Nepal.

Cochylis indica Razowski

Cochylis indica Razowski, 1968c, Acta zool. cracov. 13: 144, fig. 7, 8; 1970, Cochylidae, in Amsel, Gregor & Reisser, Microlep. Pal. 3: 420, pl. 26 fig. 274.

Distribution. — N. India. Pakistan, Afghanistan.

Nepal, Kathmandu, British Embassy, 1300 m, 10–15.iv.1983 (M. G. Allen), BM 1983–151, genit. slide 22656 ♂.

Cochylis stirodelphys Diakonoff

Cochylis stirodelphys Diaknoff, 1976, Zool. Verh. 144: 7, fig. 4.

Distribution. — Nepal.

Cochylis laetana Razowski

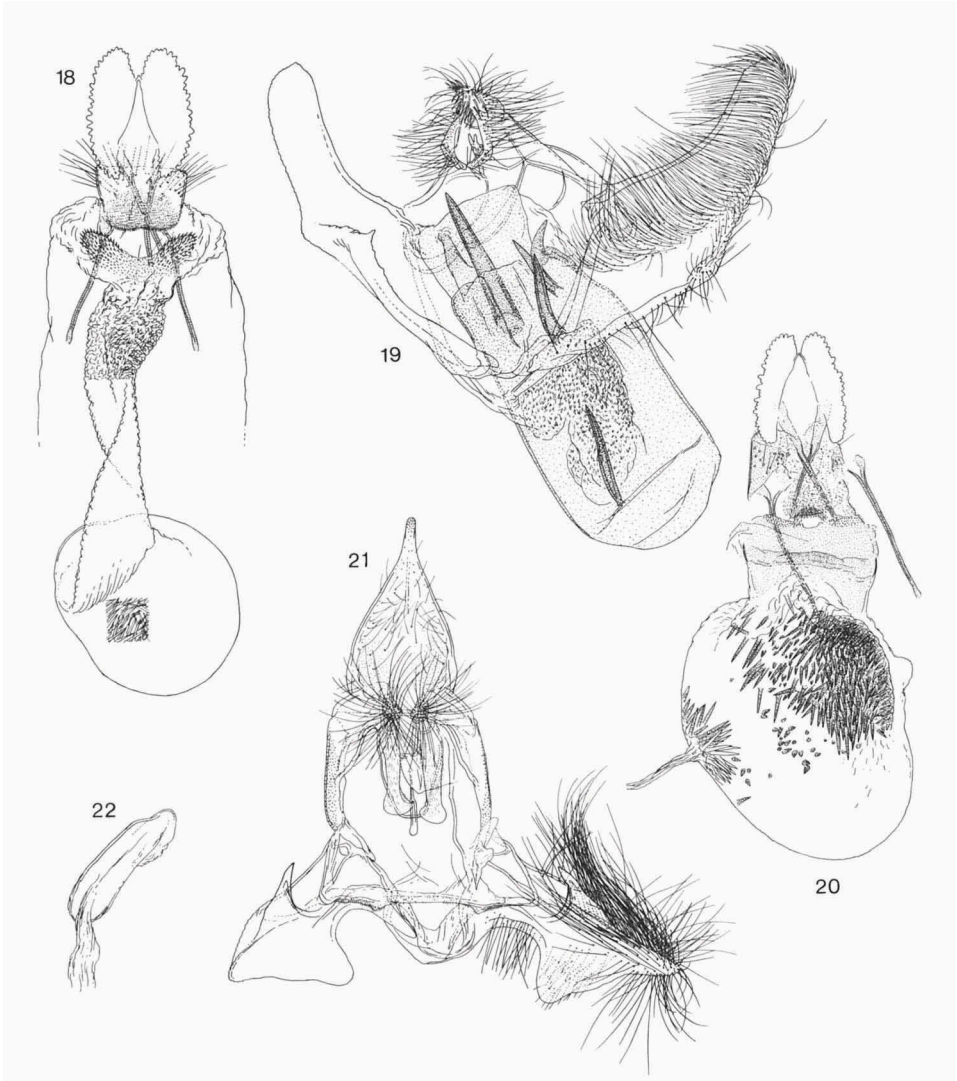
Cochylis laetana Razowski, 1968, Acta zool. cracov. 13: 139, figs. 3, 4.

Distribution. — Assam.

Cochylis faustana (Kennel)

Phalonia faustana Kennel, 1919, Mitt. münchen. ent. Ges. 8: 73, pl. 3 fig. 4.
Cochylis faustana; Razowski, 1968c, Acta zool. cracov. 13: 143; 1970, *in* Amsel, Gregor & Reisser, 1970, Microlep. Pal. 3: 424, pl. 26, fig. 278.

Distribution. — C. Asia. Afghanistan. Pakistan: Quetta.



Figs. 18–20. Genitalia of S. Asiatic Cochylinae. 18, *Eupoecilia scythalephora* (Diakonoff, 1952), holotype; 19, *E. dactylota* (Diakonoff, 1952), ♂, holotype; 20, *E. armifera* Razowski, ♀, metallotype. Figs. 21–22, *Scotiophyes nebrias* spec. nov. (Tortricidae, Archipini), holotype; 22, the same, aedeagus.

Cryptocochylis Razowski

Cryptocochylis Razowski, 1960, Polskie Pismo entom. 30: 313. Type-species: *Conchylis conjunctana* Mann, 1864, by original designation and monotypy.

Cryptocochylis dynodesma Diakonoff

Cryptocochylis dynodesma Diakonoff, 1971, Veröff. Zool. Staatssamml. München 15: 200, pl. 6 fig. 15.

Distribution. – Karakorum.

Heliocosma Meyrick

Heliocosma Meyrick, 1881, Proc. Linn. Soc. N.S. Wales 6: 693. Type-species: *Conchylis incongruana* Walker, 1863, by subsequent designation of Fernald, 1908.
Heliocosoma: Razowski, 1977, Acta zool. cracov. 22: 249 (lapsus).

Heliocosma exoeca Meyrick

Heliocosma exoeca Meyrick, 1910, Proc. Linn. Soc. N.S. Wales 35: 160.

Distribution. – New Guinea.

APOCRYPHAL COCHYLIDAE

The following remarks the author owes to Mr. Kevin R. Tuck, British Museum (Natural History).

Phalonia crocomis Meyrick

Tortrix crocomis Meyrick, 1908, J. Bombay Nat. Hist. Soc. 18: 619.
Phalonia crocomis; Clarke, 1963, Meyrick's Types 4: 24, pl. 12 fig. 3.

Distribution. — S. India.

Not a cochylid but a tortricid, probably belonging to the Tortricini. In the main collection of the British Museum provisionally placed in *Spatalistis* Meyrick (unpublished combination). The unique type is in poor condition and lacks the abdomen, but superficially reminds one of "*Spatalistis*" (*Acleris*) *orbigera* Meyrick, but is broader winged.

Conchylis flavicostana Walker

Conchylis flavicostana Walker, 1863, Catal. Lep. Het. Br. Mus. 28: 361. Swinhoe & Cotes, 1889, Catal. Moths India: 697.

Distribution. — India.

This species is not a cochylid but an arctiid (Lithosiinae). Placed in the British Museum in *Pseudoblabes*, as a synonym of *oophora* Zeller.

Conchylis conjunctana Walker

Conchylis conjunctana Walker, 1866, Catal. Lep. Het. Br. Mus. 35: 1788 (India). Swinhoe & Cotes, 1889, Catal. Moths India: 697.

Distribution. – N. India.

This is not a cochylid but belongs to the Arctiidae, Lithosiina. In the main collection it is placed under *Asura*.

Conchylis stoliczkana Moore

Conchylis stoliczkana Moore, 1878, Ann. Mag. Nat. Hist. (5)1: 237; 1879, 2nd Yarkand Mission, Lepid.: 16, pl. 1 fig. 14. Cotes & Swinhoe, 1879, Catal. Moths India: 697.

Distribution. — India: Yarkand.

According to a note in T. B. Fletcher's Index (in the British Museum), Meyrick considered this species to be a "pyralid". Further information is lacking.

APPENDIX

ARCHIPINI

Scotiophyes Diakonoff

Scotiophyes Diakonoff, 1976, Zool. Verh. 144: 74 Type-species, *Adoxophyes faeculosa* Meyrick, 1928, by original designation.

The type species of this genus has been attributed by Meyrick to *Adoxophyes* Meyrick, because of the constant and conspicuous feature of that genus of vein 3 originating in both fore and hind wing distinctly before the lower angle of cell. Re-investigation of *S. faeculosa* Meyrick (Diakonoff, 1976), when a second species had been described, showed however that it has a combination of unusual characters: vein 6 in the fore wing in male originating from the stalk of 7+8, 5 and 6 being strongly distant, the unusual course of vein 11, the stalked veins 6 and 7 in the hind wing, etc. Now a third species becomes known, extending our knowledge of *Scotiophyes* and compelling also to extend its diagnosis slightly, as follows.

Costal fold in the fore wing small, but present or altogether absent. Labial palpus slightly sinuate, subporrected and dilated towards base with roughish scales above and beneath, or curved and ascending, little dilated, short-scaled, rather smooth. Vein 6 in the fore wing in male originating from the stalk of 7+8 or connate with its base, in female variably approximated to the base of that stalk or connate with it.

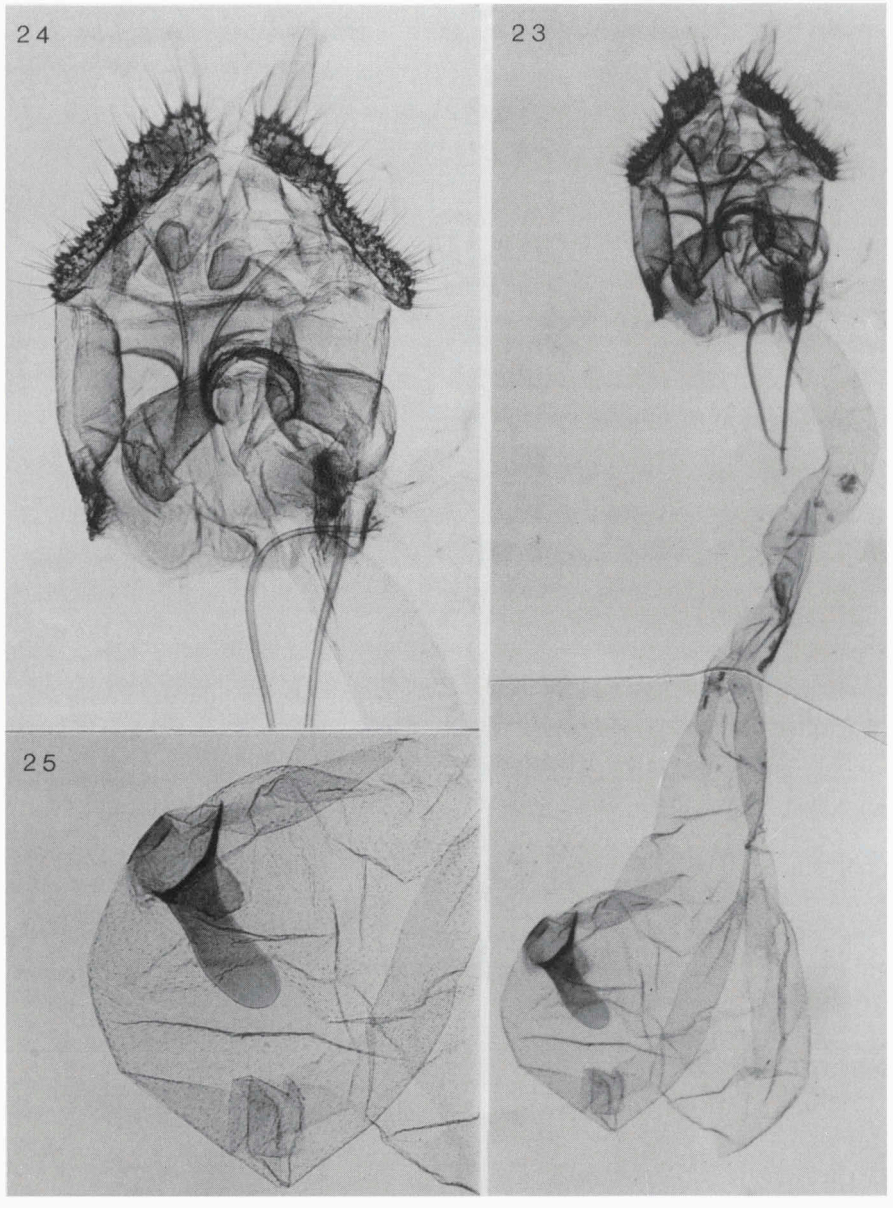
Remarkable are the male genitalia, not resembling those in *Adoxophyes* at all, but in *S. faeculosa* and *S. hemiptycta* Diakonoff, 1983, closely approaching those of the not less peculiar *Borneogena antigrapha* Diakonoff, 1941. However, the present, third species, described below, though being entirely similar as to the facies and neuration, possesses quite distinct genitalia, with smaller, differently shaped valva, a complicated, larger and acute uncus, and a tiny aedeagus.

Not less remarkable is the fact that the species *faeculosa* and *hemiptycta* are strongly sexually dimorphous, while in the present species the sexes are completely alike.

Scotiophyes nebrias spec. nov.
[νεβρίας = dappled like a fawn]
(figs. 21–25)

♂ 13.5 mm. Head dull pale ochreous-fulvous, forehead and face glossy, whitish. Antenna light ochreous, ciliations about 1. Labial palpus curved and ascending close to face, median segment rather smooth, gradually dilated towards apex, terminal segment slender, subobtuse; dull light ochreous-fulvous, finely dusted with orangeish. Thorax smooth, pale ochreous, anterior fourth, collar and shoulders suffused with orange.

Fore wing without costal fold, rather broad, dilated, costa rounded-prominent at base, straight posteriorly, apex obtusely pointed, termen long, gently



Figs. 23. *Scotiophyes nebrias* spec. nov., ♀, genitalia, allotype; 24, the same, upper part, more magnified; 25, the same, fragment of bursa copulatrix, with signum.

convex, strongly oblique. Glossy pale golden-ochreous with the faintest pinkish tinge, markings dull, light greyish-fuscous, partly suffused with light ochreous-orange and variably speckled and transversely striated with deep chestnut. An oblong patch along base of wing, from base of costa to 1/3 of dorsum, edge forming a larger and a smaller scallop, devided by a slight notch at 2/3; a subquadrate spot at 2/5 of costa, anteriorly reaching to middle of disc, posteriorly rounded; a larger oblong semicircular dorsal patch, almost touching preceding, extending from middle of dorsum to tornus and lower part of termen; a still larger apical patch, anterior edge triangularly prominent at 1/3 of disc below costa, lower edge gently convex. Cilia glossy pale ochreous, slightly infuscated on dorsum.

Hind wing dull, sub-semipellucent, light grey-fuscous along edge, becoming glossy light golden-ochreous.

Male genitalia. Tegumen high, subovoidal, subsclerotic, bases of pedunculi long-haired at the sides. Uncus bulb-shaped, little narrower, erected in a long simple point. Socius small, clavate, free, thinly long-haired. Gnathos, a sclerotic cone, concave, with a deep median longitudinal gully, its basal third emarginate, its top with a median slender process. Vinculum small. Valva robust, rather short, pointed, shaped as a one-sided harpoon; costa straight, posterior half long-bristled, sacculus deeply excised beyond base, forming a triangular blade-like process beyond middle, harpe, a strong sclerotic thorn in middle of disc, transtilla, a simple narrow band. Aedeagus very small, short, not dilated.

♀ 15 mm. Fore wing connate with the stalk of 7 + 8. Hind wing unicolorous light grey. Otherwise in all respects similar to the male.

Female genitalia. Ovipositor broad, but lobi anales slender. Apophyses thin and rather excurved. Ninth segment broad, sclerotic, its tergite shaped as a narrow median strip, directed longitudinally. Sterigma, a transverse sclerotic plate with rounded sides, rostral edge deeply excised in middle; ostium, a rigid low sclerotic collar, open on rostral side, directed frontad. Ductus bursae long, simple, rather tortuous above middle, gradually dilated. Corpus bursae elongate pear-shaped. Signum one, a large, obtuse hollow horn, with a short basal diverticle.

Brunei, 1000', Ulu Temburong, LP 298, lowland forest, 19–22.ii.1982 (G. S. Robinson), BM 1982–156, genit. slide ♂ 22563, holotype, ♂; 3 ♂ paratypes.

Brunei, 1300', Ulu Temburong, LP 283, lowland forest, 19–22.ii.1982 (G. S. Robinson), BM 1982–156, ♀, genit. slide 23172, allotype; 3 ♂, paratypes.

The species is rather remote from the other two known *Scotiophyes* species and may represent the least progressive member of this transitional series.

However specialised the genitalia of the two sexes are, they appear to be less apomorphic than in the other two, especially when we accept the related, highly apomorphic genus *Borneogena* Diakonoff as the end of this morphocline, speaking in cladistic terms.

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Synonyms in italics