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RECORDS AND DESCRIPTIONS OF MICROLEPIDOPTERA (6)

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COPROMORPHIDAE

Meyrick, 1905, Journ. Bombay Nat. Hist. Soc., vol. 16, p. 606.

This small family represents a natural group with clearly marked characters, and is easy of discrimination. It inhabits tropical regions of Asia and extends through the Papuan region over the whole Pacific. The last mentioned region might be the country of origin of this group, as genera with peculiar and possibly archaic characters have been recorded from the Pacific Islands; some of those species are distinguished by an exceptionally large size.

One of the interesting points with regard to the family is its possible place in the system. The long-ciliate or pectinate antennae, the neurination, and the complicated genital apparatus of the male seem to indicate an affinity with the Tineoidea. The general facies, however, is divergent to some extent, while the presence of a cubital pecten on the hind wings fundamentally discriminates this family from all the Tineoidea *sensu stricto*. When describing the family, Meyrick suggested that the cubital pecten might point towards an affinity with the Tortricoidea; this relation, however, is not supported by any other characters. He further surmised that the Copromorphidae would be nearest allied to the Xyloryctidae; in my opinion this surmise is devoid of any ground. Later Meyrick tried to combine with the Copromorphidae two other groups of "Tineina" that also are in possession of a cubital pecten, viz., the family Orneodidae, and the genus *Hypertropha*

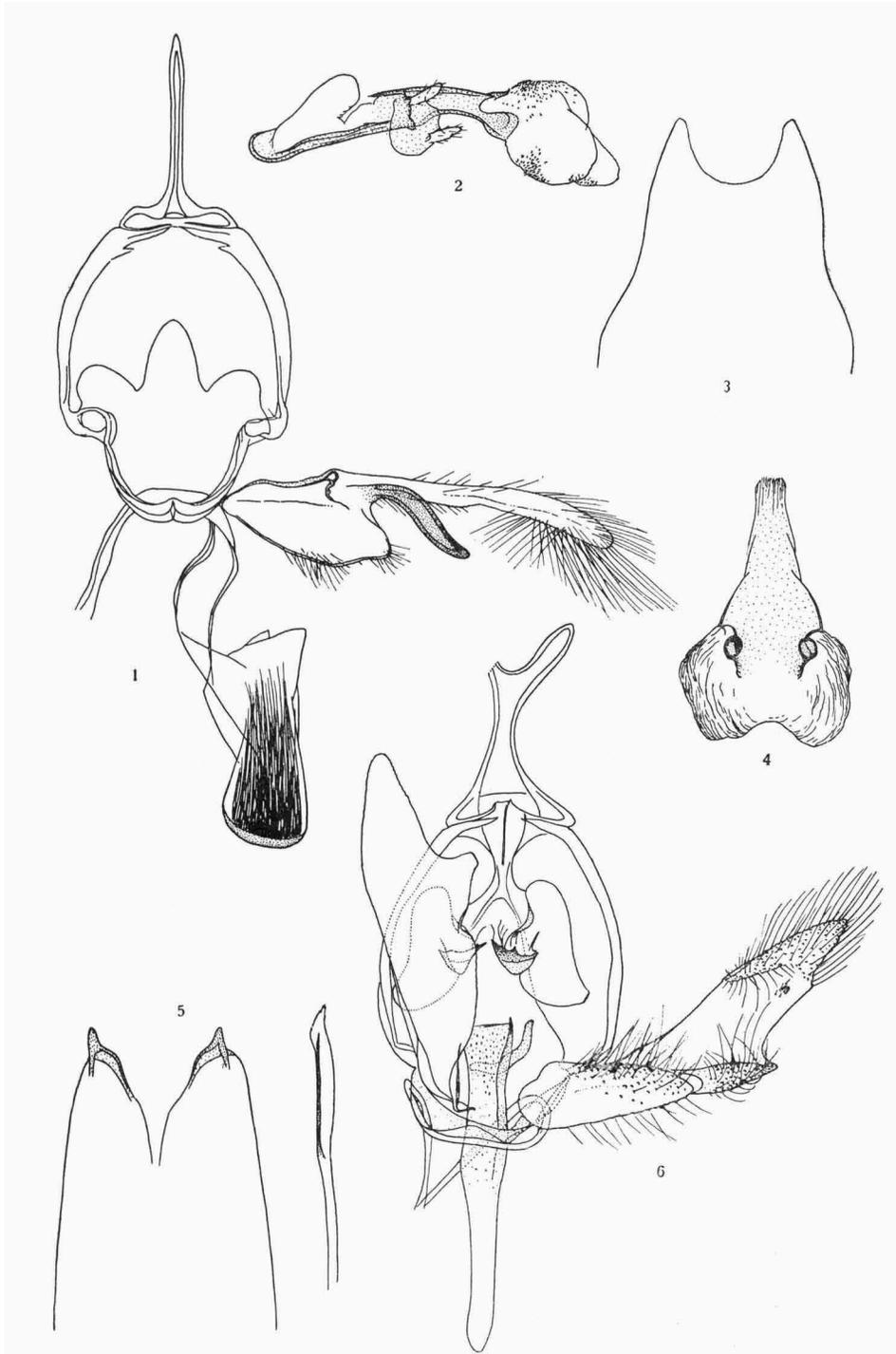
Meyr. The relation of the former with the Copromorphidae, however, is problematic, and deserves further proofs, while *Hypertropha* has in my opinion nothing in common with the family concerned, except for the cubital pecten, and must be relegated to the Glyphipterygidae, where it was originally placed by Meyrick. The limited extent of the family, its certain archaic characters at the one hand, and a high specialisation at the other all indicate that we have to do with a modern off-shoot of an ancient and for the greater part extinct group. The very uncertainty as to its affinity supports this — in the same way as it does with, e.g., the family Carposinidae. It is to be hoped that definite indications as to the affinity of these families will be found in future, but it is likely possible that the “links” for which we look do not exist any more.

The Copromorphidae are scarce in the Malayan-Papuan region; the species are often uniform and their nomenclature is consequently subject to confusion, as will be evident from the following.

Two new species are described below. Their types are preserved in the Leiden Museum.

Copromorpha roepkei spec. nov. (figs. 5-7)

♂ 17-19 mm, ♀ 18-21 mm. Head in male white, with face and tufts on vertex tinged greyish, in female pale grey, face and tufts on vertex grey. Antenna with scape rather broad and short, flattened dorso-ventrally, white, apical portion clouded with grey; flagellum in male unipectinate ($2\frac{1}{2}$), pectinations broad, flattened, towards top curved posteriorly, ochreous-greyish, flagellum from above fuscous-grey, at broad intervals banded with whitish; antenna in female similar to male but pectinations short ($\frac{3}{4}$), flagellum from above blackish, similarly banded with whitish. Labial palpus rather long, porrected, diverging, curved, longer in female; median segment thickened with appressed scales, moderately dilated posteriorly, broader in female, terminal segment slender, about $\frac{1}{3}$ of the breadth of median, and less than half of its length, with top obliquely truncate, upper edge appearing acutely pointed; black, with top of median segment, and base and top of terminal segment, white. Thorax white, irrorated with light grey in middle and posteriorly, a black lateral dot on each side before the middle, the long apical tuft dark grey; patagium white; tegula white, suffused with grey. Legs, anterior femur bronze-fuscous, tibia blackish, whitish ventrally, with pale apex, tarsus blackish, with whitish rings on apices of segments; median femur whitish, becoming infuscated towards apex, with bronze lustre, tibia dark fuscous with three pale ochreous bands, tarsus dark fuscous, banded with pale ochreous; posterior leg pale ochreous. Abdomen glossy whitish



Figs. 1-4. Male genitalia of *Copromorpha phytochroa* spec. nov.; 1, tegumen and vinculum, with valva and pencil-shaped scent organ; 2, aedeagus with anellus; 3, seventh ventrite; 4, gnathos.
 Figs. 5-6. Male genitalia of *C. roepkei* spec. nov.; 5, seventh ventrite and pleurite; 6, total aspect.

tinged pale ochreous in male, pale fuscous becoming glossy whitish towards base in female.

Fore wing elongate, moderately dilated, ovate-truncate; costa little curved at base, almost straight posteriorly, at $\frac{2}{3}$ gently prominent in male, more so in female, apex rounded, termen gently rounded, little oblique. Wing membrane smooth and semipellucid between veins, except above cell and vein II, and below vein 1b, where it is opaque; veins roughly scaled with series of small tufts, series of raised larger scale-tufts along edges of cell, especially large along closing vein. Creamy-white, pellucid parts with bluish opalescence; costal edge suffused with pale ochreous. Markings black, becoming fuscous towards base and on the anterior half of dorsum, in female dorsal markings fuscous, tinged tawny. Opaque parts with small dots tending to form a transverse strigulation; extreme base of wing with a black dot; a subquadrate fuscous spot on cell well beyond base, an outwards-oblique small jot on costa above that spot; a vertical transverse band from $\frac{2}{5}$ of costa, another, narrower similar band from $\frac{3}{5}$, interconnected by two series of black tufts, along upper and lower edge of cell, respectively; irregular transverse strigulation below those markings, on dorsum; wing membrane between these markings more or less obscured by greyish transverse strigulation, less pronounced on base of dorsum; tufts along closing vein black anteriorly, white posteriorly; an ill-defined suffused transverse fascia halfway between preceding markings, vertical, dilated and broken inwards above middle, almost wiped out on dorsum; an irregular transverse series of dots on veins beyond preceding, a more distinct series of black streaks on veins, just before their extremities; terminal edge suffused with bronze-fuscous. In female markings on middle of wing forming a more distinct and continuous transverse submedian band, that is slightly inwards-oblique; terminal $\frac{1}{5}$ of wing suffused throughout with greyish.

Hind wing semipellucid, creamy-white, with prismatic reflections. Cilia ochreous-white, glossy.

Male genitalia (figs. 5-6). Tegumen subspheroid. Uncus slender, furcate with a broad base. Socii absent. Gnathos, two semi-cardiform erect plates, interconnected in middle, each medially with a pocket-like sclerotisation, that has a small tooth in the middle of its outer edge. Vinculum short, truncate. Valva rather narrow, cucullus narrowed to a blunt point, bristled; sacculus also bristled, with an apical projection. Aedoeagus rather slender, straight, truncate; cornuti absent, vesica spinulose. A small crescentic body, visible at base of tegumen, may be the transtilla. Seventh ventrite sclerotized, caudally produced into two acute points, pleurites shaped as narrow rods. (Genitalia slide no. 1687, holotype).

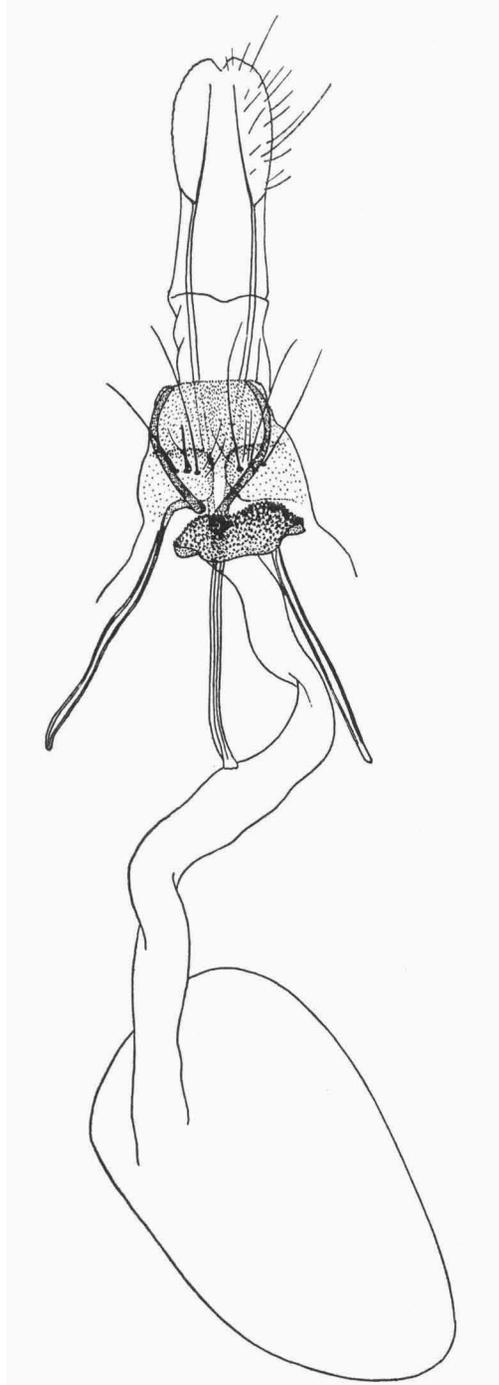


Fig. 7. Female genitalia of *Copromorpha roepkei* spec. nov.

Female genitalia (fig. 7). Ovipositor erectile, rather broad. Eighth segment strongly pileate, supported by curved apical portions of anapophyses, each ventral lobe with a marginal row of three strong bristles. Limen, a subtrapezoid, strongly dentate plate. Ductus bursae and bursa copulatrix with punctulate (in fact, minutely verrucose) wall. Signum absent. (Genitalia slide no. 1688, allotype).

Holotype, male, allotype, female, East Java, Tengger Mountains, Mount Pandjangan, near Nongkodjadar, 1400 meters, 15. III. 1940 (A. M. R. Wegner).

Paratypes, the same locality and collector, 1 ♂, 2 ♀, 28. IV. 1940. Nongkodjadar, 1200-1300 meters. 4 ♀, 7. II, 10. III, 26. IV. 1940. Altogether, 2 ♂, 7 ♀.

Dedicated to the eminent Dutch Lepidopterist, Prof. Dr. W. K. J. Roepke, of Wageningen.

This species is closely allied to *Copromorpha pleurophanes* Meyr., 1905, described from Maskelyia, Ceylon, and from Margherita, Assam. As the markings of the two species are slightly variable, it is hardly possible to discriminate them superficially. The comparison of the male genitalia of the present species with those of the lectotype of *pleurophanes* (in the British Museum, to be designated by Mr. J. F. Gates Clarke) revealed at once that *roepkei* is quite distinct.

According to Meyrick's notes, *C. pleurophanes* occurs in India, Ceylon, Java, and Formosa. It seems to me more likely that each of these regions will prove to have a species of its own; the Javanese "*pleurophanes*" in any case is *roepkei*.

***Copromorpha phytochroa* spec. nov. (figs. 1-4)**

♂ 24-26 mm (holotype 26 mm). Head pale green, face below suffused with dark fuscous except along edges, lower edge whitish, a dark fuscous dot at the base of each tuft on vertex. Antenna with scape rounded; pale green, suffused, towards apex and below, with dark fuscous; flagellum with long ($2\frac{1}{2}$) and broad pectinations, with points slightly curved posteriorly and finely ciliate; fuscous above, ringed with dark fuscous, and at broad intervals with whitish, pectinations tawny. Labial palpi porrect, diverging; median segment broad, moderately dilated, curved, terminal segment short, more than $\frac{1}{3}$ of median, almost $\frac{1}{3}$ as broad, spindle-shaped, top obliquely truncate, tolerably pointed; median segment dark fuscous, apex white; terminal segment dark fuscous, with a lateral submedian spot and with apical third, white. Thorax pale green, irrorated and suffused with fuscous throughout except at anterior lateral angles; a large erect rough transverse

pale green crest before apex, apex smoothly scaled, whitish-fuscous (partially concealed by crest); collar of patagia suffused with fuscous anteriorly, in middle, and laterally also along posterior edge; tegula thus suffused in middle anteriorly. Legs, dark fuscous, anterior and median tibia and tarsus faintly banded with pale ochreous, posterior leg irrorated with pale ochreous, knee pale golden-ochreous. Abdomen light brown, venter pale ochreous (in paratype, brownish, anterior margin of third tergite paler, venter pale tawny-ochreous).

Fore wing rather narrow, elongate-truncate, costa prominent at $\frac{1}{5}$, more so at $\frac{2}{3}$, gently prominent in between, curved before apex, apex broadly rounded, termen rounded, vertical. With numerous raised rough scale-tufts of variable size arranged along veins, wing membrane between veins rather thinly covered with transverse rows of scales. Light olive-green, markings dark and pale fuscous with bronze gloss, costa from base to beyond middle with a dark fuscous streak with small creamy transverse marks; costal edge beyond middle creamy with three triangular dark fuscous dots, ultimate dot smaller, subapical; this costal streak emitting some three irregular transverse marks beyond base, that are dissolved in fuscous irroration below $\frac{1}{3}$ of wing, indicating a basal patch that extends to $\frac{1}{5}$ of wing; posterior half of costal streak forming two triangular prominences below (in paratype three well-defined dentations), limited by cell, anterior pair more or less confluent so as to form a larger triangular spot; dorsum from $\frac{1}{4}$ to tornus, with a streak of paler fuscous suffusion, beyond middle of wing forming a large, inwardly oblique tooth-like transverse projection reaching to below $\frac{2}{3}$ of costa, and edged with dark fuscous; its anterior edge running along closing vein and including two large raised tufts, its anterior edge with one tuft; top of this projection connected by irregular and interrupted transverse dotting with first costal dot; similar dotting arranged in three or four series, connecting $\frac{3}{4}$ of costa with dorsum, and indicating a vertical transverse fascia; dorsal suffusion extending below vein 3 to tornus and including four large tufts of ground colour along vein 1b; termen suffused with fuscous, this suffusion extending halfway towards cell, with anterior edge irregular, marked along this edge and along its middle with dark fuscous; terminal edge slightly darker fuscous. Cilia pale fuscous with bronze gloss, basal half darker fuscous.

Hind wing light bronze-fuscous with faint prismatic reflections, veins darker fuscous with higher bronze gloss, edge of wing in apex and along upper half of termen narrowly suffused with darker fuscous, with small dentations between veins. Cilia fuscous with pale base and darker antemedian shade, rather dull.

Male genitalia (figs. 1-4). Tegumen subspheroid. Uncus long, slender, pointed, with broad base. Socii absent. Gnathos represented by an elongate plate, dilated downward, with a plicate submembraneous pending appendage at each side of the base, and a strong porrect knob mediad of the base of this projection. Vinculum slender, U-shaped. Valva with a moderately broad sacculus part ending in a blunt prominence, a long and slender straight cucullus part, bristled at apex and a horn-shaped and sinuate harpe, originating from below the base of cucullus. Anellus, a small plate, with short anellus lobes. Aedoeagus straight, rather slender, top emarginate laterally, ventrally forming two round lobes with serrulate edge; base of aedoeagus with lower edge of the orifice shaped as a long process; vesica spinulose; cornuti, three patches of larger spinulae. Anterior edge of the seventh segment (apparently a homologon of the mensis ventralis in Tortricidae) forming a long sclerotized band adjacent to vinculum, ending at each side in a deep tube, at the bottom of which is implanted an apparently extensile pencil of long hairs. 7th ventrite moderately sclerotised, with dilated base and a large semicircular emargination of anterior edge. (Genitalia slide no. 1686, holotype; no. 1685, paratype).

Holotype, male, East Java, Tengger Mountains, Nongkodjadar, 1200-1300 meters, 14. IV. 1940 (A. M. R. Wegner).

Paratype, male, the same locality and collector, 20. II. 1941.

This large and elegantly coloured species is closely allied with *C. bryanthes* Meyr., 1926, described from Sarawak after a unique specimen (in the British Museum, genitalia slide ♂, no. 9292); the only superficial difference that I could find is that the terminal segment of the palpus in the present species is slightly longer and more slender than in *bryanthes*. The genitalia, however, are quite different.

Except in Borneo, *C. bryanthes* occurs also in the Bismarck Archipelago and in Malaya, according to Meyrick's notes, and I saw also a male specimen from Buru in the Walsingham Collection, in the British Museum. I presume that what is said above of *C. pleurophanes* fully applies to *C. bryanthes*; each of the above mentioned localities might prove to possess a distinct local species, after their genitalia will become known.

The remarkable appendages of the 7th ventrite, shaped as inverted pencils of hairs — probably they are scent organs — are interesting. Similar organs are known to me in Tortricidae (*Eboda*) and in Glyphipterygidae (certain species of *Imma*).