

THE FRUIT FLIES OF THE TRIBE EUPHRANTINI OF INDONESIA, NEW GUINEA, AND ADJACENT ISLANDS (TEPHRITIDAE: DIPTERA)^{1,2}

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Abstract. The tribe Euphrantini is revised for Indonesia, New Guinea and the adjacent islands of the Bismarcks and Solomons. It consists of 6 genera, 3 subgenera, and 48 species. Seventeen species are described as new and 1 unnamed new species is keyed, discussed and figured. I am removing the following from Euphrantini: *Agaristina*, *Chaetomerella*, *Dacopsis*, and *Piestometopon*. *Rhacochlaena* is a new synonym of *Euphranta* (*Staurella*) and *Euphranta rivulosa* is a new synonym of *Euphranta* (*Staurella*) *lemniscata*. *Euphranta* (*Xanthotrypeta*) is given new status. The following are new combinations: *Euphranta* (*Euphranta*) *basalis*; *E. (E.) variabilis*; *Euphranta* (*Staurella*) *flavina*; *S. (S.) mediofusca*; and *Euphranta* (*Xanthotrypeta*) *bimaculata*.

This paper treats all of the known species of Euphrantini fruit flies of Indonesia (including all of Borneo), New Guinea, and the adjacent islands of the Bismarcks and the Solomons. The tribe as defined by Hering (1947: 15) includes those Trypetinae which lack presutural bristles and/or have long hair on the pleuroterga (area between metanotum and metapleura, above the metathoracic spiracles). I do not believe that the presence or absence of presutural bristles is of tribal significance and prefer to remove those genera which lack both presuturals and long hair on the pleuroterga from Euphrantini. The following genera have been previously treated as Euphrantini: *Agaristina* Hering, from Irian Jaya, which I am placing in Trypetini; *Chaetomerella* de Meijere, from Java and Taiwan, which is of questionable position but seems to be intermediate among Adramini, Trypetini and Acanthonevrini; *Dacopsis* Hering, from Indonesia, New Guinea, the Bismarck Archipelago, and the Solomons (= *Sophira* of Malloch 1939: 430, et al., not Walker) which belongs in the *Sophira* group of genera of Acanthonevrini (Hardy 1980: 150); and *Piestometopon* de Meijere, from Java, which apparently is a Trypetini.

As discussed in my treatment of the *Sophira* group of genera (Hardy 1980), the arrangement of the fruit flies into higher categories has been based mostly upon the classification of Hering (1947), and the status of several of the categories is controversial and confusing. Some of these categories seem reasonably sound when dealing strictly with faunas of local areas, but when an attempt is made to apply the same classification from a worldwide standpoint, the entire system falls apart. The char-

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acters used for separating subfamilies and tribes have been, for the most part, rather trivial or of questionable value, and intergrades have been found between most of the higher categories. It seems obvious that some of the subfamilies and tribes of Hering need to be combined and that phylogenetic characters throughout the family should be reassessed and more reliable characters found for supergeneric arrangements. Hopefully, this would be based upon internal anatomy as well as external characters and would be reflective of the biological differences apparent in the different groups. The major weakness in our understanding of the Tephritidae is the dearth of biological data for the preponderance of the species.

In this treatment I am restricting the tribe Euphrantini to include those Trypetinae which have fine erect hairs on the pleuroterga; presutural bristles absent (excepting *Soita* Walker); prescutellar bristles lacking (excepting *Euphranta* (*Staurella*) Bezzi and *Dimeringophrys* Enderlein); intrapostalar bristles lacking; ocellar bristles rudimentary or absent; and a comparatively slender thorax as seen in side view (*Adrama*-like). These flies are rather similar in appearance to *Adrama* Walker and, like *Adrama*, have the haired pleuroterga and lack intrapostalar bristles; they are obviously closely related to the Adramini. Euphrantini species differ by possessing the usual complement of head and thoracic bristles, except for ocellars, with humerals lacking in only a few species of *Euphranta* (see introduction under that genus) and dorsocentrals rudimentary in *Dimeringophrys*; by having well-developed postocular (occipital) setae; by having the metathoracic area above and between the hind coxae semimembranous, rather than with a broad sclerotized bridge as in *Adrama*; and by the male having vanes of the aedeagal apodeme short, fused at their bases and forked at their apices, rather than being slender and widely separated as in *Adrama*. Three spermathecae are present in the female and the piercer is comparatively short and weakly sclerotized. The arista is typically long plumose, but variable and may be short plumose in some species.

Acronyms for institutions where collections are located are as follows:

AMS	The Australian Museum, Sydney
BMNH	British Museum (Natural History), London
BPBM	B.P. Bishop Museum, Honolulu
DEI	Institute für Pflanzenschutzforschung (formerly Deutsches Entomologisches Institut), Eberswalde, DDR
FRSB	Forestry Research Station, Bulolo, Papua New Guinea
PIZW	Polska Akademia Nauk Instytut Zoologiczny, Warsaw
RNHL	Rijksmuseum van Natuurlijke Histoire, Leiden
TMB	Termesztudományi Museum, Budapest
UH	University of Hawaii, Honolulu
UQMB	University of Queensland Museum, Brisbane
USNM	U.S. National Museum of Natural History, Smithsonian Institution, Washington, D.C.

ZMHB Zoologisches Museum, Humboldt Universität, Berlin
 ZMUA Zoologisch Museum, Universiteit van Amsterdam
 ZMUC Zoologisk Museum, Universitets Copenhagen

KEY TO GENERA AND SUBGENERA OF EUPHRANTINI

- 1. Front with at least 2 pairs of fronto-orbital bristles; superior fronto-orbitals strong 2
 Front with only 1 pair of orbitals, situated near anterior margin (Fig. 2a); superior fronto-orbitals lacking; dorso-central bristles rudimentary; wing markings as in Fig. 41 **Dimeringophrys**
- 2 (1). Only 2 developed scutellar bristles; slender, mostly yellow bodied, *Ichneumon*-like flies; with a complete transverse groove connecting lateral sutures of mesonotum 3
 Not as above; 4 well-developed scutellars 4
- 3 (2). Veins R₁, R₄₊₅, M₃₊₄, and base of Cu covered with long conspicuous hairs (Fig. 40a); lower superior fronto-orbital bristles situated below middle of front and greatly enlarged, flat, straplike; head and thorax yellow, without black markings; presutural and sternopleural bristles present **Soita**
 Wing veins lacking long hairs, M₃₊₄ and base of Cu bare; frontal bristles normal; head, thorax, and abdomen with conspicuous black markings; presutural and sternopleural bristles absent **Ichneumonosoma**
- 4 (2). Front with 2-3 pairs of inferior fronto-orbitals 5
 Only 1 pair inferior fronto-orbital and 1 pair superior fronto-orbital located below middle of front (Fig. 39); wings dark brown with hyaline wedges from margin (Fig. 58) **Ptilona**
- 5 (4). Prescutellars absent 6
 Prescutellar bristles present **Euphranta (Staurella)**
- 6 (5). Face concave in middle, from lateral view; inferior fronto-orbitals widely separated; dorsocentral bristles strong and usually sternopleurals well developed; humerals present except in *bilineata*, n. sp., *quadrimaculata*, n. sp., and *tricolor*, n. sp. . . . (all from New Guinea) 7
 Face vertical, not concave in middle; inferior fronto-orbitals situated close together on lower part of front, widely spaced from superior fronto-orbitals; humeral bristles absent; dorsocentrals and sternopleurals rudimentary; ♀ ovipositor blunt apically, not serrate (Fig. 1b) **Cyclopsia**
- 7 (6). Sternopleural bristles present, except in *quadrimaculata*, n. sp., which has r-m crossvein near apex of cell 1st M₂ and humeral bristles absent
 **Euphranta (Euphranta)**
 Sternopleurals absent; crossvein r-m at middle of M₂; humerals present
 **Euphranta (Xanthotrypeta)**

Genus **Cyclopsia** Malloch

Cyclopsia Malloch, 1939, Proc. Linn. Soc. N.S.W. 64(3-4): 444. Type-species: *inaequalis* Malloch (= *inscripta* (Walker)).

This genus fits the characteristics of typical *Euphranta* except the face is vertical, not concave in middle; 2 inferior fronto-orbital bristles are situated on the lower part

of front, widely spaced from superior fronto-orbitals; humeral bristles are lacking and dorsocentrals are poorly developed, only about 2× as long as setae on the mesonotum. Sternopleurals are rather small compared to most *Euphranta*. The female ovipositor is blunt at the apex, with 2 pairs of preapical setae, rather than being strongly serrate, dentate or lobed (Fig. 1b, 8e, 12b).

Malloch said, "This genus connects the Adraminii [sic] with the *Euphranta* group rather distinctly." Hering (1941b: 4) treated this as an Adramini. It fits the habitus of Adramini, as well as that of *Euphranta*, but the metathorax is not bridged above the hind coxae; the metasternum is semimembranous and slightly sunken.

Only 2 species are known: *inscripta* (Walker) from New Guinea, Maluku and the Bismarck Archipelago, and *univittata* Hardy from the Philippines. These species are separated by the following characters.

Conspicuous brown mark over r-m crossvein; apical portion of wing all brown beyond level of m crossvein (Fig. 1a)	inscripta
No dark mark over r-m; large hyaline wedge from wing margin in 2nd M ₂ extending across cell R ₅ (cf. Hardy 1970: 88, Fig. 7a)	univittata

Cyclopsia inscripta (Walker)

Fig. 1a–e

Dacus inscriptus Walker, 1860, J. Proc. Linn. Soc. Lond., Zool. **5**: 162. Type-locality: the type ♂ in BMNH is labeled "Borneo, Ambong" but the species is described in Walker's paper from the island of Ambon. The "Borneo" is probably an error.

Euphranta inaequalis Malloch, 1939, Proc. Linn. Soc. N.S.W. **64**: 445. Type-locality: Cyclops Mts, New Guinea. Type ♂ in BMNH.

This species is characterized by the details of the wing maculation (Fig. 1a) as noted above.

Head yellow to rufous, large brown to blackish spot covering upper median portion of front. Third antennal segment dark brown, base yellow. Body mostly reddish brown, pale yellow to nearly white on humeri, notopleura, scutellum, and propleura, broad yellow-white band extending from upper portion of each sternopleuron over posterior $\frac{1}{3}$ – $\frac{2}{5}$ of each mesopleuron. Mesonotum with a broad gray pollinose fascia extending almost full length in area bordered by dorsocentral bristles. Dorsocentral bristles poorly developed, sometimes difficult to discern, ca. 2× longer than setae on mesonotum, located about $\frac{1}{3}$ distance between inner postalar and supraalar bristles. Median portion of mesonotum yellow in ground color but color obscured by gray pollen. Sides of mesonotum mostly dark brown to blackish, tinged with rufous, interrupted with rufous on suture, a yellow-rufous vitta extending on side from posterolateral corner to slightly in front of supraalar bristle, in line with dorsocentral. Legs yellow to rufous, tinged with brown on mid and hind tibiae. Wings as in Fig. 1a and as noted above. In ♂, 1st tergum and sometimes all of 2nd yellow, 2nd marked with brown on each side in some specimens. Broad lateral margins of tergum 3 and narrow margins of 4 pale yellow, yellow longitudinal median vitta on terga 2–4; otherwise terga shining black. Female with basal 4 terga yellow-rufous, 5–7 shining black. Ovipositor base about equal in length to segments 4+5. Piercer very short, less than $\frac{1}{3}$ length of 8th segment, blunt at apex, with 2 pairs of strong preapical setae (Fig. 1b). Two round, rather heavily sclerotized spermathecae plus 1 rather slender, largely membranous structure (Fig. 1c). Sternum 5 of ♂ about as wide as long, with a short concavity

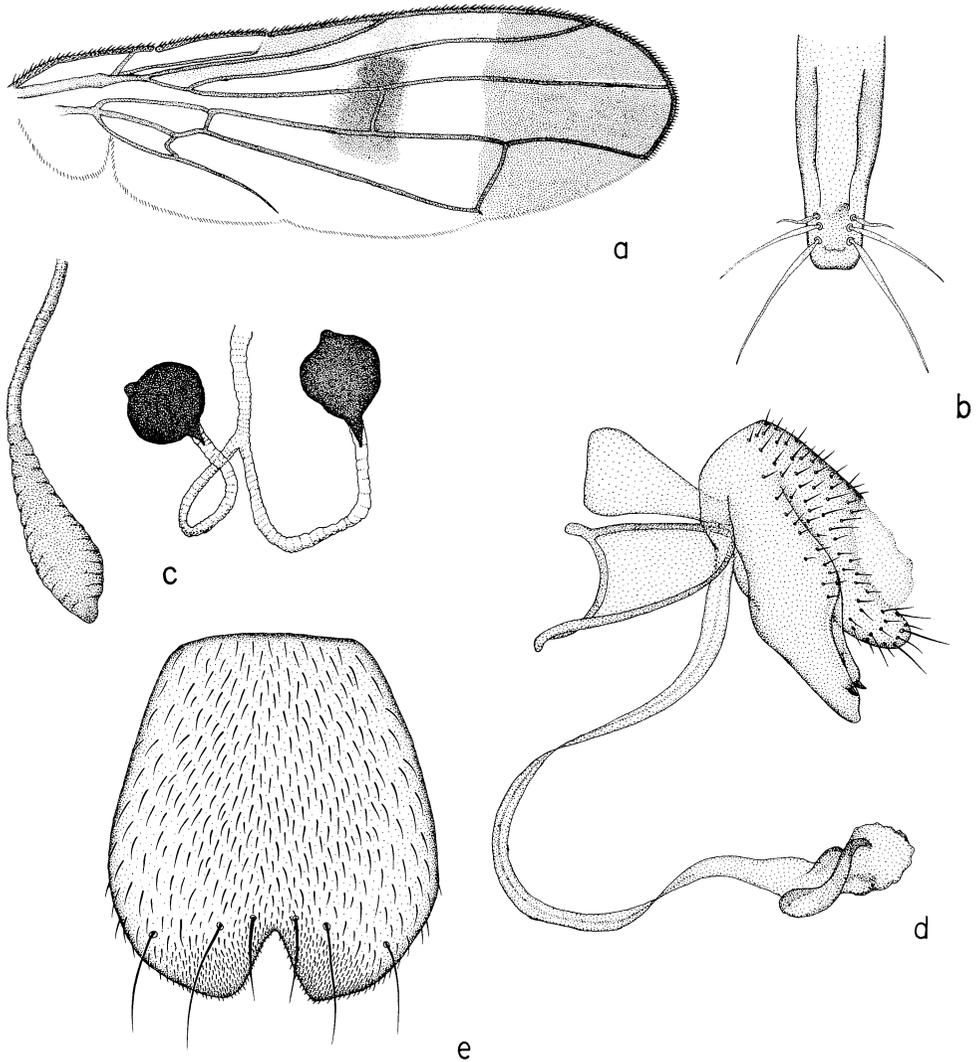


FIG. 1. *Cyclopsia inscripta*: a, wing; b, apex of ♀ piercer; c, ♀ spermathecae; d, ♂ genitalia, lateral; e, 5th sternum, ♂.

on posteromedial margin, posterior lobes densely short setose (Fig. 1e). Male genitalia as in Fig. 1d.

Length: body 7.5–8.0 mm.

Distribution. The entire island of New Guinea.

Specimens examined. Types of both taxa and numerous additional specimens seen, with the following data. IRIAN JAYA: NEW GUINEA (W): Kebar Val, W of Manokwari, 550 m, 4–31.I.1962 (L. Quate); Cyclops Mts, Ifar, 300–500 m, 28–30.VI.1962 (J.L. Gressitt); Cyclops Mts, W Sentani, 150–250 m, 19.VI.1959 (T.C. Maa). PNG: NEW GUINEA (NE): Bulolo, 700 m, 26.XI.1969 (J. Sedlacek); Finisterre Range, Saidor,

Sibog Vill, 6–16.VI.1958 (W.W. Brandt). BISMARCK ARCH.: “Ralum,” “Dahl, S. 1896–97,” and MALUKU: Ambon [no date] (F. Muir).

Genus *Dimeringophrys* Enderlein

Dimeringophrys Enderlein, 1911, Zool. Jahrb., Syst. **31**: 452. Type-species: *ortalina* Enderlein, from Sumatra. Equals synonym of *Dacus bilineatus* Walker (Hardy 1959: 165).

This genus is easily differentiated from other Euphrantini by having only 1 pair of frontal bristles. These bristles are incurved inferior fronto-orbitals and are located near the lower margin of the front (Fig. 2a). Superior fronto-orbital bristles are lacking. Prescutellar bristles are present, as *Euphranta* (*Staufrella*), and the dorsocentral bristles are rudimentary, represented by just a tiny seta on each side, located about $\frac{1}{3}$ the distance between inner postalar bristles and supraalars. The wing markings are more similar to Dacini than to other Trypetinae by having a brown costal band and wings otherwise mostly clear.

Only 2 species are presently known: *bilineata* (Walker), widespread, and *pallidipennis* Hardy, from the Philippines and Thailand.

Dimeringophrys bilineata (Walker)

Fig. 2a–b, 41

Dacus bilineatus Walker, 1860, J. Roy. Linn. Soc. Lond., Zool. **4**: 150. Type-locality: Celebes. Type ♀ in BMNH.

Dimeringophrys ortalina Enderlein, 1911, Zool. Jahrb., Syst. **31**: 452. Type-locality: Sumatra. Type ♀ in PIZW.

This species is closely related to *pallidipennis* Hardy and is differentiated by having the 2 costal and basal cells yellow up to a level with the fork of veins R_{2+3} and R_{4+5} , a narrow brown costal band extending from the apex of Sc to the upper apical portion of cell R_5 , and the remainder of the cell beneath the costal band and the extreme basal portion of cell R_3 yellow. Also, it has a rather prominent brown mark in the posterior portion of the wing covering the m crossvein and apical portions of cells 1st M_2 and M_4 (Fig. 41). In *pallidipennis*, the wing is entirely hyaline except for a very narrow band of brown along the costal margin to the apex of cell R_3 .

Head shaped as in Fig. 2a, higher than long with face gently concave in median portion as seen in lateral view. Front and face yellow, except for a tinge of brown in median portion of former. Antennae yellow, tinged with brown on apical $\frac{2}{3}$ of outside surface of 3rd segment. Third segment extending almost to lower margin of face, slightly narrowed from base to apex. Arista long plumose. Palpi entirely yellow, rather broad, about $1\frac{1}{2}\times$ width of 3rd antennal segment. Thorax mostly dark brown to black, yellow on humeri, notopleura, propleura, scutellum, and broad vertical band over hind portion of each mesopleuron; broad yellow band extending down median portion of mesonotum from front to posterior margin, wider posteriorly to a level with supraalar bristles. Prescutellar bristles well developed. Dorsocentrals situated about $\frac{1}{3}$ distance from postalar to supraalar bristles. Femora yellow, with tinge of brown on posterobasal portion of hind and anterobasal portion of mid, also on basal and apical portions of posterior surface of front pair. Tibiae dark brown to black, tarsi yellow, tinged with brown. Wings marked as noted above and as in Fig. 41. Third costal section subequal to 2nd, r-m crossvein distinctly beyond middle of cell 1st M_2 . Abdomen shining black on sides,

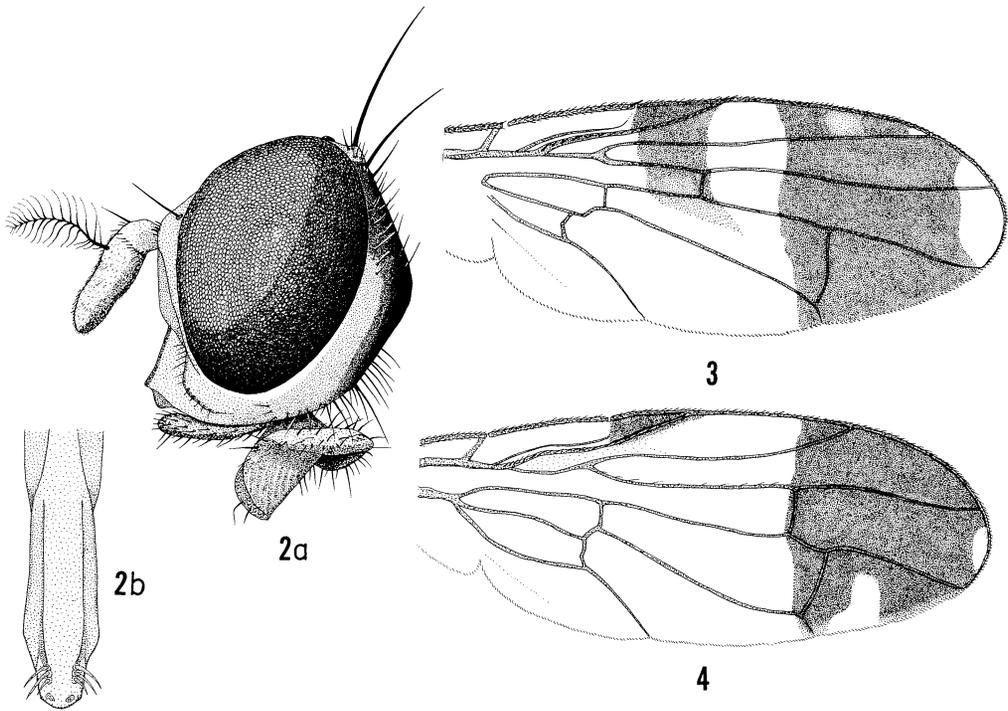


FIG. 2-4. 2, *Dimeringophrys bilineata*: a, head; b, apex of ♀ piercer. 3, *Euphranta (Euphranta) basalis*, wing. 4, *E. (E.) bilineata*, wing.

broad yellow median band extending entire length from base of 1st to apex of 5th tergum. Sterna dark brown to black. Genitalia have not been relaxed for study. Female ovipositor as in Fig. 2b, piercer very short, attenuated into a slender apical portion.

Length: body and wings 7.5-7.75 mm.

For further descriptive details refer to Hardy (1959: 165).

Distribution. Widespread over SE Asia, recorded from Borneo, Laos, Philippines, Sulawesi, and Sumatra.

Specimens examined. Types of both the above taxa and ca. 2 dozen specimens from over the range of the species.

Genus *Euphranta* Loew

Euphranta Loew, 1862, Europ. Bohrfliegen, p. 28. Type-species: *Musca connexa* Fabricius.

Mosina of Rondani, 1872, Dipterol. Ital. Prodr. 7: 180 (misidentification, not Robineau-Desvoidy).

Lagarosia van der Wulp, 1891, Tijdschr. Entomol. 34: 210. Type-species: *lacteata* van der Wulp.

Layarasia (error).

Euphranta is differentiated from other Euphrantini by lacking presutural bristles and possessing dorsocentrals, also by typically having humeral and sternopleural bristles; humerals are lacking in (*Euphranta*) *bilineata*, n. sp., *quadrimaculata*, n. sp.,

and *tricolor*, n. sp., all from New Guinea, and sternopleurals are lacking in *Euphranta* (*Xanthotrypeta*) *bimaculata* (Malloch), from the Solomon Islands, and *E. (E.) quadrimaculata*, n. sp., from Irian Jaya.

These are rather slender-bodied flies with an *Adrama*-like habitus but the meta-thoracic area above and between the hind coxae is semimembranous, not broadly sclerotized.

The 3 subgenera are differentiated by the characters given in the key above.

Front with 2–3 inferior fronto-orbital bristles. Ocellar bristles rudimentary or absent. Face concave in median portion. Arista with short to moderately long dorsal and ventral rays, short hairs along inner margin. Metasternum semimembranous, slightly sunken, rather sharply narrowed above hind coxae. Mid tibia with 1 strong apical spur. Female with 3 spermathecae. Piercer typically serrated, dentated, or lobed at apex (Fig. 8e, 12b, 25a).

Biology. *Euphranta* species are probably mostly fruit infestors, but some are evidently stem miners and pod infesters. Little is known of their biologies. *Euphranta* (*Staurella*) *japonica* (Ito)—known under *Rhacochlaena*—is a notorious pest of cherries (*Prunus avium*) in Japan. I have host associations with the following fruits: *E. (Staurella) linocierae* Hardy, from Australia, ex *Linociera ramiflora* (Oleaceae); *E. (E.) skinneri* Hardy, from the Philippines, ex Cucurbitaceae; *E. (S.) cassiae* (Munro), from India, ex pods of *Cassia fistula* (Leguminosae); *E. (S.) canagae* Hardy, from the Philippines and Indonesia, ex *Cananga odorata* (Annonaceae) and *E. (S.) maculipennis*, n. sp., from Java, collected on leaves on this host; *E. (E.) connexa* (Fab.), from Europe, ex *Cynanchum vincetoxicum* (Asclepiadaceae); *E. (S.) camilliae* (Ito) ex *Camellia japonica* (Theaceae) and *Castaneum crenata* (Fagaceae) in Japan.

Dr D. McAlpine (in litt.) has indicated that some species of *Euphranta* in Australia breed in the fruits of mangrove (Rhizophoraceae) growing in salt water. Shiraki (1933: 336, 338) recorded *E. (S.) apicalis* Hendel, from Taiwan, reared from stems of *Aeginetia indica* (Orobanchaceae) and *E. (S.) chrysopila* Hendel, from Taiwan, collected on stems of *Bambusa*.

Euphranta are difficult to collect mainly because we have little or no knowledge of the biologies or habits of most of the species. They are comparatively rare in collections. Many of the species are known from unique specimens or from only 1 sex.

KEY TO SPECIES OF *Euphranta* (*Euphranta*) FROM INDONESIA,
NEW GUINEA, SOLOMON IS, AND BISMARCK IS

- 1. Humeral bristle absent 2
- Humeral well developed 4
- 2 (1). Crossvein r-m situated near apex of cell 1st M₂, scarcely over ½ the length of r-m from m crossvein (Fig. 4) 3
- Crossvein r-m at middle of cell 1st M₂; wing with a narrow brown crossband at level of m crossvein; incomplete band over r-m (Fig. 16) . . . (Papua New Guinea) **tricolor**, n. sp.
- 3 (2). Mesonotum with 2 narrow dark brown to black vittae from opposite humeri to

- dorsocentral bristles; abdomen yellow to rufous; wing lacking a brown cross mark at level of cell Sc; apex of cell R₅ hyaline (Fig. 4); sternopleural bristles small . . . (NE New Guinea) **bilineata, n. sp.**
- Large black spot on each side at level with humeri; 2 short black vittae from behind suture to beyond dorsocentrals; abdomen with black median vitta over terga 1-5; 6th tergum all rufous; ovipositor base black; short streak of brown across wing from Sc; apex of wing brown (Fig. 12a); sternopleurals absent . . . (Irian Jaya) **quadrimaculata, n. sp.**
- 4 (1). Large brown mark covering r-m and m crossveins; narrow brown costal band through apical 2/3 of cell R₁ extending into upper preapical portion of R₃ and R₅ ending in wing margin near upper apex of cell 2nd M₂ (Fig. 8a); r-m crossvein near apical 1/4 of cell 1st M₂; largely black species 5
- Not as above; if r-m is at basal 1/4, scutellum is bordered with bright yellow and 3rd tergum and femora are clear yellow 6
- 5 (4). Complete preapical, oblique band to margin in apex of cell 2nd M₂ (Fig. 8a); body and legs all dark reddish brown to black . . . (Java, Sumatra, India, and Philippines) **macularis**
- Costal band extending only short way into cell R₃ (Fig. 42); scutellum, pleuro-terga, humeri, and propleura yellow; sternopleura and femora rufous, faintly tinged with brown . . . (Java) **lacteata**
- 6 (4). Crossvein r-m near base of cell 1st M₂, opposite end of vein Sc or middle of cell Sc; brown mark from wing margin in cell Sc extends only through cell R₅, mostly proximal to r-m (Fig. 7) 7
- Crossvein r-m near or beyond middle of 1st M₂ (except in *vitabilis* Hardy, where it is at basal 2/5 but the r-m is situated about opposite end of R₁ and the brown crossband extends well into cell 1st M₂) (Fig. 17) 8
- 7 (6). Apical hyaline mark in wing large, filling most of apex of cell R₅ and upper apex of 2nd M₂; r-m near basal 1/6 of cell 1st M₂ (Fig. 7); scutellum all yellow; mid and hind femora mostly brown; abdomen all black; upper inferior fronto-orbital bristles normal in position, situated well below superior fronto-orbitals . . . (SE New Guinea) **latifasciata, n. sp.**
- Apical hyaline mark confined to R₅ and part of R₃; r-m at basal 1/4 of cell 1st M₂ (Fig. 6b); scutellum dark brown over disc; femora pale yellow except for a brown anterior spot at apical 1/3 of mid pair; 3rd tergum pale yellow; upper inferior fronto-orbitals situated just below superior fronto-orbitals (Fig. 6a) . . . (Java) **flavizona, n. sp.**
- 8 (6). Wings with 4 deep hyaline wedges or crossbands extending 2/3 or all across wing from hind margin; with 3-4 brown transverse bands in addition to narrow marginal band through apex of cell R₅ (Fig. 15); upper inferior fronto-orbital bristles well spaced from superior fronto-orbitals, distance between being sub-equal to distance from superior fronto-orbitals to inner verticals 9
- Not as above; inferior fronto-orbitals nearer to superior fronto-orbitals than latter to inner verticals 10
- 9 (8). Hyaline crossbands not continuous to anterior margin of wing; hyaline mark in cells R₁ and R₃ just beyond apex of vein R₁ (Fig. 15); 2nd costal cell tinged faint yellow-brown; thorax predominantly dark brown to black . . . (Ambon, Maluku) **transiens**
- Hyaline crossbands complete, extending to anterior margin, with 4 transverse brown bands in addition to brown costal band extending into R₅; 2nd costal

- cell hyaline except at extremities (Fig. 44); thorax rufous, tinged with brown on sides of mesonotum . . . (NE New Guinea) undescr. sp.
- 10 (8). Apex of wing brown, no hyaline mark in apex of cell R₅ 11
 Apex of wing hyaline 12
- 11 (10). Apex of wing filled with dark brown mark continuous with brownish yellow coloration over anterior portion of wing (Fig. 5); mesonotum broadly yellow down median portion . . . (Kalimantan) **figurata**
 Brown marking in apex continuous as an arm over m crossvein to hind margin; otherwise wing hyaline except for brown crossband from costa in middle of cell R₁, over r-m crossvein into upper portion of cell 1st M₂, spot of brown in cell Sc, and basal part of R₁ (Fig. 9); mesonotum not as above . . . (SE Kalimantan) **maxima**
- 12 (10). Wings without complete narrow brown crossband from costa at basal 1/3 of cell R₁ to posterior margin at level of r-m crossvein, and without a brown band from apex of vein Sc to cell Cu 13
 Wing with 2 broad hyaline crossbands over middle set off by the above noted brown bands (Fig. 10) . . . (Flores) **naevifrons**
- 13 (12). Mesonotum mostly black with large yellow or white prescutellar spot 14
 Not as above, mesonotum mostly or entirely rufous; no more than 1 pair of brown vittae extending 3/5-3/4 length of mesonotum 15
- 14 (13). Wing with entire apices of cells R₃ and R₅ hyaline; large preapical marking of brown broadly joined with brown mark extending to costal margin in cell Sc (Fig. 13) . . . (Solomon Is) **scutellata**
 Hyaline spot not filling apex of R₅; hyaline crossband from costal margin just beyond apex of vein R₁ extending over wing at level just beyond r-m crossvein (Fig. 17) . . . (New Britain and New Ireland) **vitabilis**
- 15 (13). Mesonotum with 2 dark brown vittae extending from anterior margin to level with supraalar bristles or nearly to dorsocentrals; abdomen with dark brown to black markings 16
 Thorax and abdomen yellow to rufous . . . (Irian Jaya) **pallida, n. sp.**
- 16 (15). Large brown preapical wing marking without hyaline wedge from costa in apical 1/3 of cell R₁, only small apical spot present (Fig. 3); at least terga 4-5 entirely shining black 17
 Prominent hyaline mark at apical 1/3 of R₁ extending through R₃ (Fig. 14); terga 3-5 broadly yellow on sides; apical 1/2 of 5 and all of 6 (♀) yellow **simonthomasi, n. sp.**
- 17 (16). Wing with broad, uninterrupted preapical marking of brown (Fig. 3) . . . (New Guinea) **basalis, n. comb.**
 Wing with prominent hyaline mark on posterior margin in cell 2nd M₂ (Fig. 43) . . . (New Guinea) **variabilis**

Euphranta (Euphranta) basalis (Walker), new combination

Fig. 3

Psila basalis Walker, 1865, J. Proc. Linn. Soc. Lond., Zool. 8: 126. Type-locality: New Guinea. Type ♂ in BMNH.

This is one of the Walker species that I missed when I studied the Walker types (Hardy 1959, 1966). I have since had a chance to study this. It is a typical *Euphranta*, fitting the group of species characterized by having the apical 2/5 of the wing brown

except for a hyaline mark at the apex (Fig. 3). The wing markings resemble *flavo-scutellata* Hardy from the Philippines (Hardy 1974: 119) and *vitabilis* Hardy from New Britain and New Ireland (Hardy 1970: 125). *E. basalis* is differentiated by having the thorax yellow to rufous except for 2 rather narrow brown to black vittae on the mesonotum which extend from the front margin inside each humerus to about opposite the supraalar bristles. Also, there is a small brown mark on the lower anterior portion of each mesopleuron. The other 2 species each have the thorax predominantly black.

Front only slightly tinged with brown medianly; face yellow. Two pairs of widely spaced inferior fronto-orbital bristles present. Wings marked as in Fig. 3, brown mark from margin in cell Sc extends over r-m crossvein and evanesces at about middle of cell 1st M₂. Legs mostly yellow to rufous with spot of brown on posterior surface of front femur at about apical 1/3, also with tinge of brown on tibiae, especially hind pair. Abdomen mostly black, first 2 terga broadly yellow over median portion, brownish on sides.

Distribution. New Guinea. Known only from the type.

Specimens examined. Type.

Euphranta (Euphranta) bilineata Hardy, **new species**

Fig. 4

I am placing *bilineata*, along with *quadrifasciata*, n. sp., as aberrant *Euphranta* (*Euphranta*) that lack humeral bristles and have the sternopleural bristles small or absent. By lacking the humerals, these species would appear to fit near *Cyclopsia* Malloch, but the head bristles are normal in position and I do not feel that these are related. Until more information is available I would prefer to treat these as *Euphranta*. The 2 are readily differentiated from known species by the distad position of the r-m crossvein (Fig. 4).

E. (E.) bilineata fits nearest to *quadrifasciata*, n. sp., from Irian Jaya; it is differentiated by having 2 narrow, dark brown to black vittae on the mesonotum extending from opposite the humeri to the dorsocentral bristles; by lacking large black spots on each side of the humeri; by the all yellow to rufous abdomen, rather than with a black median vitta; by the wings lacking a brown cross band at the level of cell Sc (Fig. 4); by the presence of sternopleural bristles; and by the hyaline apex of cell R₅.

♀. Entirely yellow to rufous except for narrow dark brown to black vittae on mesonotum, dark brown spot each side of middle of front extending to or slightly beyond base of superior fronto-orbital bristle; hind tibiae dark brown to blackish. *Head.* Upper inferior fronto-orbitals normal in position, closer to superior fronto-orbitals than to lower pair. Ocellar bristles lacking. Antennae entirely yellow, 3rd segment about 2× longer than wide. Arista moderately plumose. *Thorax.* All bristles well developed except: humerals and prescutellars absent; sternopleurals about 1/2 normal size, i.e., about 1/2 as long or as thick as notopleural or supraalar bristles. *Legs.* Yellow except brown to blackish hind tibia. *Wings.* Mostly hyaline with faint discoloration of brownish yellow; large brown mark covering apical 1/3 and dark brown mark through subcostal cell. Apical brown marking complete beyond level with lower margin of m crossvein; narrow hyaline apex in cell R₅; oblong hyaline marking extending from posterior margin into cell 2nd

M_2 (Fig. 4). Cell Sc $\frac{2}{3}$ – $\frac{3}{4}$ length to 2nd costal. Crossvein r-m at extreme apex of cell 1st M_2 ; distance from r-m to m crossvein ca. $\frac{1}{2}$ length to r-m. *Abdomen*. Entirely rufous, including ovipositor. Ovipositor base conical, length equal to segments 4–6. Piercer not extruded for study. Tergum 6 subequal to 5th.

Length: body 5.25 mm, excluding ovipositor; wings 5.75 mm.

♂. Unknown.

Holotype ♀, PNG: NEW GUINEA (NE): 1080 m, 14.VII.1963 (M. Sedlacek) (BPBM 12,898).

Euphranta (Euphranta)? figurata Walker

Fig. 5

Dacus figuratus Walker, 1856, J. Proc. Linn. Soc. Lond., Zool. 1: 133. Type-locality: "Borneo." Type ♀ in BMNH.

The type is in such poor condition that the generic placement of this species is uncertain. The head is missing, the wings are broken off and glued on a card, and the body is glued down on a large card, obscuring the leg and some other characters.

The pleuroterga are covered with fine, erect hairs and the prescutellar bristles are apparently lacking. This would appear to be a *Euphranta* and seems to be typical of the subgenus except that without the head the *Cyclopsia* characters cannot be checked. It would be borderline with *Euphranta (Xanthotrypeta)* by having rudimentary sternopleural bristles.

This species differs from other known *Euphranta* by having a large brown spot filling the wing apex; the anterior portion of the wing is broadly yellow-brown to about r-m crossvein and the posterior portion subhyaline (Fig. 5).

Mesonotum shining black with broad yellow band bordered by dorsocentral bristles. Median portion of mesonotum with gray fascia extending full length, sutures gray pollinose. Scutellum mostly yellow, narrow anterior margin and lateral margins on base and all of metanotum black. Humeri and most of notopleura yellow, lower portion of latter black. Pleura black; propleura, upper portions of mesopleura and narrow vitta across top border of each sternopleuron connecting with propleuron yellow. Legs predominantly rufous, mid and hind tarsi and tibiae brown to black.

Refer to Hardy (1959: 172) for other descriptive notes.

Distribution. Borneo. Known only from the type.

Specimens examined. Type.

Euphranta (Euphranta) flavizona Hardy, new species

Fig. 6a–b

By having the r-m crossvein basad in position this species fits near *latifasciata*, n. sp., from New Guinea, but the 2 species are not related. *E. flavizona* is readily characterized by having the 3rd abdominal tergum entirely clear yellow; the scutellum black on the disc, yellow only on the margins; the apical hyaline mark in wing confined to cell R_5 and part of R_3 ; the crossvein r-m at the basal $\frac{1}{4}$ of cell 1st M_2 (Fig. 6b); the femora pale yellow except for a brown anterior spot on the apical $\frac{1}{3}$ of the mid pair and upper inferior fronto-orbital bristle situated just slightly below the superior

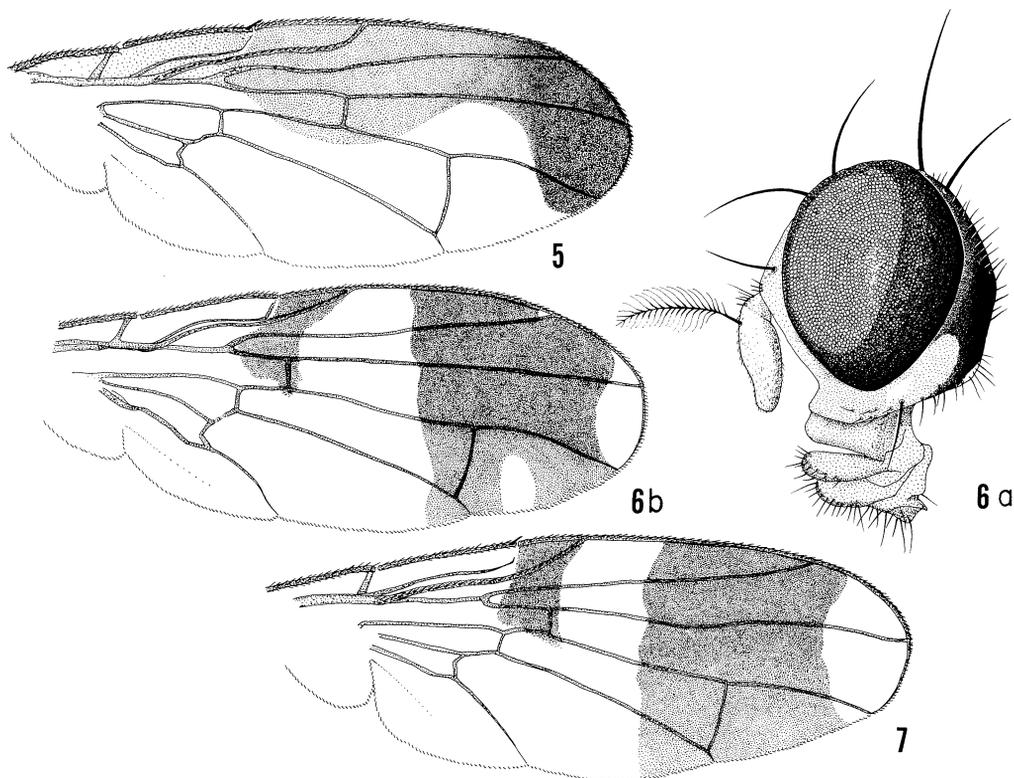


FIG. 5-7. 5, *Euphranta (E.) figurata*, wing. 6, *E. (E.) flavizona*: a, head; b, wing. 7, *E. (E.) latifasciata*, wing.

fronto-orbital (Fig. 6a); also, the humeral, dorsocentral and sternopleural bristles are all well developed.

♀. *Head*. Clear yellow; large black spot occupying middle portion of front; upper $\frac{2}{3}$ of sides of occiput shining black. Front with scattered, inconspicuous, pale pile. Ocellar bristles absent. Two inferior fronto-orbital bristles, widely spaced, upper located just below superior fronto-orbital, distance between only slightly more than distance between 2 upper ocelli. Antennae entirely yellow with 3rd segment about $3\times$ longer than wide, slightly tapered on apical $\frac{1}{2}$. *Thorax*. With a full complement of large, well-developed bristles. Predominantly shining black; large yellow mark on posterior median portion of mesonotum between dorsocentral bristles, extending as narrow median vitta almost to suture, sides of suture yellow in ground color. Median gray fascia extends down mesonotum from about level with hind margins of humeri, sides of suture gray pollinose, pollinosity extends over notopleura to lateral margins of mesonotum behind humeri. Posterolateral margins of mesonotum and broad margins and venter of scutellum yellow. *Legs*. Mostly clear yellow, tinge of brown on mid and hind tibiae, brown anterior spot at apical $\frac{1}{3}$ of mid femur. *Wings*. Hyaline except for prominent brown cross marks. Cell Sc about $\frac{3}{5}$ as long as 2nd costal. Crossvein r-m at basal $\frac{1}{4}$ of cell 1st M_2 ; markings as in Fig. 6b; brown transverse mark extending from subcostal cell over r-m crossvein ending

at vein M_{1+2} ; broad mark extending across apical $\frac{2}{5}$ of wing leaving large apical hyaline spot in cells R_3 and R_5 , tiny hyaline spot at apex of R_1 , oblong spot on posterior margin extending into cell 2nd M_2 . *Abdomen*. Terga shining black except for completely yellow 3rd tergum, yellow extending to base of median portion of 4th tergum and along narrow apical margin of 2nd. First 2 sterna brown, tinged with rufous, 3rd and 4th clear yellow, 5th yellow with faint tinge of brown on basal $\frac{3}{4}$, dark brown along apex, 6th dark brown tinged with black. Tergum 6 about $\frac{2}{3}$ as long as 5th. Ovipositor shining black, basal segment equal in length to segments 4–6. Piercer not extruded for study.

Length: body 6.25 mm; wings 5.7 mm.

♀. Unknown.

Holotype ♀, JAVA: (Central) S of Semarang, nr Ambarawa, 600 m, 5.VI.1975 (D.E. Hardy) (BPBM 12,899).

Euphranta (Euphranta) lacteata (van der Wulp)

Fig. 42

Lagarosia lacteata van der Wulp, 1891, Tijdschr. Entomol. **34**: 211. Type-locality: Java. Type ♂ in ZMUA. I have studied the type.

This species is closely related to *macularis* (Wiedemann) and is differentiated mainly by lacking the preapical brown band through cells R_3 , R_5 , and 2nd M_2 (Fig. 42). The specimens I have seen from W Java also differ by having the scutellum, pleuroterga, lower part of humerus and propleura yellow and the sternopleura and femora rufous, faintly tinged with brown. Otherwise it resembles *macularis*.

Distribution. Java.

Specimens examined. I have seen several specimens from Tjibodas, Mt Gede, and Telagawarna in western Java.

Euphranta (Euphranta) latifasciata Hardy, new species

Fig. 7

This species fits the characteristics of a typical *Euphranta* except the sternopleural, dorsocentral, and humeral bristles are rather poorly developed, about $\frac{1}{2}$ to scarcely over $\frac{1}{3}$ the size of normally developed bristles. By having the r-m crossvein basad in position it resembles *flavizona*, n. sp., but the 2 do not seem closely related. *E. latifasciata* differs from *flavizona* by having a large apical hyaline mark in the wing, filling most of the apex of cell R_3 and the upper apex of 2nd M_2 ; the r-m crossvein is situated near the basal $\frac{1}{6}$ of cell 1st M_2 (Fig. 7); the scutellum is all yellow; the mid and hind femora are mostly brown; the abdomen is all black; and the upper inferior fronto-orbital bristles are normal in position, situated well below the superior fronto-orbitals.

♀. *Head*. Predominantly yellow to rufous, with a dark brown to blackish streak down middle of front from just below ocellar triangle to lunule. Brown spot on each gena at lower hind margin. Type with 2 pairs inferior fronto-orbital bristles on right side, 3 pairs on left side, extra bristle placed very close to lower inferior fronto-orbitals. Upper inferior fronto-orbital normal in position, at middle of front slightly closer to superior fronto-orbital than to lower bristle. Third antennal segment brown, base rufous, elongate, slender, 4× longer than wide, equal in length to face. Arista long plumose. *Thorax*. Mostly dark brown to blackish, mottled with yellow to rufous. Scutellum pale yellow. Posteromedian portion of mesonotum rufous,

median portion rufous, tinged with brown to anterior margin. Margins of suture, notopleura and portions above and behind each humerus yellow, dull yellow spot on upper median portion of each mesopleuron. Humerus mostly yellow to rufous, tinged with brown along upper portion. Pleura with black bristles, setation and pubescence gray. Gray pubescent along sides of suture. Median portion of mesonotum short yellow setose except for a few short black setae near anterior margin and posterolateral portions of mesonotum behind suture, short black setae on a shining black ground color covered with light gray pollen. Scutellum almost bare on disc, just a few scattered pale setae and 4 strong black bristles. Halteres pale yellow. *Legs*. Mostly dark colored, apices of mid and front femora broadly rufous, hind femora black except for rufous apices. *Wings*. Hyaline except for 2 prominent dark brown crossbands. Cell Sc extremely short, scarcely over $\frac{1}{6}$ as long as cell R_1 . Crossvein r-m about opposite end of vein Sc very near base of cell 1st M_2 . Markings as in Fig. 7. *Abdomen*. Entirely shining black except a very narrow rim of yellow at base of 1st tergum. Basal segment of ovipositor large, conical, slightly longer than segments 4–6. Tergum 6 equal in length to 5th. Piercer not extruded for study.

Length of body, excluding ovipositor, 10.0 mm; wings 9.0 mm. This is one of the largest of the *Euphranta*.

♂. Unknown.

Holotype ♀, PNG: NEW GUINEA (SE): E of Port Glasgow, Mamai Pltn., 150 m, 16.II.1965, in light trap (R. Straatman) (BPBM 12,900).

***Euphranta (Euphranta) macularis* (Wiedemann)**

Fig. 8a–e

Chyliza macularis Wiedemann, 1830, Aussereurop. Zweifl. Insekt. **2**: 531. Type-locality: Java. Type ♀ in ZMUC.

Lagarosia striatella van der Wulp, 1891, Tijdschr. Entomol. **34**: 213. Type-locality: Java. Type ♀ is supposed to be in the ZMUA, but I have not found it there.

Euphranta nigra Enderlein, 1911, Zool. Jahrb., Syst. **31**: 439, Fig. Q. Type-locality: Soekaranda, Sumatra. Type ♂ in PIZW.

This species is readily recognized by its distinctive wing markings (Fig. 8a). It is closely related to *lacteata* (van der Wulp) by having a large brown mark in the wing over the apical $\frac{1}{3}$, covering the r-m and m crossveins, a transverse brown band from the anterior margin in cell Sc extending across the prebasal portion of the wing at the level of the fork of veins M_{1+2} and M_{3+4} into the upper base of cell M_4 , and a narrow brown costal band in the apical $\frac{3}{4}$ – $\frac{4}{5}$ of cell R_1 (Fig. 8a, 42). It is differentiated from *lacteata* by having the narrow band along the costa in cell R_1 continuous as an oblique band through the subapical portions of cells R_3 and R_5 ending in the costa at the upper apex of cell 2nd M_2 . It also differs by having the body and legs all dark reddish brown to black.

Head dark colored except for pale yellow upper $\frac{3}{5}$ of face. In lateral view face gently concave in middle. Ocellar bristles absent. Inferior fronto-orbitals variable in number (specimens on hand mostly have 2 pairs, a few have 3). Thorax black, faint tinge of rufous over dorsum, dark reddish brown on sides; sides and underpart of scutellum rufous. Mesonotum rather densely gray pollinose, especially down median portion and on sides at suture. Mesonotum and scutellum densely covered with short, dark-colored setae; sternopleura densely covered with yellow-white pubescence and fine hairs; pleuroterga with abundant, rather long, yellow-white pile. Dorsocentral bristles just in front of line drawn between postalar bristles. Halteres yellow. Wings as described above and in Fig. 8a. Large brown mark in middle of wing sometimes

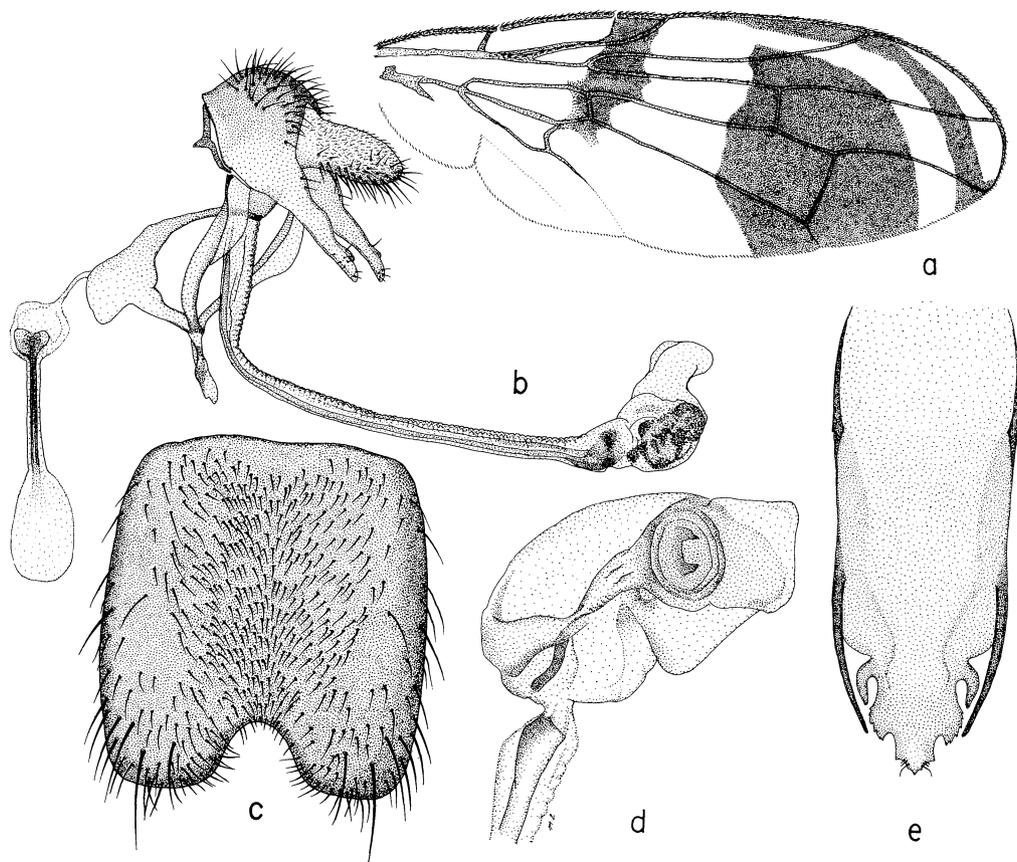


FIG. 8. *Euphranta (E.) macularis*: a, wing; b, ♂ genitalia, lateral; c, 5th sternum, ♂; d, apex of aedeagus; e, apex of ♀ piercer.

connected with costal band in cell R_1 . Legs mostly dark reddish brown to blackish. Abdomen subshining black in ground color, densely black setose, covered with thin gray pollinosity (microscopic pubescence) over entire dorsum except for polished dark reddish brown to black apical $\frac{2}{5}$ of 5th tergum and for shining area at base of each seta. Male 5th sternum slightly longer than wide, with shallow U-shaped concavity in middle of hind margin (Fig. 8c). Male surstyli slender; 10th sternum rudimentary, apparently fused with surstyli. Cerci longer than wide, thickly setose over ventral surfaces (Fig. 8b). Aedeagus as in Fig. 8d. Tergum 6 of ♀ $\frac{1}{2}$ – $\frac{2}{5}$ as long as 5th. Basal segment of ovipositor, as seen from dorsal view, scarcely longer than 5th tergum, 1.0 mm long by 1.0 mm at its widest point. Ovipositor short and broad, piercer weakly sclerotized, serrated and lobed apically as in Fig. 8e, 1.3 mm long. Extended ovipositor slightly over 3.0 mm. Three oblong spermathecae present.

Length: body, 8.5–9.25 mm; wings, 7.5–8.5 mm.

Distribution. Java, Sabah, Sumatra, India, and Philippines.

Specimens examined. Types of *macularis* and *nigra*, also ca. 50 specimens from throughout the species' range.

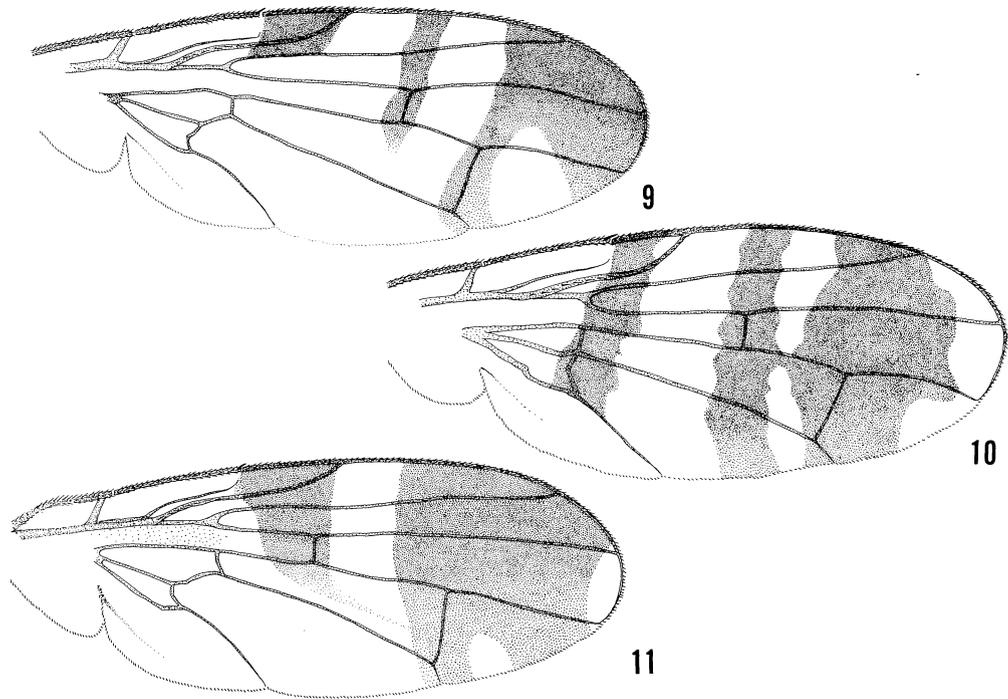


FIG. 9-11. 9, *Euphranta (E.) maxima*, wing. 10, *E. (E.) naevifrons*, wing. 11, *E. (E.) pallida*, wing.

***Euphranta (Euphranta) maxima* Hering**

Fig. 9

Euphranta maxima Hering, 1941, *Siruna Seva* 3: 14. Type-locality: SE Kalimantan. Type ♀ in ZMHB.

This species is characterized by its wing markings: a dark brown mark over the apex which continues as a brown band to the posterior margin over the m crossvein, leaving a large hyaline wedge through cell 2nd M_2 almost halfway across R_5 ; a brown band across the wing from the costal margin near the middle of cell R_1 , extending over r-m crossvein halfway across cell 1st M_2 , and a dark brown spot occupying cell Sc and the basal portion of R_1 (Fig. 9).

Front and face yellow, large black spot over upper median portion of front extending onto vertex. Original description states incorrectly "Die ersten 2 Fühlerglieder gelb, das 3 schwarz"; first 2 antennal segments dark brown, 3rd clear yellow. Ocellar bristles absent. One superior fronto-orbital, 3 inferior fronto-orbitals. Thorax mostly yellow-brown, large black spot above each humerus; black longitudinal band on each side of mesonotum from behind suture to posterior margin; black band across lower portion of each mesopleuron. Mesonotum with yellow median vitta from near suture to hind margin, broadening on posterior portion before scutellum, short yellow postsutural vitta on each side extending to inner postalar bristle. Humeri and upper portions of mesopleura pale yellow. Legs mostly yellow to rufous, tinged with brown on tibiae and tarsi. Wings as above and in Fig. 9. Abdomen mostly yellow-brown, 1st tergum black, broad black band down each side extending to middle of 5th tergum. Sixth tergum

entirely yellow-brown. Basal segment of ovipositor elongated, longer than remainder of abdomen, dark brown to black in color.

For further details refer to original description.

Distribution. SE Kalimantan. Known only from the type.

Specimens examined. Type.

Euphranta (Euphranta) naevifrons Hering

Fig. 10

Euphranta naevifrons Hering, 1941, Arb. Morphol. Taxon. Entomol. Berlin-Dahlem 8(1): 30. Type-locality: "Rana Mêsé," Flores Island. Type ♀ in DEI.

This species is characterized by the wing markings: the presence of a brown crossband extending from the costal margin at the basal $\frac{1}{3}$ of cell R_1 to the posterior margin at a level with the r-m crossvein, this band being joined with the broad preapical brown band by a thin brown line along vein M_{1+2} ; the apical $\frac{1}{2}$ of cell Sc subhyaline, faintly tinged with yellow, a dark brown crossband extending from the basal $\frac{1}{2}$ of Sc across the wing at the level of the bases of cells R_3 and 1st M_2 into the lobate portion of cell Cu (Fig. 10).

Head yellow, large black mark in upper median portion of front. One superior fronto-orbital, 2 inferior fronto-orbitals. Third antennal segment broken off. Thorax mostly shining black, yellow median vitta extending full length; yellow on sides of mesonotum along suture, humeri, scutellum, propleura, and sternopleura. Legs yellow, all tibiae, tarsi and basal halves of mid and hind femora yellow-brown. Wings as in Fig. 10. Abdomen, including ovipositor, blackish brown. Basal segment of ovipositor short, about equal to terga 5+6.

For further details refer to original description.

Distribution. Flores I, Nusa Tenggara, Indonesia. Known only from the type.

Specimens examined. Type.

Euphranta (Euphranta) pallida Hardy, new species

Fig. 11

E. (E.) pallida is an entirely pale yellow to rufous species fitting nearest to *basalis* (Walker) and readily differentiated by its yellow to rufous thorax and abdomen.

♀. *Head.* Fitting features of most *Euphranta*, with rudimentary ocellars, no dark markings on front. Inferior fronto-orbitals normal in position. Third antennal segment ca. 3× longer than wide, extending almost full length of face. Palpi unusually well developed, distinctly broader and longer than 3rd antennal segment, width about $\frac{1}{2}$ length of labellum. *Thorax.* All yellow to rufous, covered with fine yellow pile, bristles well developed except sternopleurals only about $\frac{2}{3}$ as long as notopleurals and supraalars. *Legs.* Entirely pale yellow to rufous, large apical black spur on mid tibia $\frac{1}{2}$ length of basitarsus. *Wings.* Basal $\frac{2}{3}$ mostly hyaline, tinged with yellow in basal cells; large brown mark covering apical $\frac{1}{5}$ of wing, hyaline spot over apex of cell R_5 , another spot from margin extending into middle of cell 2nd M_2 . Prominent brown mark extending across wing from subcostal cell over r-m crossvein through about $\frac{1}{2}$ of cell 1st M_2 . Crossvein r-m just before middle of cell 1st M_2 . Cubital cell with a prominent, but short, apical lobe (Fig. 11). *Abdomen.* Lacking dark markings. Sixth tergum subequal in length to 5th, base of ovipositor slightly longer than segments 4–6. Piercer not extruded for study.

Length: body and wings, excluding ovipositor, 5.0 mm.

♂. Unknown.

Holotype ♀, IRIAN JAYA: NEW GUINEA (NW): Japen I, SSE, Sumberbaba, Dawai R, 28.X.1962, in jungle (H. Holtmann) (BPBM 12,901).

Euphranta (Euphranta) quadrimaculata Hardy, **new species**

Fig. 12a-b

This species fits the same complex of species as *bilineata*, n. sp., from NE New Guinea, by lacking humeral bristles, being predominantly yellow to rufous, and having the r-m crossvein distad in position. In contrast, however, this species lacks sternopleural bristles and in this regard would appear to fit *Xanthotrypeta* Malloch. It differs from *X. bimaculata* (Malloch), the only known species of that taxon, by lacking humeral bristles and by the placement of the r-m crossvein. I am skeptical about the value of the presence or absence of humeral or sternopleural bristles in this case. It appears that the bristles may be nothing more than species characters in some instances. *E. quadrimaculata* fits nearest to *bilineata* and is differentiated by having a large black spot on each side of the mesonotum at a level with the humeri and 2 short black vittae from behind the suture to beyond the dorsocentrals; a black median vitta extending over terga 1-5 of the abdomen; the 6th tergum of the female all rufous and the ovipositor base black; and wings with a short streak of brown extending transversely from the subcosta and the apex of the wing brown (Fig. 12a). Also, it lacks the sternopleural bristles.

♀. *Head*. Fitting description of *bilineata*, with prominent brown to black spots on sides of median portion of front. *Thorax*. Entirely yellow except for 4 black markings mentioned above, bristles well developed. *Legs*. Pale yellow, hind tibiae brown to black. *Wings*. Subhyaline, large dark brown mark in apical $\frac{1}{3}$ and brown mark which fills cell Sc and extends obliquely across wing through basal portion of cell R_5 almost to vein M_{1+2} opposite basal portion of vein M_{3+4} . Brown apical mark completely filling wing tip beyond level of r-m and m crossveins, except for a large hyaline spot from posterior margin which fills most of cell 2nd M_2 . Crossvein r-m very near crossvein m, distance between these about $\frac{1}{2}$ length of r-m (Fig. 12a). Cubital cell with a very short point at apex, transverse section of vein Cu, slightly bent. *Abdomen*. Clear yellow, shining black median vitta from base to apex of 5th tergum, broadest in median portions of 1st 2 terga, narrow over 3-5. Sixth tergum equal in length to 5th. Base of ovipositor shining black, subequal in length to terga 4-6. Remainder of ovipositor yellow to rufous, piercer gradually tapered to apex and microscopically serrated on edges (Fig. 12b).

Length: body and wings, 5.75 mm, excluding ovipositor.

♂. Unknown.

Holotype ♀, IRIAN JAYA: NEW GUINEA (W): Nabire, 5-50 m, 25.VII-2.IX.1962, malaise trap (J. Sedlacek) (BPBM 12,902).

Euphranta (Euphranta) scutellata Malloch

Fig. 13

Euphranta scutellata Malloch, 1939, Ann. Mag. Nat. Hist. **4**: 252. Type-locality: Solomon Is. Type ♂ and allotype ♀ in BMNH.

E. (E.) scutellata fits the group characterized by having a mostly black thorax and

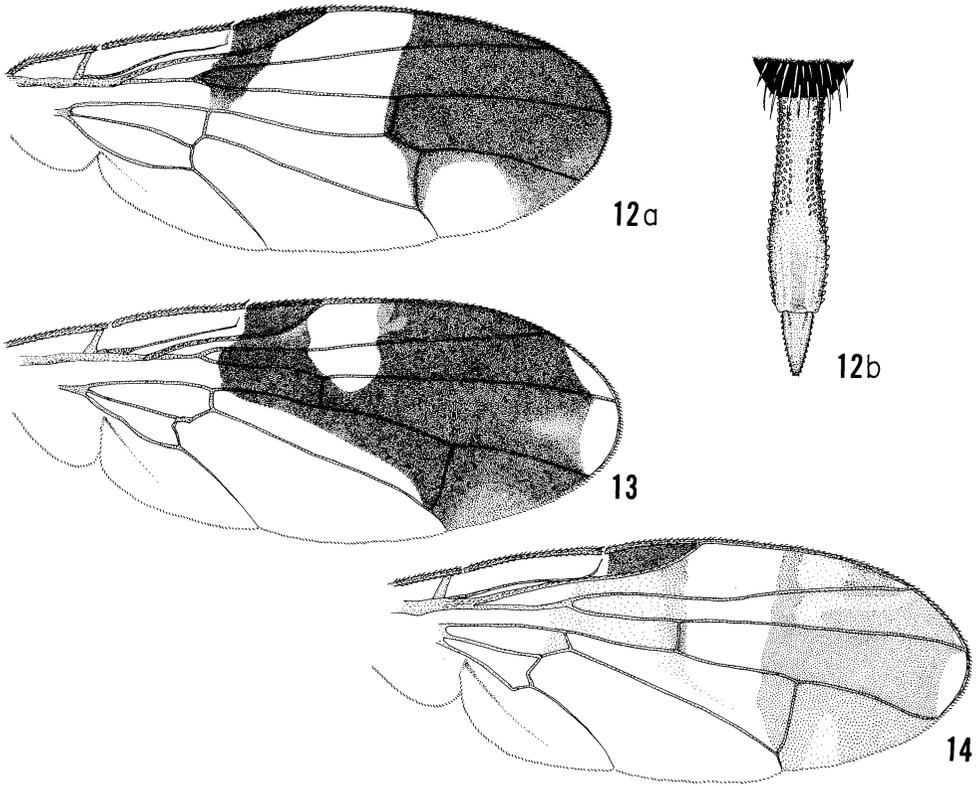


FIG. 12-14. 12, *Euphranta* (*E.*) *quadrimaculata*: a, wing; b, apex of ♀ piercer. 13, *E.* (*E.*) *scutellata*, wing. 14, *E.* (*E.*) *simonthonasi*, wing.

a large yellow prescutellar spot on the mesonotum. Malloch (loc. cit.) allied this species to *lacteata* (van der Wulp) but the 2 are totally different (refer to Fig. 13 and Fig. 42). *E. scutellata* is differentiated from other known species by the wing markings: the hyaline area of the wing apex extending through apices of cells R_3 and R_5 and a large brown preapical marking covering most of the central portion of the wing continuous with a brown marking that extends to the costa in cell Sc, leaving a large hyaline wedge extending from the anterior margin just beyond the end of vein R_1 across the wing into cell R_5 just beyond the r-m crossvein (Fig. 13).

Head mostly yellow, brown in middle of front, black on each side of face, occiput glossy black except in center behind ocelli. Third antennal segment mostly brown. Ocellars rudimentary. Thorax shiny black, large yellow mark in middle of hind portion of mesonotum, scutellum mostly yellow, tinged with brown on its base. Broad gray fascia extending longitudinally down middle of mesonotum, gray along margins of suture. Wings as in Fig. 13. Crossvein r-m at about middle of cell 1st M_2 . Legs mostly black; fore pair, all trochanters and tarsi brownish yellow; apices of front femora and bases of front tibiae blackened. Hind femora of ♀ yellow on basal $\frac{1}{5}$. Abdomen entirely glossy black. Base of ♀ ovipositor conical, over $\frac{1}{2}$ as long as remainder of abdomen.

Length of body 8.5–10.0 mm.

For further details see original description.

Distribution. Solomon Is. Known only from the type and allotype.

Specimens examined. Type and allotype.

***Euphranta (Euphranta) simonthomasi* Hardy, new species**

Fig. 14

E. (E.) simonthomasi fits close to *variabilis* (Kertész) but differs by having a prominent hyaline wedge from the costa through the apical $\frac{1}{3}$ of cell R_1 , extending through cell R_5 ; cells R_1 , R_3 , and R_5 basad of the r-m crossvein to the fork of veins R_{2+3} and R_{4+5} are brownish yellow, rather than hyaline; the pleura are entirely yellow to rufous with no dark markings and the abdomen is pale yellow except for a large dark brown to blackish mark over the dorsomedian portions of terga 3–4 and over the basomedian portion of 5.

♀. *Head.* Shaped as in typical *Euphranta*. Two pairs of widely spaced inferior fronto-orbitals on lower $\frac{1}{2}$ of front. Superior fronto-orbitals just above middle of front. Ocellars absent. Front, face, and occiput pale yellow, tinge of pale brown through median portion of former, tinge of brown across upper median portion of latter. Antennae entirely yellow. Aristae moderately long plumose. *Thorax.* Entirely pale yellow to rufous, brown longitudinal markings on mesonotum, on each side from anterior margin just inside outer scapular bristles to level about halfway between supraalars and dorsocentrals. These vittae narrowed at suture, indistinctly divided by thin yellow line before and behind suture; postscutellum and metanotum dark brown to blackish on sides, rufous, tinged with brown on middle portion. Large yellow-white prescutellar spot present. Scutellum and pleura entirely pale yellow. Dorsocentral bristles comparatively small, approximately $\frac{1}{2}$ size of supraalar bristles, located halfway between supraalars and postalars. Sternopleural bristles slightly weaker than dorsocentrals. *Wings.* Markings as noted above and in Fig. 14; crossvein r-m at middle of cell 1st M_2 . *Legs.* Entirely yellow to rufous. *Abdomen.* As noted above, predominantly pale yellow to rufous, large brown to blackish mark over median portion from base of tergum 3 to just beyond middle of 5th tergum. Tergum 6 entirely yellow, about $\frac{2}{5}$ as long as 5th tergum as seen in dorsal view. Ovipositor base (7th segment) pale yellow except for dark brown to black apex. Basal segment just slightly longer than terga 5–6. Piercer not extruded for study.

Length: body 7.25 mm; wings 6.75 mm.

♂. Unknown.

Holotype ♀, IRIAN JAYA: NEW GUINEA (W): Hollandia (Jayapura), 3.I.1958 (R.T. Simon Thomas) (AMS).

The species is named after Dr R.T. Simon Thomas, who spent several years doing entomological work in Irian Jaya and was especially helpful to me when I worked in that area.

***Euphranta (Euphranta) transiens* (Walker)**

Fig. 15

Trypeta transiens Walker, 1860, J. Proc. Linn. Soc. Lond., Zool. 5: 164. Type-locality: Ambon, Maluku. Type (sex?) in BMNH.

This species is characterized from other known *Euphranta (Euphranta)* by having 4 deep, hyaline wedges extending from the posterior margin $\frac{2}{3}$ or more across the

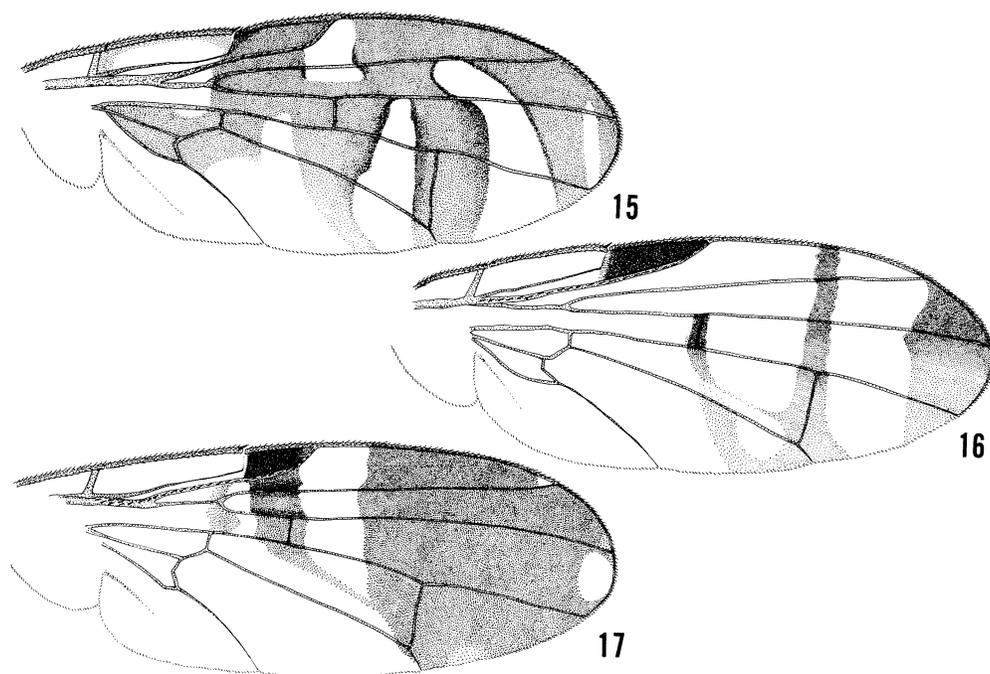


FIG. 15-17. 15, *Euphranta (E.) transiens*, wing. 16, *E. (E.) tricolor*, wing. 17, *E. (E.) vitabilis*, wing.

wing, with the anterior margin brownish yellow except for a hyaline mark in cells R_1 and R_3 about opposite the end of vein R_1 , and a narrow marginal band of brown extending around the apex of the wing through cell R_5 (Fig. 15). Also, the upper inferior fronto-orbital bristles are rather widely spaced from superior fronto-orbitals, the distance between about equal to the distance between superior fronto-orbitals and the inner vertical bristles.

Because of the wing markings this species seems to fit in a complex with a new undescribed species from Papua New Guinea.

Type has 3 pairs of well-developed inferior fronto-orbital bristles on right side of front, 4 pairs on left, extra bristle developed near lower margin of front. Front predominantly black, lower margin and upper orbits yellow. Third antennal segment reddish brown. Thorax predominantly dark brown to black in ground color, gray pollinose on dorsum, median posterior portion of mesonotum yellow just before scutellum. Notopleura, humeri, except for brown anterior margins, and hypopleura yellow; pleura otherwise brown to black. Front legs rufous, tinged with brown on tibiae and tarsi; middle legs mostly brown to black, dorsal surface and apical $\frac{1}{3}$ of each femur yellow. Hind legs and abdomen missing on type. Wings as in Fig. 15.

For more descriptive details refer to Hardy (1959: 225).

Distribution. Ambon, Maluku. Known only from the type.

Specimens examined. Type.

Euphranta (Euphranta) tricolor Hardy, **new species**

Fig. 16

This is a striking species with contrasting markings of yellow, black, and creamy white. By lacking humeral bristles, it appears to fit in an aberrant group of New Guinea species which fit typical *Euphranta* except that they lack humeral bristles. In this regard they fit *Cyclopsia* Malloch but differ by having the face concave in the middle and the inferior fronto-orbital bristles widely spaced. The other species which lack humerals are *bilineata*, n. sp., and *quadrimaculata*, n. sp. *E. tricolor* is readily differentiated by the banded wings (Fig. 16) and other characters given in the description below.

♂. *Head*. Typical in shape, with 2 pairs of widely spaced inferior fronto-orbitals on lower $\frac{1}{2}$ of front. Superior fronto-orbitals on upper $\frac{1}{2}$ of front. Ocellar bristles small, setalike. Head mostly pale yellow except for dark compound eyes, dark brown to blackish spot filling median portion of front from ocellar triangle to lower $\frac{1}{4}$, large polished black spot on each side of upper occiput; face white, bright yellow mark occupying lower median portion below edge of concavity. Antennae rufous, tinge of brown on apex of 3rd segment. Aristae moderately long plumose, longest rays ca. $\frac{3}{4}$ - $\frac{4}{5}$ width of 3rd segment. Palpi entirely yellow. *Thorax*. Conspicuously tricolored, mesonotum with prominent shining black, oblong mark on each side just above humerus; broad dark brown to blackish mark on each side extending from just behind suture, fading out just beyond dorsocentral bristles. Humeri, vertical mark across hind portion of each mesopleuron, and tear-shaped mark in median portion of mesonotum extending between the dark brown markings from about level with postalar bristles to about level with hind portion of notopleura white to cream colored. Dorsocentral bristles about $\frac{3}{4}$ length of postalars, situated about $\frac{1}{3}$ distance from postalars to supraalars. Humerals completely lacking. Sternopleurals rather well developed, about equal to dorsocentrals. *Wings*. Dark brown spot occupying apex of cell R_3 and apical $\frac{2}{3}$ of cell R_5 , dark brown band extending across wing from just below costa to posterior margin at level with m crossvein, narrow streak of brown over r-m crossvein, extending $\frac{2}{3}$ through cell 1st M_2 , evanescent and appearing again in posterior portion of wing in cell M_4 as a faint brown marking. Subcostal cell dark brown. Yellow markings in cell R_1 below cell Sc and along margin (Fig. 16); remainder of wings hyaline. Crossvein r-m at middle of cell 1st M_2 . *Legs*. Yellow, tinge of brown to black on mid and hind tibiae. *Abdomen*. Basal 4 segments entirely yellow to rufous, both tergum and sternum of 5th shining black. Genitalia not studied.

Length: body 7.25 mm; wings 6.5 mm.

♀. Unknown.

Holotype ♂, PNG: NEW GUINEA (NE): Stony Logging Area nr Bulolo, on *Trema exudate*, 2.VI.1979 (H. Roberts) (AMS).

Euphranta (Euphranta) variabilis (Kertész), **new combination**

Fig. 43

Ptilona ? *variabilis* Kertész, 1901, Természett. Füz. **24**: 426. Type-locality: NE New Guinea: Erima, Astrolabe Bay. Type ♂ in TMB.

Hering (1941a: 49) incorrectly placed this as a *Cyclopsia*. Dr L. Papp, TMB, has confirmed that the humeral bristles are present and that the inferior fronto-orbitals are rather widely spaced.

This species is close to *basalis* (Walker) by having the apex of the wing hyaline,

with a large preapical brown marking covering the wing beyond a level just before the m crossvein and with a short brown crossband from the costa in cell Sc to just below vein M_{1+2} over r-m crossvein; also by having the thorax mostly rufous, lightly tinged with brown and with a pair of brown vittae extending about $\frac{1}{2}$ the length of the mesonotum. It differs from *basalis* by having a prominent hyaline mark from the posterior margin in cell 2nd M_2 (Fig. 43), the 3rd tergum yellow on the sides, and the sternopleura brownish red to blackish. Otherwise *variabilis* resembles *basalis*.

Distribution. New Guinea.

Specimens examined. Type and 1♀, IRIAN JAYA: NEW GUINEA (W): Star Mts, Sibil Val, 1245 m, 18.X-8.XI.1961 (S. Quate).

Euphranta (Euphranta) vitabilis Hardy

Fig. 17

Euphranta (Euphranta) vitabilis Hardy, 1970, Entomol. Medd. **38**: 125. Type-locality: Keravat, New Britain. Type in BMNH.

E. (E.) vitabilis fits the species group which has the body predominantly black with a large yellow to white prescutellar mark in the middle of the mesonotum. It is differentiated by having only a small hyaline mark which does not fill the apex of cell R_5 ; small hyaline spots at the apices of cells R_1 and R_3 ; a small hyaline wedge in the apex of cell 2nd M_2 ; and a crossband of brown from the costa in cell Sc extending into the basal $\frac{1}{4}$ of cell 1st M_2 , mostly basad of the r-m crossvein but including it (Fig. 17).

Crossvein r-m near basal $\frac{1}{3}$ of cell 1st M_2 . Thorax mostly polished black in ground color on dorsum, otherwise dark brown, tinged rufous on pleura. Posteromedian $\frac{1}{4}$ of mesonotum covered with large white spot. Humeri, notopleura, margins and venter of scutellum and most of propleura yellow. Scutellum brown on disc. Mesonotum with gray fascia extending longitudinally down middle; sides of suture gray tomentose. Legs mostly brown, tinged rufous on femora. Wings as noted above and in Fig. 17. Abdomen shining dark reddish brown to blackish. Tergum 1 and base of 2nd yellow, tinged with brown. Sides of abdomen almost parallel. Basal segment of ♀ ovipositor about equal in length to terga 4-5.

Length: body and wings 5.5-6.25 mm.

Distribution. New Britain, New Ireland, Papua New Guinea, and Irian Jaya.

Specimens examined. PNG: NEW GUINEA (SE): 1♂, Mt Giluwe, 2550 m, IV-V.1963 (J. Sedlacek). BISMARCK ARCH: NEW BRITAIN: 1♂, Warangoi, XII.1952 (Sedlacek). IRIAN JAYA: NEW GUINEA (W): 2♀, Star Mts, Sibil Val, 1245 m, X-XI.1961 (L. Quate).

Euphranta (Euphranta) sp.

Fig. 44

This undescribed species fits nearest to *transiens* (Walker), from Maluku, but differs in the wing markings and body coloration. The hyaline crossbands are complete, extending to the anterior margin and isolating 4 transverse brown bands (Fig. 44). The thorax is rufous, tinged with brown on the sides of the mesonotum.

This species is not being named because the only specimen on hand is headless. It is a female from Laiagam, Papua New Guinea, 2180 m, 18-19.VI.1963, in light trap (J. Sedlacek). It is in BPBM.

Subgenus *Staurella* Bezzi

Staurella Bezzi, 1913, Mem. Indian Mus. 3: 121. Type-species: *Musca crux* Fabricius.

Staurocneros Hering, 1944, Siruna Seva 5: 2. Type-species: *Staurella circumscripta* Hering.

Rhacochlaena Loew, 1862, Europ. Bohrfliegen, p. 50. Type-species: *Trypeta toxoneura* Loew. **New synonymy.**

Members of this subgenus are differentiated from the nominate subgenus by having prescutellar bristles. Most species have 3 pairs of inferior fronto-orbital bristles but some have only 2, so this character is only of specific importance. Hering (loc. cit.) characterized *Staurocneros* as having the 3rd costal cell (cell Sc) as long as, or longer than, the 2nd costal section. I find this character variable and not of more than species-group importance.

I see no way to separate *Rhacochlaena* Loew from *Staurella* except that the arista of the former is typically short plumose or long pubescent and in the latter is generally long plumose. I have seen all degrees of intergradation between these 2 characters in *Euphranta* sens. lat. and in this case doubt that the character is even of subgeneric value.

Munro (1938: 32) compared *Rhacochlaena* and *Staurella* and stated that they agree in the "peculiarly dusted and pseudo-punctate appearance of the dorsum of the thorax, dust being absent in *Euphranta*." I see nothing distinctive about the degree of pollinosity on the mesonotum throughout the genus *Euphranta*, sens. lat.; the dorsum of the thorax ranges from shining black to opaque, densely pollinose. Munro says "in both, too, the single superior orbital bristle and the upper of the inferior orbitals are in close proximity." This is also the case in the subgenus *Euphranta*; in some species of the genus sens. lat. the 2 bristles are more widely spaced but this is not a good grouping character. Munro separates *Staurella* from *Rhacochlaena* by *Staurella* having "two, and not three, inferior bristles." This character does not appear to be of more than species-group importance. Many of the Oriental *Staurella* sens. str. have 3 pairs of inferior fronto-orbital bristles. Munro also indicated that the pattern of wing markings and position of the r-m crossvein were of importance in separating these. I find no characters of the wing markings or venation in the *Euphranta* which seem to be of more than species-complex importance. Based upon wing markings and general habitus and body markings, such as the presence of a yellow to white prescutellar mark on the mesonotum, some of the species complexes of *Staurella* are more closely related to complexes of the nominate subgenus than to other *Staurella*, and the presence or absence of prescutellar bristles may prove to be unreliable as even a subgeneric character.

KEY TO SPECIES OF *Euphranta* (*Staurella*) FROM
INDONESIA (INCLUDING N BORNEO), NEW GUINEA,
THE SOLOMON IS AND BISMARCK IS

1. Apex of wing brown (Fig. 29) or entire median portion pale brown through all of apex of M_2 and most of R_5 (Fig. 32) 2
Apex hyaline (Fig. 20, 22); if only lower apex of cell 2nd M_2 hyaline, costal margin with narrow transverse band of brown from base of cell Sc to upper apical $\frac{1}{2}$ of M_4 (Fig. 33) 4
- 2 (1). Wing with large pale brown mark longitudinally over median portion from forking of M to apex (Fig. 32) . . . (New Britain) **mediofusca, n. comb.**
Not as above 3
- 3 (2). Front with large dark brown to blackish mark in middle; face with black central mark; mesonotum, pleura and abdomen mostly black . . . (Java) . . . **maculifrons**
Head, thorax, and abdomen yellow to rufous; pair of short brown to blackish streaks on anterior portion of mesonotum extending to about level with anterior notopleural bristles . . . (Irian Jaya) **quatei, n. sp.**
- 4 (1). Wings with large V-shaped hyaline mark from margin filling nearly all of cell R_1 , extending across wing to vein M_{3+4} ; this hyaline area contains isolated brown mark in middle from margin to or beyond vein R_{4+5} (Fig. 53) . . . (Taiwan and New Guinea) **lemniscata**
Not as above 5
- 5 (4). Wings with complete, transverse, hyaline band bordered by brown beyond m crossvein (Fig. 33, 51) 6
Not as above 10
- 6 (5). Complete band of brown across wing from anterior to posterior margin at level with m crossvein (Fig. 33); arista long plumose; face all yellow or with a large, median black mark 7
Band over m not complete, ending at vein R_{4+5} (Fig. 51); arista short plumose, longest rays $\frac{1}{3}$ – $\frac{1}{2}$ as long as width of 3rd antennal segment; face with small, round, black spot in each antennal furrow . . . (Sabah, Malaysia) **incompleta, n. sp.**
- 7 (6). Wings with only 2 complete brown crossbands, 1 preapical and 1 at level of m crossvein; band from cell Sc just before, or at, level with r-m crossvein extending only into cell 1st M_2 (Fig. 55) or evanescing in 1st M_2 and M_{3+4} (Fig. 33) 8
Wings with 3 complete bands (Fig. 49) 9
- 8 (7). Face with dark brown to black mark over lower median portion; apex of palpus black; ocellar bristles absent; femora mostly black; wings as in Fig. 55 . . . (Papua New Guinea) **nigroapicalis, n. sp.**
Face and palpi yellow; ocellars present but small; femora rufous, tinged with light brown; wings as in Fig. 33 . . . (Maluku) **moluccensis, n. sp.**
- 9 (7). Mesonotum with 2 broad, dark brown to black vittae separated down midline by a narrow yellow vitta which enlarges posteriorly into a prescutellar mark; pleura marked with brown to black; metanotum, pleuroterga and hind tibiae black; 3 pairs inferior fronto-orbitals . . . (Java, Thailand) **corticicola**
Entirely yellow to rufous species, except for a tinge of brown on metanotum; only 2 pairs inferior fronto-orbitals . . . (Irian Jaya) **perkinsi, n. sp.**

- 10 (5). Wings with numerous irregular brown spots and markings through median portion (Fig. 30) . . . (Java) **maculipennis, n. sp.**
Not as above 11
- 11 (10). Small yellow to rufous species; not more than small spot of brown on mesonotum above each humerus, wing markings pale brownish yellow 12
Species conspicuously marked with brown to black; wing markings dark brown 13
- 12 (11). Costal cells hyaline; cell R_1 with 2 large hyaline marks extending to costa; subcostal cell short, scarcely $\frac{2}{3}$ as long as 2nd costal; mesonotum with small pair of pale brown, anterior spots; 2 faint brownish lines down mesonotum in line with dorsocentrals; face all yellow . . . (New Guinea) **sedlaceki, n. sp.**
Costal margin to apex of cell R_3 brownish yellow (Fig. 50); 2nd costal subequal to subcostal; thorax all pale; face with brownish black spot in middle . . . (New Guinea) **flavina**
- 13 (11). Median portion of wing largely hyaline, this area surrounded by brown costal band from subcostal cell to apex of cell R_3 extending transversely across preapical portion of cell R_5 , through 2nd M_2 , across m crossvein into upper apex of cell M_4 (Fig. 22), and sometimes through much of 1st M_2 (Fig. 52) 14
Not as above 15
- 14 (13). Crossband of brown through preapical portion of cell R_5 with width less than length of r-m crossvein; brown marking occupying just small portion of cell R_5 beyond r-m crossvein and only apex of 1st M_2 (Fig. 22) . . . (Flores I, Nusa Tenggara, Indonesia) **circumscripta**
Very broad preapical band over wing, width equal to length of last section of vein M_{1+2} , occupying apical $\frac{2}{3}$ of cell 1st M_2 (Fig. 52) . . . (Sumatra, Philippines) **latilimbata**
- 15 (13). Brown costal band in wing extending from cell Sc to about middle of apex of R_5 ; large isolated, rounded brown mark from posterior margin over m crossvein into lower margin of R_5 ; isolated band of brown from cell R_1 over r-m crossvein into upper $\frac{2}{3}$ of cell 1st M_2 (Fig. 31) . . . (New Guinea) **marginata, n. sp.**
Not as above 16
- 16 (15). Wings with a complete transverse hyaline band between r-m and m crossveins (Fig. 20) 17
Wings lacking a complete band between r-m and m crossveins 19
- 17 (16). Broad, preapical brown band over wing not interrupted by hyaline wedges from margin (Fig. 20); at least front femora marked with dark brown to black; black facial crossband broad, ca. $\frac{1}{3}$ wider than long 18
Wing with at least small hyaline wedge in apical $\frac{1}{3}$ of cell R_1 and wedge on posterior margin through middle of cell 2nd M_2 (Fig. 47, 54); femora all yellow; facial band narrow, width $3\times$ length, or face all yellow 21
- 18 (16). Femora mostly black, front and middle pair yellow only on apices; cell Sc largely yellow, brown only at apex; rather narrow band of brown at level of r-m crossvein into and evanescing in posterior portion of cell M_4 , interrupted in lower portion of cell 1st M_2 ; narrow brown streak across wing at level with branching of veins R_{2+3} and R_{4+5} , and veins M_{1+2} and M_{3+4} , extending to lobe of cell Cu (Fig. 20) . . . (Irian Jaya) **brunneifemur, n. sp.**
Femora yellow, black preapical band on posterior surface at apical $\frac{1}{3}$; cell Sc all

- dark brown, broad brown mark across middle of wing into upper $\frac{2}{3}$ of cell 1st M_2 ; no brown mark in cell M_4 ; subbasal brown streak over wing wanting (Fig. 45) . . . (Sabah, W Malaysia) **balteata**
- 19 (16). Wing with hyaline wedges from costal margin through apical 3rd of cell R_1 and middle of 2nd M_2 (Fig. 47); legs mostly or entirely yellow 20
 Brown marking through apical $\frac{1}{3}$ of wing not interrupted by hyaline wedges as above (Fig. 36); femora broadly blackened apically; tibiae dark brown to black . . . (Solomon Is) **solitaria, n. sp.**
- 20 (19). Wing with large hyaline wedge from costal margin in cell R_1 to or beyond vein M_{1+2} (Fig. 46); face with 2 dark brown to black spots near lower margin that may flow together medianly; only 2 inferior fronto-orbitals; scutellum all yellow . . . (New Guinea, Philippines) **bischofi**
 Mark in R_1 , extending only to vein R_{4+5} (Fig. 48); face all yellow; 3 inferior fronto-orbitals; scutellum reddish brown through median portion, yellow on sides . . . (Philippines, Java) **canangae**
- 21 (17). Face with narrow black crossband; front femora not swollen or black setose ventrally; hyaline wedge in cell R_1 small (Fig. 54) . . . (Sumatra, Philippines, Thailand) **maculifemur**
 Face all yellow; front femora of δ swollen, black bristled on posteroventral surface, densely black setose ventrally (Fig. 19); deep hyaline wedge from costal margin in anterior $\frac{1}{3}$ of cell R_1 through cell R_3 and most of R_5 (Fig. 47) . . . (Sabah, Malaysia) **borneana, n. sp.**

Euphranta (Staurella) balteata Hardy Fig. 45

Euphranta (Staurella) balteata Hardy, 1981, *Colemania* **1**(2): 73. Type-locality: Sabah, North Borneo. Type δ in BPBM.

This species fits in the *maculifemur* species complex by having the front tarsi of males broad and flattened and by the body and wing markings. It is closely related to *brunneifemur*, n. sp., from Irian Jaya and is differentiated by having legs yellow except for a preapical dark brown to black band across the posterior surface at the apical $\frac{1}{3}$ of the front femur; and by having cell Sc dark brown and a broad brown mark extending across the middle of the wing into the upper portion of cell 1st M_2 but no brown marking in cell M_4 or across the subbasal portion of the wing (Fig. 45).

For further details refer to the original description.

Distribution. Eastern and western Malaysia.

Euphranta (Staurella) bischofi (Kertész) Fig. 18, 46

Ptilona bischofi Kertész, 1901, *Természett. Füz.* **24**: 247. Type-locality: Lemien, Berlinhafen, New Guinea. Type δ in TMB.

This species fits nearest to *linocierae* Hardy, from Australia, and is differentiated by having the mesonotum mostly dark brown to black in ground color, with a preapical yellow spot but no distinct median yellow vitta; the sternopleura all dark brown to black; dark brown on the front part of the mesopleura and hypopleura; the metapleura black; and the hind tibiae dark brown. Also, it has just a small hyaline mark in the

apical $\frac{1}{3}$ of cell R_1 to vein R_{2+3} (Fig. 46). In *linocierae* the thorax is yellow to rufous except for a pair of brown vittae that are broadly interrupted at the suture, and the pleura are yellow except for occasional discolorations of brown on the lower sternopleura. Also, *linocierae* has a large hyaline mark in the apical 3rd of R_1 into the upper portion of cell R_5 (ref. Hardy 1951: 177, Fig. 28b).

E. (S.) bischofi fits in the group of species which have a predominantly dark-colored body with a prominent hyaline spot in the apex of the wing and which lack a complete hyaline band across the wing between the r-m and m crossveins. In the key it fits near *canangae* Hardy, from the Philippines, Malaysia and Indonesia, from which it is differentiated by having the hyaline wedge from the costal margin in the basal portion of cell R_1 extending across the wing to about the middle portion of cell 1st M_2 (Fig. 46) and by having a dark brown to black band across the lower portion of the face, which may be represented by 2 spots that are confluent or nearly so medianly. Also, it has only 2 pairs of inferior fronto-orbital bristles.

Head mostly yellow except for brown spot in middle of front; brown marking on lower portion of face (in specimen on hand from Jaya this is very narrowly divided medianly). Thorax mostly dark brown to black on dorsum, prominent yellow prescutellar spot in area bordered by prescutellar and dorsocentral bristles; yellow on sides of mesonotum, along suture, humeri, and scutellum, the latter with tinge of brown on base. Pleura largely brown to black, yellow on propleura and on front and hind portions of mesopleura. Halteres pale yellow. Legs yellow, tinge of brown on basal halves of mid tibiae, hind tibiae dark brown to black. Wings as in Fig. 46. Kertész describes the abdomen as brownish yellow, completely black on sides of first 4 terga and all black on apical terga.

The female specimen which I have on hand fits the description of *bischofi* except that the abdomen, including the base of the ovipositor, is shining black except for yellow sides of terga 5 and 6. The specimen which I recorded as this from the Philippines (Hardy 1974: 135) also has a polished black abdomen except for yellow on the first 2 terga. I may be dealing with a complex of species or coloration of abdomen may be a variable character. Only 4 specimens of this species have been seen to date. The female ovipositor is as in Fig. 18 (taken from a specimen from the Philippines).

Distribution. Irian Jaya, Philippines.

Specimens examined. Type and 1♀, PHILIPPINES: Palawan, NE Tinabog, 7.V.1962 (H. Holtmann). IRIAN JAYA: NEW GUINEA (W): 1♀, Kutsime, W of Swart Val, 1500 m, 14.XI.1958 (J.L. Gressitt).

Euphranta (Staurella) borneana Hardy, new species

Fig. 19, 47

This species fits *maculifemur* (de Meijere) from Sumatra, the Philippines and Thailand. It differs by having the face all yellow, and the male front femur swollen, with black bristles on the posteroventral surface and with the ventral surface densely black setose (Fig. 19); also, the front tibiae are densely black setose ventrally and the wing markings are distinctly different as shown in Fig. 47 and Fig. 54. The hyaline wedge

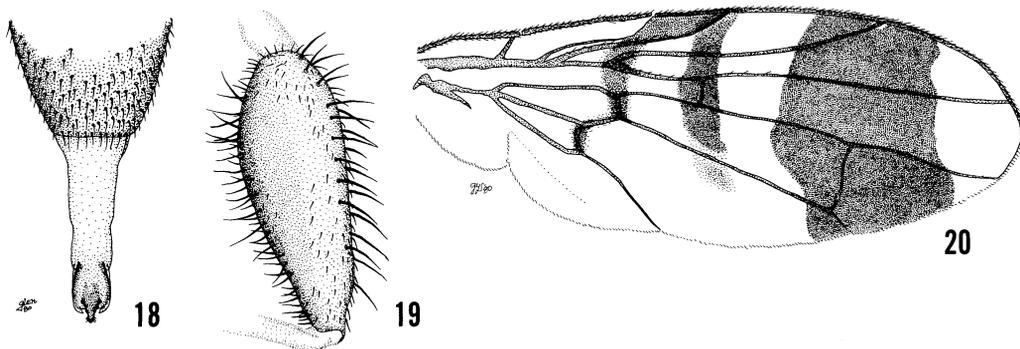


FIG. 18-20. 18, *Euphranta (Staurella) bischofi*, apex of ♀ piercer. 19, *E. (S.) borneana*, front femur, ♂. 20, *E. (S.) brunneifemur*, wing.

in the apical portion of cell R_1 extends across the wing through cell R_3 and most of R_5 .

♂. *Head*. Shaped as in other *Euphranta* except in lateral view with slightly more shallow concavity in middle of face. Three pairs inferior fronto-orbital bristles, lower 2 closer together on lower 3rd of front, upper just above middle of front near single pair of superior fronto-orbitals. Ocellars setalike. Post-ocellars rather large, approximately $\frac{2}{3}$ as long as outer verticals. Head and appendages entirely yellow, eyes and ocellar triangle dark colored. Arista moderately long plumose. *Thorax*. Predominantly yellow to rufous, large dark brown to blackish spot covering most of median portion of mesonotum. Sterno-, meta-, and hypopleura mostly shining brown, metanotum black with a tinge of rufous. Mesonotum rather densely pollinose, almost obscuring ground color. Dorsocentral bristles about halfway between supraalars and postalars. *Wings*. As noted above and in Fig. 47. In paratype hyaline crossband over wing between r-m and m crossveins nearly joined on posterior margin in cell M_4 . *Legs*. Entirely yellow; front pair modified as noted above and in Fig. 19. *Abdomen*. Shining dark brown to black, broad median yellow vitta from base of 2nd to apex of 4th terga, narrow apical margins of terga 1-4 yellow. Genitalia not studied.

Length: body 6.5 mm; wings 6.0 mm.

♀. Unknown.

Holotype ♂, 4♂ paratypes, MALAYSIA: SABAH (Borneo): Bettotan, nr Sandakan, 28.VIII.1927 (C.B.K. & H.M.P.). Holotype and 2 paratypes in UQMB. One paratype deposited in BPBM and 1 in UH collection.

***Euphranta (Staurella) brunneifemur* Hardy, new species**

Fig. 20

This species fits in the same complex of species as *maculifemur* (de Meijere) and *balteata* Hardy by having the front basitarsus on the male broad, flattened and concave posteriorly and by having rather similar wing markings. It is differentiated from the former by having the preapical brown wing marking entire, not with hyaline marks on the anterior and posterior margins; the femora predominantly dark brown; the scutellum only slightly discolored basally; the facial mark broad, ca. 2× as wide as

long; and the abdomen shining black with only a faint indication of yellow to rufous in the ground color of the median portion of the 2nd tergum in the female and on the posterior median portion of terga 2 and 3 in the male. It is most closely related to *balteata* Hardy, from Sabah and is differentiated by the predominantly black femora and by the differences in the wing markings as given in the key and as shown in Fig. 20.

♀. Fitting general features of *Euphranta* (*Staurella*). *Head*. Higher than long, gentle concavity in lower median portion of face as seen in lateral view. Two pairs of inferior fronto-orbital bristles plus 1 small, black, hair-like bristle scarcely over $\frac{1}{3}$ as long as lower inferior fronto-orbital. Ocellars lacking, postocellars rather small, about $\frac{1}{2}$ longer than largest occipital setae. Mostly pale yellow, tinge of brown in median portion of front and upper sides of occiput; lower median portion of face brown. Antennae rufous, tinged with brown on 3rd segment. *Thorax*. Mostly dark colored, rather densely gray pollinose, mesonotum black in ground color except prescutellar yellow spot and yellow mark on each side at suture. Humeri, notopleura and upper posterior portion of each mesopleuron pale yellow; otherwise pleura brown, tinged with rufous. Halteres pale yellow. Pleuroterga thickly covered with erect pale hairs. Dorsocentral bristles approximately halfway between supraalar and inner postalar bristles. Scutellum pale yellow, with tinge of brown across basal portion. *Wings*. Marked as in Fig. 20; large hyaline mark covering apices of cells R_3 , R_5 and upper apex of 2nd M_2 ; broad, uninterrupted, preapical dark brown band. Crossvein r-m near basal $\frac{2}{5}$ of cell 1st M_2 . *Legs*. Femora mostly brown, tinged lightly with rufous, yellow on extreme apices, hind femora yellow on basal halves. Tibiae mostly brown, faintly tinged with rufous. Tarsi yellow to rufous. *Abdomen*. Entirely shiny black, faint dusting of pollen, faint tinge of rufous in median portion of 2nd tergum. Basal segment of ovipositor entirely black, tinge of rufous at extreme base, approximately equal in length to terga 4-6. Piercer not examined.

Length: body 8.0 mm, excluding ovipositor.

♂. Fitting characteristics of ♀ except for genital characters; only basal 3rd of hind femur yellow; abdominal terga 2 and 3 faintly yellow to rufous in ground color on posteromedian portion. Surstyli elongate, slender, extending beyond apical portion of 4th segment. Cerci elongate, slender, very conspicuous, length approximately equal to width of abdomen as seen in lateral view. Head missing on allotype.

Holotype ♀, IRIAN JAYA: NEW GUINEA (W): Vogelkop, Sele Straits, Jef Lio, 1-5 m, 15.VIII.1957 (D.E. Hardy) (BPBM 12,903). Allotype ♂, IRIAN JAYA: NEW GUINEA (W): Star Mts, Sibil Val, 1245 m, 18.X-8.XI.1961, malaise trap (S. & L. Quate) (BPBM).

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

Fig. 21, 48

Euphranta (*Staurella*) *canangae* Hardy, 1955, Pac. Sci. 9(1): 83. Type-locality: Los Baños, Philippines. Type ♂ in USNM.

E. (S.) canangae fits in the group of species that have the apex of the wing hyaline and no transverse hyaline band over the middle of the wing and that have brown to black markings on the thorax and abdomen. It fits nearest to *bischofi* (Kertész) and is differentiated by having the face all yellow, 3 pairs of inferior fronto-orbital bristles, and the hyaline mark in cell R_1 extending from the costa to only vein R_{4+5} (Fig. 48), rather than having a deep hyaline wedge extending beyond vein M_{1+2} (Fig. 46).

Head yellow to rufous, brownish discoloration in median portion of front. Original description gave arista as long pubescent; it is moderately plumose. Thorax mostly yellow to rufous, brown vitta down each side from anterior margin at level with outer scapular bristles to level just beyond prescutellar bristles, interrupted at suture, with reddish brown marking in posteromedian portion of mesonotum between prescutellar bristles, in line with marking over scutellum. Humeri and narrow upper margins of meso- and metapleura white. Scutellum reddish brown through median portion, pale yellow on sides. Legs all yellow. Wings as in Fig. 48. Abdomen mostly shining brown, yellow vitta extending down middle from base to apex of 4th tergum. Basal segment of ♀ ovipositor dark brown to blackish, almost equal in length to remainder of abdomen. Piercer notched preapically as in Fig. 21.

Length: body 6.5 mm; wings 6.0 mm.

For further details refer to original description and to Hardy (1974: 135).

Distribution. Philippines (Bohol, Luzon, Tawitawi), Indonesia, and western Malaysia.

Specimens examined. 1♀, Indonesia: JAVA; Bogor; 1♂, MALAY PENINSULA: Kedah, nr Jitra.

Host. *Cananga odorata* (Lam.) Hook. and Thoms. (=Ylang-ylang).

Euphranta (Staurella) circumscripta (Hering)

Fig. 22

Staurella circumscripta Hering, 1941, Arb. Morphol.-Taxon. Entomol. Berlin-Dahlem 8(1): 28. Type-locality: Rana Mese, Flores I. Type ♀ in DEI.

E. (S.) circumscripta fits in the species group which has the wing apex hyaline and which has black markings on the thorax and abdomen. It belongs in a species complex with *latilimbata* Enderlein and *imitator* Hardy by having the subcostal cell long compared to the 2nd costal cell and the median portion of the wing largely hyaline, this hyaline area surrounded by a brown costal band which extends from the subcostal cell to the apex of cell R_3 and runs transversely across the preapical portion of cell R_5 through 2nd M_2 , over m crossvein into the upper apex of cell M_4 , and sometimes through much of cell 1st M_2 (Fig. 22, 52). It fits nearest to *latilimbata* and is differentiated by the comparatively narrow band over the preapical portion of the wing; in cell R_5 the width of the band is scarcely equal to the length of the r-m crossvein (Fig. 22), rather than having a broad preapical band whose width is equal to the length of the last section of vein M_{1+2} (Fig. 52).

The slightly longer subcostal cell (3rd costal section) was used by Hering (1944: 2) as a differentiating character for his genus *Staurocneros*, but this character obviously is not of more than species group importance. Refer to Hardy (1974: 129) for discussion of this synonymy.

Front with large black spot in middle, face with shining black spot in middle near lower margin. Three pairs inferior fronto-orbital bristles. Thorax mostly yellow to rufous, pair of black vittae down median portion almost reaching prescutellar bristles, metanotum dark brown to black. Abdomen mostly reddish brown with 2 wide, dark brown to black median vittae. Basal segment of ovipositor about equal in length to remainder of abdomen. Legs yellow to

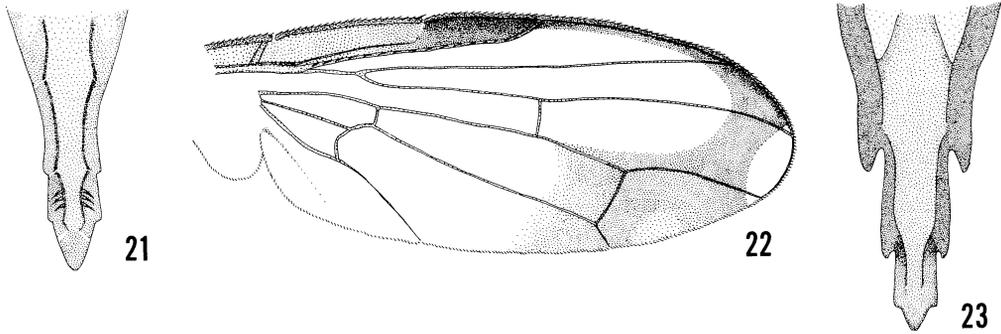


FIG. 21-23. **21**, *Euphranta* (*S.*) *canangae*, apex of ♀ piercer. **22**, *E.* (*S.*) *circumscripta*, wing. **23**, *E.* (*S.*) *corticicola*, apex of ♀ piercer.

rufous. Wings as noted above and as in Fig. 22. Markings around costa beyond subcostal cell and preapical portion of wing dark brown. Costal cells yellow, tinged with brown. Subcostal cell subequal in length to 2nd costal. Crossvein r-m at apical $\frac{2}{3}$ of cell 1st M_2 .

Distribution. Flores I, Nusa Tenggara, Indonesia.

Specimens examined. Type series.

***Euphranta* (*Staurella*) *corticicola* (Hering)**

Fig. 23, 49

Staurella corticicola Hering, 1952, *Treubia* **21**(2): 269. Type-locality: Depok, nr Jakarta, Java. Type ♀ in RNHL.

By having 4 brown crossbands over the wing, *corticicola* fits in a species complex with *camilliae* (Ito), *mikado* (Matsumura), and *separata* (Ito) from Japan; *nigripeda* (Bezzi) from India; *nigrocingulata* (Hering) from Burma; and *perkinsi*, n. sp., from New Guinea. It is very close to *separata* and I feel that the 2 species are probably synonyms. Hering separated it from *separata* by noting that *corticicola* is much larger in size, has all yellow femora and entirely dark brown tibiae. Hering measured the wing length of *corticicola* as 9.5 mm, whereas Ito measured *separata* as 8.5 mm. This difference is not significant. I have not studied specimens of *separata*. Specimens which I have identified as *corticicola* have a wing length of approximately 6.2-6.5 mm. I have studied the paratype females of *corticicola* in BMNH that Hering refers to, and my photograph of this species shows the femora, especially the hind pair, as tinged with brown on the apical halves and the tibiae as rufous tinged with brown. I doubt that these characters are of specific importance. In my key *corticicola* runs near *perkinsi*, n. sp., from New Guinea, and differs by having the mesonotum with 2 broad black vittae separated down the midline by a narrow yellow vitta that enlarges posteriorly into a prescutellar mark, the pleura marked with brown to black, the metanotum and pleuroterga black, the mid and hind tibiae tinged with black, and the head with 3 pairs of inferior fronto-orbital bristles. *E. perkinsi* is an entirely yellow to rufous species except for a tinge of brown on the metanotum, and it has 2 pairs

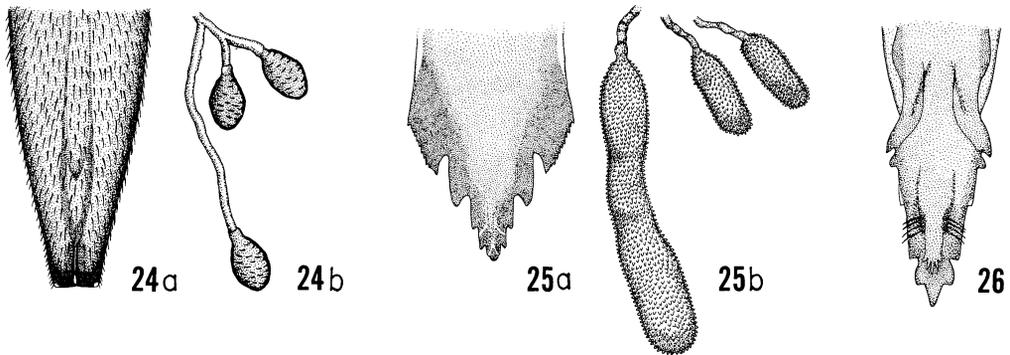


FIG. 24–26. 24, *Euphranta* (*S.*) *flavina*: a, basal segment of ♀ ovipositor; b, spermathecae. 25, *E. (S.) incompleta*: a, apex of ♀ piercer; b, spermathecae. 26, *E. (S.) latilimbata*, apex of ♀ piercer.

of inferior fronto-orbital bristles present. It should be noted that typical *corticicola* has the face all yellow and the *corticicola*-like specimens from Thailand have 2 black facial spots. I can find no other differences in the 2 populations; the wing markings seem identical. The wing photograph (Fig. 49) is from a Thailand specimen as is the apex of the female ovipositor (Fig. 23).

Distribution. Java, Malaysia, Thailand.

Specimens examined. Type series and several specimens which fit typical *corticicola* from SABAH (Borneo): Kudat, and MALAY PENINSULA: Kedah Peak. For record from Thailand refer to Hardy (1974: 31).

***Euphranta* (*Staurella*) *flavina* (Hering)**

Fig. 24a–b, 50

Staurella flavina Hering, 1941, Ann. Hist. Nat. Mus. Natl. Hung. **34**: 56. Type-locality: Kapakapa, New Guinea. Type ♀ in TMB.

E. (S.) flavina fits in a complex of small pale yellow to rufous species which have the apex of the wing hyaline and the markings rather indistinct, pale brownish yellow. It runs near *sedlaceki*, n. sp., from Papua New Guinea and New Britain, but the 2 are not related and are differentiated by the characters given in the key above. It obviously is most closely related to *latilimbata* Enderlein. The general habitus (arrangement of the yellow-white markings on the thorax, shining black spots of face, and wing venation) is rather similar in these. They are strikingly different, however, by *flavina* being entirely yellow- to rufous-bodied with faint markings in the wings and with the costal cells tinged with yellow; in *latilimbata* the thorax and abdomen are almost entirely shining black, the wing markings are dark brown (Fig. 52), and the costal cells are hyaline.

Head including antennae and palpi entirely yellow; shining dark brown to black spot in middle of lower face, approximately 2× wider than long. Three pairs inferior fronto-orbital bristles. Thorax entirely yellow to rufous, with a median yellow-white vitta from suture over median portion of scutellum; white vitta from humerus over top margin of mesopleuron and

pteropleuron. Legs entirely yellow. Wings mostly yellowish with faint tinge of brown; hyaline at apex of cell R_5 (Fig. 50). First 2 costal cells tinged yellowish, subcostal cell rather intense yellow, subequal in length to 2nd costal. Crossvein r-m at about apical $\frac{3}{5}$ of cell 1st M_2 . Abdomen entirely rufous, base of ovipositor tinged brown to blackish at extreme apex, about equal in length to terga 3-6. Female has 3 oblong spermathecae (Fig. 24b). Piercer evenly tapered to apex (Fig. 24a).

Length: body 5.5-5.7 mm.

Distribution. Papua New Guinea.

Specimens examined. Type.

Euphranta (Staurella) incompleta Hardy, new species

Fig. 25a-b, 51

This new species apparently fits in the *oshimensis* and *corticicola* group of species because of the transverse banding pattern in the wing. It seems closest to the *corticicola*-like species from Thailand (Hardy 1973: 152) (which differs from typical *corticicola* by having 2 black facial spots). *E. incompleta* differs from all known species by having the brown band over the wing at the level of the m crossvein incomplete, ending at vein R_{4+5} (Fig. 51); also, the arista is short plumose.

♀. *Head.* Shaped as in other *Euphranta*. Yellow to rufous, small, black round spot at lower portion of each antennal furrow; eyes dark brown. Ocellar bristles rudimentary, seta-like. Three pairs inferior fronto-orbitals on lower $\frac{3}{5}$ of front; upper superior fronto-orbitals near upper $\frac{1}{3}$ of front. Antennae rufous, tinged with brown apically. Longest rays on arista approximately $\frac{1}{3}$ as long as width of 3rd antennal segment. *Thorax.* Mostly yellow to rufous, 4 incomplete, dark brown to blackish vittae on mesonotum; submedian pair from just in front of level with humeral bristles to level just before dorsocentrals; presutural brown stripe on each side above humerus, from near outer scapular bristles almost to suture; postsutural vitta present on each side extending just inside dorsocentral bristles to level with prescutellars. Dorsocentrals about halfway between supraalars and postalars. Scutellum yellow, basal margin pale brown with scattered erect, pale yellow setae over disk. Mesonotum densely covered with short, suberect, yellow setae. Pteropleura with numerous long pale hairs. *Wings.* Markings pale brown, irregular preapical transverse marking across wing; another complete crossband at level with r-m crossvein; also with incomplete band mentioned above and an incomplete subbasal band from basal $\frac{2}{3}$ of cell Sc across wing at level with forking of veins R_{2+3} and R_{4+5} , and M_{1+2} and M_{3+4} , extending to lobe of cell Cu (Fig. 51). Cell Sc hyaline beyond brown basal marking but with small brown spot at extreme apex. *Legs.* Yellow, tinge of brown on mid and hind tibiae. *Abdomen.* Mostly yellow; large, oblong, shining black spot on each side covering dorsolateral portions of terga 2-3. Fourth and 6th terga entirely yellow, 5th black except narrow yellow apical margin. Basal segment of ovipositor dark reddish brown to black, about equal in length to terga 3-5. Spermathecae abnormal, represented by 1 very large and 2 rather small reservoirs; largest approximately 5× size of others, enlarged, club-shaped apically, over 5× longer than wide; small pair approximately 4× longer than wide; all spermathecae densely covered with sharp spicules, especially noticeable on large reservoir (Fig. 25b). Extended ovipositor measures 3.25 mm; piercer 0.69 mm, 8th segment 0.93 mm, and 7th 1.65 mm. Piercer serrated at apex (Fig. 25a).

Length: body, excluding ovipositor, and wings 5.5-6.5 mm.

♂. Unknown.

Holotype ♀ (BPBM 12,904), 2♀ paratypes, MALAYSIA: SABAH (Borneo): Forest Camp, 19 km N of Kalabakan, 60 m, 22.X.1962, 13.XI.1962 (K.J. Kuncheria). One paratype in BPBM, 1 in UH.

Euphranta (Staurella) latilimbata Enderlein

Fig. 26, 52

Euphranta latilimbata Enderlein, 1911, Zool. Jahrb., Syst. **31**: 438. Type-locality: Soekaranda, Sumatra. Type ♀ in PIZW.

E. (S.) latilimbata fits in a species complex with *circumscripta* (Hering) and differs from this species by having brown markings in the preapical portion of the wing forming a broad transverse band equal in width to the last section of vein M_{1+2} and occupying the apical $\frac{2}{5}$ of cell 1st M_2 (Fig. 52). It also differs by having the thorax and abdomen predominantly shining black with a yellow-white vitta extending down the middle of the mesonotum from the suture to the posterior portion and over the middle of the scutellum; it also has a yellow-white line extending over the humeri and upper margin of each mesopleuron and pteropleuron to the wing base. The abdomen is entirely shining black, except for a narrow rufous vitta extending down the middle of the first 3–4 terga. The piercer of the female ovipositor is long and slender compared to those of most *Euphranta*. The apex is as in Fig. 26. Otherwise, *latilimbata* has the general characteristics of *circumscripta*. For further descriptive details refer to Hardy (1974: 139).

Length: body, excluding ovipositor, 5.5 mm.

Distribution. Philippines, Sumatra.

Specimens examined. Type and specimens from the Philippines (Hardy 1974: 140).

Euphranta (Staurella) lemniscata Enderlein

Fig. 27, 53

Euphranta lemniscata Enderlein, 1911, Zool. Jahrb., Syst. **31**: 426. Type-locality: Takao, Taiwan. Type ♂ in PIZW.

Euphranta rivulosa Bezzi, 1928, Diptera Brachycera and Athericera of the Fiji Islands. Bull. Br. Mus. Nat. Hist. (Entomol.), p. 109. Type-locality: Suva, Fiji Is. Type ♂ BMNH. **New synonymy**, based on comparison of type and other specimens from Fiji with specimens from Taiwan and other localities in the Pacific and Oriental regions.

This species is closely related to *jucunda* Hendel, from Taiwan, and is differentiated by having the brown mark in the middle of cell R_1 completely isolated (Fig. 53), not joined by a narrow arm with brown marking in the apical portion of the wing; and 2nd costal cell entirely hyaline, rather than marked with brown through the median portion; and the r-m crossvein situated at, or slightly before, the middle of cell 1st M_2 , rather than distinctly beyond. *E. jucunda* also has a distinct, but small, hyaline spot at the apex of cell R_1 , whereas this spot is rarely present in *lemniscata*.

E. (S.) lemniscata is differentiated from other *Staurella* by having a large V-shaped hyaline mark in the middle of the wing which extends from the margin, occupying

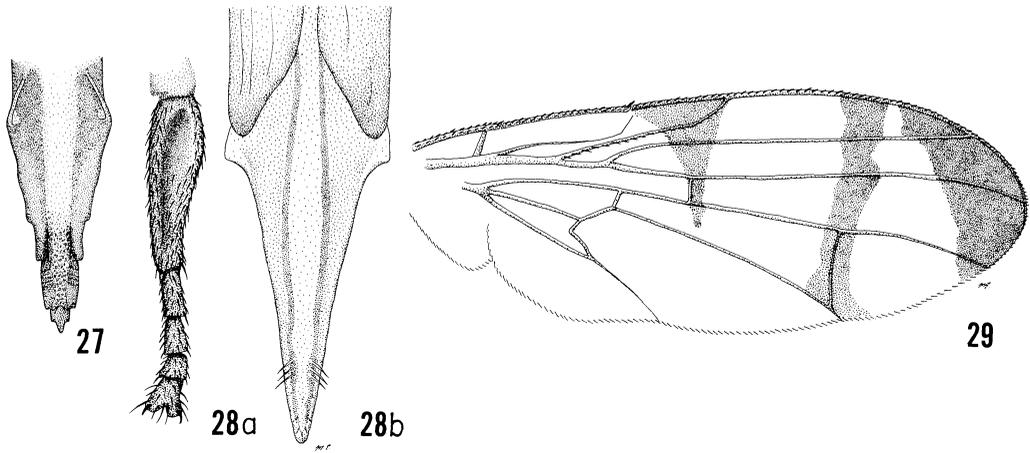


FIG. 27-29. 27, *Euphranta* (*S.*) *lemniscata*, apex of ♀ piercer. 28, *E.* (*S.*) *maculifemur*: a, front basitarsus, ♂; b, apex of ♀ piercer. 29, *E.* (*S.*) *maculifrons*, wing.

$\frac{2}{3}$ of cell R_1 , across the wing to or near vein M_{3+4} , and by having an isolated brown mark on the costal margin in the middle of this hyaline mark (Fig. 53).

Head and appendages yellow to rufous. Mesonotum mostly dark brown to blackish in ground color, with a large yellow presutural spot which narrows about opposite posterior notopleural bristles to a longitudinal vitta, extending to anterior margin. Sides of mesonotum, area of suture, and scutellum yellow. Pleura yellow, tinged lightly with brown. Mesonotum densely covered with gray pollen which obscures ground color (dorsum of thorax may be dark reddish brown in some specimens). Legs all yellow. Wing markings and venation as in Fig. 53. Abdomen typically yellow to rufous, large black spot on each side occupying posterolateral portion of terga 2-5, median and apical portions of terga broadly yellow to rufous. In some specimens dark side markings run together in middle of posterior portions of terga; some ♀ specimens with dark coloring more diffuse. In teneral specimens entire abdomen and thorax may be rufous, tinged with brown. Basal segment of ♀ abdomen elongate, almost equal in length to remainder of abdomen and piercer with 4 preapical serrations (notches) before tip (Fig. 27).

Length: body 8.0 mm; wings 7.5 mm.

Distribution. Previously recorded from Burma, Fiji, India, and Taiwan.

Specimens examined. Both type series and ca. 20 specimens with the following data. MICRONESIA: MARIANA IS: Tinian I: NW slope Mt Lasso, III.1945 (H. Dybas); Saipan I: San Antonio, 12.V.1970 (K. Smith). PNG: NEW GUINEA (NW): Morobe Distr, Arabuka, 15-2100 m, I.1968 (J. & M. Sedlacek); Kainantu, 1650 m, X.1959, at light (T.C. Maa); Huon Penin., Pindiu, 860 m, IV.1963 (J. & M. Sedlacek).

***Euphranta* (*Staurella*) *maculifemur* (de Meijere)**

Fig. 28a-b, 54

Staurella maculifemur de Meijere, 1924, Tijdschr. Entomol. 67(suppl.): 39. Type-locality: Fort de Kock (=Bukittinggi), Sumatra. Type ♀ in the ZMUA.

E. (*S.*) *maculifemur* fits in the group of species which is characterized by having the

apex of wing hyaline, the body predominantly black, and the wings with a complete hyaline band extending transversely between the r-m and m crossveins. It belongs to the same complex of species of *brunneifemur*, n. sp., from Irian Jaya, by having the front basitarsus of the male broad, flattened, and concave on the posterior surface (Fig. 28a) and by the wing markings. *E. maculifemur* is differentiated by having a hyaline wedge in the apical $\frac{1}{3}$ of cell R₁ and a large hyaline wedge through the middle of 2nd M₂; the femora are all yellow; the scutellum is broadly black basally; the facial black crossband is narrow, about 3× longer than wide and partially divided in the middle, and the abdomen has a broad yellow band down the middle of terga 1–4. For the details of the wing venation and markings, the front basitarsus, and the apex of the female ovipositor, see Fig. 28a–b, and Fig. 54. For complete descriptions refer to Hardy (1973: 156, 1974: 140).

Distribution. Philippines, Sabah, Sumatra, Thailand.

Specimens examined. Type and 18 from Thailand (Hardy 1973: 156).

Euphranta (Staurella) maculifrons (de Meijere)

Fig. 29

Staurella maculifrons de Meijere, 1914, Tijdsch. Entomol. **9**: 211. Type-locality: Wonosobo, Central Java. Lectotype ♀ and 1 paratype ♀ in ZMUA.

By having the apex of the wing brown, *E. (S.) maculifrons* fits in a complex with *chrysopila* Hendel, from Taiwan. It differs from *chrysopila* by having a wedge-shaped brown mark extending transversely over the wing, filling all of cell Sc and extending over the r-m crossvein into the upper portion of cell 1st M₂ (Fig. 29); the thorax mostly black with the pleura dark-colored except for yellow on the upper portion of the mesopleuron; and the femora with preapical brown bands. In *chrysopila* the basal brown marking of the wing consists of a narrow brown band and extends obliquely from the base of cell Sc across r-m crossvein into the upper $\frac{1}{2}$ of cell 1st M₂ (refer to Hendel 1913: 37, Fig. 1); the mesonotum is mostly rufous with 2 broad, blackish bands extending down the sides, very slightly interrupted at the suture; the propleura, sternopleura and hypopleura are yellow, a large polished black mark extending over the mesopleura, upper portion of the pteropleura, the metapleura onto the mesonotum, and extending onto the mesonotum just in front of the notopleura, connecting with dark marks on the sides of the mesonotum; also, the femora are entirely yellow except for brown marks on the posterior portions of the front pair.

Front with large black spot in middle. Face with dark brown to black central mark. Pleura shining black, upper edge of mesopleuron yellow. Humeri largely yellow, mesonotum black with large yellow preapical mark; scutellum yellow, brown mark across base. Femora with preapical dark brown to black bands, hind tibiae brown. Wing as in Fig. 29 and as noted above. Abdomen largely shining black, indistinctly yellow down median portion.

Distribution. Java. Known only from type series.

Specimens examined. Type series.

Euphranta (Staurella) maculipennis Hardy, new species

Fig. 30

This species differs from all known *Euphranta* by having numerous small irregular brown marks through the middle of the wing (Fig. 30). It fits in the broad grouping of species which have the apex of the wing (cell R_5) hyaline, but it has no known relatives.

♂. *Head*. Shaped as in other *Euphranta* with head about $\frac{1}{5}$ higher than long as in lateral view; face gently concave in median portion with distinct but small, setalike, black ocellar bristles, about equal in length (but not in thickness) to setae of occipital row. Postocellars moderately strong, about $\frac{2}{5}$ as long as inner verticals. Frontal bristles strong, with 3 pairs incurved inferior fronto-orbitals arranged over lower $\frac{2}{5}$ of front and 1 pair superior fronto-orbitals situated opposite bases of upper inferior fronto-orbitals. Median portion of front rather thickly covered with short, dark brown setae. Front dull yellow through median portion, yellow-white along orbits, ocellar triangle brown. Face mostly white, tinged yellow along sides and lower portion, 2 moderately large brown spots in middle near lower margin. Occiput entirely pale yellow. First and 3rd antennal segments yellow to rufous, faint tinge of brown at apex of 3rd; 2nd segment rufous, tinged with brown. Arista moderately long plumose, longest rays approximately equal in length to width of 3rd segment. Palpi entirely yellow, thickly black setose around apices. *Thorax*. Pale, mostly yellow, 4 brown vittae on mesonotum, rather densely gray pollinose, almost obscuring brown vittae. Lateral vittae broadly interrupted at suture. Having full complement of bristles for *Staurella*, dorsocentrals about halfway between supra-alars and postalar. Pleuroterga densely covered with long fine yellow pile. Metanotum subshining brownish red. *Wings*. Very distinctive as in Fig. 30, numerous irregular brown spots through field, larger brown markings around margin. Costa spotted brown along anterior margin, spots corresponding with markings in wing membrane. First costal section and basal portion of wing hyaline. Second costal section with brown spot at base, at apex, and median pale brown spot on margin. Cell Sc dark brown on basal $\frac{2}{3}$, small hyaline spot interrupting brown on upper median margin, small brown spot at apex of cell. Cell R_1 with 3 brown markings beyond apex of vein R_1 ; apex of cell R_3 brown, hyaline spot in middle. Apex of cell R_5 hyaline; other markings as in Fig. 30. Crossvein r-m just beyond middle cell 1st M_2 ; vein R_{4+5} setose to just beyond r-m crossvein. No evidence of costal bristles at apex of vein Sc. *Legs*. Entirely yellow. Hind tibia with row of moderately strong anterodorsal bristles from near base to apical $\frac{2}{3}$, with row of stout, black, posterodorsal setae extending full length of segment, latter scarcely differentiated from other tibial setae. Middle tibiae with row of 4-5 posterodorsal short bristles extending through median portion of segment. One strong apical bristle on mid tibia, about $\frac{1}{3}$ as long as basitarsus. *Abdomen*. Mostly pale yellow, brown on sides of terga 2-5 and basal $\frac{1}{2}$ of 5th. Sterna yellow. Male genitalia yellow, epandrium shining brown. Surstyli long and slender.

Length: body 6.6 mm; wings 6.0 mm.

♀. Fitting description of ♂ except for sexual characters. Large, shining brown spot covers sides of terga 1-5; posterior margins and broad median portion of abdomen entirely pale yellow, slight discoloration of brown connecting lateral spots on 5th tergum. Terga 6 entirely yellow, about $\frac{1}{2}$ as long as 5th. Basal segment of ovipositor yellow, in dorsal view about equal in length to terga 5-6. Ovipositor not studied.

Length: body, excluding ovipositor, 6.0 mm; wings 5.2 mm.

Holotype ♂, allotype ♀, INDONESIA: JAVA: Bogor, VIII.1953, on leaves of *Cananga odorata* (Ylang-ylang, Annonaceae) (Tjoe Tjien Mo) (USNM).

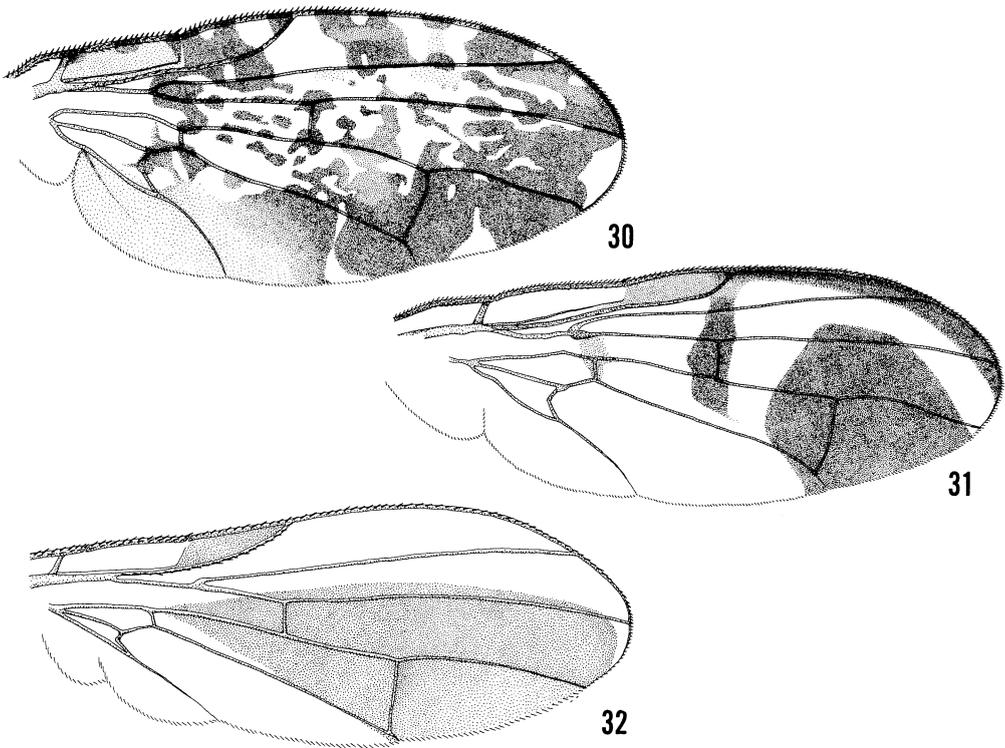


FIG. 30-32. 30, *Euphranta (S.) maculipennis*, wing. 31, *E. (S.) marginata*, wing. 32, *E. (S.) mediofusca*, wing.

***Euphranta (Staurella) marginata* Hardy, new species**

Fig. 31

This species is an enigma. The distinctive wing markings would seem to relate it to *lacteata* (v.d. Vulp), from Java; *macularis* (Wiedemann), from throughout the Oriental Region; and *ocellata* Hardy, from the Philippines; however, the resemblance is superficial. *E. marginata* has well-developed prescutellar bristles and is a typical *Staurella*, whereas the other species lack prescutellars and are typical *Euphranta*. By having the narrow brown costal band on the wing it would somewhat resemble *lemniscata* (Enderlein), from Taiwan, Burma, Fiji, and India, and *circumscripta* (Hering), from Flores I, Indonesia, but these species are quite different and do not have the large, isolated, brown mark in the posterior median portion of the wing. *E. marginata* differs from all known *Staurella* by having a narrow band of brown extending from the base of cell Sc to the upper apex of cell R₅ and by having a large isolated brown spot in the posteromedian portion of the wing covering m crossvein (Fig. 31).

♀. Fitting general features of *Staurella*. *Head*. Pale yellow except for dark reddish-brown eyes; no dark markings on front or face; 2 pairs of inferior fronto-orbital bristles. Face mod-

erately concave in median portion. *Thorax*. Mostly yellow to rufous, tinge of brown in ground color over most of mesonotum and pleura; pale yellow in prescutellar area of mesonotum, along sides of suture, on metapleura, humeri, propleura and upper median portion of each sternopleuron. Metanotum dark brown to black. Dorsocentral bristles about halfway between supraalars and inner postalars. Scutellum mostly pale yellow, faint tinge of brown along basal margin. *Legs*. Entirely yellow, faint tinge of brown on mid and hind tibiae. *Wings*. Markings as noted above and in Fig. 31. *Abdomen*. Mostly dark brown above, rufous on 1st tergum and over anteromedian portion of 2nd, faint tinge of rufous over dorsomedian portions of terga 3 and 4. Sixth tergum approximately equal in length to 5th. Basal portion of ovipositor rather short and thick, slightly longer than wide, about $\frac{1}{3}$ longer than combined length to terga 5 and 6. Ovipositor base rufous, tinged with brown, darker brown on extreme apex. Sterna rufous. Piercer not examined.

Length: body 6.0 mm, excluding ovipositor.

Holotype ♀, PNG: NEW GUINEA (NE): Morobe Distr, Arabuka-Moime, 19–2100 m, 7.I.1968 (J. & M. Sedlacek) (BPBM 12,905).

***Euphranta (Staurella) mediofusca* (Hering)**

Fig. 32

Staurella mediofusca Hering, 1941, Siruna Seva 3: 14. Type-locality: "Herbertshöhe auf Ralum" (Kokopo, New Britain), Bismarck Archipelago. Type ♀ in ZMHB.

E. (S.) mediofusca can be differentiated from all known *Euphranta* by the wing markings (Fig. 32): a pale yellow-brown mark extending longitudinally through the median portion of the wing filling most of cells R_5 and M_2 , with the anterior margin and most of the posterior hyaline, except for a faint discoloration in cell Sc (Fig. 32).

♀. Head mostly yellow, 2 black spots in lower middle of face, 2 large black marks on upper occiput. Hering (1941) said "1+2" orbital bristles; I suspect one of the inferior fronto-orbitals had been broken off. Third antennal segment extending almost to oral margin, 3× as long as wide, mostly yellow, tinged brown to black at apex. Thorax mostly rufous, tinged with brown over dorsum, dark reddish brown to blackish over meso-, meta- and sternopleura and on metanotum. Dorsocentral bristles distinctly behind a level with supraalars. Wing venation as in Fig. 32. Legs all yellow. Abdomen dark reddish brown. Basal segment of ♀ ovipositor about equal in length to terga 4+5.

Length of wing, 3.8 mm.

Distribution. New Britain. Known only from type.

Specimens examined. Type.

***Euphranta (Staurella) moluccensis* Hardy, new species**

Fig. 33

This species fits nearest to *nigroapicalis*, n. sp., from Papua New Guinea, by having only 2 complete brown bands across the wing, with the brown mark over the r-m incomplete, ending in cell 1st M_2 (Fig. 33). The 2 species are probably not closely related; *moluccensis* is readily differentiated by having the face, antennae, and palpi all yellow, the ocellar bristles present, the femora rufous, tinged lightly with brown, and the wing markings slightly different (as in Fig. 33 and 55).

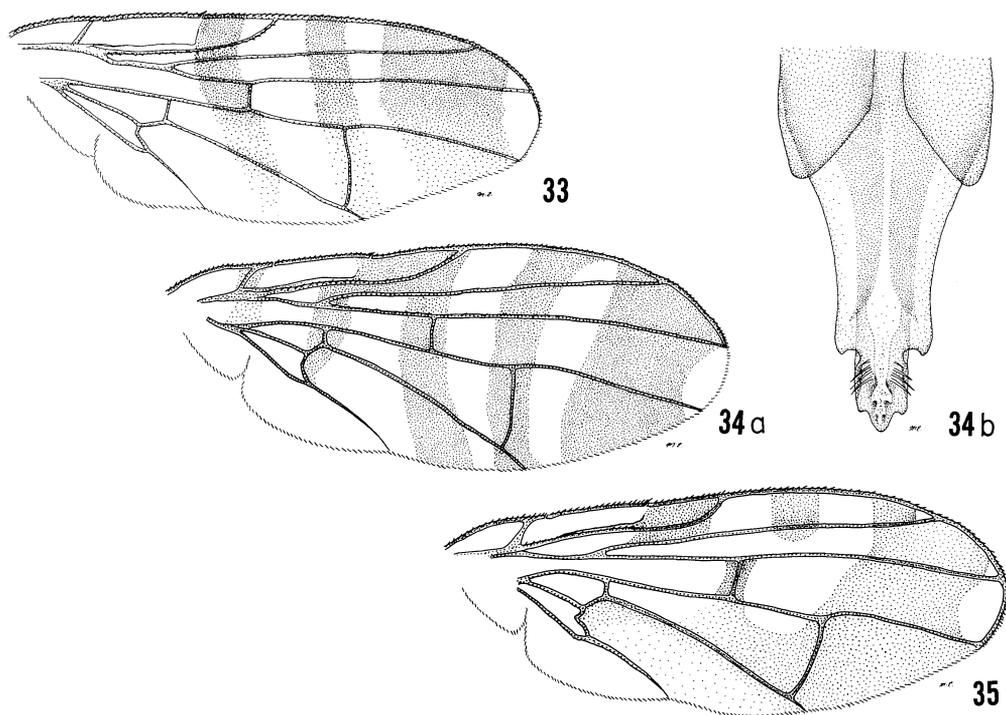


FIG. 33–35. 33, *Euphranta* (*S.*) *moluccensis*, wing. 34, *E.* (*S.*) *perkinsi*: a, wing; b, apex of ♀ piercer. 35, *E.* (*S.*) *sedlaceki*, wing.

♀. *Head*. Shaped as in other *Euphranta*, all yellow, including appendages, with rufous tinge in middle of front, tinge of brown on back part of occiput; eyes reddish brown. Two pairs inferior fronto-orbital bristles on lower $\frac{1}{2}$ of front, 1 pair superior fronto-orbitals just above middle of front. Ocellar bristles small, equal in length to about $\frac{1}{2}$ postocellars. *Thorax*. Mostly brown in ground color, rather densely gray pollinose, humeri and notopleura yellow, large yellow prescutellar spot on mesonotum. Scutellum pale yellow, with rather broad, concave, light brown mark at base. Dorsocentral bristles about $\frac{1}{3}$ distance from supraalars and postalars. Mesonotum densely covered with short, recumbent, yellow setae, curved band of brown-colored setae across median portion just behind suture. Pleuroterga with abundant long yellow pile. *Wings*. Mostly hyaline, with pale brown markings, 1 broad preapical crossband, another crossband at level of m crossvein, a 3rd extending from subcostal cell basad to, and just touching margin of r-m crossvein, evanescent in middle of cell 1st M_2 . A very faint indication of marking present in upper median portion of cell M_4 (Fig. 33). *Legs*. Femora, mid and hind tibiae rufous, faintly tinged with brown; otherwise legs yellow. *Abdomen*. Unicolorous rufous, tinged lightly with brown, rather densely gray pollinose, thickly short black setose. Ovipositor base reddish brown, about equal in length to terga 4–6. Ovipositor not extruded for study.

Length: body, excluding ovipositor, 5.5 mm; wings 5.25 mm.

♂. Unknown.

Holotype ♀ (BPBM 12,906), with hand written label "Larat XII, 7." This is obviously from Maluku and could be either Larat I SE of Ceram or Larat I adjacent to the north end of Tanimbar I, just NE of Jamdena.

Euphranta (Staurella) nigroapicalis Hardy, new species

Fig. 55

This species fits in the group of species characterized by having the apex of the wing hyaline and a complete transverse hyaline band over the wing beyond the m crossvein. It fits closest to *corticicola* (Hering), from Java, but is differentiated from all known members of this complex of species by having only 2 complete brown bands over the wing, the crossband at level of r-m crossvein ending near middle of cell 1st M_2 , and the subbasal brown marking limited to a small spot at forking of veins R_{2+3} and R_{4+5} (Fig. 55); also by having the palpi black at apices and the face with a large black mark over the lower median portion.

δ . *Head*. About $\frac{1}{3}$ higher than long, face moderately concave in median portion, front gently sloping. Ocellar bristles absent, postocellars scarcely larger than occipital setae. One pair superior fronto-orbital bristles near upper $\frac{1}{3}$ of front, 2 pairs inferior fronto-orbitals, upper pair near middle of front, lower pair in line with upper margin of lunule. Head pale yellow to white, hind portion of occiput and median portion of front dark brown to black, shining dark brown to black rectangular mark over lower median portion of face just above epistoma. Antennae rufous, tinged with brown on upper margin of 3rd segment. Third segment $3\times$ longer than wide, extending to near margin of face. Arista moderately long plumose, longest rays about equal in length to width of 3rd antennal segment. Palpi yellow, apex broadly black. *Thorax*. Mostly dark reddish brown in ground color, tinged blackish on pleura, rather densely covered with gray pollinosity (microscopic pubescence). Gray pollinosity most dense and conspicuous over a broad area down middle of mesonotum, bounded by dorsocentral bristles, and on sides along suture. Large yellow-white prescutellar spot in area bounded by prescutellar and dorsocentral bristles. Scutellum yellow-white, reddish-brown on basal margin, dorsal surface devoid of setae, a few short inconspicuous setae scattered along dorsolateral margins. Humeri and dorsal border of each mesopleuron white to slightly cream-colored; yellow mark on each side of mesonotum at suture extends over notopleuron behind bristle; propleura largely yellow. Dorsocentrals posterior to a line drawn between supraalars. Halteres yellow-white. *Wings*. Hyaline, dark brown crossband as noted above and as in Fig. 55. Cell Sc entirely brown, tiny hyaline spot at apex of cell R_1 . *Legs*. Coxae and trochanters yellow. Mid and hind femora and tibiae dark reddish brown, tinged with black, narrowly yellow on bases of femora. Front tibiae and posterior surfaces of femora dark reddish brown. Anterior surfaces of femora yellow to rufous. Tarsi rufous, tinged with brown. Strong spur of middle tibia about $\frac{2}{3}$ as long as basitarsus. *Abdomen*. Dark reddish brown to black on sides, over all of 5th tergum and along apex of 4th, broad median yellow-white vitta extending from base of abdomen to apical $\frac{3}{4}$ of 4th tergum.

Length: body and wings, 6.0–6.25 mm.

\varnothing . Fitting description of δ . Ovipositor base dark reddish brown to blackish, equal in length to terga 5+6. Basal segment of ovipositor about equal to abdominal segments 4+5. Piercer about $\frac{2}{3}$ as long as 8th segment, abruptly narrowed to sharp point at apex, 2 preapical teeth on each side.

Holotype δ (BPBM 12,907), allotype \varnothing (BPBM), 4 δ , 2 \varnothing paratypes: PNG: NEW GUINEA (NE): nr Bulolo, stony logging area, 14.XI.1978, 14.I.1979, 14.VI.1979, ex *Xanthophyllum*, "on *Xanthophyllum* log feeding on gum exudations" (Polygalaceae) (H. Roberts). Paratypes in AMS, FRSB, BMNH, and UH.

Euphranta (Staurella) perkinsi Hardy, **new species**

Fig. 34a–b

Fitting near *corticicola* (Hering) and differing as follows: body entirely yellow to rufous except for a tinge of brown on metanotum; only 2 pairs inferior fronto-orbital bristles; female ovipositor differing as shown in Fig. 34b, compared with Fig. 68b (Hardy 1973: 152); tergum 7 of female more elongate, approximately 2× longer than wide and piercer with 2 preapical indentations on each side, rather than 3 in *corticicola*, and wing markings lighter colored, yellow-brown. I see no distinctive differences in wing venation or pattern of markings in these (Fig. 34a) although markings are lighter colored, yellow-brown in *perkinsi*. Otherwise fitting description of *corticicola*.

Length: body and wings 6.75–7.0 mm.

Holotype ♂, IRIAN JAYA: NEW GUINEA (W): Aitape, X–XI.1936 (L.E. Cheesman) (BMNH, B.M. 1936-271). Allotype ♀, Hollandia (Sukarnopura), Noorbwijk Res., 7.VI.1960, 200 m (R.T. Simon Thomas) (UH, to be eventually deposited in BPBM).

The type in the BMNH collection was indicated by F.A. Perkins as a new species but it was never described.

Euphranta (Staurella) quatei Hardy, **new species**

Fig. 56

E. (S.) quatei fits near *maculifrons* in the *chrysopila* complex of species, which are characterized by having the apex of wing brown. It is differentiated from all known species in this complex by having the head, thorax and abdomen rufous-yellow except for a pair of short brown to blackish streaks on the anterior portion of the mesonotum reaching to just before the suture; the preapical hyaline band over the wing is almost parallel-sided and the apical portion of cell R_1 is hyaline except for the extreme tip; also, the basad crossband of the wing is continuous with a brown-yellow marking which extends along vein M_{3+4} (Fig. 56). In *maculifrons* the preapical portion of cell R_1 is mostly brown; also, vein M_{3+4} is hyaline except at its apex (Fig. 29).

♂. Fitting general characteristics of other *Staurella*, but entirely yellow, lacking dark markings except for those noted on anterolateral portions of mesonotum; postscutellum and metanotum dark brown to black, tinged with rufous. Upper portion of each mesopleuron pale yellow-white; humeri and prescutellar mark on mesonotum yellow-white. Surstyli of ♂ genitalia extend to about basal $\frac{1}{3}$ of 5th abdominal tergum and cerci about equal in length to height of epandrium. Otherwise fitting description of *maculifrons*.

Length: body 7.8 mm.

♀. Unknown.

Holotype ♂, IRIAN JAYA: NEW GUINEA (W): Star Mts, Sibil Val, 1245 m, 18.X–8.XI.1961, malaise trap (S. & L. Quate) (BPBM 12,908).

It is a pleasure to name this species after Dr Larry Quate, who collected extensively in New Guinea and other parts of SE Asia.

Euphranta (Staurella) rudis (Walker), **nomen dubium**

Trypeta rudis Walker, 1856, J. Proc. Linn. Soc. Lond., Zool. 1: 133. Type-locality: "Borneo." In BMNH. I have studied the type.

The female is in very poor condition: the wings are missing, the thorax is damaged by the minuten and the entire body is covered with debris. It is impossible to place this species, and it is considered here a nomen dubium. From my descriptive notes on the type (Hardy 1959: 222) the mesonotum is black with a large prescutellar yellow spot. Walker's original description stated that the wings are "nearly limpid with two brown bands, the interior one abbreviated hindward." This may possibly fit in the same group of species as *maculifrons* de Meijere, but from Walker's scanty description it is impossible to say.

***Euphranta (Staurella) sedlaceki* Hardy, new species**

Fig. 35

E. (S.) sedlaceki resembles *flavina* (Hering) because of its small size, pale body coloration and the wing markings. It is differentiated by having the costal cells hyaline; cell R_1 with an isolated brownish yellow spot in the middle; the subcostal cell short, scarcely $\frac{2}{3}$ as long as the 2nd costal and r-m crossvein situated just slightly beyond the middle of cell 1st M_2 ; a pair of pale brown spots on the anterior portion of the mesonotum; 2 faint brownish lines extending in line with the dorsocentrals; and the face all yellow.

δ . *Head*. Approximately as long as high, front and face not marked with brown or black; with 3 pairs inferior fronto-orbital bristles. Antennae entirely pale yellow to rufous. Ocellars lacking, post-ocellars about 2 \times longer than occipital setae. *Thorax*. Pale yellow, tinged rufous on dorsum with rather indistinct, brownish marks on mesonotum. Dorsocentral bristles just behind level with supraalars. *Legs*. All yellow. *Wings*. As mentioned above and in Fig. 35. *Abdomen*. Rufous, tinged with brown on sides of terga 1-4; sterna dark brown. Genitalia not studied. Cerci short, length scarcely $\frac{1}{2}$ height of epandrium.

Length: body 4.5 mm.

♀ . Fitting characteristics of δ but with tinge of brown on postnotum and metanotum; sterna rufous. Basal segment of ovipositor mostly rufous, line of brown down each side of dorsal margin, apex dark brown to black. Basal segment about equal in length to terga 3-6. Piercer not studied. Sterna rufous.

Length: body, excluding ovipositor, 4.65 mm.

Holotype δ , PNG: NEW GUINEA (NE): Maprik, malaria control sect., in light trap, I.1958 (no collector given) (BPBM 12,909). Allotype ♀ , PNG: BISMARCK ARCH: NEW BRITAIN: Gazelle Penin., Gaulim, 130 m, 28.X.1962 (J. Sedlacek) (BPBM).

The species is named after J. Sedlacek, who has collected very extensively in New Guinea and New Britain.

***Euphranta (Staurella) solitaria* Hardy, new species**

Fig. 36a-b

E. (S.) solitaria fits in the group of species which have the apex of the wing hyaline and the brown marking not divided by a complete hyaline crossband. It fits nearest to *bischofi* (Kertész), from New Guinea and the Philippines but is readily differentiated by the very different markings of the wings as shown in Fig. 36a, 46; by the extensively blackened femora; by having the basal $\frac{1}{2}$ of the scutellum dark brown to black; and by having yellow median marks on abdominal terga 1-3.

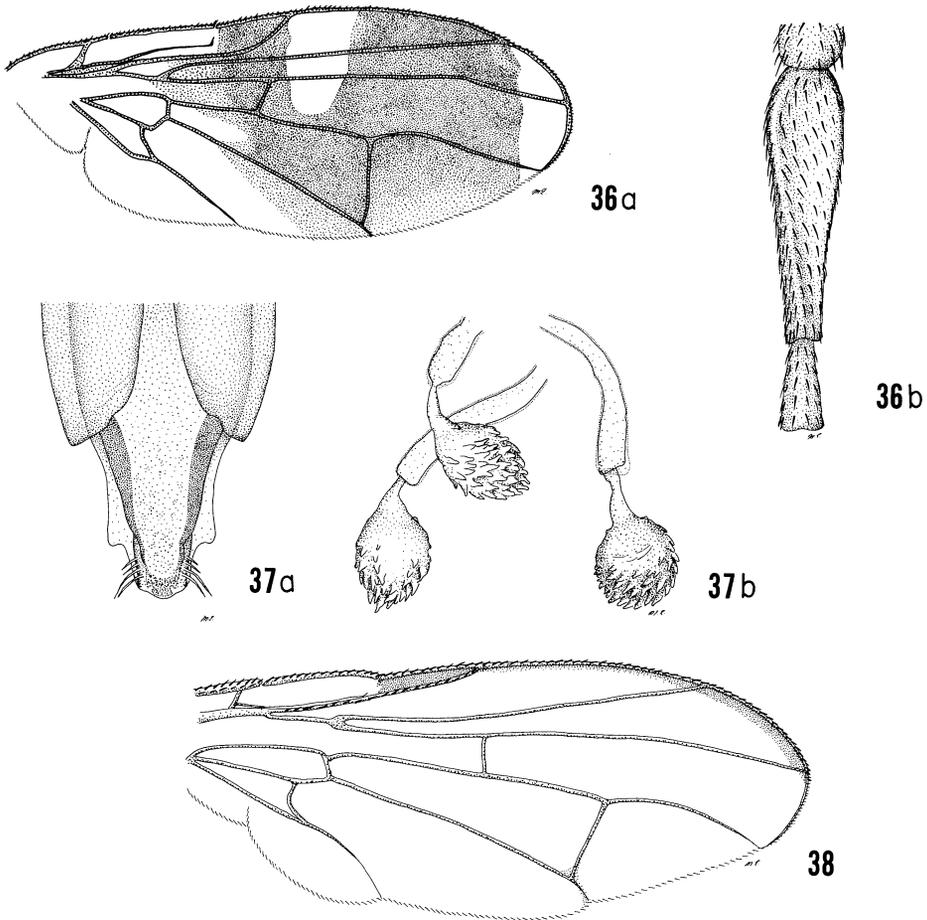


FIG. 36–38. **36**, *Euphranta* (*S.*) *solitaria*: **a**, wing; **b**, front basitarsus, ♂. **37**, *E.* (*Xanthotrypeta*) *bimaculata*: **a**, apex of ♀ piercer; **b**, spermathecae. **38**, *Ichneumonosoma imitans*, wing, drawn from type.

♂. Fitting general characters of *Staurella*. *Head*. Front with large, subshining, black mark in median portion. Face moderately concave, yellow except pair of oblong black spots near lower margin, spots slightly confluent medianly. Antennae rufous, tinged brown on 3rd segment. Two pairs inferior fronto-orbitals. *Thorax*. Mostly shining black in ground color, mesonotum dusted gray, yellow-white prescutellar spot on hind median portion of mesonotum, yellow on sides of suture. Humeri yellow. Pleura mostly brown, tinged rufous in ground color, propleura yellow; prominent spot on upper median portion of mesopleuron yellow-white. Scutellum pale yellow-white on apical $\frac{1}{2}$ and on venter with basal $\frac{1}{2}$ dark brown to black. Dorsocentral bristles about $\frac{2}{3}$ distance between supraalar and postalars. *Legs*. Front pair mostly yellow, dark brown mark over dorsal portion of femur at apical 3rd of segment, tibiae tinged faintly with brown. Basitarsi flattened dorsoventrally, broader than tibiae (Fig. 36b). Mid and hind femora and tibiae mostly black, basal $\frac{1}{5}$ – $\frac{2}{5}$ of femora yellow. All tarsi yellow to rufous. *Wings*. Very distinctively marked. Large brown markings over median portion uninterrupted,

except for hyaline mark from margin at apex of vein R_1 across wing through upper $\frac{3}{4}$ of cell R_5 just beyond r-m crossvein (Fig. 36a). Apical portion broadly hyaline, subcostal cell hyaline. Crossvein r-m just slightly basad of middle of cell 1st M_2 . *Abdomen*. Shining black, except for prominent yellow mark down middle of terga 1-3.

Length: body 8.5 mm.

Holotype δ , PNG: N SOLOMON IS: Bougainville: Rokure, 690 m, 18.VI.1956 (E.J. Ford, Jr) (BPBM 12,910).

Subgenus **Xanthotrypeta** Malloch, **new status**

Xanthotrypeta Malloch, 1939, Ann. Mag. Nat. Hist. **4**: 250. Type-species: *bimaculata* Malloch.

This taxon, which is known from only the type-species, fits the characters of typical *Euphranta* except that the sternopleural bristles are completely lacking. Since the size of the sternopleurals in *Euphranta* varies considerably from poorly developed to strong, I do not consider this single character of generic value. I suspect that the lack of sternopleurals may be a specific character. One other species is on hand (*quadrimaculata*, n. sp.) which lacks the sternopleurals but differs from *Xanthotrypeta* by also lacking humerals. I prefer to treat the latter as an aberrant *Euphranta* (*Euphranta*) until further knowledge is obtained which might clarify its status.

Euphranta (Xanthotrypeta) bimaculata (Malloch), **new combination**

Fig. 37a-b, 57

Xanthotrypeta bimaculata Malloch, 1939, Ann. Mag. Nat. Hist. **4**: 250. Type-locality: Segi, New Georgia. Type \varnothing in BMNH.

X. bimaculata is readily differentiated from other known *Euphranta* by lacking the sternopleural bristles.

\varnothing . Predominantly yellow to rufous species; large black spot on each side of front portion of mesonotum laterad of humeri, extending posteriorly to about level with anterior notopleural bristle. Median portion of front with brown to blackish streak extending most of its length from ocellar triangle, large shining black spot present on each side of upper portion of occiput covering bases of outer vertical bristles. Apex of 7th abdominal segment of female (ovipositor base) and basal portion of 8th segment dark brown to black. Mid and hind tibiae faintly tinged with brown. Wings with basal $\frac{2}{3}$ largely yellow fumose, apical $\frac{1}{3}$ entirely brown except for narrow apex of cell R_5 and hyaline mark in lower apical portion of cell 2nd M_2 . Brown streak across wing over r-m crossvein into upper portion of cell 1st M_2 (Fig. 57). [It should be noted that Malloch's figure of the type (loc. cit., Fig. 13) is misleading; he shows a continuous brown marking from apical portion of wing over vein M_{1+2} connecting with mark over r-m crossvein. This is not correct; the 2 brown markings are separated by a narrow, transverse, subhyaline band.] Sixth tergum of \varnothing subequal to 5th, basal segment of ovipositor about equal in length to terga 4-6. Piercer short, scarcely over $\frac{1}{3}$ as long as 8th segment, apex shaped as in Fig. 37a. Three roughly spiculated spermathecae as in Fig. 37b.

Length: body 7.0-8.0.

δ . Unknown.

For further descriptive details refer to the original description.

This species superficially resembles some *Adrama* but there are no ventral spines on the femora and the metasternum is not sclerotized.

Distribution. Solomon Is.

Specimens examined. Previously known only from the original pair of specimens from New Georgia. I have studied the type series and have specimens on hand from the following areas: SOLOMON IS: New Georgia Group, Gizo I, 100 m, VII.1964 (J. & M. Sedlacek); SE Santa Ysabel, Tatamba, 0–50 m, IX.1964 (R. Straatman).

Genus *Ichneumonosoma* de Meijere

Ichneumonosoma de Meijere, 1914, Tijdschr. Entomol. **57**: 195. Type-species: *Lagarosia imitans* de Meijere. *Axania* Enderlein, 1920, Zool. Jahrb., Syst. **43**: 337. Type-species: *ichneumonea* Enderlein (=syn. of *imitans* de Meijere).

Ichneumonosoma belongs in the Euphrantini because of the arrangement of the thoracic bristles and the presence of fine erect hairs on the pleuroterga. It fits near *Soita* Walker and superficially the 2 are much alike, having predominantly or entirely yellow bodies and clear wings, being rather large, slender, Ichneumon-like in shape, and having only 1 pair of strong scutellar bristles. It is differentiated by lacking long hairs on the wing veins and M_{3+4} , with the base of Cu bare; by the front with normal bristles, not enlarged and flattened; also by having conspicuous black markings on the head, thorax and abdomen.

Ichneumonosoma heinrichi Hering

Ichneumonosoma heinrichi Hering, 1941, Siruna Seva **3**: 16. Type-locality: Talassa, S Sulawesi. Type ♀ in ZMHB.

I. heinrichi is distinguished from *imitans* (de Meijere) by having the scutellar bristles situated nearer to the base than to the apex; by having the thorax nearly all yellow to rufous, with a small black spot on each side of the mesonotum behind the humerus and a short postsutural vitta on each side in line with the dorsocentrals; and by the abdomen being all rufous, lacking black markings except for apex of basal segment of female ovipositor.

Fitting description of *imitans* in most details but having 2 pairs of inferior fronto-orbitals. Basal segment of ♀ ovipositor reddish brown, blackish at apex, slightly longer than last 2 abdominal terga.

Hering (1941) gave the wing measurement as 10.0 mm.

Distribution. Known only from Sulawesi.

Specimens examined. Type.

Ichneumonosoma imitans (de Meijere)

Fig. 38

Lagarosia imitans de Meijere, 1911, Tijdschr. Entomol. **54**: 383. Type-locality: Batavia (Jakarta), Java. Type ♂ in the ZMUA.

Axania ichneumonea Enderlein 1920, Zool. Jahrb., Syst. **43**: 337. Type-locality: Sikkim, India. Type ♂ in BMNH.

I. imitans is differentiated from *heinrichi* Hering by having 4 black spots on the mesonotum in front of the suture, 2 submedian spots just behind the suture and a black vitta on each side extending from behind the suture just inside a line with the dorsocentral bristles to a level with the postalars and broadly expanded so they are almost confluent in middle of hind margin of the mesonotum; by having the pleura each with a black vertical band over the mesopleuron, a small oval black spot on the sternopleuron, 1 on the hypopleuron and a large black mark over the metanotum; by having the mid and hind femora black at bases and bases of hind tibiae brown to black, and the abdomen black on apices of terga 1-4 and 5th tergum with an elongate black spot on apical $\frac{1}{2}$.

The following notes are based on the type of *imitans*. No ocellar bristles, occipital setae weak, Dacini-like. One pair inferior fronto-orbitals at lower $\frac{1}{4}$ of front, 1 pair of superior fronto-orbitals at upper $\frac{1}{3}$. Four strong bristles in clump each side of vertex in position of inner vertical bristles, just above level with ocellar triangle. Front with black spot in median portion. Face all yellow. Arista short plumose. Thorax yellow except for black markings noted above. Humeral bristles strong; sternopleural and presutural bristles lacking; pteropleural bristle weak, hairlike. Mesonotum with distinct transverse indentation or furrow between sutures. Legs mostly yellow, bases of mid and hind femora black, bases of hind tibiae brown to blackish. Wings almost completely hyaline, narrow brown band along costal margin from tip of vein Sc to just beyond R_{4+5} . Crossvein r-m at middle of cell 1st M_2 . Cubital cell with a short apical lobe (Fig. 38). Abdomen long and slender, mostly yellow, with black markings as noted above.

Length: de Meijere measured the δ as body 10.0 mm and wing 9.0 mm. Enderlein gave δ body 11.0-12.5 mm and wing 8.0-9.0 mm; ♀ body 11.0 mm and wing 6.75 mm.

Distribution. Java and India. Known only from type specimens.

Specimens examined. Both types.

Genus *Ptilona* van der Wulp

Ptilona van der Wulp, 1880, Tijdschr. Entomol. **23**: 138. Type-species: *brevicornis* van der Wulp.
Ptiolina, error.

This genus is differentiated from other Euphrantini by having only 1 pair of inferior fronto-orbital and 1 pair of superior fronto-orbital bristles located below the middle of the front (Fig. 39) and by having the wings dark brown with hyaline wedges from the margins (Fig. 58). For further generic characteristics and a key to known species, refer to Hardy (1974: 144-145).

Only 1 species is known to occur in Indonesia.

Ptilona confinis (Walker)

Fig. 39, 58

Rioxa confinis Walker, 1856, J. Proc. Linn. Soc. Lond., Zool. **1**: 132. Type-locality: Sarawak, North Borneo. Type ♀ in BMNH. For further synonymy refer to Hardy (1977: 84).

P. confinis is differentiated by the wing markings: by having an oblong hyaline spot in cell R_5 immediately above the m crossvein, another oblong spot near the apical

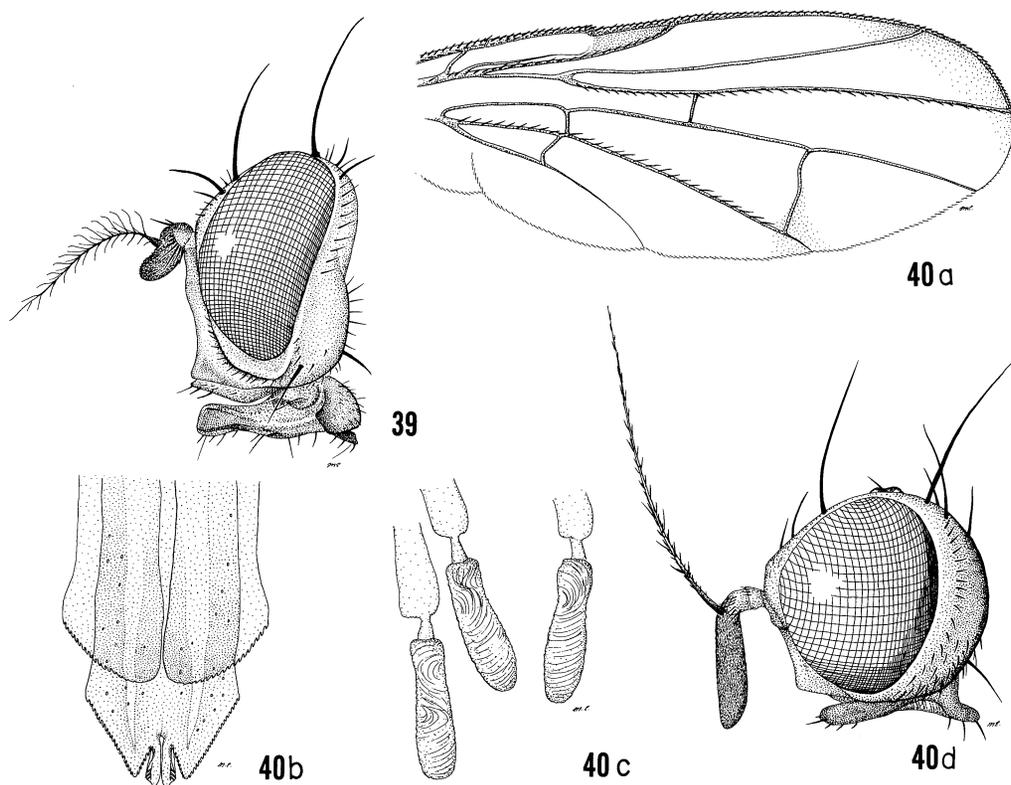


FIG. 39–40. **39**, *Ptilona confinis*, head. **40**, *Soita psiloides*: **a**, wing; **b**, apex of ♀ piercer; **c**, spermathecae; **d**, head.

portion of cell 1st M_2 , and a pair of spots (often confluent) in the lower portion in cell M_4 .

Wing markings and venation as in Fig. 58. Head shaped as in Fig. 39. Thorax predominantly yellow, tinged with brown, dark brown to black markings over pleura and metanotum, mostly gray pubescent on mesonotum and scutellum. Scutellum entirely yellow. Legs yellow, tinged with brown on apices of middle and hind femora. In ♂ brown discolorations appear more extensive over middle and hind femora. Abdomen predominantly dark brown to black, 1st tergum tinged with brown, 2nd largely yellow, 3rd yellow at base, brown over remainder of segment. Terga 4–5 in ♂ and 4–7 in ♀ dark brown to black. Male genitalia as in Hardy (1974: 146, Fig. 85c). Base of ♀ ovipositor short, shining dark brown to black, about equal to abdominal terga 5+6, approximately 0.8 mm long. Piercer (Hardy 1974: 146, Fig. 85f) short and thick, blunt at apex, approximately equal in length to basal segment. Extended ovipositor 2.3 mm. Three small round spermathecae present.

Length: body and wings, 6.0–7.0 mm.

Distribution. This is the common species of *Ptilona* throughout the Oriental Region

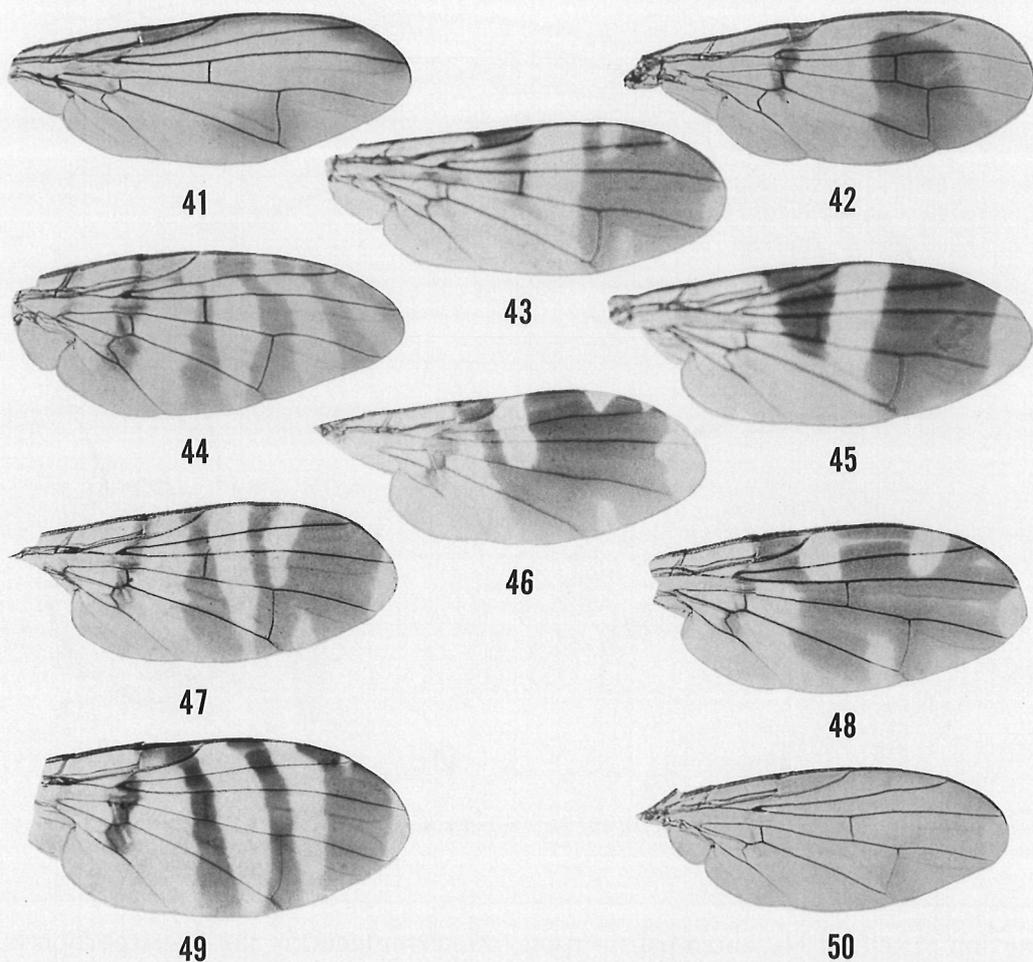


FIG. 41-50. **41**, *Dimeringophrys bilineata*, wing. **42**, *Euphranta (Euphranta) lacteata*, wing. **43**, *E. (E.) variabilis*, wing. **44**, *E. (E.)* sp.?, wing. **45**, *Euphranta (Staurella) balteata*, wing. **46**, *E. (S.) bischofi*, wing. **47**, *E. (S.) borneana*, wing. **48**, *E. (S.) canangae*, wing. **49**, *E. (S.) corticicola*, wing. **50**, *E. (S.) flavina*, wing.

and the Moluccas Is. In Indonesia it has been recorded from Ambon, Java, Kalimantan, and Sulawesi. It very probably occurs on all the main islands of Indonesia.

Specimens examined. Type and ca. 100 specimens from numerous localities over Indonesia.

Genus *Soita* Walker

Soita Walker, 1865, J. Proc. Linn. Soc. Lond., Zool. **8**: 136. Type-species: *psiloides* Walker.

These are slender-bodied, Ichneumon-like flies fitting near *Ichneumonosoma* de Meijere by their wasplike appearance, their yellow bodies, the complete transverse groove

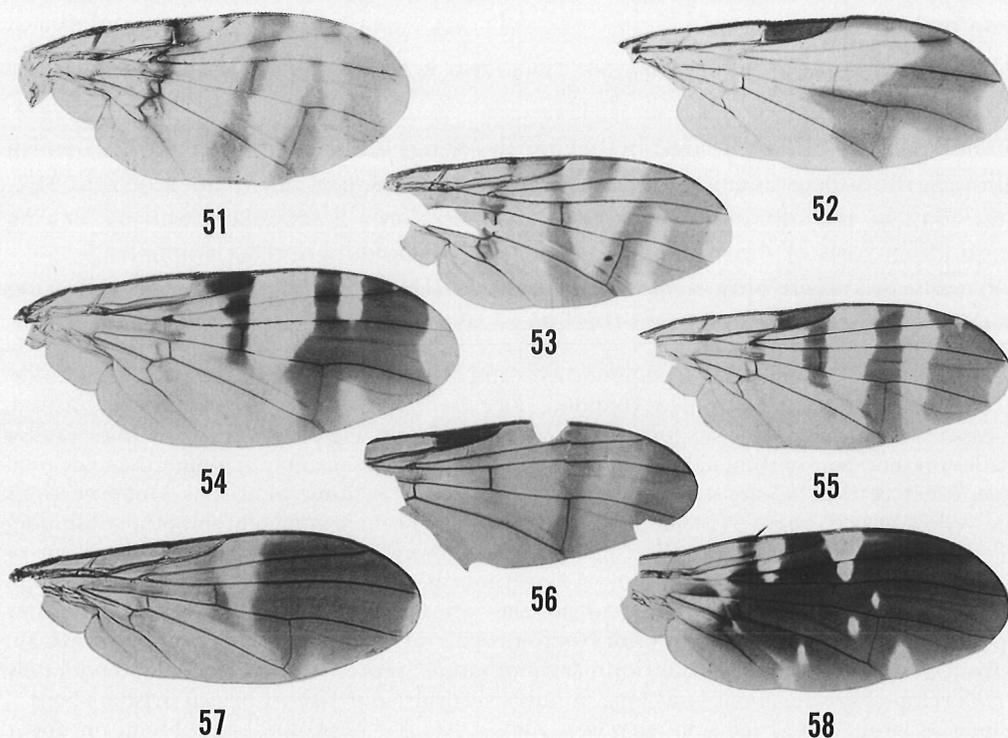


FIG. 51-58. 51, *Euphranta* (*S.*) *incompleta*, wing. 52, *E. (S.) latilimbata*, wing. 53, *E. (S.) lemniscata*, wing. 54, *E. (S.) maculifemur*, wing. 55, *E. (S.) nigroapicalis*, wing. 56, *E. (S.) quatei*, wing. 57, *E. (Xanthotrypeta) bimaculata*, wing. 58, *Ptilona confinis*, wing.

connecting lateral sutures on the mesonotum, the clear wings, and only 2 scutellar bristles. *Soita* is differentiated by having veins R_1 , R_{4+5} , M_{3+4} and the base of vein Cu covered with long, conspicuous hairs; the lower superior fronto-orbital bristles situated below the middle of the front and greatly enlarged, flat, and strap-like; and the thorax all yellow, without black markings and having presutural and sternopleural bristles.

Thorax elongate, 2× longer than wide. Bristles of dorsum of thorax strong: dorsocentrals and inner postalars equal to or longer than 2nd costal cell, scutellars equal in length to 4th costal section (between tips of veins R_1 and R_{2+3}). Dorsocentrals just behind suture in line with notopleurals. Second abdominal tergum with strong bristle each side near junction with 1st tergum and 5th tergum in ♂ and 6th tergum of ♀, row of 4-6 strong black bristles on posterior margin.

Three species have been recorded to date, 2 from the Philippines and the type-species, from Salawati Island, Irian Jaya.

For a key to species refer to Hardy (1974: 150).

Soita psiloides Walker

Fig. 40a–d

Soita psiloides Walker, 1865, J. Proc. Linn. Soc. Lond., Zool. 8: 136. Type-locality: Salawati I, Irian Jaya. Type ♂ in BMNH.

This species is differentiated by having the wings all hyaline except for brownish yellow in the subcostal cell and a pale brownish yellow spot at the apex of vein M_{3+4} (Fig. 40a); by the all yellow abdomen; by having only 2 scutellars; and by lacking longitudinal rows of short black spines on the mesopleura and sternopleura.

Previously known only from the type male (Hardy 1959: 197). The following descriptive notes are based upon the female specimen from Papua New Guinea.

♀. Entirely yellow to rufous, compound eyes and ocellar triangle dark colored. Head rather peculiar in shape; vertex flattened, rounded, not raised, vertical bristles posterior in position, at upper hind margin of head just above edge of occiput (Fig. 40d). Small hairlike ocellar bristles present, pair of thin, pale-colored, hairlike postocellars scarcely $\frac{1}{2}$ longer than occipital setae. Inner vertical bristles strong, black, about $\frac{1}{5}$ as long as humeral bristles. Outer verticals pale yellow-brown, about $\frac{2}{3}$ as long as inner verticals. Front completely smooth, subshining yellow, bare, with a few small yellow hairs on margins and along lower portion. One pair of superior fronto-orbital bristles near lower $\frac{2}{5}$ of front (these are broken in the specimen at hand so there is no way of telling whether or not they are flattened, strap-like as in ♂). No other superior fronto-orbital bristles. Inferior fronto-orbitals rather close together near lower margin of front, just above level with anterior margin of lunule, represented by 1 brown, moderately well-developed bristle, about $\frac{1}{2}$ as long as outer verticals, and 1 short brown bristle, about $\frac{2}{3}$ as long as larger one. Face shining yellow, almost straight in profile, small hump on upper margin. Palpi and mouthparts rufous, tinged with brown. Third antennal segment broken on specimen at hand. Thorax as described for ♂, covered with moderately thick yellow hairs. Transverse depression connecting lateral sutures prominent. Humeral, inner postalar, dorso-central, anterior supraalar, presutural and humeral bristles dark brown to black. Noto-, meso-, ptero- and sternopleural bristles yellow to yellow-brown. Only 1 pair of notopleurals present, anterior pair missing. Metathoracic, postcoxal bridge heavily sclerotized, very similar to that of *Phytalmia*. Mid femur with pair of short, preapical, posterior, bristlelike setae. Mid tibia with row of about 8 short, brownish red, bristlelike setae scattered down posterodorsal margin from basal $\frac{1}{4}$ to apex. Mid tibia with 3 ventral bristles at apex, 2 moderately long, 1 short. Hind femur with 4 anterodorsal reddish brown bristles on apical $\frac{1}{3}$ of segment. Hind tibia with row of short, pale, setaelike bristles arranged along anterodorsal margin from about basal $\frac{1}{5}$ to apex. Second tergum with moderately strong but thin hairlike bristles on each side near junction with 1st tergum; 6th tergum with row of 4 strong bristles on apical margin. Sixth tergum equal in length to 5th. Sixth sternum with 4 strong dark brown bristles at apex; sterna 2–5 each with pair of closely placed bristles near postero-median margin, small, rather setaelike on 2nd sternum, slightly larger on 3rd, still larger on 4th and 5th, almost equal in size to bristles on 6th sternum. Basal segment of ovipositor short, scarcely longer than wide. Piercer short and thick, terminating in 4 sharp toothlike points at apex, minute serrations on apical margins (Fig. 40b). Closely resembling the ovipositor of *Soita baltazarae* Hardy, from the Philippines (refer to Hardy 1974: 151, Fig. 87b). Three elongate spermathecae (Fig. 40c).

Length: body 9.5 mm; wings 7.5 mm.

Distribution. Salawati I and Papua New Guinea.

Specimens examined. Holotype and 1♀, PNG: WOODLARK I: (Murua), Kulunadau Hill, 16–22.IV.1957 (W.W. Brandt).

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