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THE SYRPHIDAE OF GUADALCANAL, WITH NOTES ON RELATED SPECIES

By C. H. CURRAN

Most of the material reported upon in this paper was collected in Guadalcanal Island by Mr. C. O. Berg, who also had an opportunity to study the biology of several of the species. It is his intention to report upon his observations in the near future. Of the 28 species contained in the collection, 10 are described for the first time.

The Museum is greatly indebted to Mr. Berg for the generous donation of types and uniques not represented in its collection. Where no collector's name is cited under the records of previously described species, the material was collected by Mr. Berg. The names of other collectors are included in the data, and we wish to express our appreciation to them for the donation of the recorded specimens as well as of many other insects of various orders.

MICRODON MEIGEN

This genus is represented by a single, undescribed species. In order to show its relationship to other species of the Indo-Australian region, I present a key to the species I have seen:

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- | | |
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| 11. Face wholly black pilose..... | |
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Antennae longer than the head....22
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most all brown.....23
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mostly brown.....*wulpi* Mik
Wings differently colored.....24
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color.....*stenogaster* Curran
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28. Face and mesonotum golden yellow

pilose.....*minuticornis* Curran
Face and mesonotum black pilose....
.....*boharti*, new species

Microdon boharti, new species

Deep blue black, face and mesonotum black pilose; wings brownish on apical half; scutellum unarmed. Length, 10 mm.

FEMALE: Face narrow, the front gently narrowing to the vertex, the frontal depression at the middle of the front very broad and shallow; ocellar triangle scarcely longer than wide, the ocelli situated far forward. Occiput grayish pollinose. Face considerably receding below, rather strongly convex on the lower half, weakly so above. Pile black, whitish on the occiput. Antennae black, decidedly shorter than the length of the head, the first and third segments of about equal length, the third elongate oval, the upper edge very slightly convex, the apex obtusely pointed above; hair black; arista brownish red, reaching to beyond the tip of the third segment. Eyes bare.

Thorax black, the pleura mostly, and the posterior calli, brownish. Pile short, appressed, black; in front there is some fine, erect pale hair, and there is a patch of whitish hair on the pteropleura. Scutellum rather strongly metallic blue, the hair short and black.

Legs black, with short, appressed black hair. Wings cinereous hyaline basally, the apical half smoky brown; apical cross vein transverse, carried slightly outward in front; vein closing the discal cell bulbous behind, and recurrent anteriorly. Squamae luteous, with yellow fringe, the upper lobe with brown border and fringe.

Abdomen bluish black, with short, appressed black hair; first segment, basal lateral triangles on the second, broad, transverse apical spots on the sides of the third and fourth segments, and a small spot on the apical angles of the fifth segment white haired. Venter brownish and white pilose basally, otherwise black and black haired. The abdomen is widest at the apex of the second segment, with subparallel sides, the fifth segment strongly narrowing to the apex.

HOLOTYPE: Female, Guadalcanal, April, 1945 (G. E. Bohart).

The abdomen is somewhat crushed so it is possible that it may be somewhat oval.

Citabaena peltata de Meijere

Eumerus peltatus DE MEIJERE, 1908, Tijdschr. v. Ent., vol. 51, p. 223.

One female, Guadalcanal, February, 1945.

This belongs to the group in which the hind tarsi are broadened and flattened.

Ornidia obesa Fabricius

Syrphus obesus FABRICIUS, 1775, Systema entomologiae, p. 763.

Seven males and 18 females, Guadalcanal, August and September, 1944, and April 19, 1945 (C. O. Berg), and female, July 23, 1945 (Frank Cilley).

This species has been recorded from a number of the islands of the Pacific and is common throughout the American tropics.

Syrphus contax, new species

Face and cheeks yellow; mesopleura partly yellow; legs wholly yellowish; abdominal segments with two narrow black fasciae. Length, 9 mm.

MALE: Frontal triangle black, reddish yellow in front, the black area thickly covered with ochraceous pollen except anteriorly; a black spot above each antenna; pile black, some pale hairs along the orbits. Vertical triangle small, black, thinly brownish pollinose except in front, the hair black. Occiput cinereous pollinose, the orbits more or less brassy, the pile brassy yellow, becoming white below. Face and cheeks yellow, the face, except the moderately large tubercle, yellow pollinose, in profile gently concave above, very narrowly concave below the tubercle; pile yellow.

Thorax black, the notopleura and the broad posterior border of the mesopleura apparently luteous in ground color but densely clothed with tawny yellow pollen, the pollen otherwise cinereous yellow. The mesonotum is bronze black, the sides very broadly pale pollinose in front, and a pair of broad, pollinose stripes extend from the

anterior margin to behind the middle. Pile bright golden yellow. Scutellum yellow, rather dull, with yellow pile, the apex with black hair.

Legs wholly reddish yellow and with yellow hair, the broad apex of the hind femora and their tibiae and tarsi with short black hair. Coxae aeneous brown, the front pair mostly yellow.

Wings hyaline, the stigmal cell pale brownish. Squamae and halteres reddish yellow.

Abdomen pale orange, the base, lateral margins, and very broad basal bands on the second to fourth segments shining, with six narrow black bands, those on the apices of the segments extending over the side margins, the others well separated from them. The anterior bands are situated at about the basal fourth of the second to fourth segments; those on the third and fourth segments interrupted in the middle and slightly tapering to the sides; that on the second produced posteriorly near the middle and carried obliquely forward to unite at the basal fifth of the segment. The black posterior band on the second segment encloses a narrow, preapical fascia on the median half, the band on the third segment is similar, but the pale fascia extends across the median two-thirds of the segment. On the fourth segment the posterior yellow band is much wider in the middle than the black one and tapers to the sides, the apex of the segment very narrowly brown. The base of the abdomen is semitranslucent except laterally, and the bases of the segments are grayish white pollinose when viewed from certain angles. Pile subappressed, black; mostly yellow and erect on the two basal segments. Genitalia shining brown posteriorly. Venter reddish yellow, the second and third sternites with preapical brown fascia; hair yellow, black on the fourth sternite except basally.

HOLOTYPE: Male, Guadalcanal, August, 1944 (C. O. Berg).

In form, this species is very similar to the species described by de Meijere as *elongatus*, but the abdominal markings are quite different. Both these species are referable to the *balteatus* group.

10. Thorax rather dark rusty reddish with the yellow spots in strong contrast *vespaeformis* Doleschall
Thorax rusty yellowish without contrasting yellow spots..... 11
 11. Mesonotum with a pair of brown lines on the anterior half, male.....
..... *bergi*, new species
Mesonotum without dark vittae... 12
 12. Costal brown border of the wings expanded to form a spot extending over the basal cross veins, female...
..... *bergi*, new species
Brown costal border not expanded... 13
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..... *perpallida*, new species
Mesonotum wholly pale. *rubella* Wulp
 14. Wings dark only in front. 15
Wings wholly brown, darker in front *virtuosa* Curran
 15. Fourth abdominal segment not wholly black..... 16
Fourth abdominal segment wholly black..... *macgregori* Curran
 16. Costal border brown on the whole length; scutellum wholly pale.....
..... *gigas* Curran
Costal border not brown on the whole length; scutellum with black spot 17
 17. Third abdominal segment with very broad, entire yellowish fascia.....
..... *tinctiventris* de Meijere
Third abdominal segment with a pair of elongate, longitudinally placed yellowish spots.....
..... *luteolimbata* de Meijere
 18. Sides of the face broadly yellowish in ground color on more than the upper half..... 19
Sides of face black in ground color on more than the upper half..... 21
 19. Wings with the alula of full size.....
..... *pulchrifrons* Austen
Alula distinctly narrowed..... 20
 20. The yellow of the sides of the thorax is wholly limited to the notopleura
..... *porphyra* Curran
The yellow color extends onto the surrounding parts in front of the suture..... *fallax* Austen?
 21. Wings with narrow, conspicuous clouds on the cross veins.....
..... *maculata* Walker
Cross veins at middle of wing not conspicuously clouded..... 22
 22. Humeri haired posteriorly..... 23
Humeri not haired posteriorly.....
..... *varipes* Curran
 23. Wings with small apical brown spot..
..... *nigricoxa* Curran
Wings hyaline, the stigma brown.....
..... *chalybescens* Curran
- Baccha mundulosa**, new species
- Blackish, base of abdomen reddish, the third segment with arched reddish fascia; wings with the costal brown border greatly expanded before the middle. Length, 14 mm.
- MALE: Facial stripe, front, and vertical triangle shining black, the upper third of the frontal triangle densely grayish brown pollinose. Ocellar triangle small, situated far forward. Occiput and posterior part of the cheeks black, cinereous pollinose. Face reddish, cinereous pollinose on the lower orbits and beneath the antennae, black stripe narrowing below and not quite reaching the oral margin; tubercle narrow and small, the face not receding below. Antennae reddish, the arista brown on the apical half or more. The pile is black on the front and upper angles of the face, otherwise brassy yellow.
- Thorax black, the pleura aeneous in front and behind, brown below the wings, the sides of the mesonotum in front of the suture and a broad band extending downward onto the sternopleura reddish in ground color and with thick cinereous pollen, the aeneous areas with thin pollen; sides of mesonotum behind the wings and the scutellum brownish red. Mesonotum in front of the suture somewhat dulled by brownish pollen; pile brassy yellow, black behind the suture and rather dense laterally; scutellar pile brassy yellow and moderately long. Humeri with a single transverse row of yellow hairs, the collar moderately strong.
- Legs reddish; posterior femora with a broad postmedian brownish band, the apical half of their tibiae and basal third of the

first segment of the hind tarsi brownish. Hair short, brassy yellow, black on the hind legs from the coxae to the middle of the first tarsal segment, long on the posterior surface of the middle femora where a few black hairs are mixed with the pale pile.

Wings hyaline, the anterior border brown, expanded to form a triangular spot covering the cross veins and broad apices of the basal cells and the apex of the anal cell; middle of second basal cell, anal and auxiliary cells and alula hyaline, the immediate base of the wing broadly brownish red. Vein closing the discal cell almost straight; alula large, gently convex behind.

First abdominal segment reddish yellow with the middle blackish; second reddish with a moderately broad dorsal black vitta; third segment black with a gently arched, very narrowly interrupted reddish fascia on the posterior half, the outer ends narrowed. Apical two segments wholly blackish. Venter brownish red, the apical two sternites black; hair short, long on first two segments, black except on the first segment; from the middle of the third segment to the apex forming a dense, rather short lateral fringe. Genitalia black, quite small, the appendages reddish.

HOLOTYPE: Male, Guadalcanal, July, 1944 (C. O. Berg).

This species is very close to *mundula* Wulp, but the description of that species does not mention the reddish yellow face and the pale spots on the pleura, and the hind legs are somewhat more extensively black.

***Baccha bergi*, new species**

Rusty reddish yellow, the abdomen partly black; wings with dark costal border expanded before the middle and at the tip. Length, 9 to 13 mm.

MALE: Head reddish yellow or yellow, the pile all pale brassy yellow. Upper half of the frontal triangle greenish black, the anterior border of the black convex. Vertical triangle shining black, a single row of short hairs extending from the vertex to the ocellar tubercle. Occiput dark in ground color, densely cinereous pollinose. Cheeks

narrow, thinly pollinose behind. Face with a little white pollen below on the sides; in profile very slightly receding below, the tubercle rather large but not strikingly prominent. Antennae pale orange, the arista brown except basally.

Thorax uniform in color, or the disc of the mesonotum slightly darker; sometimes a weak brownish spot on each side of the mesosternum. Pile short, appressed, and black on the disc of the mesonotum, elsewhere pale brassy yellow. Pleura with a trace of whitish pollen. Mesonotum with a narrowly separated pair of black vittae extending from the anterior margin to a little behind the middle and slightly broadening posteriorly; a weak collar of pile on the front margin. Scutellum with short pile, the ventral fringe present.

Legs wholly reddish yellow or yellow and with brassy yellow pile.

Wings narrowly brown in front, the brown color rather triangularly expanded to cover the veins closing the basal cells and again expanded in front of the tip of the third vein; basally the dark color may be rather luteous; alula narrow but not linear. Squamae yellow with brassy fringe. Knob of halteres tinged with brown.

First and second abdominal segments pale, the second slender and with the apex broadly blackish. Third segment mostly reddish yellow, with a median posterior triangle extending to the posterior fourth, and a pair of lateral triangles broadly united in front and extending almost to the apex of the segment. In one male the segment is wholly blackish, but the pale area is indicated by a very thin covering of cinereous white pollen. Fourth segment black with a pair of moderately separated reddish triangles on the basal third; fifth segment all black. Pile short, appressed, black; longer and yellowish on the first segment and sides of the second. Venter rusty reddish, or black, except basally, the hair black. Genitalia reddish to castaneous, the appendages yellow, conspicuously large.

FEMALE: Front very narrow above, shining greenish black except above the antennae, the sides narrowly, thinly cinereous pollinose below. Mesonotum with the

vittae very weak and shorter, only a little darker than the general ground color; pile of thorax shorter. Third abdominal segment shining reddish yellow, with an apical black triangle as in the male, and a very slender basal one; the sides broadly brownish except apically and basally. Fourth segment with the basal half of the subtriangular spots rather rectangular, the inner ends reaching to beyond the middle of the segment. Fifth and sixth segments pale with a very broad median black vitta. Venter shining yellowish, the fourth segment brownish laterally and apically.

TYPES: Holotype, male, and allotype, female, Guadalcanal, February, 1945; paratype, male, July, 1944 (C. O. Berg).

Both males have the black vittae on the mesonotum very conspicuous, but in the female they are scarcely discernible. Despite the variability in abdominal markings, the general pattern is the same and it is to be expected that females will be found with the pattern similar to the male.

***Baccha perpallida*, new species**

Rusty yellow, the abdomen with black markings; mesonotum with transverse black spot behind the middle; wings narrowly pale brown in front. Length, 10 mm.

MALE: So similar to *bergi* that a detailed description is not necessary. The head is the same. The black spot on the thorax occupies about one-fourth of the width, just behind the middle, and is produced forward in the middle as a short, acute triangle. The pile is slightly shorter. The light brown costal border is confined to the costal and subcostal cells and the anterior half of the first basal cell, except apically, where it is conspicuously expanded in the submarginal cell. The third abdominal segment bears a short, brown median vitta basally, and a rather small apical triangle; the fourth is black with two small, widely separated, subtriangular yellow spots, the fifth wholly black. Venter yellow, the fourth sternite brown except basally, the fifth wholly brown. Genitalia brown, the appendages yellowish. Pile as in *bergi*.

HOLOTYPE: Male, Guadalcanal, December, 1944 (C. O. Berg).

The genitalia in this species are conspicuously smaller than in *bergi*, and the mesonotal collar is shorter.

***Baccha vespaeformis* Doleschall**

Baccha vespaeformis DOLESCHALL, 1857, *Natuurk. Tijdschr. Nederlandsch Indië*, vol. 14, p. 411.

This species has been confused with *rubella* Wulp but is readily distinguished by the yellow spots on the dark rusty reddish thorax.

Male and female, Amboina (F. Muir).

***Baccha rubella* Wulp**

Baccha rubella WULP, 1898, *Termés. Füzetek*, vol. 21, p. 423.

In the original description van der Wulp describes the apices of the posterior tibiae and the first segment of their tarsi as "somewhat darker." If these areas are brown, the species is wrongly placed in my key, but would differ from all those species following it in the key by having the thorax rusty yellowish. The specimen before me, which is badly damaged, has the legs of uniform color but agrees in other respects with the description. It has posterior black fascia and strong median vitta, and blackish lateral margins on the third and fourth abdominal segments; the fifth segment also has a broad median vitta, the sixth is missing. The head is missing. The pile on the thorax is much more conspicuous and yellowish, the hair being mostly erect and more abundant.

One female, Guadalcanal, August, 1944 (C. O. Berg).

***Syritta orientalis* Macquart**

Syritta orientalis MACQUART, 1842, *Diptères exotiques nouveaux ou peu connus*, vol. 2, pt. 2, p. 76.

Seven males and one female, Guadalcanal, September and November, 1944, and March, 1945 (C. O. Berg); male and female, Oro Bay, New Guinea, November-December, 1944 (B. Struck).

The species is widely distributed.

***Syritta luteinervis* de Meijere**

Syritta luteinervis DE MEIJERE, 1908, *Tijdschr. v. Ent.*, vol. 51, p. 226.

A single male from Guadalcanal, August ?, 1944.

The pale wing veins serve readily to distinguish this species from others in the region. It was originally described from New Guinea.

MESEMBRIUS RONDANI

This genus was erected for the European *Helophilus peregrinus* Loew, which has the eyes narrowly separated at the middle of the front. In most of the species the eyes of the male are contiguous for at least a short distance. It was on the basis of the greatly narrowed front that Rondani separated his new genus from *Helophilus* Meigen (the correct spelling is *Elophilus*), but there is another character that readily distinguishes both sexes of *Mesembrius*. This is the presence of a group of short, black, nodose hairs close to the base of the first segment of the posterior tarsi. I am aware of only two synonyms of the genus, *Prionotomyia* Bigot and *Tityusa* Hull, both based on African species. In *T. regulus* Hull, the front tarsi are greatly broadened and the hind tarsi are broadened and ornamented with tufts of pile. *Mesembrius rex* Curran, also from Africa, is very similar, but the posterior tarsi do not bear hair tufts. The females are quite plain and lack any character that would separate them from other females of *Mesembrius*.

Mesembrius fulvicauda, herein described, has the hind femora of the male very considerably lengthened and the tibia ends in a long spur, as it does in the female of *gigas* Curran; other species have shorter spurs. Throughout the genus the legs of the males are modified in one way or another, thus furnishing the main characters for the separation of the species. The females are rather similar in appearance and often difficult to determine. I have prepared a key to the Oriental and Australasian females contained in the Museum collection, in the hope that it will aid in the identification of this sex. Unfortunately, the series are small, and it may be necessary to make modifications when larger series are available.

FEMALES OF *Mesembrius*

1. Reddish fascia on second abdominal segment interrupted in the middle. .2

- Reddish fascia entire. *gigas* Curran
2. Tibiae, or at least one pair, broadly blackish apically. 3
All the tibiae and tarsi reddish, over 19 mm. in length.
..... *fulvicauda*, new species
3. Front black pilose on its whole length in the middle. 4
Front wholly pale pilose on the anterior half, or with some black hairs on the shining black spot. 5
4. Anterior femora wholly black pilose on the apical half; band on second abdominal segment broadly interrupted; front wholly black pilose.
..... *bergi*, new species
Anterior femora wholly yellow pilose posteriorly; front pale pilose laterally; band on second segment narrowly interrupted.
..... *niveiceps* de Meijere
5. Face wholly yellow, the pale color extending along the sides of the front. 6
Face with median black stripe, which may be mostly pale pollinose. 7
6. The opaque black of the third abdominal segment occupies more than the basal half in the middle.
..... *peregrinus* Loew
The opaque black occupies the basal two-fifths in the middle, black hair present immediately above the antennae. species?
7. Pollen of the front of almost uniform color; yellow fascia on second abdominal segment narrowly interrupted. *bengalensis* Wiedemann
Pollen of the front brown above, very much darker than on the anterior portion. 8
8. Scutellum with black hairs on the posterior half. 9
Scutellum wholly yellow pilose.
..... *tuberosum* Curran
9. Middle tibiae swollen ventrally for a considerable distance before the middle. *albiceps* Wulp
Middle tibiae without such swelling.
..... *bengalensis* Wiedemann

Mesembrius bergi, new species

Dark species, the lateral margins of the abdomen wholly shining black; front of female black pilose; wings tinged with brown, broadly brownish in front on the basal two-thirds. Length, 11.5 to 13 mm.

FEMALE: Head black in ground color; front brown pollinose, the sides broadly brassy yellow pollinose on the lower three-fifths, the large bare area above the antennae wider than high; the dark brown pollen is divided in the middle by a slender line of brown pollen extending forward from the median ocellus; pile black with very little pale pile on the anterior orbits. Occiput with rich yellowish brown pollen and black hair above; occipital pollen cinereous, yellowish towards the orbits, narrowly white along the orbits; pile pale golden yellow. Cheeks yellow pollinose and pilose posteriorly, thinly cinereous pollinose in front. Face with cinereous pollen, the pile golden yellow above, becoming white and shorter below, the shining black median stripe extending to well above the middle. Antennae brownish red.

Mesonotum brownish orange, the dark vittae opaque brownish black, the outer ones subshining posteriorly, the middle one only thinly pollinose behind and reaching obscurely to the posterior margin. Pile light brassy yellow, more golden laterally, black on the posterior half of the black stripes, on the pale vitta between the lateral dark vittae and the posterior calli, the upper surface of the latter with short, coarse black hair. Pleura with cinereous pollen, the pile golden yellow above, becoming whitish below. Scutellum subtranslucent yellowish red, the border with pale pile, the disc with coarser black hair.

Legs black; the basal fourth of the front, third of the middle, and immediate base of the hind tibiae pale reddish; tips of the femora and basal segment of the middle tarsi reddish. Hair black, golden yellow posteriorly on the basal half of the front tibiae and on the basal two-thirds of the middle pair, some pale pile at the base of the latter on the ventral surface; posterior femora with golden pile above and posteriorly except on the apical fourth, and some yellow hairs ventrally on the basal

half or less. Posterior tibiae not produced.

Wings tinged with brown, broadly brownish in front on more than the basal half. Squamae and fringe bright orange. Halteres yellowish.

Abdomen black, with three light reddish fasciae, the first broadly interrupted in the middle. First segment gray pollinose in the middle, white pilose but a few black hairs towards the sides. Second segment opaque, broadly shining behind, the shining band narrowing laterally and not reaching the sides and for the most part very thinly brown pollinose; reddish band formed of two outwardly broad, gradually narrowing spots, their inner ends obtusely rounded; pile yellow in front of the posterior opaque band, black posteriorly and on the sides except on the broad base. The pale fascia on the third segment is evident laterally, and quite narrow in the middle where it is about half as wide at the opaque fascia, twice as wide laterally, and narrowly separated from the base of the segment except towards the sides; on the disc of the segment the opaque band is followed by brownish gray or brownish pollen, the broad apex of the segment shining; fourth segment rather similar to the third, but the pale fascia is less narrowed in the middle and covered with yellow pollen, the opaque fascia is narrower and semi-interrupted; on these two segments the pile is black except on the yellow areas and lateral margins. The fifth segment bears a pair of moderately large, basal, brownish yellow, semi-circular pollinose spots, the rest of the surface very thinly brown pollinose, the pile all yellow. All the pale bands are well separated from the lateral margins. Venter black, more or less reddish subbasally, thinly cinereous pollinose, the hair pale golden yellow.

Types: Holotype, female, and paratype, female, Guadalcanal, February, 1945 (C. O. Berg).

Mesembrius fulvicauda, new species

An extremely large species, the males about an inch in length and with long, bushy hair on all the tibiae, the females smaller and with all the tibiae and tarsi reddish. First pale abdominal band inter-

rupted, the two following entire; apex of abdomen reddish, with golden to fulvous pile. Length, males, 23 to 25 mm.; females, 20 to 22 mm.

MALE: Frontal triangle shining black, the sides narrowly whitish or yellowish pollinose; pile whitish laterally, black on the shining area but rather golden on the upper part. Vertical triangle very long and narrow, the eyes contiguous for a distance less than the length of the ocellar triangle, the pollen cinereous brown to dark golden brown; pile brassy yellow to reddish, black on the shining ocellar tubercle. Vertex and occiput with bright yellowish red pollen and with golden to bright tawny pile above; posterior orbits narrowly cinereous, the inner occiput mostly cinereous pollinose; pile of posterior orbits and cheeks pale to dark golden. Cheeks pale pollinose posteriorly, shining black in front but with thin brown pollen. Face reddish yellow, with broad median black stripe, the pollen golden, paler along the orbits, the pile golden yellow to pale tawny, sparse and black on the black stripe; black stripe thinly reddish brown pollinose. Antennae reddish, the third segment sometimes with brown tinge; arista wholly reddish.

Thorax black in ground color, the lateral margins and scutellum reddish. Mesonotum bright reddish yellow pollinose, with three dull black vittae, the median one becoming obsolete at the posterior fifth, the outer ones slender inside the humeri and narrowly separated from the posterior margin; all appearing brown from anterior view. Pleura with cinereous yellow to pale golden pollen, shining beneath the squamae and broadly black anteriorly. Pile golden yellow, being short on the disc, longer and tawny on the borders of the mesonotum and on the upper edge of the pleura; black on the upper surface of the postalar calli. Scutellum with short tawny or golden yellow pile, on the disc with black hairs intermixed, or they may predominate on the apical half.

Legs reddish, the coxae, basal half of the anterior four femora, and basal four-fifths of the posterior pair black, the dark color dulled except ventrally by cinereous or cinereous yellow pollen. Pile on the femora

tawny, long, and dense on the posterior surface of the anterior four and on the anterodorsal surface of the hind pair basally; a tuft of black hair anteriorly near the apex of the middle femora, and some short black spinose hairs on the ventral surface of the posterior pair at the apex. Front tibiae with short golden pile, on the posterior border with long, dense black pile bordered above with some long, tawny hair. Middle tibiae with short, tawny hair above, black below, both sides with long, dense, apically crinkly hair forming a dense brush on the whole length and continuing along the sides of the tarsi where it becomes shorter and thinner to the apex. Posterior tibiae with similar brush on the anterior surface, but with a conspicuous curl at the basal third, the posterior surface with a brush on the apical half, the anterior brush continued along the tarsi. The pile on the tarsi is short, tawny to golden yellow, the front pair with some black hair in front. The posterior femora are very long, their tibiae about two-thirds their length and with a strong anteroventral spur at the apex.

Wings tinged with luteous or brownish yellow, the veins reddish basally and anteriorly. Squamae and fringe yellowish red. Halteres reddish.

Abdomen broad basally, narrowing to the apex of the third segment, the fourth with parallel sides. First segment brownish black, narrowly reddish beneath the scutellum. Second segment opaque black with the posterior border shining, the tip narrowly reddish; a very broad, narrowly interrupted orange fascia extends across the segment and is carried forward laterally towards the base; the inner ends of the spots are gently convex in front; anterior black band two-thirds as wide as the posterior. Third segment subopaque black or brown, the apex broadly reddish; pale orange on the basal third in the middle, the band widening towards the sides but conspicuously narrowed just before the lateral margins. Fourth segment shining, dark reddish to castaneous, the base narrowly yellowish, the apex and sides broadly reddish. Genitalia shining dark reddish. Lateral borders narrowly reddish on whole

length behind the first pale fascia. Pile very short, erect, yellow to brassy yellow, black on the posterior black fasciae, long and tawny on the sides basally, becoming shorter and golden apically, the golden hair extending across the apex of the fourth segment. On the fourth segment the hair is coarser, sparse, and appressed on the disc. Hair on genitalia wholly pale. Venter black, the incisures yellow, pile long, golden yellow. Fourth visible sternite reddish, with short, sparse, appressed golden yellow hair, the apex emarginate in the middle, the lobes moderately long and with short, stout, tawny hairs apically.

FEMALE: A large, rectangular, shining black spot above the antennae, the front elsewhere thickly golden yellow pollinose except about the ocelli, where the pollen is more grayish; pile all rich golden yellow, a few black hairs above the antennae; black facial vitta a little narrower. Pile on thorax shorter; no black hairs on the scutellum. Legs simple, the pile normal, golden yellow, a few black hairs on the under side of the posterior tibiae, which have a row of black spinules ventrally on the basal third, their femora with black spinules below on the apical fourth. There is a broad band of reddish yellow pollen on the base of the fourth segment, followed by a broader, opaque black band behind which the segment is shining black; lateral margins and apex reddish, on the apical half fringed with close-set, bright tawny hair; fifth segment shining red, with similar apical fringe. Venter black, with yellowish incisures and reddish apex; most of the fourth sternite and the fifth with coarse black hair, the apex of the fifth with a tawny fringe.

TYPES: Holotype, male, and allotype, female (in coitus), Guadalcanal, December, 1944 (C. O. Berg). Paratypes, two males and one female, Guadalcanal, July 23, 1945 (Frank Cilley); and male, Bougainville, 1944 (W. G. Downs).

Despite the remarkably lengthened hind femora of the male, this species is a typical *Mesembrius* with the typical globulose hairs present on the base of the posterior tarsi; they are black and numerous in the female, but rather difficult to locate in the

male, the adjacent hairs being longer. The legs of all the known females are simple, but in most males there are ornamentations composed of pile and also morphological structures. In some the tarsi are greatly broadened. It is possible that the male of *gigas* Curran, from Malaya, may somewhat resemble this species. The female has a length of 19 mm., but the tarsi are black and the tibiae partly black. *M. vestitus* Wiedemann also has mostly black tibiae and tarsi, while *insignis* Walker has the tibiae black apically.

***Axona chalcopyga* Wiedemann**

Eristalis chalcopyga WIEDEMANN, 1830, *Ausereuropäische zweiflügelige Insekten*, vol. 2, p. 178.

Four males and one female, Guadalcanal, October and December, 1944, and January and June, 1945.

This is a large, metallic blue species with the apex of the abdomen orange. It is widely distributed in the Indo-Australian region.

ERISTALIS LATREILLE

The collection contains representatives of five species, two of which are undescribed. I present a key to the bright metallic green or blue species that are likely to occur in the region:

METALLIC GREEN OR BLUE SPECIES

1. Arista plumose.....4
Arista bare.....2
2. Fourth abdominal segment with three opaque spots....*inscripta* Doleschall
Fourth segment with at most one spot.....2
3. Third abdominal segment with a broad opaque band formed of an oval central spot and slightly oblique spots normally united with it; fourth segment with basal median opaque triangle.....*bergi*, new species
Third and fourth segments wholly shining (New Hebrides).....
.....*luciliomima* Hull
4. "Abdomen blue-green".....
.....*muscoideus* Walker
"Abdomen red-yellowish copper colored".....*cuprius* de Meijere

***Eristalis inscripta* Doleschall**

Eristalis inscripta DOLESCHALL, 1857, Natuurk. Tijdschr. Nederlandsch Indië, vol. 14, p. 407, pl. 9, fig. 4.

The collection contains a male and a female, April, 1944.

There has been much confusion concerning the identity of this species. De Meijere apparently identified the male correctly from New Guinea, but was confused about the identity of the female. His observations indicate that the females represented both *inscripta* and a second species, probably the one herein described as *bergi*. The dark markings on the abdomen of the female are very similar to those of the male. The front is brown pollinose on about the upper half, in front of the ocelli; the upper fifth of the front is shining.

There may be some doubt about the specimens from Guadalcanal being *inscripta*. Doleschall's specimens came from Amboina, and it is to be noted that *E. splendens* de Guillou and *E. metallica* Doleschall have long been confused, the latter having been placed as a synonym of *splendens*, although abundantly distinct. A similar condition exists in the case of *Baccha vespaeformis* Doleschall and *B. rubella* Wulp, the former from Amboina, the latter from New Guinea, although these species have never been synonymized. To offset the possibility that my specimens are not *inscripta*, we find very many instances where the same species occurs in Amboina and in New Guinea, *Azona chalcopyga* being one example, but this species has a very wide range.

***Eristalis bergi*, new species**

Bright blue or violaceous; front of female shining, with narrow median dull line, abdomen with opaque fasciae. Length, 10 to 11 mm.

FEMALE: Front rather narrow, shining steel blue and violaceous, the orbits cinereous pollinose below and narrowly brown pollinose on the upper fourth; an opaque median line extends from the ocelli to the anterior third of the front; pile black. Posterior orbits silvery white pollinose except above, the pile pale brassy yellow, black above. Cheeks metallic green on the

posterior half, black in front, the pile brassy. Face black, very broadly reddish on the sides, the pale areas cinereous to brassy pollinose, the hair short and brassy yellow. Antennae reddish, brown above, the arista brown, bare; third segment short oval. Eyes bare.

Dorsum of the thorax blue, the pleura green, all strongly violaceous. Mesonotum with the anterior border, a pair of median vittae on the anterior half, and the borders of the suture brownish pollinose but appearing brownish yellow from posterior view. Hair very short, black, appressed; whitish on the lower half of the pleura; scutellum with some bristly hairs on the free border.

Legs blackish, the femora mostly blue or violaceous.

Wings hyaline or sometimes largely brownish yellow, the stigmal cell and a spot on the anterior cross vein brown. Squamae grayish brown. Halteres reddish yellow.

First abdominal segment usually green; second with a narrow, incomplete basal band, a broad apical band and median line opaque brownish, often cupreous; third segment with a broad dull band lying mostly behind the middle, strongly expanded in the middle but somewhat narrowed on each side of the expanded area; fourth segment with a rather diamond-shaped basal spot in the middle. Hair short, black, appressed; yellowish, erect, and long on the fourth and fifth segments and on the venter.

TYPES: Holotype, female, and two paratypes, females, Guadalcanal, September, 1944 (C. O. Berg); female, Little Florida Island, Solomons, March, 1945 (G. E. Bohart), and female, Munda, North Georgia, February, 1945 (L. A. Cornwell).

This species resembles *inscripta* Doleschall but is readily distinguished by the shape of the dull areas and by the presence of only a line of opaque in front of the ocelli. In *inscripta* the front is pollinose on the upper fourth or more.

***Eristalis marfax*, new species**

Black; thorax with two transverse pale pollinose fasciae; wings brownish to beyond the middle on the anterior half or

more; abdomen aeneous with opaque fasciae. Length, 10 to 11 mm.

FEMALE: Front rather narrow, opaque dark brown on about the upper half, cinereous white pollinose in front except for a large, shining black area above the antennae; the orbits are broadly pollinose. Pile black, some white pile on the sides below. Posterior orbits brown above, white below, the pile black on the brown portion, white below and on the face and cheeks. Face and cheeks densely white pollinose, a triangle on the front of the cheeks and a broad facial stripe that does not reach the antennae shining black. Antennae brown, the third segment orange; arista brown, very short pubescent basally. Eyes short whitish pilose above.

Thorax dull brownish black; a broad, cinereous yellow pollinose band extends across the mesonotum immediately in front of the suture but is divided by a broad, anteriorly geminate, yellowish brown vitta that extends from the anterior margin to slightly behind the suture; a second, incomplete, cinereous pollinose band lies in front of the scutellum. Pleura cinereous or whitish pollinose except for a large brown area on the pteropleura. Pile white, black behind the suture and on the brown pleural spot. Scutellum opaque black, the free border aeneous; pile white or pale yellow. The pile is short, erect or suberect.

Femora shining black, with reddish tips; tibiae brown, the anterior pair reddish on the basal third to half, the middle pair reddish with the ventral surface brown on the apical half, the posterior pair reddish above on the basal third or less; tarsi brown. Pile whitish, black on the tarsi and on the anterior surface of the posterior femora.

Wings light brownish, becoming cinereous hyaline posteriorly and apically. Squamae yellowish, with white fringe. Halteres reddish yellow.

Abdomen aeneous, with opaque black markings. First segment gray pollinose. Second segment with a broad basal band and a broader posterior opaque band, broadly connected in the middle, the aeneous spots narrowed and with the ends rounded inwardly; apex of the segment shining on the median third. Third seg-

ment opaque on less than the posterior half, the band rectangularly produced in the middle but not reaching the base of the segment, the apex of the segment rather broadly shining on the median half. The opaque fascia on the fourth segment is less than one-half the length of the segment in width; in the middle its front margin is at the basal fourth of the segment, the outer front margin at the posterior third; the shining apical portion is triangular and extends forward to the apical third of the segment. Fifth segment opaque with the broad sides and the medianly broadened apex shining black. The sides of the abdomen are at least moderately shining on their whole length. Pile pale yellowish, white on the first segment, black on the posterior half of the second segment and on the opaque portion of the third. Venter black, thinly cinereous pollinose and whitish pilose.

TYPES: Holotype, female, and paratype, female, Guadalcanal, February, 1945 (C. O. Berg).

This species bears a close resemblance to *niger* Wiedemann, but there are numerous differences. In *niger* the front is somewhat wider and the facial tubercle is much wider and the shining area extends to the lateral fourth of the face, a character that should serve to separate the males of the two species; the shining apices of the segments are also broader and the apex of the scutellum is broadly aeneous. I have examined the type of *niger* and have seen many specimens from Java and Malaya, the former being the type locality.

Eristalis resoluta Walker

Eristalis resoluta WALKER, 1859, Proc. Linnean Soc. London, vol. 3, p. 95.

A series of 20 males and seven females from Guadalcanal, from September, 1944, to January, 1945, and April, 1945.

The abdomen is dull black and cupreous or coppery red, the apical segments with three opaque black spots, the wings brown, somewhat paler basally.

Eristalis collaris de Meijere

Eristalis collaris DE MEIJERE, 1908, Tijdschr. v. Ent., vol. 51, p. 258.

Thirty-one males and 14 females from Guadalcanal, from October, 1944, to April, 1945.

This is a small species with reddish legs and a broad, pale pollinose fascia in front of the mesonotal suture. It was originally described from New Guinea.

LATHYROPTHALMUS MIK

The collection contains two new species belonging to this genus. In order to determine their relationships it has been necessary to restudy the Oriental and Australasian material in the Museum collection with the result that some species previously considered to be synonyms are now recognized as distinct. Unfortunately, the material available is insufficient to enable me to revise the genus, but it is apparent that the number of species will be found to be considerably greater than the number now recognized. The key which follows does not include *kochi*, *lunatus*, and *obscuritarsis* de Meijere, or *ferrugineus* and *connectans* Hervi-Bazin, since these are not represented in the collection. However, *obscuritarsis* is probably the same as *quinguelineatus* Fabricius since the color of the tarsi is generally the same as in African specimens of the latter, of which the only specimen I have seen from the Orient is a male from Canton, China. The characters used in the key are believed to be of use in separating both sexes, but are sometimes based upon only one sex. The color and width of the front of the females furnish excellent characters for the separation of this sex, in which the species are sometimes more easily recognized than the males.

TABLE OF SPECIES

- | | |
|---|---|
| 1. Scutellum black..... 2 | Mesonotum with pale pollinose discal vittae..... 6 |
| Scutellum reddish, yellowish, or translucent, at least on the apical half..... 10 | 4. Third and fourth abdominal segments each with a pair of broadly separated, parallel, cinereous pollinose spots..... <i>selectans</i> Curran |
| 2. Abdomen shining metallic bluish black, the third and fourth segments each with a narrow, somewhat sinuate, anteriorly arched, opaque black fascia... <i>nitidus</i> Wulp | Third and fourth segments with transverse pollinose spots or none..... 5 |
| Abdomen differently colored..... 3 | 5. Third and fourth segments each with a shining, interrupted transverse fascia..... <i>oculatus</i> Coquillett |
| 3. Mesonotum without pale discal vittae..... 4 | Third and fourth segments each with a cinereous pollinose fascia on the basal half..... <i>lugens</i> Wiedemann |
| | 6. Second abdominal segment with pale pollinose fascia or partly pale in ground color..... 7 |
| | Second segment wholly dark..... |
| | ♀ <i>lugens</i> Wiedemann |
| | 7. Second abdominal segment with cinereous, interrupted pollinose fascia on black ground color..... |
| | ♀ <i>ocularius</i> Coquillett |
| | Second segment partly pale in ground color..... 8 |
| | 8. Third to fifth abdominal segments each with a pair of oblique orange pollinose spots... <i>sextus</i> , new species |
| | Spots on these segments basal, transverse, or absent..... 9 |
| | 9. The large yellow spots on the second abdominal segment are transverse on their posterior border..... |
| | <i>tristriatus</i> de Meijere |
| | The yellow spots are convex posteriorly and much narrowed towards the lateral margins..... |
| | <i>nigroscutatus</i> de Meijere |
| | 10. Mesonotum with strongly contrasting black and pale vittae..... 11 |
| | Mesonotum ochraceous pollinose, the vittae only a little darker; an irregular dark fascia between the wings..... <i>diffidens</i> , new species |
| | 11. Wings with conspicuous brown spot in the middle anteriorly..... 12 |
| | Wings with at most a black stigmal spot or weak, diffuse clouding... 13 |
| | 12. Basal half of marginal cell brown; anterior four femora usually all reddish..... <i>splendens</i> Le Guillou |
| | Basal half of marginal cell hyaline; |

- bases of the femora always very broadly black. *cupreofasciatus* Wulp
13. Fourth abdominal segment with a pair of widely separated, round, oval or angulate, pale pollinose spots (sublunulate in *obliquus*) on black or reddish ground. 14
- Fourth segment with arched pale pollinose fascia that is rarely interrupted in the middle. 17
14. Anterior four femora broadly black basally. 15
- Anterior four femora wholly reddish. 16
15. Middle tibiae wholly pale haired.
- *obliquus* Wiedemann
- Middle tibiae black haired on the apical half, at least posteriorly.
- *sauvissimus* Walker
16. The black median mesonotal vittae are continued as red rectangles almost to the scutellum and are wholly dulled by thin brown pollen.
- *quadrioculata* Bigot
- The black vittae end far before the scutellum and are normally all shining behind the suture; outer black vittae always shining.
- *punctulata* Macquart
17. Face yellowish in ground color; legs usually all yellowish.
- *arvorum* Fabricius
- Face black in ground color; femora black with yellow tips. 18
18. Pleura with a very broad, shining stripe extending from behind the front coxae to beneath the squamae, the vitta always apparent from dorsal view. 19
- The broad pleural stripe is dull and not apparent from dorsal view.
- *quinquevittatus* Fabricius
19. The pleural band is thinly pollinose and partly obscure in some views; tessellate frontal spots of front of female light brown; no shining spots on middle of front.
- *laetus* Wiedemann
- The pleural band has extremely thin pollen, except in front; tessellate frontal spots of female dark brown; a small shiny black spot below the

middle of the front.

. *quinquevittatus* Fabricius

Lathyrrophthalmus splendens Le Guillou

Eristalis splendens LE GUILLOU, 1842, Rev. Zool., p. 314.

There are one male and 15 females from Guadalcanal, March, August, and September, 1944, and January, 1945. This is a strikingly colored species and is readily distinguished from all related forms except the following. Characters given in the key will readily separate the two.

Lathyrrophthalmus cupreofasciatus Wulp

Eristalis cupreofasciatus WULF, 1868, Tijdschr. v. Ent., vol. 11, p. 114.

The Museum collection contains two specimens collected by F. Muir of Amboina, the type locality. The species is somewhat less brilliant than *splendens*, and the brown wing markings are less extensive.

Lathyrrophthalmus sauvissimus Walker

Eristalis sauvissima WALKER, 1859, Proc. Linnean Soc. London, vol. 3, p. 95.

One male and 11 females, Guadalcanal, March, August, September, and October, 1944. It is separated from allied forms by characters given in the key.

Lathyrrophthalmus sextus, new species

Mesonotum with three black vittae, the middle one geminate on the anterior half; scutellum shining black; abdomen with narrow yellowish band and six oblique yellow spots. Length, 11 mm.

FEMALE: Front black, moderately wide, gently widening from the vertex to the antennae; upper half with brown pollen along the orbits and forming a slender median line that separates two narrow shining vittae that extend almost to the shining black, rectangular supra-antennal area, the pollen on the sides of the lower half of the front dull golden; a band of brown pollen immediately above the shining black area; ocellar tubercle and vertex blue black; the ocellar triangle conspicuously wider than long; pile all black. Occiput cinereous pollinose, with pale yellowish pile. Cheeks shining black, the posterior portion bordered with cinereous pollen.

Face dull golden pollinose and short golden pilose; the oral margin and the area about the tubercle shining black, the upper half of the tubercle brownish red; the usual lateral bare stripes are fused with the black tubercular spot but extend upward a short distance on each side. The tubercle is large, oval, and devoid of hair. Antennae reddish, the third segment oval, broadly brown above; arista brown on apical third, practically bare. Eyes with very short sparse pale hairs.

Thorax black in ground color; mesonotum densely ochraceous pollinose, with three subopaque blackish vittae which do not quite reach the posterior border, the median one divided by a brown line on the anterior half; posterior calli shining blackish; pile short, rich reddish yellow, black on the black portions. Pleura with cinereous yellow pollen, a broad, bare, rather aeneous band extending from behind the front coxae to below the base of the wings; pile reddish yellow, paler below. Scutellum shining blue black, the disc somewhat dulled and with short, appressed black hair, the free border with longer, golden hair.

Legs shining reddish, the coxae and basal half of the femora black, the basal fifth of the posterior tibiae and basal third of the anterior four pale yellow; basal two segments of middle tarsi yellow, the apical two or three tarsal segments brownish. Pile black, yellow on the yellow areas, on the upper surface of the posterior femora, and partly yellow on the basal half of their lower surface.

Wings hyaline, with luteous tinge on basal half in front; stigma with basal and apical black spots, the space between them bright brownish yellow. Squamae brown, the base broadly yellowish. Halteres yellow.

Abdomen black, mostly opaque brownish black, with opaque reddish yellow markings. First segment reddish yellow with only the sides blackish. Second segment with an arched, subbasal reddish band that is narrowly interrupted in the middle and widely separated from the lateral margins, the outer ends lying on the middle of the segment, the width equal to about one-

fourth the length of the segment. Third and fourth segments with a pair of widely separated oblique reddish spots, their outer ends pointed and at, or slightly behind, the middle of the segment. Fourth segment with a pair of widely separated, oval, parallel, reddish yellow pollinose spots; the spots and band on the preceding segments with similarly colored pollen. The broad sides of the second segment and broad lateral triangles on the third and fourth shining, the apices of these segments also shining black on the median half or more. Fourth segment with the broad apex and sides shining. Pile very short, erect, black, yellowish on the pale areas of the basal four segments and on their lateral margins basally; longer and all black on the fifth segment. Venter shining black, the hair black, pale basally.

HOLOTYPE: Female, Guadalcanal, February, 1945 (C. O. Berg).

This species is readily separated from the other members of the *punctulatus* group by the black scutellum and face, and from other species with black scutellum by the shape of the abdominal markings.

***Lathyrophthalmus diffidens*, new species**

Mesonotum ochraceous with interrupted blackish band behind the suture and weak vittae; pile on eyes very short and sparse; tarsi reddish yellow. Length, 14 mm.

MALE: Frontal triangle rather small, shining black, the lunula castaneous with a yellow spot above each antenna; broadly bordered with yellowish brown pollen laterally and less broadly so above; pile black. Ocellar triangle small, black, brown pollinose in front of the ocelli; pile black, but some yellow hairs just at the vertex. Occiput cinereous pollinose except above, the pile yellowish above, white below. Face and cheeks black, brownish yellow pollinose, and short yellow pilose. The posterior portion of the cheeks is shining except on the margins, and the pollen is thin anteriorly between the eye and oral margin, the oral angles shining black; tubercle shining black and bare, with a broad lunulate black band continuous with it for half its length, the ends curving outward, this band pilose; the black tubercle is con-

nected by a narrow stripe to the narrowly shining oral margin. Antennae reddish, with the broad upper border of the third segment and the apical half of the arista brown or black.

Thorax black in ground color with the sides and posterior border of the mesonotum and the scutellum reddish. Pollen ochraceous, with six darker vittae, the median four much abbreviated and rather blackish behind the suture, and more or less shining; in front of the suture they are only a little darker than the adjacent pollen. The lateral vitta is shining black or brown and extends from the humeri to above the base of the wing; it is interrupted at the suture and narrowly divided on its whole length in front of the suture. Pile rather thick but short, of a rich reddish yellow, paler on the sides and pleura; on the dark vittae there are black hairs intermixed but these are not apparent from frontal view. The hair on the disc of the scutellum is very short and black, tawny on the base and free border. The pollen on the pleura is paler than on the dorsum, and there is a large, almost bare spot below the wings that extends onto the mesopleura.

Coxae brownish red, the posterior pair with yellowish pile. Femora castaneous with yellow tips, the posterior pair darker and with reddish apex; pile black, yellow basally on the upper and lower surfaces of the posterior pair and posterodorsally on the middle pair; long and dense on the posterior surface of the middle pair. Anterior four tibiae reddish yellow on the apical half, extremely pale yellow basally; hair black, very pale yellowish on the basal half of the middle pair and on the base of the front pair; posterior tibiae castaneous with the apex reddish and the base pale yellow, the pile wholly black. Tarsi red-

dish with black hair, the basal segment of the middle pair yellow and with yellow hair.

Wings hyaline, the veins mostly reddish; the short, pale luteous stigma is limited by black at each end. Squamae yellowish, becoming brown on the very broad border; fringe rather golden on the lower lobe and brown on the upper. Halteres reddish yellow.

First abdominal segment reddish yellow, with pale yellow pile. Second segment reddish, with the base, except laterally, subopaque black, the posterior third dull blackish except on the immediate apex medianly, the lateral borders shining brown. Third segment reddish on the basal half towards the sides, less so in the middle and at the sides, black posteriorly, with a broad, dull band that is produced forward in the middle but does not quite reach the base of the segment and is widely separated from the lateral margins. Fourth segment shining black but from some views the disc appears dull, on more than the basal half. Pile black on the second segment except at the anterior angles, black on the third except on the reddish fascia, the fourth segment with basal band of yellow pile that expands laterally to cover more than two-thirds of the segment. Genitalia black, yellow pilose. Venter yellowish, the fourth and fifth sternites black; pile pale yellow.

HOLOTYPE: Male, Guadalcanal, January, 1945 (C. O. Berg).

This is the first recorded species of the genus from the Pacific region in which the thorax is not strongly vittate. Other species with non-vittate pollinose thorax are known from Africa. *L. selectans* Curran, from Selangor, has the mesonotum shining black.

