

(Noona Dan Papers No. 95.)

**Tephritidae (Diptera) collected by the Noona Dan Expedition in the Philippine and Bismarck Islands. \*)**

By  
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This important collection has added much to our knowledge of the fruit flies of the regions covered by this expedition (Petersen, 1966). Sixty-seven species are present, 43 from the Southern Philippines (18 are new species) and 24 species from the Bismarck Islands (7 are new). The collections from the Philippines and the Bismarcks are being discussed separately since the two faunas are not related. The species from Palawan, Tawi Tawi and Balabac show close relationship to the fauna of Malaysia and Indonesia and those of the Bismarcks are close to New Guinea.

A monographic study of the Philippine fruit flies is now being prepared and will present keys, descriptions and figures to all of the known species from these Islands.

The illustrations have been prepared by Miss Geraldine Oda and Mrs. Amy Farmer.

**1. Species from the Philippine islands**

Subfamily **DACINAE**

Tribe **ADRAMINI**

**Adrama determinata** (Walker)

*Dacus determinatus* Walker, 1857, Jour. Proc. Linn. Soc. Lond. 1:133.

Twenty-two specimens. **PALAWAN**: Pinigisan, 600 m., Sept. 9, 1961; Makagwa, Sept. 18, 1961. — **BALABAC**: Dalawan Bay, Oct. 7, 1961. — **TAWI TAWI**: Tarawakan, Oct. 25, 1961.

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## Tribe DACINI

*Callantra pedunculata* (Bezzi)

*Mellessis pedunculata* Bezzi, 1916, Bul. Ent. Res. 7:115; 1919, Phil. Jour. Sci. 15(5) 439, pl. 2, fig. 5.

One female. TAWI TAWI: Tarawakan, Oct. 23, 1961, in Malaise trap.

*Callantra picta* n. sp. (figs. 1a—c)

This species is related to *C. smieroides* Walker, from the Celebes and Borneo, but differs by having the white mark over each mesopleuron expanded, occupying almost the entire dorsal margin of that sclerite and almost continuous with the white mark over the humerus. In *smieroides* the mark over the mesopleuron is pale yellow, straight-sided, and occupies a rather narrow strip over the posterior portion of the sclerite; the humeri of *picta* are entirely white and the marks along the suture, the scutellum, metapleura and pleuroterga, also the spot at upper portion of each sternopleuron white, rather than these marks being yellow to rufous with upper portion of each humerus brown and with the pleuroterga dark brown. Also, *picta* has the pleura predominantly shining black in ground color and sides of metanotum shining black, and abdomen with prominent yellow markings. In *smieroides* the pleura are predominantly red, tinged with brown and the meta-

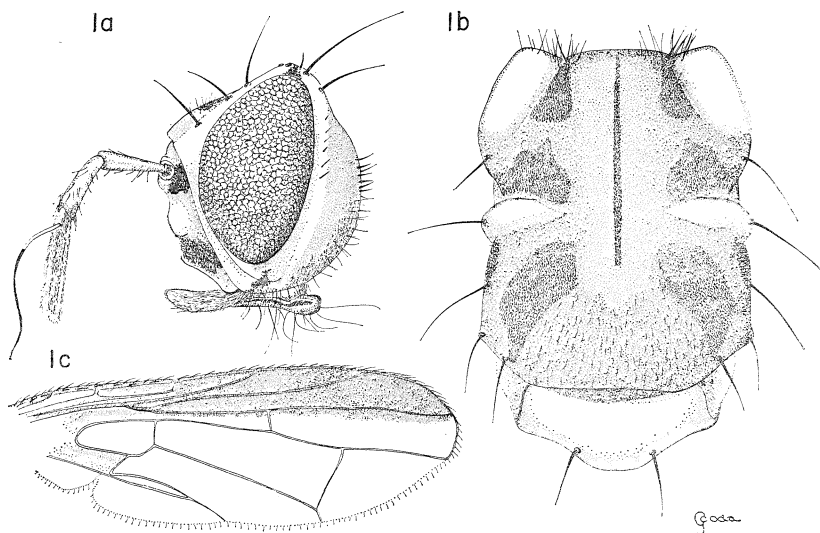


Fig. 1. *Callantra picta* n. sp.: a, head; b, thorax, dorsal; c, wing.

notum is rufous. Because of the wing markings, this would also resemble *conopsoides* (de Meijere) and *longicornis* (Wiedemann), from Indonesia, but those species differ by having two preapical ventral spines on the front femora as well as in other respects. It would fit near *bioculata* (Bezzi) from the Philippines, but differs by having a yellow mark covering most of the pleurotergon, lacking ventral spines on front femora, having the tergal glands on fifth segment yellow, and cell M not elongate.

♂. *Head*: Largely yellow, occiput bicolored with margin bordering eyes and vertex yellow-white. A shining black mark across vertex connects with the black of the ocellar triangle. Front with a brown spot at the base of each bristle and a brown discoloration in middle of the swollen portion. Front one-half longer than wide. Face yellow except for the large shining black spots in each antennal furrow, these extend almost to oral margin and each extends a short distance across middle of front. Face with a small concavity at lower two-thirds (fig. 1a). Palpi elongate, slightly tapered apically, yellow except for brown basal two-fifths. Front with two pairs inferior fronto-orbitals and one pair of superior fronto-orbitals. A prominent pair of black postocellar setae are present. A small brown mark present below each eye margin, also lower median portion of occiput brown and a dark brown to black mark present below frontal suture just below antennae. Antennae elongate, first segment equal in length to second and equal to length of face (fig. 1a), first segment yellow, tinged faintly with brown. Second segment rufous, tinged with brown, third segment dark brown to black. Arista yellow basally, otherwise black. *Thorax*: Mesonotum broadly rufous down median portion with a large black mark behind each humerus and with a black vitta on each side extending from behind suture almost to inner postalar bristle and another small brown to black streak on each side extending from supraalar bristle to suture (fig. 1b). With white markings as mentioned above and with the white spot at upper margin of sternopleuron extended posteriorly for a short distance under the edge of the pteropleuron. Propleura, anterior portion of mesopleuron around spiracle, ventral margin of sternopleuron, and lower portion of pteropleuron rufous. Pleura otherwise black in ground color, except for the mentioned white spots, densely grey pubescent. Metanotum and postscutellum with a rufous mark extending down the middle. Scutellum narrow, slightly over two

times wider than long, basal margin brown. Halteres white. *Legs*: Coxae and trochanters brown, tinged with red. Front and middle femora predominantly brownish red, yellow down the antero-dorsal surfaces. Hind femora dark brown, tinged with yellow-red on apical third to two-fifths. Tibiae mostly brown, tarsi white, base of hind femur pale yellow. *Wings*: With a broad dark brown costal band extending through upper third to two-fifths of cell  $R_5$  for its entire length (fig. 1c). Cubital streak rather faint. Subcostal cell equal in length to second costal and subequal to fourth costal section (cell  $R_1$ ). Fourth and fifth costal sections approximately equal in length, r-m crossvein situated near apical two-thirds of cell 1st  $M_2$ . Vein  $Cu_1 + 1st A$  approximately half as long as the lobe of cubital cell. *Abdomen*: Typically *Callantra*-like in shape. First tergum shining brown to black except for yellow-white apical margin. Second tergum subshining black with a pair of large apical yellow spots. Third tergum tinged with yellow on each side of the median black line before hind margin. Fourth, fifth and sixth terga yellow submedianly, broadly blackened on sides and with a black vitta extending down the middle. The genitalia have not been dissected for study.

Length: Body, 8.5 mm.; wings, 7.0 mm.

♀. Unknown.

Holotype male, PALAWAN: Uring Uring, Sept. 26, 1961, in Malaise trap. — In the Zoological Museum, Copenhagen.

***Dacus (Strumeta) dorsaloides* Hardy and Adachi**

*Dacus (Strumeta) dorsaloides* Hardy and Adachi, 1954, Pac. Sci. 8(2): 167, figs. 9a—b.

Two specimens. BALABAC: Dalawan Bay, Oct. 12, 1961.

***Dacus (Strumeta) limbiferus* (Bezzi)**

*Chaetodacus ferrugineus* var. *limbiferus* Bezzi, 1919, Philip. Jour. Sci. 15(5):424.

Two specimens. BALABAC: Dalawan Bay, Oct. 8, 1961.

***Dacus (Strumeta) pedestris* (Bezzi)**

*Chaetodacus ferrugineus* var. *pedestris* Bezzi, 1913, Philip. Jour. Sci. 8:322.

Twenty-one specimens. PALAWAN: Uring Uring, Aug. 20—25, 1961. — BALABAC: Dalawan Bay, Oct. 8—11, 1961. — TAWI TAWI: Tarawakan, Oct. 23—Nov. 13, 1961. — MINDANAO: Sapamoro, Dec. 18—21, 1961.

**Dacus (Strumeta) peterseni** n. sp. (figs. 2a—b)

Because of the bulla in the male wing, the lack of tergal glands, the peculiar shape of the male abdomen, the all yellow to white face, etc., this fits in a complex with *mcgregori* (Bezzi), from the Philippines and Singapore. It differs readily from *mcgregori* by having the thorax predominantly black, the third antennal segment rounded at apex and the costal band greatly expanded at the wing apex and also with a streak of brown extending through most of cell  $R_5$  beyond the r-m crossvein (fig. 2a). *D. mcgregori* has the thorax chiefly or entirely rufous with the third antennal segment obliquely truncate at apex and the costal band not expanded, etc. *D. peterseni* is closely related to a new species from Thailand which is being described in a monograph on Southeast Asian species, in press, but differs by having the broad rufous median band on the mesonotum continuous to the hind margin; the middle femora brown to black at apices and the middle and hind tibiae brown to black; by having a continuous yellow-white vitta on each side of mesonotum from inner postalar bristle to the humerus; and the abdomen with prominent rufous markings over terga 3—5 (figs. 2b).

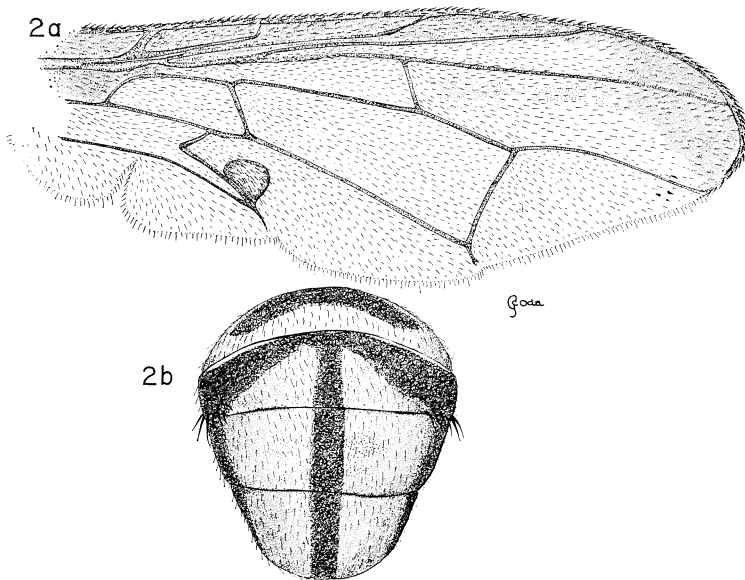


Fig. 2. *Dacus (Strumeta) peterseni* n. sp.: a, wing; b, abdomen, dorsal.

♂. *Head*: Entirely yellow to ivory-white except for the reddish brown eyes and the brown posteromedian portion of the occiput, also with a faint tinge of brown in the median portion of the front. Front about two times longer than wide, two pairs of inferior fronto-orbitals. Face entirely ivory-white, slightly concave in lower median portion. Antennae yellow, tinged faintly with brown on apical portion of third segment, third segment three to four times longer than wide. Palpi yellow, almost devoid of setae. *Thorax*: Mostly polished black in ground color with the postsutural vittae white, rather broad, straight-sided, and continuous along sides of thorax over humeri. Median rufous vitta densely grey pubescent and extending to posterior margin of mesonotum and with a rather faint narrow faintly brown vitta extending down middle just beyond suture. Area of mesonotum immediately behind the lower corner of each humerus polished black, this coloring extending over upper half of notopleural callous, over the suture, and continuing as a narrow line along outer margin of each postsutural white vitta in line with the anterior supraalar and ending before reaching a level with the outer postalar bristle. Posterolateral margins of mesonotum yellow to rufous. Scutellum yellow with a polished black band across the base, this is expanded on the sides. Pleura predominantly polished black, propleura yellow to rufous. Yellow mark over mesopleuron extending onto sternopleuron but not expanded at this point. Halteres brownish red. *Legs*: Yellow, except for black preapical dorsal and posterior surfaces of middle femora, broad bases of middle tibiae, and the hind tibiae which are black. One strong apical spur present on middle tibia. Hind tibia with a sensory structure on the posterodorsal surface at about the apical two-thirds to three-fourths of the segment. This is different in formation than those which I have observed on other Dacini and consists of a slightly raised area with a fringe of prominent yellow hairs in a straight row. *Wings*: As in figure 2a. Largely hyaline with a brown band extending from base along margin to apex and filling all of apical portion of cell  $R_5$ . The bulla in cell M is pale brown and prominent. *Abdomen*: Distinctive in shape, broadest at segment three, and with fourth and fifth segments narrowed (fig. 2b). First tergum black anterolaterally and otherwise rufous, second tergum with a prominent black mark on anterior margin, yellow to rufous on sides and on posterior margin. Third tergum with a shining black band across

base which is narrowed medianly, expanded laterally and continuous with a black mark over lateral margins of terga 4—5. Also, with a broad median black vitta extending from base of third tergum to apex of fifth (fig. 2b).

Length: Body and wings, 4.5—4.7 mm.

♀. Unknown.

Holotype male, TAWI TAWI: Tarawakan, Nov. 6, 1961, in malaise trap. — In Zoological Museum, Copenhagen.

This species is named after Dr. Børge Petersen, leader of the Noona Dan Expedition to the Southern Philippines.

**Dacus (Zeugodacus) calumniatus** n. sp. (figs. 3a—d)

This species is differentiated from other *Zeugodacus* which have three postsutural yellow vittae, two black spots on the face

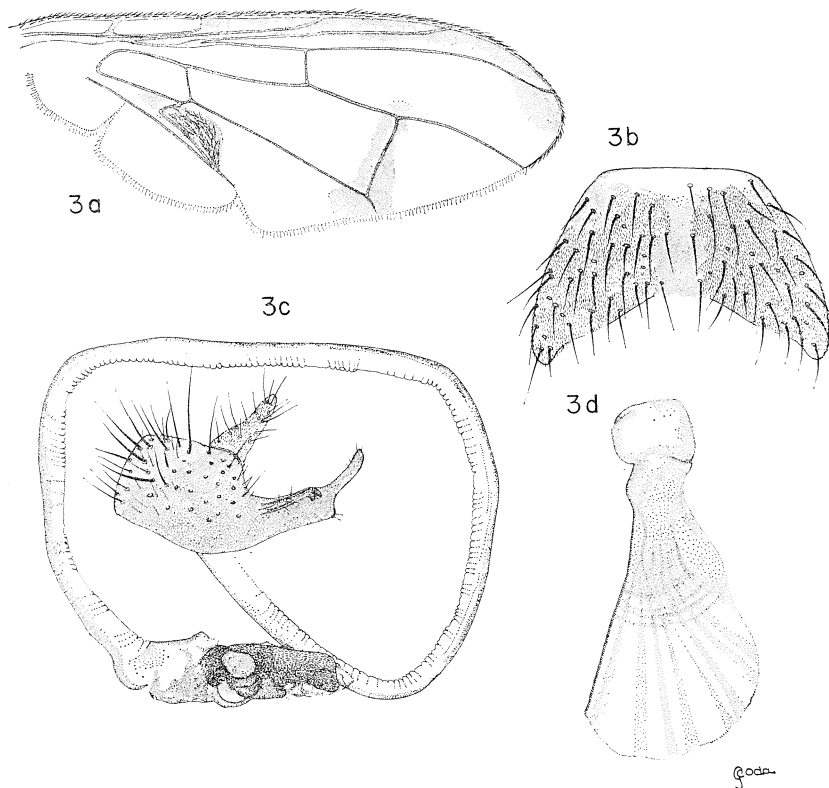


Fig. 3. *Dacus (Zeugodacus) calumniatus* n. sp.: a, wing; m, fifth sternum of male; c, male genitalia, lacking hypandrium; d, ejaculatory apodeme.

and the costal band enlarged at the wing apex, by having a prominent brown vitta extending over the m crossvein (fig. 3a). It fits the concept of *Dacus caudatus* Wiedemann, 1830, *nec* Fabricius, 1805. This species is similar in most respects to *tau* (Walker) and is differentiated by the brown mark extending over the m crossvein.

♂. *Head*: Yellow except for the compound eyes, a brown to black line across the vertex and including the ocellar triangle, a faint discoloration of brown in the median portion of the front and in the submedian portions of the occiput, also a tinge of brown beneath the eye margin on each gena and a prominent black spot in each antennal furrow. Front broad, about one-fifth longer than wide, entirely yellow except for the median discoloration, no dark spots at bases of bristles. Three pairs of inferior fronto-orbital bristles present. Facial spots oblong, filling antennal furrows but not extending to oral margin. Antennae yellow, tinged faintly with brown on the apical portion of the third segment. *Thorax*: Largely black in ground color, anterior portion of mesonotum rufous in ground color with a black median vitta extending forward to a line about opposite the middle of the humeri, not extending to inner scapular bristles. Postsutural yellow vittae broad, the median tapered anteriorly and extending slightly beyond the suture, blunt posteriorly and ending near the prescutellar bristles. Lateral vittae parallel sided, ending slightly beyond inner postalar bristles. Propleuron and anterior portion of mesopleuron rufous, tinged faintly with brown. The yellow spot on upper portion of sternopleuron large, occupying approximately half of the length of the upper margin of sternopleuron and extending posteriorly a short way under edge of pteropleuron. Scutellum yellow with a narrow brown band at the base. *Legs*: Coxae, trochanters and tibiae yellow-brown. Apices of hind femora faintly marked with brown. Basitarsi pale yellow, other tarsomeres yellow, tinged with brown. *Wings*: Costal band extending into the upper edge of cell  $R_3$  under vein  $R_{2+3}$  and rather broadly expanded in the apex of the wing, at its widest point the band is over twice as wide as the band measured at tip of vein  $R_{2+3}$  (fig. 3a). Other details of the wing venation and markings as in the figure. *Abdomen*: Largely yellow, black on the lateral margins and with complete black bands over bases of the second and third terga. First tergum narrowly black at base and on lateral margins.



Fourth and fifth terga broadly blackened posterolaterally and with a median black vitta which extends from third over the apex of the fifth. Tergal glands yellow to rufous. The fifth sternum is more than two times wider than long, gently concave on hind margin (fig. 3b). The genitalia are as in figure 3c. The surstyli are slender, curved inwards at apices. The ejaculatory apodeme is as in figure 3d.

Length: Body, 6.5 mm.: wing, 6.0 mm.

♀. Unknown.

Holotype male, TAWI TAWI: Tarawakan, Nov. 7, 1961, in malaise trap. — In the Zoological Museum, Copenhagen.

**Dacus (Zeugodacus) mundus** (Bezzi)

*Chaetodacus mundus* Bezzi, 1919, Philip. Jour. Sci. 15(5):429, pl. 1, fig. 9.

One male, one female. PALAWAN: Uring Uring, Aug. 25, 1961; Pinigisan, 600 m., Sept 12, 1961.

**Dacus (Zeugodacus) pubescens** (Bezzi)

*Chaetodacus pubescens* Bezzi, 1919, Philip. Jour., Sci. 15(5):434, pl. 2, fig. 2.

One female. TAWI TAWI: Tarawakan, Nov. 8, 1961, in malaise trap.

Subfamily **TRYPETINAE**

Tribe **ACANTHONEVRINI**

**Hexacinia pellucens** n. sp. (figs. 4a—e)

This species is readily differentiated from all known *Hexacinia* by having the spots over the wing comparatively large, mostly consisting of transverse, elongated subhyaline marks equal or nearly equal to the width of the cell (fig. 4a). It is related to *stellipennis* (Walker) but that species has the spots in the wing field tiny, round, only a fraction the width of the cells. All of the known species of *Hexacinia* will be keyed in a monograph of the Philippine Tephritidae in press.

An almost all yellow species with sides of metanotum brown to black, and lacking conspicuous brown spots on mesonotum and with small spots of brown at bases of scutellar bristles.

♂. *Head*: Bristles of the front brownish yellow. Two pairs inferior fronto-orbitals and two pairs superior fronto-orbitals, the former placed on lower fourth of front. Upper superior fronto-

orbitals just below inner vertical bristle. Ocellar bristles tiny, hair-like, dark brown to black, subequal in length to and much thinner than the postorbital row of bristles. Postocellar bristles yellow-white. Outer vertical bristles black. Face vertical, slightly raised down the median portion and with a small brown to black spot on each lower lateral margin. Antennae entirely yellow. Third segment slightly over two times longer than wide. Arista long plumose. Palpi and mouthparts yellow, palpi thickly brown setose. *Thorax*: Entirely yellow except for four small indistinct spots on hind portion of mesonotum, a mark above and below each humerus, a few faint spots on pleura, spots at bases of scutellar bristles and metanotum mostly brown to black. *Legs*:

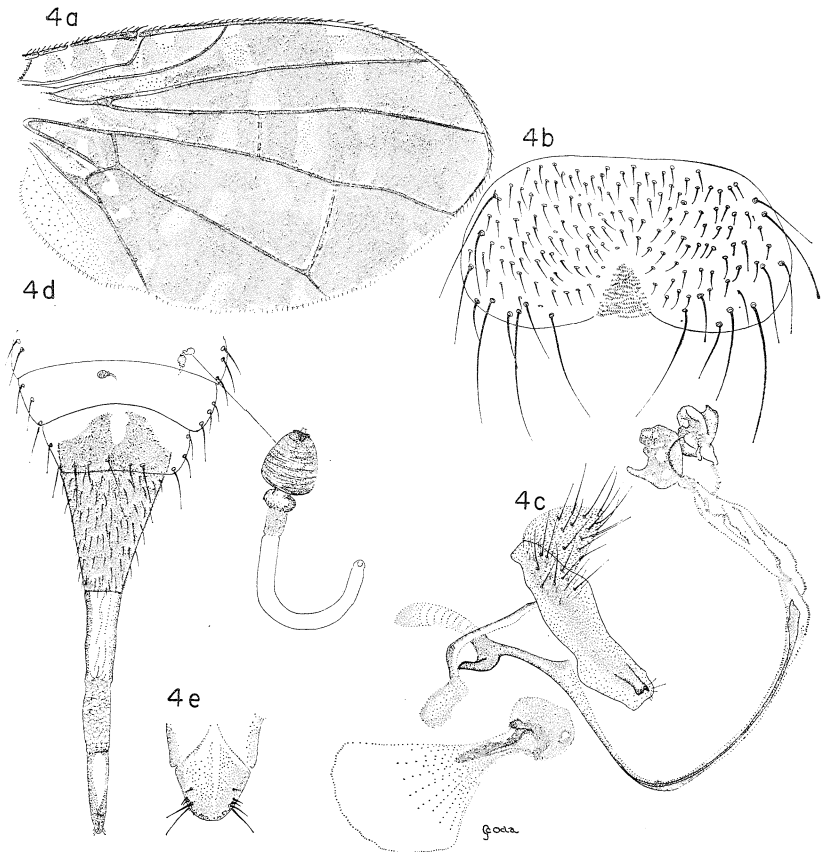


Fig. 4. *Hexacinia pellucens* n. sp.: a, wing; b, fifth sternum of male; c, male genitalia, lateral; d, extended ovipositor; e, apex of piercer.

Yellow except for a small brown ventral spot at apical two-thirds to three-fourths of each middle and hind femur. Middle tibia with one strong apical spur. Hind femur with two prominent preapical dorsal bristles. Hind tibia with six anterodorsal and three anteroventral bristles at the middle. *Wings*: As is typical of this genus, very broad, predominantly brown with the subhyaline markings as in figure 4a. *Abdomen*: Yellow with one black spot on sides of terga 1 and 2, with four black spots arranged across terga 3 and 4 and with fifth tergum entirely shining dark brown to black. Sterna yellow, except for brown lateral and posterolateral margins of fifth sternum. Fifth nearly two times wider than long, densely setose with a bare area extending down the middle and with three or four prominent bristles on each side of hind margin. Hind margin with a U-shaped concavity in the middle, the membrane in the concavity is densely covered with microscopic setae or spicules (fig. 4b). Epandrium brown, slender, at its broadest point it is equal in width to the broad surstyli, the latter are truncate at apices and completely hide the tenth sternum (fig. 4c).

Length: Body, 5.5 mm.; wings, 5.5 long by approximately 2.8 mm. wide.

♀. Fitting the description of the male, but with some faint, tiny brown spots on pleura and four broken spots on each of terga 2—6. Three small round spermathecae present. Basal segment of ovipositor rufous, as seen from dorsal view, just slightly longer than terga 4—5 and approximately 1.0 mm. in length. From ventral view the basal segment is 1.25 mm. Piercer short and blunt (fig. 4e), .75 mm. long. Extended ovipositor 3.4 mm. (fig. 4d).

Holotype male, PALAWAN: 3 km. N.E. Tinabog, May 13, 1962, in forest (H. Holtmann). Allotype female, same data except May 11, in bushes along creek. Approximately 75 paratypes both sexes. LUZON: Mt. Limay, July 1914; Banahao, April 1914; Dalton Pass, Nueva Viscaya, Apr. 9—10, 1968 (M. D. Delfinado); Baquio, Benquet (Baker); Imugin, Nueva Viscaya (Baker); Mt. Makiling Laguna, (some from Baker collection — no data) a number of collections March, April, July and September 1930—1968 (F. C. Hadden, T. C. Maa, M. D. Delfinado, D. E. Hardy, J. L. Gressitt); Mayoyao, Ifugao, Mt. Province, 1200—1500 m., Aug. 31, 1966 (H. M. Torrevillas); Camarines Sur, Mt. Isarog, 20 km. E. of Naga, 500—600 m., April 6, 1963 (H. M. Torrevillas); Antipolo, Rizal,

March—Sept., 1952—53 (Townes family); Wa-Wa Dam, Mr. Montalban, Rizal, 150—200 m., March 22, 1965 (H. M. Torrevillas). — MINDORO: Mangarin, November 1917; San Theodora, January 1916. — MINDANAO: Davao, no date (Baker); Dapitan (Baker); Lake Lanao, Tagaya, Lanao 470—720 m. June 15, 1958 (H. E. Milliron); Sula, Jolo I., near base of Mt. Dahao, 150 m., Sept. 2, 1958 (H. E. Milliron). — PALAWAN: Binaluan, Nov.—Dec. 1913 (G. Boetcher); Uring Uring, May 1, 1947, in second growth forest and Aug. 22, 1961, in malaise trap (M. Celestino and Noona Dan Expedition); Puerto Princesa, sea level, second growth forest, April 24, 1947 (H. Hoogstraal). — SIBUYAN: No data (Baker). — NEGROS: Cuernos Mts. (Baker). — Holotype, allotype, and a series of paratypes in the B. P. Bishop Museum, paratypes in the U.S. National Museum; Bureau of Plant Industry, Manila; Zoological Museum, Helsinki; Zoological Museum, Copenhagen; University of Hawaii; B. P. Bishop Museum, and the Field Museum of Natural History, Chicago.

**Hexacinia stellipennis** (Walker)

*Trypeta stellipennis* Walker, 1860, Jour. Proc. Linn. Soc Lond. 4:159.

One female. TAWI TAWI: Tarawakan, Oct. 24, 1961, in malaise trap.

**Rioxa megispilota** n. sp. (figs. 5a—d)

This species is differentiated from *R. sexmaculata* (Wulp) by the comparatively large marginal wing spots (fig. 5a). On the anterior margin these extend almost or entirely across the cells and a large hyaline spot is present near the base of cell  $R_1$ , a very prominent hyaline spot present in cell  $M_4$  on posterior margin of wing, also in female a hyaline spot is present in cell 2nd  $R_5$  beyond the r-m crossvein. In most specimens of *sexmaculata* which have been studied, the marginal spots are much smaller, the ones on the anterior margin are confined to the margin and do not extend across the cell. The spot in cell  $M_4$  is small, indistinct and there is no prominent hyaline spot in the basal portion of  $R_1$ , also there is no hyaline spot in cell  $R_5$  just beyond the r-m crossvein. The size and shape of the hyaline spots in the wings obviously do vary somewhat, but the series on hand shows consistent differences from another series (*sexmaculata*) from the Philippines and I believe that these are distinct species. This species also shows resemblance to *lucifer* Hering from the Philippines, but differs by

having a prominent spot extending through apex of cell  $R_3$  and a large, oblong, hyaline spot near the base of cell  $R_1$ .

♂. Fitting the general characteristics of most *Rioxa*. *Head*: Distinctly broader than high, slightly higher than long. Mostly yellow, with brown markings on the back part of the occiput, a brown spot on lower margin of each gena and lower corners of front, also upper two-thirds of face brown in ground color, densely grey pollinose. Lower third of face white. With two pairs of inferior fronto-orbitals and two pairs of superior fronto-orbitals. Ocellar bristles rudimentary. Postocellars strong, yellow-white. Antennae brown. Arista pectinate, with long plumes on the dorsal margin, also with short hairs along anterior margin but with the ventral margin bare. *Thorax*: Yellow with four narrow brown to black vittae on the mesonotum, the two submedian vittae in line with dorsocentral bristles and extending onto sides of scutellum. Lower portion of each humerus, and a very narrow line along margin of notopleuron, black. Propleura, mesopleura and a line across upper pteropleuron to pleurotergon dark brown to black.

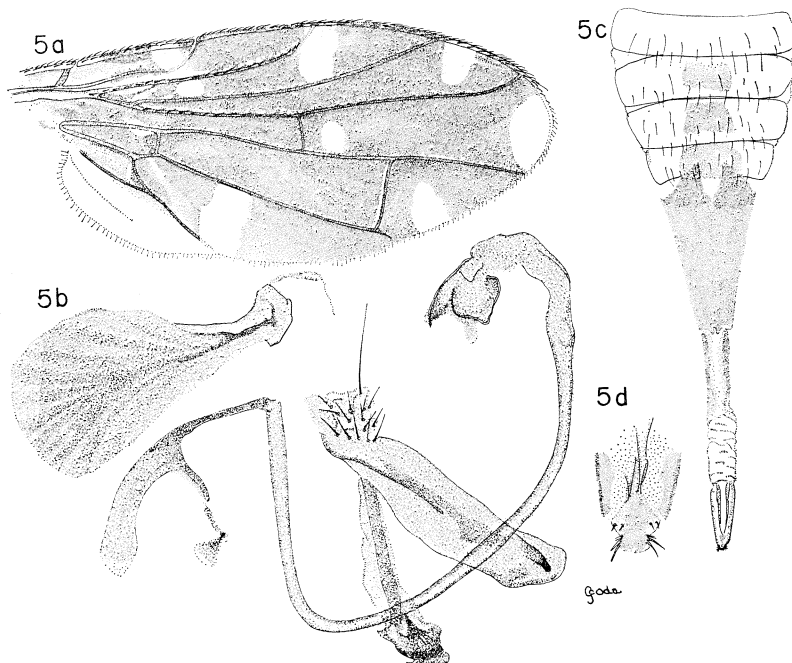


Fig. 5. *Rioxa megispilota* n. sp.: a, wing; b, male genitalia; c, extended ovipositor; d, piercer of ovipositor.

Also another black line extending from lower edge of each mesopleuron to hypopleuron. Postscutellum and metanotum yellow to rufous medianly, brown to black on sides. Dorsocentral bristles about opposite anterior supraalars. *Legs*: Yellow. Middle tibia with one strong apical spur. Hind femora brown. *Wings*: As in figure 5a (drawn from female). On the type no hyaline spot is present in 2nd portion of cell  $R_5$  beyond the r-m crossvein, this is present in all other specimens on hand. It is obviously not just a sexual character since the spot is present on the paratype male. Subcostal vein undulate, rather strongly curved upward medianly, and sloping rather gradually to the costa, not bent at a right angle as in most Tephritidae. Vein  $R_1$  ending approximately half-way between the r-m and m crossveins. Vein  $R_{4+5}$  curved sharply upward before the apex. Cubital cell with a short, pointed lobe at apex. Vein  $R_{4+5}$  setose almost its entire length, the setae extending well beyond a level with the m crossvein. *Abdomen*: Principally shining black, yellow down the middle of terga 1—3. Fourth and fifth sterna each with a broadly U-shaped concavity in middle of hind margin. Epandrium very narrow, forming a slender bridge above the anal area. Surstyli broad, straight-sided and blunt at apices, completely hiding the tenth sternum as seen from lateral view (fig. 5b). Each anal plate with a strong apical bristle. Ejaculatory apodeme large, fan-like.

Length: Body and wings, 7.0 mm. Paratype measures 5.0 mm. for body and wings.

♀. Fitting the description of the male except for the wing markings (fig. 5a). Also the brown marking of the anterior portion of the pleura is not so extensive and the pleura are chiefly yellow, each with two longitudinally stripes extending the entire length, one at a level near upper margin of mesopleuron and one at lower margin of that sclerite. The sterna are brown and three oblong spermathecae are present. Sixth tergum well developed, as viewed from above at least three-fourths as long as fifth. Base of ovipositor dark brown, tinged with red, approximately equal in length to terga 3—5, and 1.7 mm. long. Piercer short, thick, blunt at apex (fig. 5d), .7 mm. long. Extended ovipositor (fig. 5c), 4.0 mm.

Length: Body and wings, allotype, 6.0 mm.; paratypes, range from 5.0 to 6.0 mm.

Holotype male, allotype female, and six paratypes, one male,

five females, TAWI TAWI: Tarawakan, Oct. 24—Nov. 7, 1961, in malaise traps. — Type, allotype and two paratypes in the Zoological Museum, Copenhagen, the remainder of the paratypes in the B. P. Bishop Museum and the University of Hawaii.

**Rioxa sexmaculata** (van der Wulp)

*Ptilona sexmaculata* van der Wulp, 1880, Tijds. Ent. 23:185.

Five specimens. BALABAC: Dalawan Bay, Oct. 9, 1961, in malaise trap. — PALAWAN: Pinigisan, 600 m., Sept. 1—10, 1961, in malaise and light traps.

**Themara lunifera** Hering

*Themara lunifera* Hering, 1938, Deuts. Ent. Zeits. 1938, p. 408.

One male. TAWI TAWI: Tarawakan, Nov. 2, 1961 in malaise trap.

**Themara hirtipes** Rondani

*Themara hirtipes* Rondani, 1875, Ann. Mus. Geneva 7:435.

One female, 3 males. PALAWAN: Pinigisan, 600 m., Sept. 13, 1961; Uring Uring, Aug. 20, 1961; and Makagwa, Sept. 18, 1961. All from malaise traps.

**Xarnuta stellaris** n. sp. (figs. 6a—d)

This species is very close to *X. obsoleta* (Wiedemann) (*morosa* de Meijere is a synonym) from Java, but differs by having two hyaline spots on the wing margin in cell  $R_1$  in the female (fig 6a) and one spot in the male, rather than having no hyaline spots on margin until beyond apex of vein  $R_{2+3}$ ; by lacking a transverse hyaline streak through cells 2nd  $R_5$  and 1st  $M_2$  between the m and r-m crossveins. In other respects, fitting the characteristic features of most other known *Xarnuta*, with the body red, tinged with brown, and very densely black setose, also legs very black setose and with prominent rows of black bristles on the femora, and hind tibiae. The genitalia have not been compared with other species, these probably are distinctive. Fifth sternum of male about half longer than wide, gently concave on posterior margin, densely covered with erect black setae and with four or more strong black bristles on each side of posterior margin. Epandrium dark brown to black over the dorsum, yellow ventrally, thickly covered with erect black hairs. Surstyli narrow, blunt at apices and completely covering tenth sternum. Ejaculatory apodeme large, fan-shaped, other aspects of genitalia as in figure 6b. Sixth tergum of female

well developed, two-thirds to three-fourths as long as fifth and with black bristles along entire hind margin. Basal segment of ovipositor yellow, brown at apex, very short and thick, (fig. 6c), as seen from dorsal view, only slightly longer than sixth abdominal tergum. Measured from ventral view, the basal segment is about .6 mm. long. Piercer very short, less than two times longer than wide and about .25—.3 mm. in length. The apex is serrated along the margin (fig. 6d). The fully extended ovipositor is only about 1.0 mm. in length. The piercing structure seems to be weakly sclerotized.

Length: Body, 5.5—5.75 mm.; wings, 4.8—5.0 mm.

Holotype female, PALAWAN: Uring Uring, Aug. 22, 1961, collected in light trap. Allotype male, LUZON: Manila, June 11, 1919 (McGreggor). One paratype female, same data as type and one

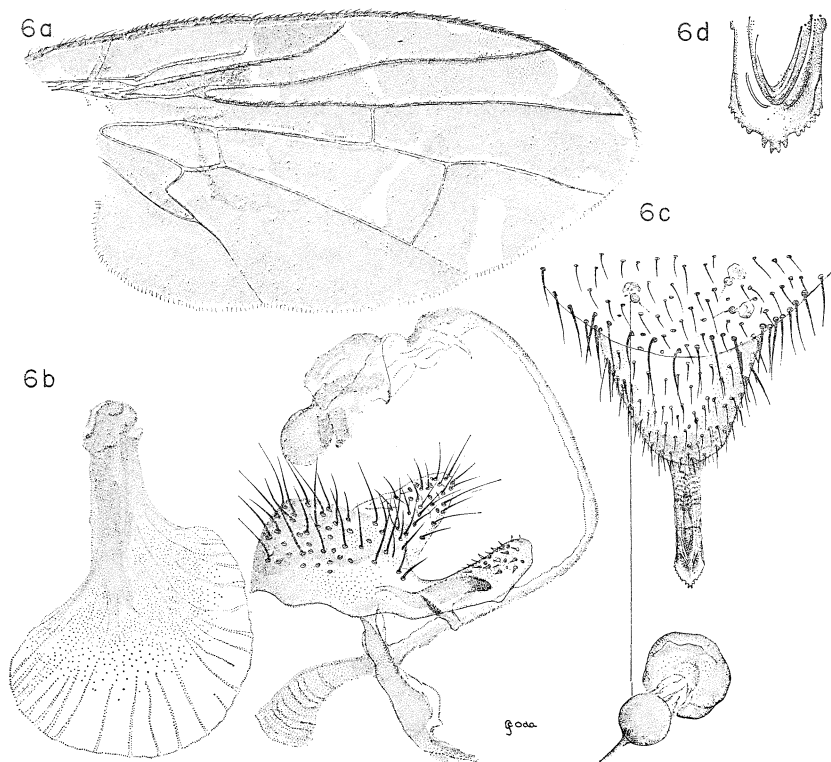


Fig. 6. *Xarnuta stellaris* n. sp.: a, wing of female; b, male genitalia; c, extended ovipositor; d, apex of piercer.



paratype male, same data as allotype. — Type in the Zoological Museum, Copenhagen, allotype in the Museo Civico di Storia Naturale, Milano. Paratypes in the University of Hawaii collection.

#### Tribe ACIURINI

##### **Sphaeniscus atilius** (Walker)

*Trypeta atilia* Walker 1849, List, Dipt. Ins. Brit. Mus.: 4:1021.

Thirty-five specimens. MINDANAO: Sapamoro, Dec. 20, 1961.

#### Tribe EUPHRANTINI

##### **Cyclopsia univittata** n. sp. (figs. 7a—d)

The genus *Cyclopsia* Malloch is borderline between Euphrantini and Adramini. Hering (1941:4) treated this as an Adramini and Malloch (1939:441) treats it in the same group as *Euphranta*. Because of the presence of dorsocentral bristles and at least rudimentary sternopleural bristles, I am placing this in Euphrantini. I find no evidence of postocellars on the specimens at hand, Malloch makes no mention of these in his description and it is apparent that these are lacking in this genus. *Cyclopsia* then would be the only included genus in Euphrantini which lacks postocellar bristles and in this regard it would show much closer relationship to the Dacinae and to *Adrama*. The problem requires much more study, but it is now obvious that Euphrantini and at least genera like *Adrama* cannot be correctly considered as belonging in two separate subfamilies and it is more likely that they should be placed in the same Tribe.

*C. univittata* shows relationship to *inscripta* (Walker) (*C. inaequalis* Malloch, the type of the genus is a synonym. Refer to Hardy, 1959:176). It is differentiated by having a subhyaline wedge from the wing margin extending through cells 2nd  $M_2$  and  $R_5$  to vein  $R_{4+5}$ , not with the entire wing apex beyond m crossvein brown; by having the thorax and abdomen predominantly black with a median yellow vitta on the mesonotum and with yellow marks on the basal abdominal segments, rather than having the thorax brownish yellow. Mesonotum with two broad brown vittae, and abdomen reddish yellow.

♀. *Head*: Slightly higher than long, (fig. 7b) at the widest point the gena is less than the width of one eye, the upper two-thirds of the face is vertical, the lower margin is projected,

and rather distinct antennal furrows are present. Front polished black on upper portion directly beneath the median ocellus, this mark extending down median portion, two-thirds the length of front and pointed anteriorly. Vertex broadly yellow. Upper sides of occiput polished black, lower portion pale yellow. Genae and face yellow-white. First two antennal segments rufous, third rufous at base, otherwise black, about three times longer than wide and rounded at apex. Arista moderately plumose, the longest hairs are about half the width of the third segment. Palpi and mouthparts yellow, with short black setae on outside surface of each palpus. Two pairs inferior fronto-orbital bristles present, these are located close together near the lower portion of the front. One pair superior fronto-orbitals situated in the black mark near upper one-fourth of front. Ocellar bristles absent or rudimentary

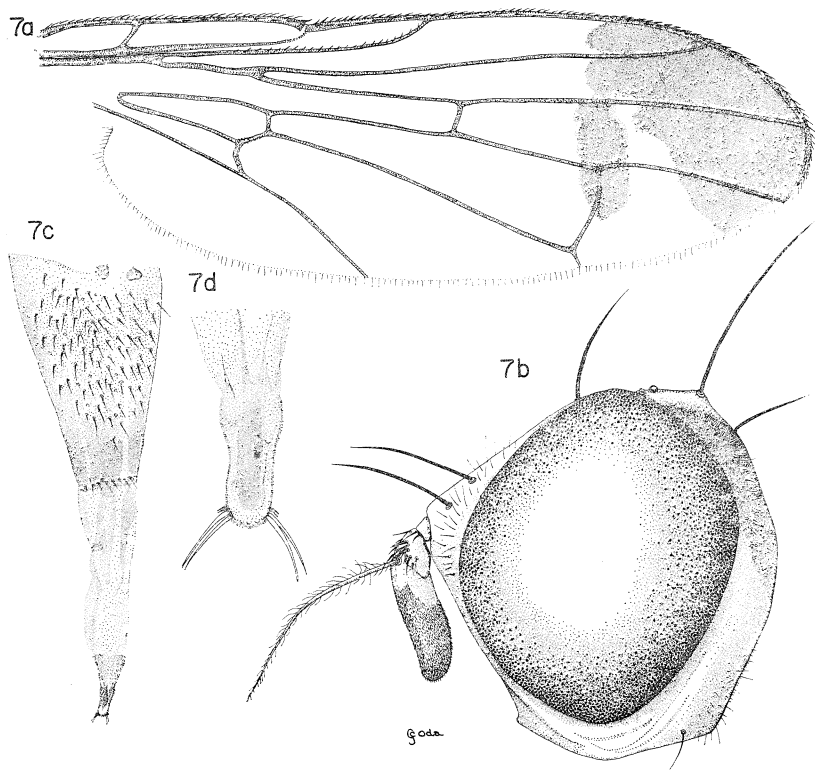


Fig. 7. *Cyclopsia univittata* n. sp.: a, wing; b, head; c, extended ovipositor; d, apex of piercer.

and no postocellars visible on the specimen at hand. Inner and outer vertical bristles are present. *Thorax*: Largely polished black, mesonotum with a prominent yellow mark extending from each notopleural callus a short distance along the suture, and with a median rufous vitta extending from anterior margin to slightly beyond a level with the supraalar bristles, this area is densely grey pollinose, almost obscuring the rufous ground color. Scutellum, humeri, propleura, prosternum and a large spot on mesopleura extending onto upper portion of sternopleura yellow-white. Halteres yellow-white. One pair of small dorsocentral bristles present, situated distinctly in front of the inner postalars and approximately one-fourth as long as the latter. Humeral, presutural, and prescutellar bristles lacking. Sternopleural bristles represented by a small pale seta which under high power can be differentiated as a rudimentary bristle. *Legs*: Mostly yellow, middle and hind tibiae and tarsi brown. Front tibiae and tarsi yellow, tinged faintly with brown. Femora slender. One strong apical spur present on middle tibia. *Wings*: Mostly hyaline, lacking brown or yellow markings in basal cells and in posterior portion of wings behind m crossvein. Cell Sc and most of cells  $R_1$  and  $R_3$  yellow. Apical portions of  $R_1$  and  $R_3$  brown, with this marking continuing around wing apex until upper third of cell 2nd  $M_2$  and continuing as a transverse band across the wing at m crossvein; also a narrow band of brown present along r-m crossvein (fig. 7a). Subcostal cell about four-fifths as long as second costal, r-m crossvein situated near middle of cell 1st  $M_2$  and lobe of cubital cell short, one-fifth to one-sixth as long as  $Cu_1 + 1st A$ . *Abdomen*: Mostly polished black on dorsum, thickly covered with short black setae. With a broad yellow mark extending from base, over basal two-thirds of second tergum and with sides of terga 1—3 yellow. Also, with sixth tergum yellow, faintly tinged with brown. Sterna 1 and 2 yellow; 3 yellow, tinged with brown; 4 and 5 are brown and 6 is yellow, tinged with brown at apex. The latter is less than half as long as 5. Conjunctiva pale yellow. Three tiny spermathecae present, two round and one oblong. Base of ovipositor rufous, tinged with brown at apex, as seen from dorsal view, the basal segment is approximately equal to terga 4—5, and measured on ventral margin the base is 1.5 mm. Piercer very short, weakly sclerotized and blunt at apex (fig. 7d), measuring .375 mm. in length. Extended ovipositor (fig. 7c) 3.0 mm.

Length: Body, without ovipositor, 7.0 mm.; wings, 6.0 mm.

♂. Unknown.

Holotype female, LUZON: Mt. Makiling, Mud Spring, Laguna, 1000', March 30, 1968 (D. E. Hardy). One paratype female. PALAWAN: Uring, Uring, Aug. 25, 1961, in malaise trap. Type in B.P. Bishop Museum. Paratype in the Zoological Museum, Copenhagen.

***Dimeringophrys bilineata* (Walker)**

*Dacus bilineatus* Walker, 1860, Proc. Linn. Soc. Lond. 4:150.

*Dimeringophrys ortalina* Enderlein, 1911, Zool. Jahrb. 31:452, fig. W.

Two specimens. TAWI TAWI: Tarawakan, Nov. 9—14, 1961.

***Elleipsa* new genus**

A remarkable Trypetinae on hand from Balabac Island, S. W. Philippines which fits in Euphrantini by having the pleuroterga covered with fine erect hairs, and the presutural bristles lacking. It differs from all known members of this Tribe by having the arista bare and in this regard would be like Trypetini. This genus also differs by lacking dorsocentral bristles, and by having rows of short, black, ventral spines on the middle and hind femora similar to *Callistomyia Bezzi*. These are not related. Other characteristics are as described below under the type of the genus.

Type of genus *E. quadrifasciata* n. sp.

***Elleipsa quadrifasciata* n. sp. (figs. 8a—b)**

♂. *Head*: Entirely rufous except for the dark reddish brown eyes, approximately one-third higher than long with occiput only slightly swollen. Compound eyes oval. Front sloping, antennae situated at or slightly below middle of head as seen in direct lateral view. Face almost vertical, and nearly flat with just a shallow furrow developed on each side. Antennae and mouthparts entirely yellow, third segment three times longer than wide, rounded at apex (fig. 8a). Palpi with short black setae around the margins. Three pairs inferior fronto-orbitals and one pair of superior fronto-orbitals, the latter are shorter than the inferior fronto-orbitals (fig. 8a). Ocellar bristles rudimentary or lacking. Postocellars moderately developed, about two-thirds as long as the superior fronto-orbitals. *Thorax*: Mesonotum with a broad black vitta extending down the median portion from the anterior margin between the outer scapular bristles almost to the hind margin, ending just beyond prescutellars. This area is densely grey polli-

nose and entire mesonotum is covered with short yellow recumbent setae. Sides of mesonotum broadly rufous in ground color, covered with grey pollen. Humeri, notopleura, and scutellum rufous to yellow. Scutellum with four strong reddish brown marginal bristles and almost devoid of setae, with only a few scattered hairs around the margin. Postscutellum and metanotum polished black. Pleura predominantly black in ground color covered with grey pollen and pubescence. Pleuroterga densely grey pubescent and with numerous erect yellow hairs over most of its surface. Halteres pale yellow. *Legs*: Yellow, tinged with brown on hind tibiae. All femora rather stout, middle and hind with short black posteroventral and anteroventral spines extending over apical half to two-fifths of the segment. Middle tibia with one strong apical spur. *Wings*: Predominantly hyaline with four brown bands: one from apex of subcostal vein extending to base of cell  $M_4$ ; a broad band across the wing at level of r-m and m crossveins; a narrow

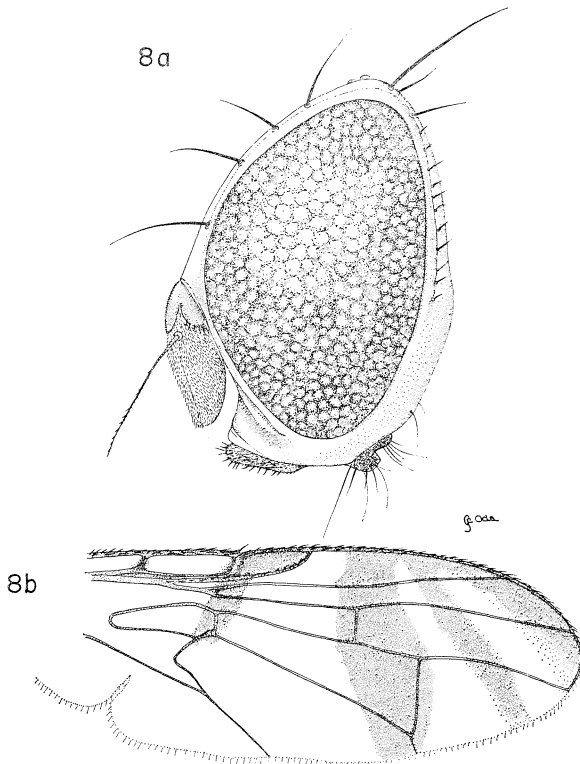


Fig. 8. *Elleipsa quadrifasciata* n. sp.: a, head; b, wing.

transverse band extending from about apical third of cell  $R_1$  across wing ending in hind margin before apex of cell 2nd  $M_2$  and with a costal band connected with the latter mark extending through the apical four-fifths of cell  $R_5$  (fig. 8b). Subcostal cell rather short, scarcely over half as long as second costal. The r-m crossvein situated near apical two-thirds of cell 1st  $M_2$  and lobe of cubital cell short, scarcely one-fourth as long as vein  $Cu_1 + 1st A$ . Vein  $R_{4+5}$  with only four or five setae at base, these do not extend much beyond a level with apex of subcostal vein. *Abdomen*: Rather clavate, gradually expanded, widest at segment four. Rufous except for black first tergum and narrow latero-basal margins of second tergum, yellow pilose on sides of first two terga, otherwise covered with reddish brown setae and with dark brown to black marginal bristles on the fifth tergum. The genitalia have not been studied.

Length: Body, 5.7 mm.; wings, 4.4 mm.

♀. Unknown.

Holotype male, BALABAC: Dalawan Bay, Oct. 7, 1961, in malaise trap. — In the Zoological Museum, Copenhagen.

***Euphranta (Euphranta) flavoscutellata* n. sp. (fig. 9)**

This species differs from all known *Euphranta* by the wing markings and body coloration. The wings are characterized by having the apex entirely hyaline; a broad dark brown mark extending across the apical two-fifths (excluding the hyaline apex); a tiny hyaline spot at apex of cell  $R_3$  and another hyaline spot on the margin in cell 2nd  $M_2$ ; also with a brown mark extending from subcostal cell across r-m crossvein into upper portion of cell 1st  $M_2$ ; thorax polished black in ground color with scutellum yellow, densely black setose.

♂. *Head*: Slightly higher than long, the front gently sloping.

fig.9

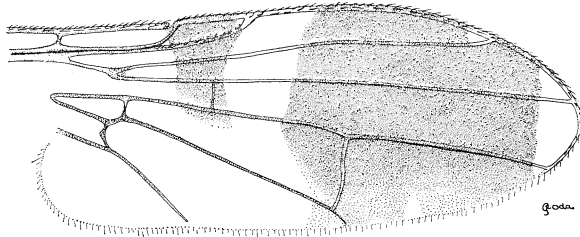


Fig. 9. *Euphranta (Euphranta) flavoscutellata* n. sp. wing.

Occiput black, except for anterobasal corners and ventromedian area. Front brown on upper two-thirds, yellow below, with a faint reddish brown tinge extending down median portion but not reaching front margin. Face entirely pale yellow, distinctly concave as seen from lateral view, with the epistomal margin projecting. Two pairs inferior fronto-orbitals present. Antennae yellow, third segment approximately three times longer than wide and rounded at apex. Arista long plumose; the longest hairs are equal or greater than the width of the third segment. Palpi yellow with black setae around the margin. *Thorax*: Predominantly polished black in ground color covered with grey pubescence, and with a tinge of yellow along the suture and in the ground color of the posterolateral margins. No definite pattern is present in the grey of the mesonotum although the area behind each humerus is broadly shining and the sides of the mesonotum behind the suture are subshining. Scutellum entirely yellow, densely black setose with a faint tinge of brown along the base. Postscutellum and metanotum polished black, lightly grey pubescent. Pleura dark brown to black, marked with yellow in the area around anterior spiracles, and with the prosternum yellow. The chaetotaxy is typical for the subgenus *Euphranta*. Halteres pale yellow *Legs*: Mostly yellow, each front femur with a large posterior preapical brown spot. Middle femur brown except for yellow apices and bases. Hind femur broadly yellow at base and apex with a broad brown band from near middle to about apical three-fourths. Middle and hind tibiae brown to black except for yellow apices. Middle tibia with one strong apical spur. *Wings*: As noted above and as in figure 9. The subcostal cell about two-thirds as long as second costal and r-m crossvein situated near basal two-fifths of cell 1st M<sub>2</sub>. Vein R<sub>4+5</sub> setose only at its base, the setae extend along the vein only to about a level with apex of subcostal vein. *Abdomen*: Second tergum and apical portion of 1st yellow over the entire median portion, brown to black on lateral margins. Remainder of abdomen polished black in ground color, lightly brown pubescent and thickly black setose. The genitalia have not been dissected for study. The epandria are polished black and the surstyli are yellow and are slender, straight sided.

Length: Body, 5.5 mm.; wings, 5.0 mm.

♀. Unknown.

Holotype male, BALABAC: Dalawan Bay, Oct. 7, 1961, in malaise trap — In the Zoological Museum, Copenhagen.

***Euphranta (Staurella) canangae* Hardy**

*Euphranta (Staurella) canangae* Hardy, 1955, Pac. Sci. 9:83, figs. 4a—d.

Two males, two females. TAWI TAWI: Tarawakan, Nov. 1, 1961, in malaise trap.

***Euphranta (Staurella) ferenigra* n. sp. (figs. 10a—b)**

Resembling *E. maculifemur* (de Meijere), from Sumatra, but differing by having the r-m crossvein situated at or slightly beyond middle of cell 1st  $M_2$  and distinctly beyond apex of vein  $R_1$ , rather than being near basal fourth of cell 1st  $M_2$  and distinctly before apex of  $R_1$ ; by the brown marking across wing from subcostal cell extending obliquely over r-m crossvein through upper two-thirds of cell 1st  $M_2$ , rather than extending as a straight mark to vein  $M_{1+2}$  but not covering over r-m crossvein; also by lacking a hyaline spot in apical two-thirds of cell  $R_1$  and in apex of cell 2nd  $M_2$  (fig. 10a). Compare with figure 9, de Meijere, 1924:39). The body markings are also very different in these species. *E. ferenigra* is superficially similar to *flavoscutellata* n. sp. but these belong to different subgenera.

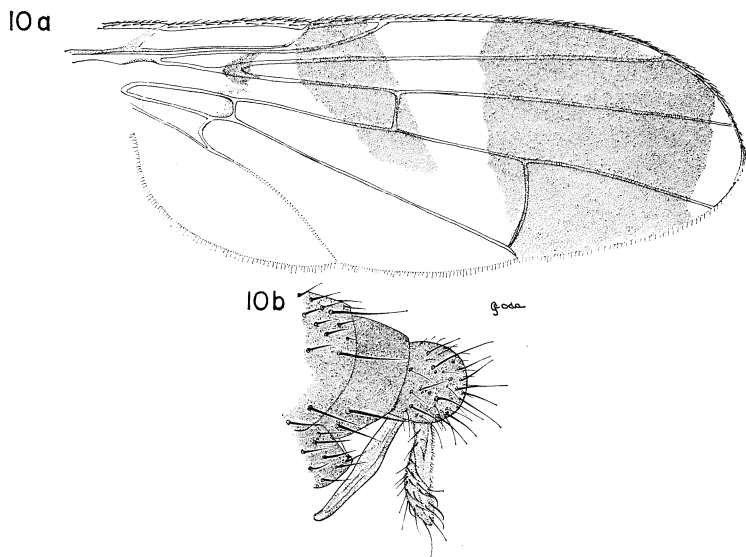


Fig. 10. *Euphranta (Staurella) ferenigra* n. sp.: a, wing; b, male genitalia.



♂. *Head*: Almost all dark brown to black, tinged with rufous in the ground color of the front, yellow over the vertex, and on upper portion of face and lower margin of front. Clypeus black, mouthparts brown, tinged with red, labella fringed with long pale hairs. Palpi brownish red with black setae around the margin. First two antennal segments rufous, tinged with brown. Third segment brown, three times longer than wide. Arista plumose, the longest hairs are almost equal in length to the width of the third segment. Three pairs inferior fronto-orbital bristles present. Front just slightly longer than wide. Eyes, oval, higher than long, and occiput only slightly swollen. *Thorax*: Entirely polished black in ground color, densely grey pubescent except for the yellow scutellum, the latter has a narrow brown basal margin. Scutellum almost devoid of setae, with only a few scattered hairs around margin. Halteres yellow. *Legs*: Predominantly black. Tarsi yellow, tinged faintly with brown and extreme apices of hind tibiae tinged with rufous. Middle tibia with one strong apical spur. *Wings*: As discussed above and as in figure 10a, with the apex broadly hyaline and with a tiny hyaline spot at apex of cell  $R_1$ . *Abdomen*: Approximately three times longer than wide. Densely grey pollinose, with terga 2 and 3 broadly yellow through the median portions, black on the sides; abdomen otherwise polished black in ground color. Epandrium polished black, globose in shape. Surstyli yellow to rufous, elongate, straight-sided, one-half to two-thirds longer than the epandrium (fig. 10b). Anal plates elongate, almost as long as surstyli.

Length: Body, 5.0 mm.; wings, 4.5 mm.

♀. Unknown.

Holotype male, BALABAC: Dalawan Bay, Oct. 10, 1961, in malaise trap. — In the Zoological Museum, Copenhagen.

#### ***Ptilona confinis* (Walker)**

*Rioxa confinis* Walker, 1857, Jour. Proc. Linn. Soc. Lond. 1:132.

One female. PALAWAN: Uring Uring, 16, 1961, in malaise trap.

#### ***Scolocolus* new genus**

A species on hand from Palawan, fits intermediate between Adramini and Euphrantini, but would best fit in the latter because of the presence of postocellar, dorsocentral, and prescutellar bristles. The pleuroterga are thickly covered with erect pale hairs, as in Euphrantini, and also *Adrama*. It differs from other known

Euphrantini by having anteroventral and posteroventral rows of preapical spines on front and middle femora; by lacking humeral and sternopleural bristles; and the arista short plumose (fig. 11c). The genus *Paraeuphranta* Hardy, based upon *furcifer* (Walker) (ref. Hardy, 1959: 173), also has ventral spines on the femora but these are confined to the front pair, also *Paraeuphranta* differs by having sternopleural and humeral bristles and having the arista long plumose, face concave in profile, 3 pairs inferior fronto-orbitals, as well as in other regards.

Wing markings and venation as in figure 11a. Genitalia as in figures 11e and 11f.

Type of genus *Scolocolus bicolor* n. sp.

***Scolocolus bicolor* n. sp.** (figs. 11a—h)

Differing from other Euphrantini by the characters given above. Superficially resembling *Lagarosia striatella* Wulp from Java but the wing markings, chaetotaxy, etc. are distinctive.

♂. *Head*: Entirely black except for the reddish eyes, a dull black vitta extending down the front to about level with upper inferior fronto-orbital bristles, and also a polished black spot on lower portion of each antennal furrow. The latter spots extend from anterior margin of face in an elongate triangle about two-fifths the length of face. The basal half of each palpus is black, the apical portion is yellow (giving rise to the name *bicolor*). The labella are brownish red and fringed with long yellow cilia. Front distinctly narrowed above, broadest at about level with anterior-inferior fronto-orbital bristles and narrowest just before the vertex. Measuring the width through the median portion and the length from median ocellus to anterior margin, the front is approximately two times longer than wide. Two pairs inferior fronto-orbital bristles present, the upper inferior fronto-orbital is rather widely spaced from the superior fronto-orbitals, the distance between these is two-thirds greater than the distance between inferior-orbitals. Head higher than long with face vertical as seen in direct lateral view and occiput, at its widest point, about two-thirds as wide as the eye (fig. 11c). Face very slightly raised down median portion. Antennae yellow to rufous, third segment about three times longer than wide and rounded at apex. Arista very short plumose, the longest hairs are only a fraction of the width of the third segment. *Thorax*: Mostly black in ground color densely grey pubescent. Mesonotum with a pair of narrow, shining black vittae

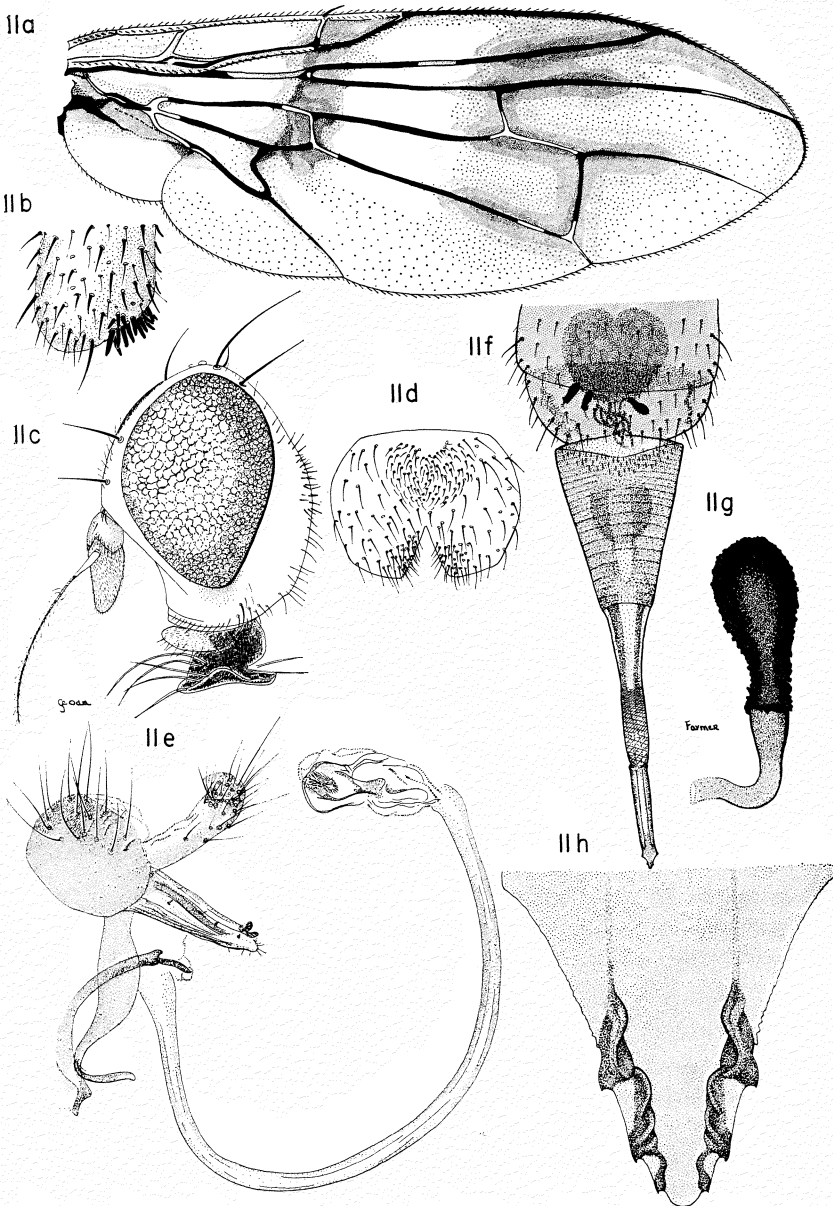


Fig. 11. *Scolocolus bicolor* n. sp.: a, wing; b, front tibia of male; c, head; d, fifth sternum of male; e, male genitalia; f, extended ovipositor; g, spermatheca of female; h, apex of piercer.

extending in the dorsocentral line from just before dorsocentrals to a line drawn between posterior third of humeri. Mesonotum otherwise black in ground color, obscured by the grey pollen, except for a yellow line, continuous with the yellow humeri, extending posteriorly over and along the suture covering all except anterior edge of notopleural callus; with a small isolated brown spot behind each suture, continuous over posterolateral margins to hind margin of sclerite. Lateral margins of mesonotum beneath notopleural bristles, narrowly black. Scutellum black covered with grey pubescence on the disc, yellow around margin and on venter. Postscutellum, metanotum and pleuroterga black in ground color, densely grey pubescent; the latter thickly covered with erect yellow hairs. Propleura, anterior portion of each mesopleuron, behind the spiracle, and the posterior portion behind the episternal suture yellow, also yellow on upper portion of pteropleuron and posteroventral and narrow posterior border of sternopleuron. Upper edge of each mesopleuron with a rather broad white stripe, extending to base of humerus, also metapleura largely white. Pleura otherwise black covered with grey pubescence. Halteres pale yellow-white. Dorsocentral and prescutellar bristles rather short, approximately half as long as inner postalar bristles. Four strong scutellar bristles present. Scutellum flat with sparse setae around margins. *Legs:* Largely yellow, middle and hind coxae dark brown. Front tibia with a black line extending down the posterior surface and a brown line extending down the anterior surface. Front femur with a small brown posterior spot near apical two-thirds. Front basitarsus brown. Middle femur brown on ventral surface and hind with a preapical ring of brown. Front femur with about five prominent posteroventral spines before the apex and a row of small anteroventral preapical spines. Middle femur with four to five preapical spines in each of the anteroventral and posteroventral rows. Middle tibia with one strong apical spur. Front tibia with a cluster of short, thick, black spines on anteroventral surface at the apex (fig. 11c). *Wings:* Largely hyaline with a prominent dark brown to black crossband extending from subcostal cell to upper basal portion of cell  $M_4$ . Also, with a broad brown band extending across apical third of wing, covering the area occupied by the r-m and m crossveins, and also continuing around the margin as a very narrow band extending to apex (fig. 11a). The r-m crossvein situated near apical fourth of cell 1st  $M_2$  and

cubital cell with a short pointed lobe at apex. *Abdomen*: Largely black, densely grey tomentose and covered with yellow setae, apical two-thirds of fifth tergum shining black. Terga 1—4 with a yellow mark on each side on posterior margin. Fifth tergum entirely black. Abdomen rather elongate, almost straight sided, three times longer than wide. Fifth sternum about as wide as long with a deep narrow cleft extending half the length of the sclerite on the hind margin (fig. 11d). Male genitalia as in figure 11e. Epandrium almost globose and surstyli slender, straight sided, rather truncate at apices. Ejaculatory apodeme very slender, not at all expanded.

Length: Body, 9.2 mm.; wings, 8.0 mm.

♀. Fitting the description of the male in most respects with broad yellow posterolateral markings on second tergum and narrow yellow markings on terga 3—5. Fifth tergum entirely polinose. Sixth tergum subshining dark brown to black, about three-fifths as long as fifth. Basal segment of ovipositor dark brown, tinged with rufous and as seen from dorsal view about equal in length to terga 5—6. Three spermathecae, these are clavate in shape (fig. 11g). Ovipositor as in figure 11f. Basal segment measures 1.75 mm. Piercer rather short, distinctively pointed and serrated at apex as in figure 11h, 1.2 mm. long. Extended ovipositor 4.4 mm.

Holotype male, allotype female and eight paratypes, six males, two females, PALAWAN: Tagembung, 1150 m., Sept. 17—20, 1961. — Type, allotype and some paratypes in the Zoological Museum, Copenhagen. Other paratypes in the U. S. National Museum, B.P. Bishop Museum, and the University of Hawaii.

***Stauroceros imitator* n. sp.** (figs. 12a—b)

This species is very close to *Staurella circumscripta* Hering (1941), from the Lesser Sunda Islands and is differentiated by having only two inferior fronto-orbital bristles, not three; by having the thorax and abdomen entirely rufous except for a clear yellow median vitta extending down the mesonotum from suture to apex of scutellum, and a white mark extending along upper edge of each mesopleuron over the humerus; not with mesonotum and abdomen conspicuously marked with black. Also by having the basal segment of the ovipositor rufous except for a brownish tinge at apex, and equal in length to terga 3—5; not brown to

black, tinged with rufous and about as long as abdomen. The wing markings are very similar in the two, I see no differences which appear to be of significance. This is also close to *flavina* (Hering) from New Guinea and Bismarck Islands, but differs by having the head distinctly longer than wide, much more distinctly narrowed in front as seen in direct lateral view; by having a large black spot occupying the middle of the front and a prominent pale yellow median vitta extending down mesonotum from suture over apex of scutellum.

The genus *Staurocneros* Hering was erected, with *Staurella circumscripta* Hering as type, to differentiate those species of *Staurella* (I treat this as a subgenus of *Euphranta*) which have the subcostal cell elongate, equal in length to the second costal cell. Hering also included other characteristics which I have found to be trivial and of no value. I also question the value of the length

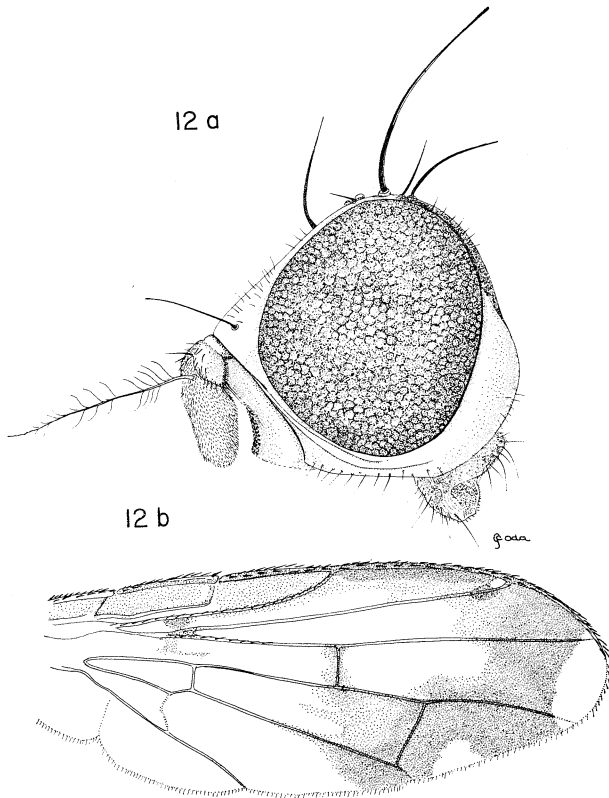


Fig. 12. *Staurocneros imitator* n. sp.: a, head; b, wing.

of the subcostal cell in this particular case and I am discussing this in my monograph of the Philippine Tephritidae, *in press*. The new species on hand has such a distinctive head shape (fig. 12a), that I am treating it under *Staurocneros*. The status will be discussed in the Philippine study. The head shape has not been recorded for the type of the genus. Hering made no mention of it and this may not be a generic character.

♂. *Head*: Longer than high, distinctly narrowed anteriorly as seen in lateral view. The height measured at about level with the vertex is almost two times the height measured along the front margin (fig. 12a). As seen from dorsal view, head broad, distinctly wider than the front portion of the thorax. Front rather broad, not much longer than wide and yellow with a large oblong median spot extending between the upper pair of inferior fronto-orbitals from ocellar triangle to lower two-thirds of front. Face yellow with a polished black spot in middle just above epistoma. A large shining black spot also occupies each side of upper occiput. Occiput slightly swollen, at widest point about half the width of the eye. Compound eyes almost circular. Antennae yellow, third segment about twice as long as wide, rounded at apex. Arista plumose, the longest hairs are about four-fifths the width of the third segment. Three pairs inferior fronto-orbitals present with the second pair rudimentary, hair-like, and not clearly differentiated. Lower inferior fronto-orbitals situated just above lower margin of front and upper pair situated near upper two-thirds of front and just slightly in front of superior fronto-orbitals. Ocellar bristles rudimentary, postocellars short but distinct. *Thorax*: Shaped as in *Euphranta* (*Staurella*) and with strong dorsocentral and prescutellar bristles. Entirely rufous except for the yellow vitta extending down middle of mesonotum from about level of anterior notopleural bristle over middle of scutellum and with a white band extending along upper margin of each pleuron over humerus. With a tinge of brown on anterior margin of mesonotum in the areas between the inner and outer scapular bristles and with a pair of faint longitudinal streaks of brown extending over the metanotum. *Legs*: Entirely yellow, each middle tibia with a single strong apical spur. *Wings*: As in figure 12b. Median portion largely hyaline, with brown markings extending from base of second costal cell around wing margin to apex of cell  $R_3$ ; with a broad brown band extending across the wing at this point,

leaving a large hyaline apical spot extending to hind margin of wing, along vein  $M_{3+4}$  over the m crossvein, to wing margin, with an isolated hyaline spot on margin on cell 2nd  $M_2$  in the female (fig. 12b) and with 2nd  $M_2$  entirely brown in the male. Vein  $R_1$  extending slightly beyond a level with the r-m crossvein so the subcostal cell is equal or slightly longer than 2nd costal cell. Vein  $R_{4+5}$  is setose from the base about half the distance to r-m crossvein. The lobe at apex of cubital cell is short and pointed. *Abdomen*: Entirely rufous, lacking any dark markings except for the shining black epandrium of the genitalia. Abdomen straight sided and slender, about four times longer than wide. The genitalia have not been dissected for study.

Length: Body, 6.0 mm.; wings, 5.0 mm.

♀. Fitting the description of the male in most respects. Basal segment of ovipositor rufous except for a tinge of brown at apex and about equal in length to terga 3—5. The piercing structures have not been extended for study.

Holotype male and allotype female, BALABAC: Dalawan Bay, Oct. 11, 1961, in malaise trap. — In the Zoological Museum, Copenhagen.

#### Tribe GASTROZONINI

##### **Enicoptera spoliata** Hering

*Henicoptera spoliata* Hering, 1937, Phil. Jour. Sci. 63(1):106, figs. 1a-b.

One female, MINDANAO: Sapamoro, Dec. 18, 1961, in malaise trap.

#### Tribe TRYPETINI

##### **Acidiella denotata** n. sp. (figs. 13a—b)

This species rather closely resembles *A. tumifrons* Chen, from Chekiang, China, but is differentiated by having the dorsocentral bristles situated rather near the postalar bristles rather than just slightly behind the supraalars; by having the subcostal cell almost entirely brown rather than predominantly hyaline and by having small hyaline spots on wing margin just beyond middle of cell  $R_1$ , in middle of cell 2nd  $M_2$  and in middle of cell  $M_4$ , rather than having large hyaline spots in these cells; and also by lacking a hyaline spot at upper apex of cell 2nd  $M_2$  (compare figure 13a with figure 14, Chen, 1948:114). Also, the front is not swollen and produced above the antennae as in *tumifrons* (it should be noted



that *tumifrons* was described from the male and this may be a sexual character).

♀. *Head*: Entirely yellow, except for the eyes, similar in shape and most respects to that of *freyi* n. sp., with three pairs inferior fronto-orbitals and two pairs superior fronto-orbitals. Ocellar bristles slightly smaller than postocellars. *Thorax*: Entirely yellow covered with grey tomentum on the dorsum and thickly pale setose. Humeri, and a line along upper mesonotum extending to wing base, white. Scutellum concolorous with mesonotum, bare on the disc and with short yellow-brown setae along sides in addition to the four strong black bristles. All thoracic bristles black. Postscutellum dark brown to black covered with grey pubescence. Metanotum reddish brown. Propleura rather thickly yellow setose. *Legs*: Yellow, densely setose, middle tibia with one strong black apical spur. *Wings*: Predominantly dark brown with small hyaline spots around margin as in figure 13a. Subcostal cell slightly over half as long as second costal. The r-m crossvein is situated at about apical two-thirds of cell 1st  $M_2$  and lobe of cubital cell short, one-sixth to one-eighth as long as  $Cu_1+1st A$ . The r-m and m crossveins approximately parallel. Vein  $R_{4+5}$  setose almost to a level opposite the m crossvein. *Abdomen*: Mostly yellow-brown, darker down the median portions of the terga, yellow on sides of all terga. Sixth tergum almost as long as fifth. Entire abdomen densely yellow-brown setose. Base of ovipositor brownish red, about equal in length to fifth tergum and about .75 mm. long. Piercer short and thick, shaped very much like that of *freyi* but narrower and with fewer serrations on the margins (fig. 13b). Piercer .3 mm. long. Extended ovipositor 1.25 mm. long.

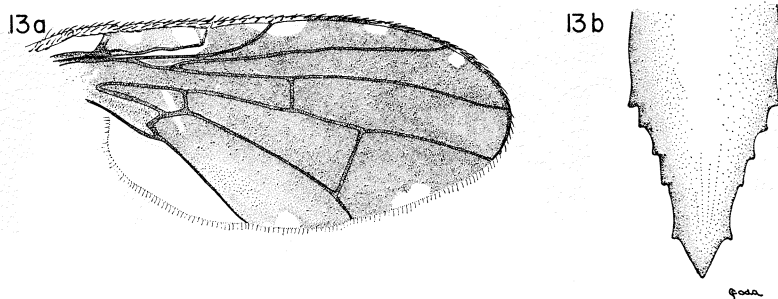


Fig. 13. *Acidiella denotata* n. sp.: a, wing; b, apex of piercer *in situ*.

Length: Body, excluding ovipositor, and wings, 6.0 mm.

♂. Unknown.

Holotype female, PALAWAN: Uring Uring, Aug. 17, 1961, in light trap. One female paratype, PALAWAN: Pinigisan, 600 m., Sept. 17, 1961, in malaise trap, inside forest. — Type in the Zoological Museum, Copenhagen. Paratype in the University of Hawaii collection.

***Acidiella freyi* n. sp. (figs. 14a—d)**

This species fits the characteristics of *Acidiella* but differs from any previously described species by having one large wedge-shaped mark in the middle of anterior margin of the wing and a large elongate hyaline spot extending through the area between the r-m and m crossveins (fig. 14b).

♀. *Head*: Higher than long, with the occiput gently swollen on the lower portion, at its widest point approximately half the width of the eye (fig. 14a). Eyes oblong, almost one-third higher than long. Head yellow to rufous except for reddish brown eyes, and except for a tinge of brown on the genae. Three pairs of inferior fronto-orbitals. Interfacial area rather thickly setose. Ocellar bristles moderately developed, about equal in size to postocellars. Face gently concave medianly as seen from lateral view, the epistomal margin produced, especially on the sides; median portion of face almost flat. Genae rather densely short setose. Antennae yellow to rufous. Third segment approximately three times longer than wide, rounded at apex. Arista short pubescent. *Thorax*: Largely yellow, tinged reddish brown in ground color of the dorsum, entirely subshining, thickly reddish to black setose on the dorsum, yellow setose on the sides. Humeri white and with a white mark extending along upper mesonotum connecting with the notopleural callus. Scutellum white, tinged faintly with yellow, completely bare except for the four strong black bristles. Postscutellum yellow, metanotum and pleuroterga rufous, tinged faintly with brown. All thoracic bristles black, propleura with three brown to black bristle-like setae on the front margin, and with a number of yellow hairs scattered over the sclerite. *Legs*: Entirely yellow, densely setose, with rows of posteroventral and posterodorsal setae (small bristles) on front femur and a prominent row of anterodorsal setae on hind tibia. Middle tibia with one strong apical spur. *Wing*: Predominantly brown with large hyaline marks as in figure 14b. The r-m crossvein situated near apical

three-fourths of cell 1st  $M_2$  and m crossvein slightly bent, convergent to r-m. Lobe of cubital cell approximately one-fourth as long as  $Cu_1 + 1st A$ . Subcostal cell about half as long as second costal. Wings rather slender, tapered slightly on posteroapical margin, about three times longer than wide. Vein  $R_{4+5}$  with four setae arranged near base and usually with one seta beyond, approximately opposite tip of vein  $R_1$ . *Abdomen*: Mostly yellow, rather thickly black setose, with a broad brown band on each of terga 3 and 4, and with lateral margins of terga 3—6 brown. Two oblong spermathecae present. Sixth tergum approximately two-thirds to three-fourths as long as fifth. Basal segment of ovipositor shining brown to black. As seen from dorsal view, the basal segment is

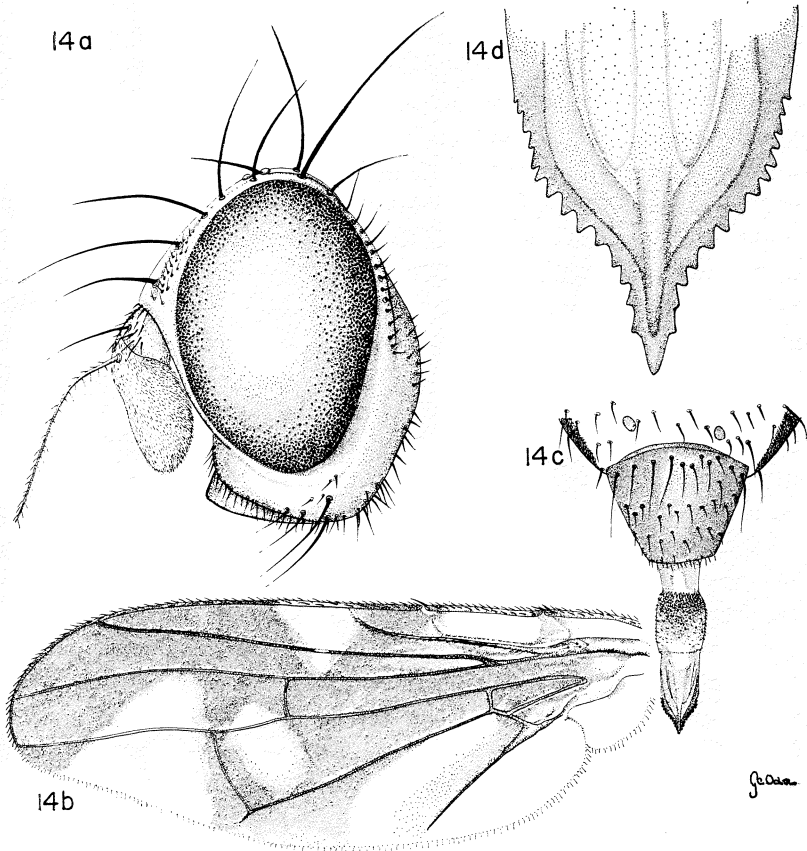


Fig. 14. *Acidiella freyi* n. sp.: a, head; a, wing; c, extended ovipositor; d, apex of piercer.

approximately equal to the fifth tergum, is just slightly longer than wide, and measures approximately .7 mm. Piercer short and thick, tapered to a sharp point at apex and with numerous serrations along the tapered margins (fig. 14d). Piercer .5 mm. long by approximately .19 mm. at its widest point. Extended ovipositor (fig. 14c) 1.2 mm.

Length: Body and wings, excluding ovipositor, 5.4 mm.

♂. Unknown.

Holotype female, LUZON: Banahao, April, 1914 (from the Frey Collection, Helsinki). One paratype female, TAWI TAWI: Tarawakan, Nov. 8, 1961, in malaise trap. — Type in the Zoological Museum, Helsinki. Paratype in the Zoological Museum, Copenhagen.

***Acidoxantha balabacensis* n. sp.** (figs. 15a—d)

This species resembles *A. punctiventris* Hendel, from Formosa, but differs by having four prominent black spots on the fourth tergum of the male and having the lower portions of metapleura and hypopleura marked with black. It appears most closely related to a new species being described from Laos, but differs by having the Y-shaped marking through the middle of the wing much narrower, with the width of stem of the Y in cell 1st  $M_2$  about equal to the length of the r-m crossvein and with the anterior arm of the Y narrower, leaving a large elongate hyaline spot occupying the basal three-fifths to two-thirds of cell  $R_5$  (from base of  $R_5$  at junction of vein  $R_{4+5}$  with  $R_{2+3}$ , three-fifths to two-thirds distance to r-m crossvein). In the species from Laos, the Y-shaped mark through the middle of the wing is very broad and in middle of cell 1st  $M_2$  the width is almost equal to the length of the m crossvein and about two times longer than r-m crossvein. The anterior arm of the Y nearly fills the basal portion of cell  $R_5$ . Also in *balabacensis* the costal band fills all of the apex of cell  $R_5$  and is rather broad (fig. 15a), while in the species from Laos the costal band is very narrow in wing apex and does not fill the apex of cell  $R_5$ . Otherwise fitting the description of other species of *Acidoxantha*, these are all very much alike in body coloring and wing markings. I see no distinctive features in the male genitalia. Wings as in figure 15a. Genitalia as in figure 15b. Abdominal terga 4 and 5 each with two submedian basal black spots and two posterolateral black spots. Mesonotum with a narrow brown mark on hind margin behind each prescutellar bristle. Female with a

pair of conspicuous submedian basal spots on terga 4 and 5, and with a tiny pair of submedian basal spots on tergum 6. Fifth tergum with a small inconspicuous posterolateral spot on each side and sixth with a rather prominent pair of posterolateral spots (fig. 15c). The basal segment of the ovipositor is almost straight sided, thick, rather bulbous, and as seen from direct dorsal view almost equal to the length of the last three terga. The base is 1.4 mm. long by 0.6 mm. wide. The piercer measures 2.7 mm.

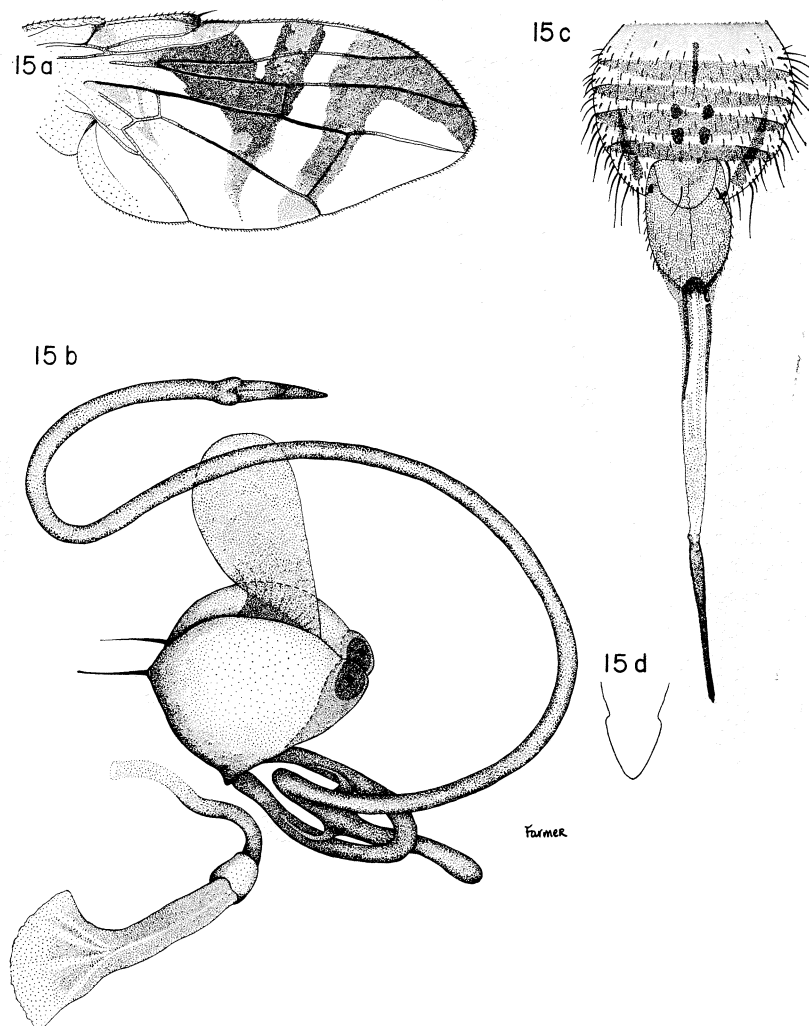


Fig. 15. *Acidoxantha balabacensis* n. sp.: a, wing; b, male genitalia; c, abdomen and ovipositor of female; d, piercer of female.

and the tip is developed into a distinct spear head (fig. 15d). The extended ovipositor (fig. 15c) measures 6.7 mm.

Length: Male, body, 5.5 mm.; wings, 5.0 mm.; female, body, 6.0 mm.; wings, 5.5 mm.

Holotype male, allotype female, and seven paratypes, one female, six males, BALABAC: Dalawan Bay, Oct. 8, 1961. — Type, allotype and two paratypes in the Zoological Museum, Copenhagen. Other paratypes in the B. P. Bishop Museum and the University of Hawaii.

#### **Acidiella longipennis** Hendel

*Acidiella longipennis* Hendel, 1915, Ann. Mus. Nat. Hung. 13:457.

Four females, PALAWAN: Uring Uring, Aug. 14, 1961, in light trap; Pinigisan, 600 m., Sept. 3—9, 1961, in malaise trap, outside forest.

#### **Neanomoea** n. sp.

One male, TAWI TAWI: Tarawakan, Nov. 16, 1961, in malaise trap.

Being described in Philippine monograph in preparation.

#### **Vidalia tuberculata** n. sp. (figs. 16a—b)

The species on hand fits the genus *Vidalia* because of the presence of only one pair of superior fronto-orbital bristles and by the wing venation and markings. It differs from most species in this genus by lacking the long processes developed from the front, but it does show the beginning stage of this development. The front is carinate on each side, and the upper inferior fronto-orbital bristle is situated on a rather prominent tubercle (fig. 16a). This would appear to fit nearest *V. bidens* Hendel from Formosa, the wing markings are almost identical in the two. It differs by having the head almost normal in shape with the sides of the front slightly raised and with just a small tubercle at base of upper superior fronto-orbital bristle, rather than having both pairs of the inferior fronto-orbitals situated on very prominent tubercles and the bristles large and flattened. In *bidens* the upper inferior fronto-orbitals are nearly two times longer and more than twice as broad as the inner vertical bristles. In *tuberculata* the upper inferior fronto-orbital bristle is just slightly longer and slightly thicker than the inner vertical and the lower inferior fronto-orbital is comparatively small, not noticeable thickened or flat, and less than two-thirds as long as inner verticals.

♂. Head: Slightly higher than long, with the occiput only scarcely produced as seen in lateral view, and the front gently sloping so that the antennae are situated at the middle of the head (fig. 16a). Head entirely yellow, except for the reddish brown compound eyes and the black ocellar triangle. Face nearly vertical, only slightly raised down the median portion. Front narrowing anteriorly, the width measured just below median ocellus is one-third greater than the width measured just above antennae. At the broadest point, the front is as wide as long. Lateral margins gently carinate, median portion flat, smooth, devoid of setae. Bristles arranged as in figure 16a. One pair of small superior fronto-

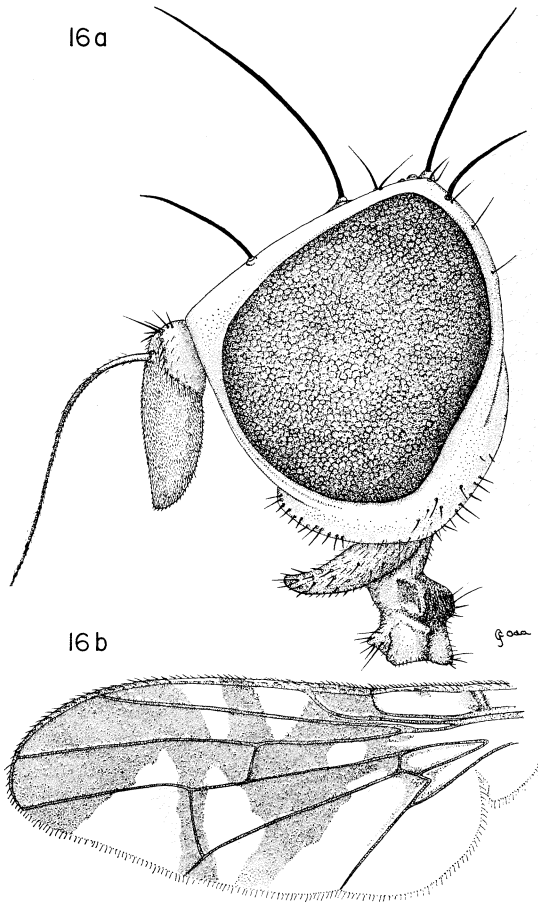


Fig. 16. *Vidalia tuberculata* n. sp.: a, head; b, wing.

orbitals, these are rather hair-like and approximately equal in size to postocellar bristles. Also, a prominent seta (rudimentary bristle) is present immediately above the upper inferior fronto-orbital. Ocellar bristles rudimentary, seta-like. Antennae yellow, third segment about two times longer than wide and rounded at apex. Arista nearly bare. Palpi yellow, with few scattered black setae around the margins. *Thorax*: Yellow to rufous in ground color with humeri yellow-white. Notopleura and scutellum white. Propleura with prominent yellow setae, thoracic bristles black. Scapulars well developed. Dorsocentrals situated almost in line with supraalars. *Legs*: Yellow, middle tibia with one strong apical spine. *Wings*: Marked as in figure 16b, with two hyaline wedges on costal margin beyond apex of vein  $R_1$ , these extend to vein  $R_{4+5}$ . Also with a prominent hyaline wedge from wing margin through cell 2nd  $M_2$  two-thirds the distance to cell  $R_5$  and another wedge from margin near apex of  $M_4$  through 1st  $M_2$  into part of cell  $R_5$ . Also with a large hyaline spot near basal portion of cell 1st  $R_5$ . The r-m crossvein situated near apical three-fourths of cell 1st  $M_2$ . Lobe of cubital cell approximately one-third as long as vein  $Cu_1 + 1st A$ . Vein  $R_{4+5}$  setose to the r-m crossvein. *Abdomen*: First three terga entirely yellow; terga 4—5 polished black. Epan-drium polished black; surstyli yellow, long and narrow. The genitalia have not been dissected for detailed study.

Length: Body, 3.9 mm.; wings, 3.6 mm.

♀. Unknown.

Holotype male, BALABAC: Dalawan Bay, Oct. 8, 1961, in light trap. — In the Zoological Museum, Copenhagen.

#### Subfamily SCHISTOPTERINAE

##### ***Rhabdochaeta bakeri* Bezzi**

*Rhabdochaeta bakeri* Bezzi, 1913, Phil. Jour. Sci. D, 8:328.

One male. TAWI TAWI: Lapid Lapid, Nov. 21, 1961.

##### ***Rhabdochaeta dorsosetosa* n. sp. (figs. 17a—b)**

This species fits near *senior-whitei* Bezzi, from Ceylon because of the narrow dark rays in the anterior portion of the wing and the presence of presutural dorsocentral bristles on the mesonotum. It differs by having four pairs of dorsocentral bristles, two presutural in position, rather than three pairs of dorsocentrals and one presutural pair; by having the mesonotum uniformly black, not



with a broad stripe down the middle; by having the hyaline mark from the wing margin in cell  $R_3$  extending uninterrupted into upper portion of cell 2nd  $M_2$ , rather than being interrupted by a brown mark in cell  $R_5$ ; and by having only two shining red bullae in the middle of the wing, rather than three. The presence of two extra pairs of marginal setae on the scutellum is also probably diagnostic. This species would also fit near *centralis* Hendel, from Formosa but differs by having the four pairs of dorsocentral

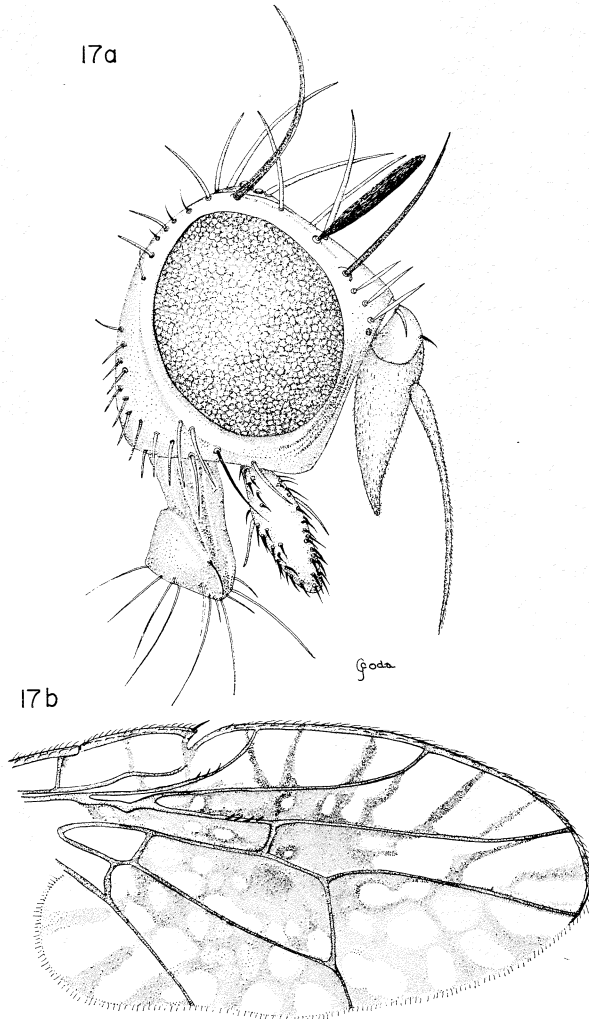


Fig. 17. *Rhabdochaeta dorsosetosa* n. sp.: a, head; b, wing.

bristles and by having an isolated brown streak through apex of cell  $R_5$ .

♂. *Head*: Slightly broader than thorax as seen directly from above, and as seen in lateral view approximately as long as high. Compound eyes oval. Entirely yellow-grey except for the compound eyes and except for a dark mark in ground color of median portion of occiput. Front broad, distinctly wider than long and greater in width than one compound eye as seen from above. Face concave medianly as seen in lateral view and raised down the median portion. Front with four pairs of inferior fronto-orbital bristles, the upper bristle is black, flat and scale-like. The second bristle from the top is dark colored. The lower bristles are white. Two pairs superior fronto-orbitals, the lower is yellow-brown and situated almost opposite the upper inferior fronto-orbital. Also, with a pair of white bristles situated in the middle of the front in line with the ocellar triangle. Ocellar bristles strong and white, also postocellars white, inner vertical bristle yellow-brown, well developed; outer vertical short, white, about equal in size to postocular setae. Antennae yellow, third segment long-pointed as in figure 17a. One black bristle present on each gena, about equal in length to fronto-orbitals. *Thorax*: Dark brown to black in ground color over most of the dorsum, yellow on lateral margins and densely grey pollinose with a rather thick covering of flat scale-like yellow setae over the mesonotum. Scutellum yellow, postscutellum yellow-brown in ground color covered with grey pollen. Metanotum shining black in ground color densely grey pollinose over the upper portion, polished black below. Pleura predominantly brown to black in ground color with propleura yellow except for a brown spot immediately below each humerus, anterior and dorsal margins, also posteroventral portion of each sternopleuron yellow. Halteres pale yellow-white. The two pairs of presutural dorsocentrals are white, the postsutural dorsocentrals are yellow-brown. Scutellum with four strong bristles, the lateral bristles yellow-brown, the dorsoapical bristles yellow-white, also with a pair of smaller cruciate white setae immediately posterior to the dorsoapical bristles and with one or two prominent white setae on each side. *Legs*: Mostly yellow, middle femur with two brown ventral spots, one near basal fourth and one near apical two-thirds. Middle tibia with a narrow brown band near basal one-fourth of segment. Hind femur with a preapical brown mark

extending over postero-ventral and anterior margins and with a corresponding brown ring near base of hind tibia. One prominent apical spur on middle tibia. *Wings*: As in figure 17b, with only two shining red areas in the middle. *Abdomen*: Brown to black on the sides with a broad yellow mark extending down the middle from near base of first tergum to apex. The brown to black marking on the sides is opaque grey except on the fifth tergum where a polished brown preapical mark is present on each side. A pair of preapical, dorsal, white bristles is present in the middle of terga 2—5. Genitalia yellow, these have not been dissected for study.

Length: body and wings, 2.0 mm.

♀. Fitting the description of the male in most respects. Sixth tergum well developed, one-half longer than the fifth, and with a polished dark brown to black crescent-shaped mark in the middle portion, with the points directed posteriorly. Ovipositor yellow, basal segment about .8 mm. long. The piercer has not been extended for study.

Holotype male, allotype female, one male paratype, PALAWAN: Pinigisan, 600 m., Sept. 8, 1961. — Type and allotype in the Zoological Museum, Copenhagen. Paratype in the University of Hawaii collection.

#### **Rhabdochaeta multilineata** Hering

*Rhabdochaeta multilineata* Hering, 1941, Arb. Morph. Taxon. Ent. Berlin 8(1):44, fig. 14.

One male. BALABAC: Dalawan Bay, Oct. 7, 1961.

### Subfamily TEPHRITINAE

#### Tribe PLATENSINI

#### **Platensina zodiacalis** (Bezzi)

*Tephritis zodiacalis* Bezzi, Mem. Ind. Mus. 3:163, pl. X, fig. 65.

One male. TAWI TAWI: Lapid Lapid, Nov. 21, 1961.

#### Tribe TEPHRITINI

#### **Dioxyna sororcula** (Wiedemann)

*Trypeta sororcula* Wiedemann, 1830, Aussereur. Zweifl. Ins. 2:509.

Two specimens. PALAWAN: Pinigisan, 600 m. Sept. 6—7, 1961.

**Scedella sinensis** (Schiner)

*Sphenella sinensis* Schiner, 1868, Reise Österr. Freg. Novara.  
Zool. 2(1):267.

Three specimens. TAWI TAWI: Tarawakan, Nov. 18, 1961.

**Tephritis formosella** (Hendel)

*Euribia formosella* Hendel, 1915, Ann. Mus. Nat. Hung. 13:465, fig. 20.

One male. PALAWAN: Uring Uring, Aug. 13, 1961.

**Trupanea glauca** (Thomson)

*Trypeta glauca* Thomson, 1869, Dipt. Eugen. Resa. p. 581.

Two specimens. MINDANAO: Sapamoro, Dec. 19, 1961. —  
TAWI TAWI: Lapid Lapid, Nov. 21, 1961.

**Trupanea decepta** n. sp. (fig. 18)

This species fits near *T. ambigua* Shiraki, from Formosa, but differs by having the subcostal cell short, less than half the length of the second costal cell, rather than costal cell comparatively elongate, two-thirds as long as second costal; by having the thorax yellow to rufous in ground color, except for brown discoloration over the posterior portion of the mesonotum, rather than having the thorax almost entirely black in ground color; also the wing markings differ as shown in figure 18, compared with figure 5, Shiraki, 1933, pl. 13.

♂. *Head*: Yellow except for the dark-colored eyes and a tinge of brown on hind portion of occiput. Front with a faint tinge of brown in the ground color and densely grey pollinose. Head approximately as long as high, front gently sloping so the antennae are situated at the middle of head as seen in direct lateral view. Occiput gently swollen, at its widest point approximately two-fifths the width of the eye. Eye oblong, narrower on upper portion,

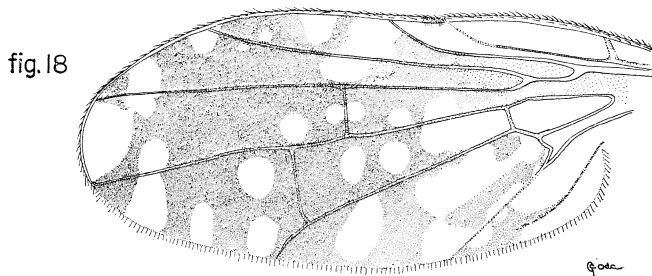


Fig. 18. *Trupanea decepta* n. sp.: wing.

broadly rounded below. Genae rather broad, at widest point about one-fifth the height of eye. All head, and body, bristles yellow with a faint tinge of brown. Three pairs of inferior fronto-orbitals and two pairs superior fronto-orbitals, these are comparatively short, only about two times longer than squamose white postocular setae on the occiput. Antennae yellow, third segment short, scarcely longer than wide. Arista short pubescent. Palpi with numerous yellow hairs on ventral margins and with brown to black setae at apices. *Thorax*: Yellow-red in ground color, brown on posterior portion of mesonotum, tinged with brown on upper portion of pteropleura and brown to black on metanotum except for rufous tinge down median portion. Mesonotum yellow-grey pubescent, thickly covered with flat, recumbent pile. Humeri pale yellow. Scutellum sparsely setose with flat, scale-like setae around margins, and with two strong yellow bristles. Dorsocentral bristles situated distinctly in front of a line drawn between supraalars. *Legs*: Entirely pale yellow. *Wings*: Hyaline basally, largely dark brown over apical half with hyaline spots around the margin and in the field as in figure 18. The r-m crossvein situated near apical four-fifths of cell 1st  $M_2$  and cubital cell with a very short point at lower apex. Only vein  $R_1$  setose, others bare. *Abdomen*: Predominantly yellow, tinged with brown at apices and at median portions of terga. The genitalia have not been relaxed for study.

Length: Body, 5.0 mm.; wings, 4.75 mm.

♀. Unknown.

Holotype male, PALAWAN: Uring Uring, Aug. 17, 1961, in light trap. — In the Zoological Museum, Copenhagen.

## 2. Species from the Bismarek Islands

### Subfamily DACINAE

#### Tribe ADRAMINI

#### *Adrama rufithorax* Malloch

*Adrama rufithorax* Malloch, 1939, Ann. Mag. Nat. Hist. ser. 11, 4:249.

Type male and one female paratype Russell Is., Lingatu, Solomons, in British Museum (Nat. Hist.).

Seven males, two females, MUSSAU: Talumalaus, 23 Jan. 1962 fit here but show some slight differences from the type of *rufithorax*. The spacing of the inferior fronto-orbital bristles seems variable and is slightly less than in the type of *rufithorax*: 2nd

bristle placed one-fourth to slightly over one-third the distance to superior fronto-orbitals, rather than about two-fifths as in Malloch's type (in his paratype it is one-third). The Bismarck specimens have a distinct dark brown band extending from wing margin across r-m crossvein to middle of cell 1st  $M_2$ , vein  $M_{3+4}$  evanesces before reaching the wing margin and the middle femur has 6—7 anteroventral spines. In the two specimens from the Solomons a rather faint brown mark extends over r-m but not to wing margin or into cell 1st  $M_2$ , vein  $M_{3+4}$  appears to reach the wing margin and the middle femur has 9 anteroventral spines. I see no other differences in these and doubt that the characters noted are of significance. It will be necessary to examine more specimens from the Solomons.

This species is characterized by having the entire thorax and face, rufous, and the wings almost entirely brownish yellow with a subhyaline mark in cells  $R_5$  and 1st  $M_2$  beyond the r-m crossvein. It fits near *fuscoapicata* Malloch, from Guadalcanal, but is differentiated by having the r-m crossvein situated in a distinct dark fascia at about basal two-fifths from apex of cell 1st  $M_2$ . In *fuscoapicata* the crossvein is not clouded and is situated at or slightly before middle of cell 1st  $M_2$ . I question the value of the spacing of the inferior fronto-orbitals in separating *rufithorax* from *fuscoapicata*. This character seems variable especially in specimens from the Bismarcks.

#### Tribe DACINI

##### **Dacus (Strumeta) atramentatus** (Hering)

*Strumeta atramentata* Hering, 1941, *Siruna Seva*. 3:9, fig. 5.

Two males. MANUS: Lorengau, June 15, 1962.

##### **Dacus (Strumeta) caliginosus** n. sp. (figs. 19a—c)

This species fits near *nigrotibialis* (Perkins), from Malaya, but differs by having the costal cells infuscated with brown and covered with microchaetae, not hyaline and bare except at apex of 2nd costal cell; by having the abdomen all black, not with apex of second yellow and with yellow marks in middle of fourth and fifth terga; by having the face predominantly yellow with black spots, rather than predominantly dark brown to black; the cubital streak very broad (fig. 19a), not narrow, etc. It also appears similar to *exspoliatus* (Hering), from New Guinea but differs by

having the costal cells brown, not hyaline; by having two post-sutural yellow vittae on the mesonotum; having no brown spots at bases of frontal bristles; the costal band extending only a short way beyond apex of vein  $R_{4+5}$  (fig. 19a), not extending two-thirds the distance between apices of  $R_{4+5}$  and vein  $M_{1+2}$ ; and by having hind femora yellow basally, not with all femora black.

♂. *Head*: Occiput brown to black except for a narrow yellow to rufous margin around sides and across top. Front rufous, face yellow with a large oblong spot in each antennal furrow, these do not reach the margin; also with a small brown spot on each gena below eye margin. Basal two segments of antennae yellow, third segment brown, tinged with rufous. Two pairs of evenly spaced fronto-orbital bristles, one pair superior fronto-orbitals. Front about one-third longer than wide, and approximately two-thirds

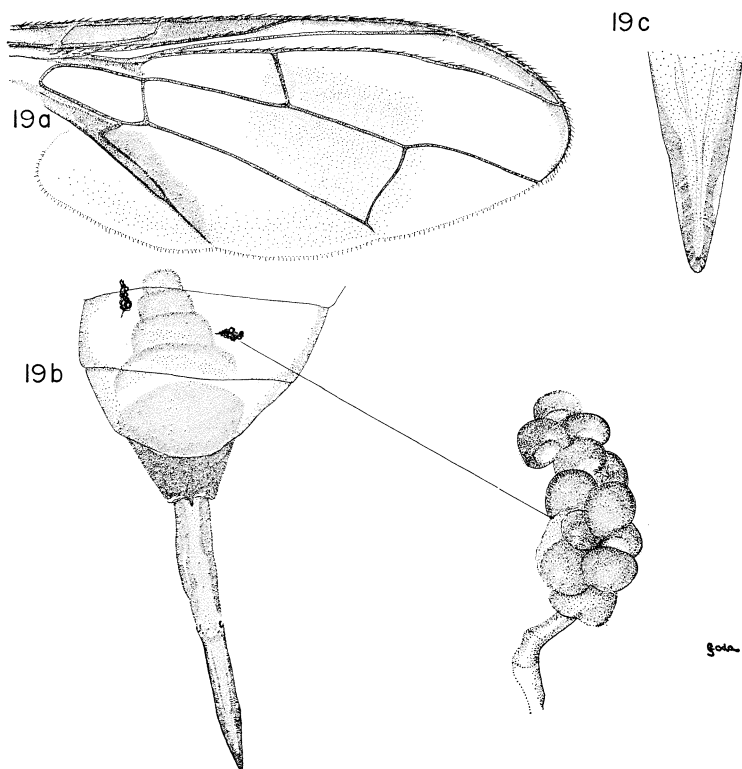


Fig. 19. *Dacus (Strumeta) caliginosus* n. sp.: a, wing; b, extended ovipositor; c, apex of piercer.

the width of one eye. *Thorax*: Polished black, with grey pubescence on pleura and on mesonotum in form of two submedian vittae extending the entire length, also grey pubescent on each side along suture. Postsutural yellow vittae very narrow, evanescent a considerable distance before the inner postalar bristle; the vittae extend scarcely half the distance between the supraalars and postalars. Humeri, except for yellow-brown anterolateral corners, notopleural calli and scutellum, except for rather broad black basal band, white. Also the vertical mark on the mesonotum, a tiny spot on upper sternopleuron and a broad mark over metapleuron and pleurotergon are white. *Legs*: Coxae, trochanters, front and middle femora, and hind tibiae brown to black. Hind femora brown on apical halves, brown basally and middle and front tibiae yellow, tinged with brown. Basitarsi yellow, other tarsomeres yellow-brown. Preapical dorsal sensory structure on hind tibia prominent. *Wings*: Subhyaline with a prominent costal band and comparatively broad cubital band, also with a tinge of brown through costal cells and along r-m crossvein. Costal cells densely covered with microchaetae. Costal band rather narrow, fading out in upper portion of apex of cell  $R_5$  (fig. 19a). The r-m crossvein situated at middle of cell 1st  $M_2$ . *Abdomen*: Subshining black, the integument minutely sculptured and densely covered with white hairs. Posterolateral margins of second tergum and apex of fifth tergum tinged with yellow. Tergal glands large, occupying the greater portion of each side of the fifth tergum. The genitalia have not been dissected for study.

Length: Body, 6.0 mm.; wings, 5.5 mm.

♀. Fitting the description of the male. Basal segment of ovipositor shining black, as seen from dorsal view, the base protrudes scarcely half of the length of the fifth abdominal tergum. As seen from ventral view, the basal segment is short and thick, only slightly longer than wide, the length equaling 1.25 mm. Piercer reddish brown, evenly tapered to the apex (fig. 19c), and 1.35 mm. in length. Extended ovipositor (fig. 19b) measures 3.85 mm.

Holotype male, NEW BRITAIN: Yalom, 1000 m., May 20, 1962. Allotype female, same data as type, except May 8, 1962. Four paratypes, two males, two females same data as type, May 8—18, 1962. — Type, allotype and two paratypes in the Zoological Museum, Copenhagen. Two paratypes in the University of Hawaii collection.



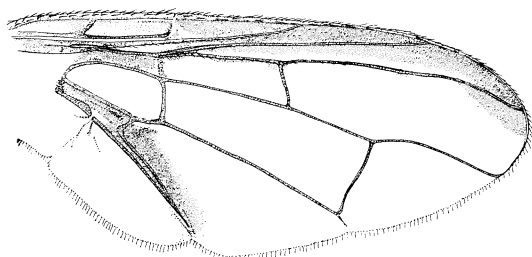
**Dacus (Strumeta) epicharis** n. sp. (figs. 20 a—b)

Fitting very near *caliginosus* n. sp. but differing by having the costal cells bare of microchaetae except in apical half of second cell and along the extreme upper edge of first; also by the very broad costal band (fig. 20a); by having a distinct yellow mark on each side of posterior margin of second tergum and the bases and ventral margins of all femora yellow. Because of the broad costal band it would resemble *latus* (Perkins), from Malaya, but that species differs by having the face predominantly black, the front and middle femora black, the postsutural yellow vittae on mesonotum much larger and extending to postalar bristles, etc.

♂. Fitting the description of *caliginosus* in most regards. *Head*: With a slight discoloration of brown present at bases of frontal bristles. *Thorax*: White mark over mesopleuron occupying posterior third of that sclerite, both anterior and posterior margins of white mark are nearly vertical. White mark on upper portion of sternopleuron tiny as in *caliginosus*. *Legs*: With bases and ventral margins of femora yellow, also anterior surface of front femora yellow. *Wings*: Costal cells hyaline or nearly so. Devoid of microtrichia in basal portion of second cell and in all, except dorsal margin, of first costal cell. Costal band filling almost all of cell  $R_3$  (fig. 20a) and with a tinge of brown extending over upper portion of r-m crossvein. Cubital band broad. The r-m crossvein situated near apical three-fifths of cell 1st  $M_2$ . *Abdomen*: As in *caliginosus* except that the apex of second tergum is yellow with a black vitta through middle.

Length: Body, 7.0 mm.; wings, 6.0 mm.

20 a



20 b



Fig. 20. *Dacus (Strumeta) epicharis* n. sp.: a, wing; b, apex of piercer.

♀. Fitting the description of the male in most respects, base of ovipositor dark, shining brown to black, as seen from above about three-fourths as long as fifth tergum. Basal segment viewed from below just slightly longer than wide, 1.4 mm. long. Piercer rather broad, almost straight-sided, broadly rounded apically, and with a slight concavity at the extreme apex (fig. 20b), very differently shaped than in *caliginosus*. The piercer measures 1.8 mm. in length. Extended ovipositor 4.5 mm. long.

Holotype male, allotype female, and two male paratypes, MUS-SAU: Malakata, June 9, 1962. — Type and allotype in the Zoological Museum, Copenhagen; paratypes in the University of Hawaii collection.

**Dacus (Strumeta) moluccensis** (Perkins) (fig. 21a—d)

*Strumeta moluccensis* Perkins, 1939, Univ. Queensl. Papers, Dept. Biol. 1(2):17, pl. 1, fig. 12.

This has been listed as a synonym of *froggatti* (Bezzi) by Hardy and Adachi (1954:169). Mr. George Steyskal, U. S. Department of Agriculture, Washington, D.C. has studied a topotypic specimen, from Banika, Russell Group, Solomon Islands, and has pointed out that *froggatti* is distinct from the closely related species which occurs in the Solomon Islands, by lacking a complete black basal band on the third tergum of the abdomen; by having a rather broad stripe of black hairs down each side of the mesonotum; by having the yellow mark at upper portion of sternopleuron not extended posteriorly under the pteropleuron; and on the specimen he studied, the postsutural yellow vittae were short, ending well before the inner postalar bristles. I have one specimen on hand from the Solomon Islands, July—August, 1909, collected by W. W. Froggatt, which fits the original description and apparently the characteristics of the topotype studied by Steyskal except that the postsutural yellow vittae are extended approximately to the inner postalar bristle. A prominent distinguishing feature which separates this from *moluccensis* is that the entire median portion of the mesonotum is black, rather than with the ground color rufous, tinged faintly with brown (it is often necessary to wet the mesonotum with alcohol in order to bring out the ground color); the third tergum of *moluccensis* has a complete black basal band and the mesonotum is typically covered with pale hairs. The extent of the dark hairs on the mesonotum is apparently variable, in some specimens a thin streak of dark hairs is present down each side of

the mesonotum, in others a broader area, usually subshining black, of black setae extends down each side in line with the dorsocentral bristles. Wings as in figure 21a. The costal band is yellow and rather broad, occupying the upper half to two-thirds of cell  $R_3$  to the base of vein  $R_{2+3}$ . Abdomen predominantly rufous, with a black band across the base of third tergum, with sides of fourth and fifth terga narrowly brown to black, and with a narrow black vitta extending from base of third almost to apex of fifth. Fifth sternum of male with a V-shaped cleft in the middle of the hind margin, extending about half the length of the segment (fig. 21b). Male genitalia as in figure 21c; the ejaculatory apodeme broadly expanded distally. Fifth sternum of male of *froggatti* with a deep,

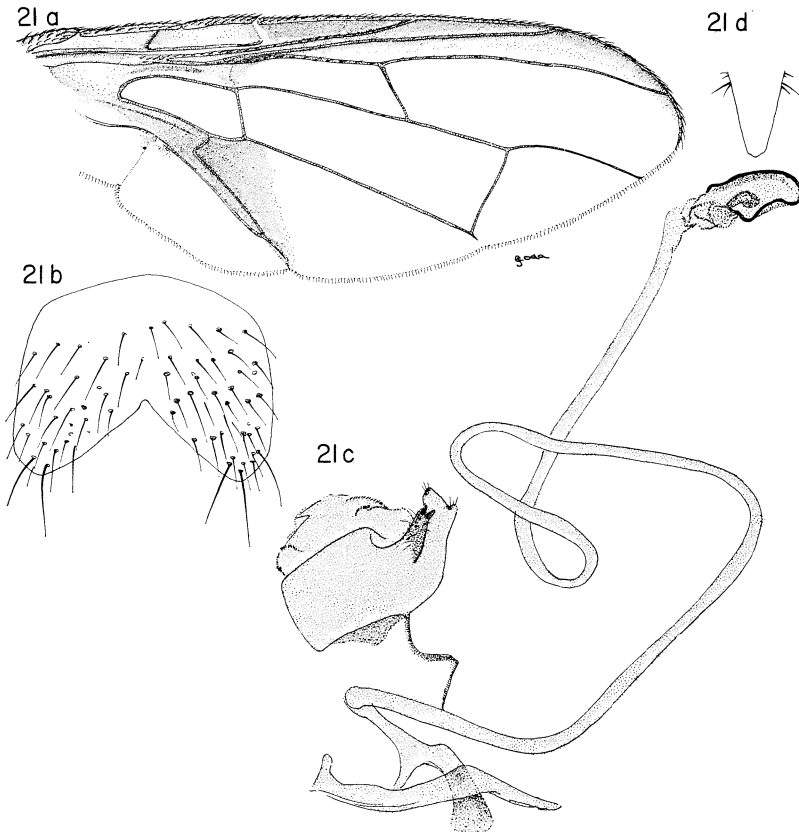


Fig. 21. *Dacus (Strumeta) moluccensis* (Perkins): a, wing; b, fifth sternum of male; c, male genitalia; d, apex of piercer.

broadly U-shaped concavity on the hind margin extending two-thirds the length of the segment and the surstyli are broadly truncate at apices. In *moluccensis*, the surstyli are broadly bilobate at apices. Female ovipositor elongate, approximately 9.5 mm. when fully extended. The basal segment is 2.42 mm. long by 1.79 mm. at its widest point. The piercer is long and slender, approximately 3.17 mm. long by 0.25 mm. at its widest point, the apex is microscopically trilobate (fig. 21d), this is seen only under high power magnification.

Length: Body, 8.0—10.0 mm.; wings, 7.5—8.5 mm.

The description and figures under the name *froggatti* by Hardy and Adachi (1954:169), figures 11a—c, pertain to this species. Specimens are on hand from GUADALCANAL, Solomon Islands; AMBOINA, Indonesia; and Rabaul, NEW BRITAIN, October–November 1949, reared from “aila” *Inocarpus edulis* (N. L. H. Krauss). This species was not represented in the Noona Dan collection.

#### Subfamily TRYPETINAE

##### Tribe ACANTHONEVRINI

#### *Clusiomorpha adustata* Hering

*Clusiomorpha adustata* Hering, 1947, Siruna Seva. 6:3.

Two males, DUKE OF YORK: Manuan, July 21, 1962.

#### *Clusiosoma biseriata* Malloch

*Clusiosoma biseriata* Malloch, 1939, Proc. Linn. Soc. N. S. Wales 64 (3—4):426, pl. XI, fig. 7.

Three females, one male, NEW BRITAIN: Yalom, 1000 m., May 23, 1962. — DY AUL: Sumuna, March 9, 1962.

#### *Clusiosoma melanthes* Hering

*Clusiosoma melanthes* Hering, 1947, Siruna Seva. 6:3.

Eleven specimens. NEW IRELAND: Lemkamin, 900 m., April 21, 1962. — DUKE OF YORK: Manuan, July 21, 1962.

#### *Rabauliomorpha* new genus

An Acanthonevrini, fitting in the complex of genera with *Rabaulia* Malloch, *Clusiosoma* Malloch, and *Clusiomorpha* Hering which are apparently confined to New Guinea, the Bismarck and Solomon Islands and characterized by having dark fumose wings, strong setae along veins  $M_{3+4}$  and  $Cu_1$ , and by having the front legs of the male modified, usually with a row of black spines on

front basitarsus or a process on the front tibia, and sometimes with a dense clump of ventral spines on the front femora of the male. *Rabauliomorpha* is similar to *Clusiomorpha* Hering because of the convex face and the comb on the front basitarsus of the male. It differs by having the antennae two-thirds as long as the face, rather than not more than half as long; by the middle tibia having only one black apical spine, not two; and by having the face strongly convex, rather than slightly convex. In Malloch's Key (1939:417), it would run to *Rabaulia* Malloch, but differs by having only one black apical spur on middle tibia and no black ventral bristles on front femora; also the front basitarsus of the male has a ventral comb of black teeth extending the entire length; the antennae extend over half the length of the face (fig. 22a) and the front is very narrow, measured from the lower ocellus to the anterior margin it is two times longer than wide. *Rabaulia* has two strong and two short black bristles at apex of front tibia; the front femora have black ventral bristles; front basitarsus lacking ventral comb; third antennal segment about half as long as face; and front broader, about one-half longer than wide. Head slightly higher than long with the face strongly gibbose and the lower occiput markedly swollen. Front sharply receding, so that the antennae are situated at or slightly below a level with the middle of the head as seen in direct lateral view (fig. 22a). Front narrow, two times longer than wide and vertex with a distinct transverse carina, as in *Rabaulia*. Third antennal segment slightly tapered apically. Arista long plumose. Two pairs inferior fronto-orbital bristles and two pairs superior fronto-orbitals. Ocellars tiny. Genal bristle yellow, all other head bristles, also postocular bristles black. Thorax densely black setose over mesonotum. Anterior dorsocentral bristles situated opposite supraalars. Six pairs scutellar bristles present, intermediate pair less than half the length of the other bristles. Thorax with the normal complement of bristles. Front basitarsus with a complete comb as in figure 22b. Veins  $R_1$ ,  $R_{4+5}$ ,  $M_{3+4}$  and  $Cu_1$  conspicuously setose, subcostal cell (third costal section) approximately half as long as second costal cell. The r-m crossvein situated near middle of cell 1st  $M_2$  and cell  $Cu$  with a short pointed lobe at apex, this is approximately one-fourth as long as vein  $Cu_1 + 1st A$ .

Type of genus *R. gibbosa* n. sp.

**Rabauliomorpha gibbosa** n. sp. (figs. 22a—c)

♂, *Head*: Pale yellow except for a dark brown mark on each side of upper portion of occiput and a brown streak extending longitudinally down the front. In addition to the characteristics given above, the palpi are slender, with one brown bristle at apex and numerous short yellow setae over apex and along ventral margin. At its widest point the occiput is almost half the width of the eye. Genae rather broad at the widest point almost one-fourth the eye height. *Thorax*: Predominantly yellow, with a longitudinal black mark on each side of mesonotum in line with anterior dorsocentrals on inner margin, extending over scutellum on each side to just beyond the secondary pair of bristles. Also, with a short brown mark extending along each notopleuron. Each mesopleuron with a narrow brown vitta extending longitudinally at a level with the lower of the two mesopleural bristles, this extends almost the full length of the sclerite. Metanotum dark brown to black and hind margins of pleuroterga with brown. Pleura with a few scattered brown to black setae on upper portions of mesopleura and pteropleura, otherwise with fine yellow setae. *Legs*: Entirely pale yellow. Front femur with four or five yellow posteroventral bristles extending over the length of the

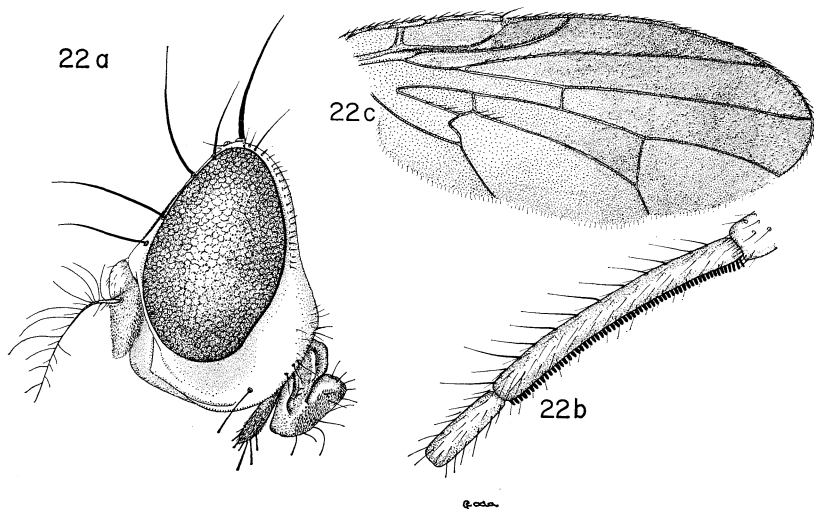


Fig. 22. *Rabauliomorpha gibbosa* n. sp.: a, head; b, front basitarsus of male; c, wing.

segment. Front tibia with a rather prominent row of posterodorsal bristles extending the full length of the segment. Front basitarsus with a row of short yellow posterodorsal setae and with a prominent comb of short blunt teeth as noted above and as in figure 22b. Middle tibia with a strong black bristle at apex extending about half the length of basitarsus and lacking other black bristles or setae. Hind tibia with one brownish yellow anteroventral bristle near middle and four or five anterodorsal bristles (strong setae) in a row from near base to just beyond middle of segment. *Wings*: Predominantly brown, subhyaline through the basomedian portion (fig. 22c). *Abdomen*: Basal four segments yellow except for a faint brown streak on each side of anterior margin of second and a brown longitudinal band over the middle of the fourth. Fifth tergum polished black except for the narrow basal margin. Abdomen rather thickly black setose and with prominent black bristles at apices of terga. Venter of abdomen entirely pale yellow. The genitalia have not been relaxed for study. The epandrium is yellow-brown, the surstyli and anal plates are pale yellow.

Length: Body and wings, 3.5—3.7 mm.

♀. Unknown.

Holotype male, NEW BRITAIN: Yalom, 1000 m., May 16, 1962, in malaise trap. — In the Zoological Museum, Copenhagen.

**Neothemara exul** (Curran)

*Themarohystrix exul* Curran, 1936, Proc. Calif. Acad. Sci. 22(1):27.

One female. LAVONGAI: Banatam, March 23, 1962.

**Xarnuta confusa** Malloch

*Xarnuta confusa* Malloch, 1939, Ann. Mag. Nat. Hist. Ser. 11, vol. 4:261, pl. 11, fig. 20.

One female. MUSSAU: Boliu, June 5, 1962.

Tribe ACIURINI

**Sphaeniscus atilius** (Walker)

*Trypeta atilia* Walker, 1849, List. Dipt. Ins. Brit. Mus. 4:1021.

Two females. NEW BRITAIN: Yalom, 1000 m., May 17, 1962 and NEW IRELAND: Danu, Kalili Bay, April 30, 1962.

Tribe EUPHRANTINI

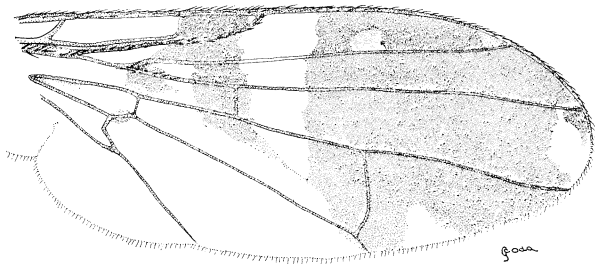
**Euphranta (Euphranta) vitabilis** n. sp. (fig. 23)

Fitting very close to *E. flavoscutellata* n. sp., from the Philippi-

nes, the wing markings are almost identical. Differing by having a large white spot in the middle of the hind portion of the mesonotum, having the scutellum brown over the disc, the face brown, front and hind femora yellow-brown, and abdomen dark brown to black, tinged with yellow to rufous over the first tergum and the base of the second. Not with the first two terga clear yellow except on lateral margins.

♂. *Head*: Higher than long, with the front gently sloping and the antennae situated slightly above the middle as seen from lateral view. Face gently concave in the middle. Occiput only slightly swollen. Front largely brown, yellow along extreme lateral and anterior margins. Face shining brown in median portion, yellow on sides. Antennae and palpi yellow. Two pairs inferior fronto-orbitals. *Thorax*: Mostly polished black in ground color, covered with grey pubescence or tomentum and short black setose on the dorsum, yellow to white setose on sides. The white spot on posteromedian portion of mesonotum occupies almost the entire area between the dorsocentral bristles. A rather prominent broad grey vitta extends down middle of mesonotum from inner scapular bristles almost to the white posterior spot, also the suture on each side is bordered by grey tomentum. Humeri and notopleural calli yellow, covered with grey tomentum. Pleura brown, tinged with yellow in the ground color. Scutellum brown on the disc, yellow on the sides, extreme apex and venter, with short recumbent black setae scattered over dorsal surface. Postscutellum and metanotum dark brown, tinged with rufous. Halteres pale yellow. *Legs*: Predominantly brown with a yellow to rufous tinge in ground color of femora. Coxae and trochanters pale yellow. *Wings*: Brown over the apical two-fifths except for a small hyaline spot at apex of

fig. 23

Fig. 23. *Euphranta (Euphranta) vitabilis* n. sp. wing.



cell  $R_1$ , also three spots on margin in apices of cells  $R_3$ ,  $R_5$ , and 2nd  $M_2$ . A broad brown band extends from subcostal cell over the wing at level with the r-m crossvein into upper portion of cell 1st  $M_2$ , narrowing and evanescing in that cell (fig. 23). Subcostal cell just slightly over half the length of second costal cell. The r-m crossvein situated near basal third of cell 1st  $M_2$  and lobe of cubital cell short, scarcely one-sixth the length of vein  $Cu_1 + 1st A$ . Vein  $R_{4+5}$  setose only on the basal portion, the setae extend only about one-third the distance to the r-m crossvein. Abdomen: Shining dark brown to black, tinged faintly with rufous in ground color and with first tergum and base of second yellow, tinged with brown. Sides of abdomen almost parallel. The genitalia have not been dissected for study.

Length: Body and wings, 5.5 mm.

♀. Fitting the male except for genital characters. Basal segment of ovipositor shining black, about equal in length to terga 4+5 and approximately 1.25 mm. long. The piercer has not been studied.

Holotype male and allotype female, NEW BRITAIN: Keravat, July 4—5, 1965 (R. W. Crosskey). Two male paratypes, one same as type, one NEW IRELAND: Lemkamin, 900 m., April 15, 1962. — Type and allotype in the British Museum (Nat. Hist.). The paratypes in the Zoological Museum, Copenhagen and the University of Hawaii.

#### **Staurocneros flavina** (Hering)

*Staurella flavina* Hering, 1941, Ann. Mus. Nat. Hung. 34:56, fig. 3.

One female. LAVONGAI: Banatam, March 25, 1962, in malaise trap.

#### Tribe TRYPETINI

#### **Hendelina fossata** (Fabricius)

*Tephritis fossatus* Fabricius, 1805, Syst. Antl. p. 320.

Two females. MUSSAU: Malakata, June 10, 1962. — NEW IRELAND: Lemkamin, 900 m., April 23, 1962.

#### **Hendelina humeralis** (Hendel)

*Pseudospheniscus humeralis* Hendel, 1915, Ann. Mus. Nat. Hung. 13:452.

Two males, NEW BRITAIN: Valoka, July 11, 1962.

**Hendelina taylori** (Malloch)

*Pseudospheniscus taylori* Malloch, 1939, Proc. Linn. Soc. N. S. Wales 64 (3—4):450, pl. XI, fig. 16.

One male. NEW IRELAND: Lemkamin, 900 m., April 14, 1962, in malaise trap.

Subfamily **SCHISTOPTERINAE****Rhabdochaeta pluscula** n. sp. (fig. 24a—b)

In Bezzi's key to *Rhabdochaeta* (1926:310) this runs to *asteria* Hendel by having the dark rays in the anterior portion of wing narrow, scutellum with only four bristles, only two pairs dorso-central bristles and by having vein  $M_{1+2}$  curved upward sharply just beyond m crossvein. The wing markings are very different, however, in the two, and *pluscula* is readily differentiated from all known *Rhabdochaeta* by having three complete longitudinal brown lines through apical portion of cell  $R_5$ , four brown streaks through cell  $R_3$ , with three of these complete to the wing margin and with one abbreviated; and cell  $R_1$  with one complete brown crossband and two abbreviated, incomplete marks (fig. 24b).

♂. *Head*: Mostly yellow, with the upper median portion of occiput brown on each side. Three pairs inferior fronto-orbitals, two pairs of superiors. Antennae yellow, third segment tapered to a sharp point (fig. 24b). Palpi long, rather straight-sided, densely covered with flat, appressed setae around the margins, and also with erect yellow-white hairs on dorsal and ventral margins. *Thorax*: Dark brown to black in ground color of mesonotum, completely opaque, grey-brown pollinose. Pleura yellow to rufous, tinged brown on upper pteropleura and with the metapleura and

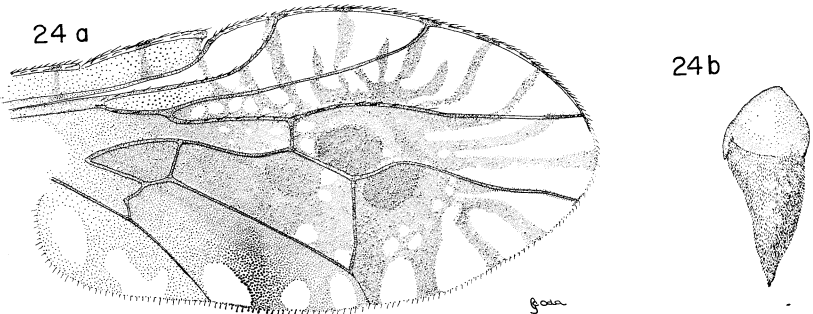


Fig. 24. *Rhabdochaeta pluscula* n. sp.: a, wing; b, antenna.

pleuroterga dark brown. Humeri and notopleural calli pale yellow. Scutellum brown over dorsal portion with a yellow mark near base on each side, with the apex narrowly yellow and with the venter yellow. Postscutellum and metanotum polished black, covered with grey tomentum. Halteres pale yellow. Two pairs of dorso-central bristles and four pairs of scutellar bristles. *Legs*: Entirely yellow to rufous, lacking brown or black rings on femora. *Wings*: As in figure 24a, with four shining red areas and also a dark brown to black area in the middle of the wing. Fourth costal section, between apices of veins  $R_1$  and  $R_{2+3}$  distinctly shorter than fifth section. *Abdomen*: Largely brown, with extreme lateral margins of the terga and the median portions of terga 3—5 yellow. Abdomen rather thickly covered with short flattened yellow setae. The genitalia have not been dissected for study.

Length: Body, 2.5 mm.; wings, 2.3 mm.

♀. Unknown.

Holotype male, MUSSAU: Boliu, June 4, 1962. — In the Zoological Museum, Copenhagen.

### Subfamily TEPHRITINAE

#### Tribe PLATENSINI

#### **Platensina malaita** Curran

*Platensina malaita* Curran 1936, Proc. Calif. Acad. Sci. (4) 22:29, pl. 1, fig. 1.

Nine specimens, LAVONGAI: Banatam, March 23, 1962. — MUSSAU: Talumalaus, Feb. 7, 1962, and Eabarae, Feb. 13, 1962. — NEW IRELAND: Lemkamin, 900 m., April 14, 1962.

Solomon Isls., RENNELL: Niupani, Aug. 25, 1962; Hutuna, March 19—29, 1965 (T. Wolff).

#### **Dioxyna sororcula** (Wiedemann)

*Trypeta sororcula* Wiedemann, 1830, Aussereur. zweifl. Ins. 2: 509.

One specimen. NEW IRELAND: Lemkamin, 900 m., Apr. 23, 1962. (See also the Philippine list).

#### Tribe TEPHRELLINI

#### **Tephrella heringi** n. sp. (figs. 25a—c)

This species fits closer to *sexincisa* Malloch from Solomon Islands than to any other known species in this genus but differs

by having four pairs of inferior fronto-orbital bristles, not two; by having very different wing markings, i.e. three hyaline spots in cell  $R_1$ , and three on margin in cell 2nd  $M_2$ , not two; two hyaline spots in 1st  $M_2$ , not one; etc. It should be noted that *sexincisa* is very similar to *decipiens* Bezzi, the type of the genus, but differs by having two pairs inferior fronto-orbitals, and by having a prominent dark brown mark through middle of second costal cell, rather than having second costal hyaline except for the extreme apex.

♀. *Head*: Approximately as long as high, the front gently sloping with antennae situated at about middle of head. Eyes almost oval, occiput slightly swollen below. Face gently concave as seen in direct lateral view. Front rather broad, about as wide as long, and about four-fifths the width of one eye, the lateral margins converging sharply on lower portion. Front with four pairs of inferior fronto-orbital bristles the first and third bristles are small, one-half to three-fourths the length of the second and fourth bristles. Ocellar bristles strong, equal in size to lower superior fronto-orbitals. Frontal, ocellar and inner vertical bristles black, also genal bristles black; all other head bristles and setae yellow-white. Postocular setae flat, scale-like, but sharply pointed at apices. Head and appendages yellow except for brown upper and median portions of occiput. Third antennal segment short, about one-half

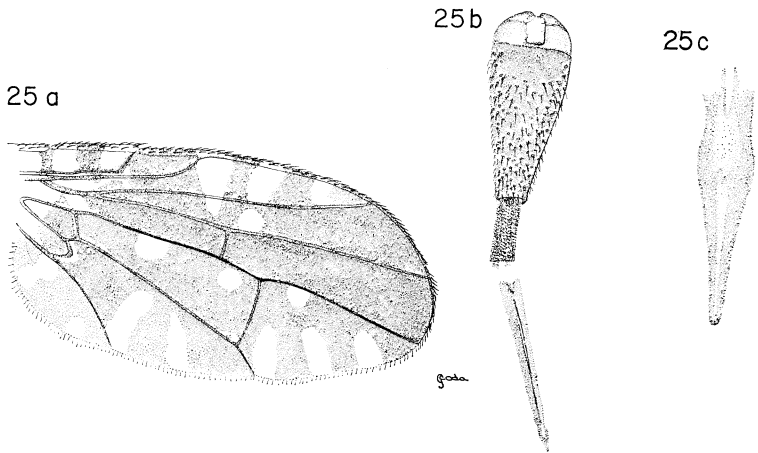


Fig. 25. *Tephrella heringi* n. sp.: a, wing; b, extended ovipositor; c, apex of piercer.

longer than wide. Arista short pubescent at base, otherwise bare or nearly so. *Thorax*: Largely black in ground color, tinged with yellow to rufous on parts of the pleura, and rather densely grey to grey-brown pollinose, covered with flat yellow-white scale-like hairs. All bristles dark brown to black. Two strong scutellar bristles present, and two pairs of dorsocentral bristles, the anterior dorsocentrals situated just slightly behind the suture. Humeri yellow, tinged with brown and densely grey pollinose over dorsal halves. Halteres pale yellow. *Legs*: Coxae and femora yellow-brown. Tibiae and tarsi yellow. *Wings*: Predominantly brown with hyaline spots arranged as in figure 25a. The r-m crossvein situated near apical four-fifths of cell 1st  $M_2$  and apex of cubital cell almost straight, not lobate. *Abdomen*: Entirely polished dark brown to black, the sixth tergum distinctly longer than fifth. Basal segment of ovipositor black, as seen from above, about equal in length to terga 3—6. On ventral margin the basal segment measures 1.25 mm. Piercer slender, spearhead-like at apex (fig. 25c) and 1.25 mm. long. The extended ovipositor (fig. 25b) measures 3.75—4.0 mm.

Length: Body, excluding ovipositor, 3.25 mm.; wings, 3.0 mm.

♂. Unknown.

Holotype female and one female paratype, MUSSAU: Eabarae, Feb. 13, 1962. — Type in the Zoological Museum, Copenhagen. Paratype in the University of Hawaii collection.

### Tribe TEPHRITINI

#### ***Spathulina acroleuca* Schiner**

*Spathulina acroleuca* Schiner, 1868, Reise Novara, Dipt., p. 268.

Four specimens, NEW IRELAND: Lemkamin, 900 m., April 15, 1962.

#### ***Tephritis formosella* (Hendel)**

*Euribia formosella* Hendel, 1915, Ann. Mus. Nat. Hist. 13:465, pl. 9, fig. 20.

One male, NEW BRITAIN: Valoka, July 11, 1962.

#### ***Trupanea lyneborgi* n. sp. (figs. 26a—b)**

Fitting close to *T. aucta* Bezzi, from India, the wing markings are almost identical in the two, but *lyneborgi* differs by having brownish grey markings extending through base of cell 1st  $M_2$  and across cell  $M_4$ , by having an isolated hyaline spot in cell  $R_5$  beyond

r-m crossvein, rather than having the basal portion of cell 1st  $M_2$  and  $M_4$  hyaline and a continuous hyaline mark across the wing at level with the r-m crossvein (Ref. to Bezzi, 1913, plate 10, fig. 69). *T. lyneborgi* also differs by having six inferior fronto-orbital bristles rather than three. It also fits near *mutabilis* Hering, from Flores, but has a brown mark extending through upper apex of cell 2nd  $M_2$  over the tip of vein  $M_{1+2}$  and has six rather than three inferior fronto-orbital bristles, etc.

♂. *Head*: Yellow in ground color, densely grey pubescent, or pollinose, slightly longer than high. The front broad, flat, gently sloping, with the antennae situated near upper two-thirds of head (fig 26a). Eyes broadly rounded ventrally, narrowed posterodorsal-

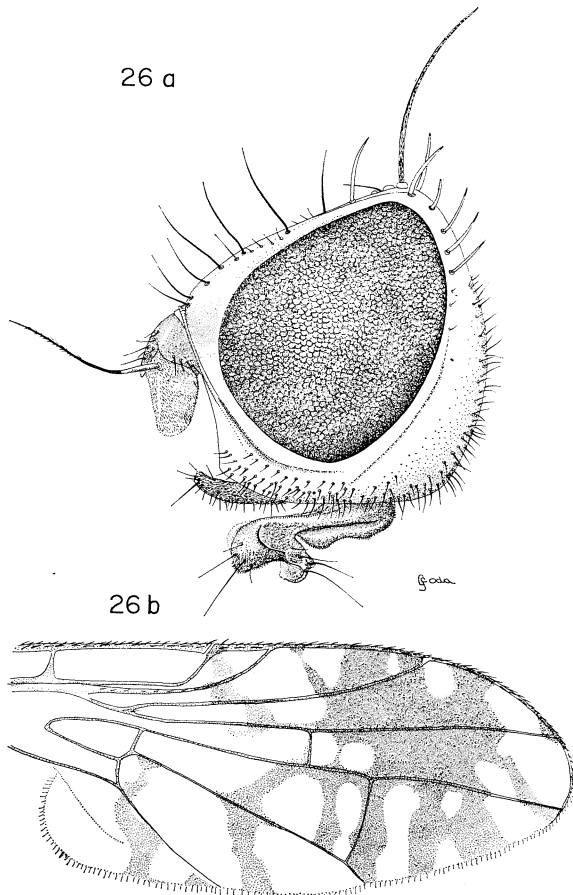


Fig. 26. *Trupanea lyneborgi* n. sp.: a, head; b, wing.

ly. Occiput moderately swollen and genae about one-fifth to one-sixth the eye height, the latter very densely setose along lower margin. Front approximately as broad as long, and approximately equal in width to one eye as seen directly from above, with about six brown inferior fronto-orbital bristles and two superior fronto-orbital bristles, one brown and one white. Median portion of front with scattered inconspicuous pale setae. Ocellar bristles brown, rather small, about equal in length to upper superior fronto-orbital. Inner vertical bristles yellow-brown, outers white. Postocellar and postocular bristles white, flat, but sharp-pointed at apices. Antennae yellow, third segment scarcely longer than wide, arista bare or nearly so. *Thorax*: Black in ground color, very densely grey pollinose and densely white setose, the setae are flat, rather scale-like. Humeri largely yellow in ground color. All thoracic bristles yellow, some tinged faintly with brown. Anterior dorsocentrals situated distinctly in front of anterior supraalars. One strong pair of scutellar bristles. Halteres pale yellow. *Wings*: Marked as in figure 26b. Subcostal cell short, scarcely one-third to one-fourth as long as second costal. The r-m crossvein situated near apical three-fourths of 1st  $M_2$  and cubital cell ending in a short point at lower apex. Vein  $R_{4+5}$  with one or two short setae at base above. *Abdomen*: Black in ground color except for extreme lateral margins of first and second terga, narrow apices of second, third, fourth and fifth terga, which are yellow, densely grey pollinose and thickly covered with short yellow setae. The genitalia have not been dissected for study.

Length: Body, 5.0 mm.; wings, 4.8 mm.

♀. Unknown.

Holotype male, NEW IRELAND: Lemkamin, 900 m., April 23, 1962. One male paratype, same locality as type, April 7, 1962, in light trap. — Type in the Zoological Museum, Copenhagen. Paratype in the University of Hawaii collection.

This species is named after Dr. Leif Lyneborg, a leading worker on the Diptera, who was the Entomologist for the expedition in the Bismarcks.

### Summary

This report deals with 67 species, 43 from the Philippines, with two genera (*Elleipsa* and *Scolocolus*) and 18 species described as new, one species from Rennell I. in the Solomons and 24 species from the Bismarcks with one new genus (*Rabauliomorpha*) and 7 new species.

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### Anmeldelse

S. L. Tuxen, ed.: Taxonomist's glossary of genitalia in insects. 2nd. enlarged edition. Munksgaard. 359 pp., 248 figs. Pris 200 kr.

Dr. Tuxens gode ide fra 1951 om sammen med en række kolleger at lave en ordbog over betegnelser for dele af insekternes ydre genitalier blev ført ud i livet i 1956. Et bevis på nytten af en sådan bog er 2. udg. af »glossariet«, — der nu foreligger — beklageligvis, til en alt for høj pris; så meget koster svært papir da heller ikke. Retfærdigvis må dog siges, at bogen er udvidet og indeholder ændringer af betydeligt omfang. 11 insektgrupper er totalt ombearbejdede eller i alt fald reviderede. Gennemgående er der tale om fremskridt. F. eks. er afsnittet om Hymenoptera sikkert bedre og rigtigere nu, men også besværligere; alene på side 156 beriger Edward L. Smith os med fire nye betegnelser, som ikke ligefrem kan siges at have stor interesse netop for taxonomer. (Rundhåndet gentages 2—3 linier tekst side 166, l. 10—12 f.n.) Imidlertid uden denne gennem tiderne stadige tilstrømning af nye termer intet glossary, og det kan vi ikke undvære. Afsnittene er stadig meget uensartede, og i den ny udgave kunne man jo nok have forventet en stramning af stoffet. Anm. kunne også have ønsket en orienterende indledning. Hvis man uden væsentlige forudsætninger læser de enkelte afsnit, bliver man temmelig desorienteret, fordi man får det indtryk, at insektgrupperne er meget mere forskellige fra hverandre, end det i virkeligheden er tilfældet. De fleste af forfatterne kører lige ud efter deres specielle gruppes næsetip og glemmer, at de burde have medvirket mere til mellempøkelig forståelse. Ordbogafsnittet kan klare mange problemer, men da mange termer forklares alene ved de definitioner, som er givet under den pågældende insektorden, kommer man ikke vidt, når man vil sammenligne med andre ordner. Hvad er f. eks. »external« og »internal parameres« sammenlignende anatomisk set?

Børge Petersen.

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