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# TWO NEW SPECIES OF LYPEROMYIA FROM THE PHILIPPINES AND THAILAND (DIPTERA: LAUXANIIDAE)<sup>1</sup>

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Abstract. Lyperomyia trispatulatus, n. sp. (Philippines) and L. celebensis, n. sp. (Sulawesi) are described and figured. L. calopus is redescribed and new records of Lyperomyia from Thailand are presented.

Lyperomyia Frey is a very small genus of Oriental lauxaniid flies with only 1 previously recognized species: from Mt Polis, North Luzon, Philippines. I have examined material in Bishop Museum (BPBM), consisting of 32 specimens collected from the Philippines and Thailand, which I have identified as L. calopus Frey, 1927, L. trispatulatus, n. sp., and L. celebensis, n. sp. The genus Lyperomyia is recorded for the first time from Thailand.

## Lyperomyia calopus Frey

Fig. 1, 3, 6

Lyperomyia calopus Frey, 1927: 15-16.—Malloch, 1929: 15.—Stuckenberg, 1971: 536, fig. 30-31.

& & Q. Body ca. 3.3 mm in length. Head shining blackish brown, except occiput and sides of face brownish yellow, nearly trapezoidal in lateral view; vertex sharp; frontal stripe matblack, strongly sloping from vertex to lunule, virtually parallel-sided; frons ratio (width at level of anterior orbital bristle and distance from anterior ocellus to frontal margin) almost equal; orbital plates tinged with yellow, glossy and wider than frontal stripe at level of anterior bristles, with 2 gray-dusted spots, 1 at upper and another at lower end; antenna yellowish brown, except 3rd segment brown, 3rd segment ca.  $1.5 \times$  as long as 2nd segment with basal bristle equal in size to anterior orbital bristle; clypeus large and glossy; lower occiput with gray-dusted spot opposite eye margin; palpi yellowish brown, tip more brown and rounded with small prominent apical setae. Thorax: mesonotum blackish brown, shiny, ca. 1.8 × length of scutellum; concolorous with mesonotum, shining, with sharp marginal rim, curved apically, somewhat swollen on dorsum, devoid of setulae. Legs brownish yellow; apical and basal parts of fore femur blackish brown, anteroventral surface with row of small spines on apical ½, 1 bristle at apex; mid and hind femora tinged with brown; fore tibia blackish brown on basal 3/4, except yellowish white anteriorly; apical 2 segments of mid and hind tarsi slightly brown. Wing (Fig. 1): length: 3.5 mm; tinged with yellowish brown, glossy; basal areas of costal, basal, discal, and 3rd posterior cells and veins with brown; 2nd vein comparatively short, curving forwards. Halter entirely yellowish brown. Abdomen blackish brown, shiny.

& genitalia. Epandrium in lateral view wedge-shaped, posterior and ventral margins meeting

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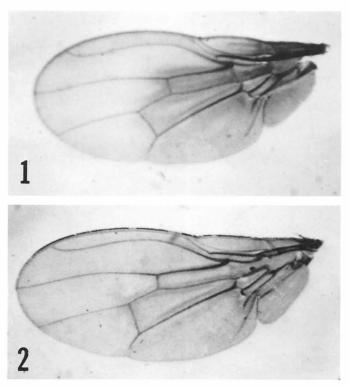


Fig. 1-2. 1, Lyperomyia calopus, wing. 2, L. trispatulatus, wing.

at nearly right angles; surstylus (Fig. 6) stout, apical posterior portion fairly strongly recurved anteriorly; processes of hypandrium as in Fig. 3.

Specimens examined. PHILIPPINE IS: Luzon I: 15, Mountain Prov: Abatan, Bugias, 60 km S of Bontoc, 1800–2000 m, 1.IV.1964 (H.M. Torrevillas); 12, same data as above except 15.VI.1964; 15, Ifugao, Mayoyao, 1000–1500 m, 6.VII.1966 (H.M. Torrevillas); 12, same data as above except 1200–1500 m, 25.VIII.1966; 15,22, same data as above except 31.VII.1966; 12, same data as above except 4.IX.1966; 12, same data as above except 19.IX.1966; 12, 6 km W of Imugan, Nueva Vizcaya, 3000′ [900 m], 11.IV.1968 (D.E. Hardy); 25, same data as above except (M.D. Delfinado); 15, La Trinidad, 4–5.IV.1968 (Delfinado); 15,22, same data as above except (D.E. Hardy); 25,12, same data as above except 1388 m; 12, Mt Santo Thomas, 2000 m, 29.XI.1953 (J.L. Gressitt).

This species is closely allied to the new species *L. trispatulatus* but differs from it by having the body entirely blackish brown, the orbital plates wider than the frontal stripe, and the hypandrium of the male genitalia with a forwardly curving process.

Frey (1927) described this species as having "yellow third antennal segment," but he is clearly in error; the segment is actually brown.

## Lyperomyia trispatulatus Okadome, new species

Fig. 2, 4, 7

& € 9. Body 3.2–3.5 mm in length. *Head* shining yellowish brown, oral margin and middle part of occiput tinged with brown; frons ratio ca. 1.4× longer than width; orbital plates (Fig.

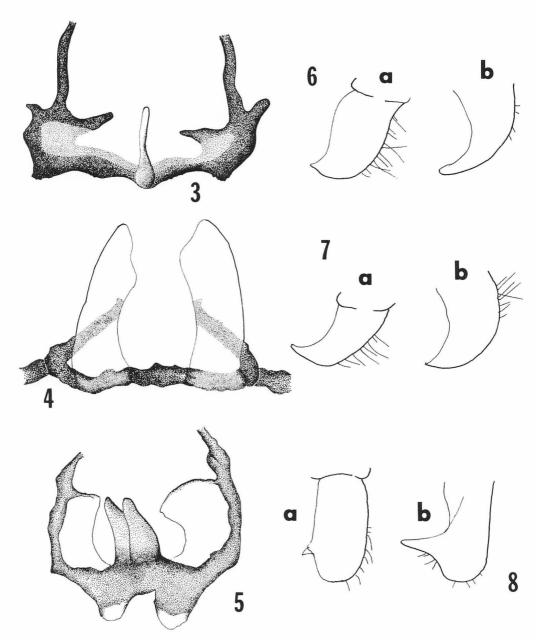


Fig. 3–8. 3 & 6, Lyperomyia calopus: (3) ring sclerite, ventral aspect; (6a) left surstylus, lateral aspect; (6b) inner aspect. 4 & 7, L. trispatulatus: (4) ring sclerite, ventral aspect; (7a) left surstylus, lateral aspect; (7b) inner aspect. 5 & 8, L. celebensis: (5) ring sclerite, ventral aspect; (8a) left surstylus, lateral aspect; (8b) inner aspect.

4) glossy, width slightly narrower than frontal stripe at region of orbital bristles, which is matreddish yellow; arista yellowish white, thickened yellow in basal area; clypeus blackish brown, especially darker on anterior margin, glossy; palpi dark brown. *Thorax*: mesonotum brownish, shiny, 1.8 to 2.0× length of scutellum; scutellum brownish yellow. *Wing* (Fig. 2): ca. 4.0 mm in length. Halter entirely yellowish brown. *Abdomen* brownish yellow, shining, broader and shorter than thorax; posterior margin of each tergite slightly brown.

*ô genitalia.* Epandrium forming a scalene triangle in side view; surstylus (Fig. 7a, b) relatively sharp, curved inwardly; processes of hypandrium as in Fig. 4.

Holotype &, PHILIPPINE IS: MINDANAO I: Misamis Or.: Mt Pomalthi, 21 km W of Gingoog City, 800–1000 m, 12.V.1965 (H.M. Torrevillas) (BPBM 13,270). Allotype &, same data as holotype except 30.IV.1965. Paratypes: MINDANAO I: 1%, same data as holotype except 11.X.1965; 1%, Bukidnon: Mt Katanglad, 1250 m, 26.X.1959 (L.W. Quate); 1%, Misamis Or.: Mt Balatukan, 15 km SW of Gingoog, 1000–2000 m, 27–30.IV.1960 (Torrevillas); 4%, same data except 1–5.V.1961; 1%, Montalban Dam, 16.III.1960, sweeping (T.C. Maa). All in BPBM.

This species is similar to *L. calopus* in general structure. It differs from *calopus* in having the body entirely yellowish brown, the orbital plates distinctly narrower than the frontal stripe, and differentiated processes of the hypandrium.

# Lyperomyia celebensis Okadome, new species

Fig. 5, 8

8 & 9. Body ca. 3.6 mm in length. Head shining yellowish brown, oral margin brown; frons ratio ca. 1.2× longer than width; anterior orbital bristle short, weak, posterior orbital bristle ca. 1.3× length of anterior; orbital plates glossy, tinged with brown, much wider than frontal stripe at level of anterior orbitals; frontal stripe mat rusty yellow; antennae and arista yellowish brown, apical % of 3rd segment black, with bristle dorsobasally, longer and stronger than anterior orbital bristles; clypeus brownish yellow, glossy; palpi yellowish brown, becoming pale yellow at anterior margin. Thorax: mesonotum blackish brown, 1.9× length of scutellum; scutellum concolorous with mesonotum. Legs yellowish brown; basal % of fore tibia and mid and hind femora brown; apical ½ of fore tibia whitish yellow. Wing 3.8 mm in length, tinged with brown. Halter yellowish brown. Abdomen blackish brown.

¿ genitalia. Lateral view with epandrium subrectangular; surstylus (Fig. 8a, b) longer than wide, apical margin not pointed outward as a triangle, without process on inner side; processes of hypandrium as in Fig. 5.

Holotype &, INDONESIA: SULAWESI: Lake Lindu, 900 m, 1-5.I.1966 (R. Straatman) (врвм 13,271).

This species is readily differentiated from *trispatulatus* by the following characters: orbital plates widened; apical area of 3rd antennal segment with blackish brown.

#### KEY TO SPECIES OF LYPEROMYIA

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### LITERATURE CITED

- Frey, R. 1927. Philippinische Dipteren. IV. Fam. Lauxaniidae. Acta Soc. Fauna Flora Fenn. 56(8): 1-44.
  Malloch, J.R. 1929. Notes on some Oriental sapromyzid flies (Diptera), with particular reference to the Philippine species. Proc. U.S. Natl. Mus. 68(21): 1-97.
- Shewell, G.E. 1977. Family Lauxaniidae, p. 182–222. In: Delfinado, M.D. & D.E. Hardy, eds., Suborder Cyclorrhapha (excluding Division Aschiza). A catalogue of the Diptera of the Oriental Region. Vol. 3. Univ. of Hawaii Press, Honolulu.