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FLIES OF THE FAMILY STRATIOMYIDAE OF THE
SOLOMON ISLANDS

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THE stratiomyid fauna (Diptera) of the Solomon Islands has been practically unknown until quite recent times. In 1936 Curran¹ described three species and recorded a fourth from the archipelago, and the following year Lindner² published what is to date the most comprehensive account of the occurrence of the family on these islands. The present paper is based largely on the collections made by C. O. Berg on Guadalcanal Island, supplemented by material collected on Guadalcanal, Bougainville, and other islands of the Solomons group by A. B. Gurney, W. G. Downs, Jean Laffoon, George E. Bohart, D. Eldon Beck, K. L. Knight, E. Reinschissel, and others. In this material I have been able to recognize all but three of the forms previously recorded or described from the Islands and have added 15 others, 13 of which are new to science. This paper is being published at this time for two reasons: To present a systematic account of a fauna that has become fairly well known, thanks to the work of the above-mentioned collectors; and to provide names for the use of Mr. Berg in his account of the biologies and immature stages of the Stratiomyidae of the Solomons.

1. Cross vein m-cu present (rarely punctiform), the last posterior vein (Cu_1) consequently arising from the second basal cell..... 2
- Cross vein m-cu absent, all posterior veins distinctly arising from the discal cell..... 14

¹ Proc. California Acad. Sci., ser. 4, vol. 22, pp. 12-14, 1936.

² Ann. Mag. Nat. Hist., ser. 10, vol. 20, pp. 370-394, 1937.

2. Flagellum of antenna elongated, consisting of 6 to 8 closely united segments, the last segment sometimes forming a short style, but never an arista (Stratiomyinae)..... 3
 Flagellum of antenna with the basal complex short and bearing a well-defined apical or subapical arista (Sarginae)..... 9
3. Flagellum of antenna 8-segmented, without a terminal style; abdomen, from dorsal view, almost circular in outline, metallic blue; wings uniformly infuscated..... *Cyphomyia marshalli* Lindner
 Flagellum of antenna 6-segmented, the penultimate segment very short, tapering, the last one forming a short style; abdomen distinctly longer than wide; wings not or but lightly infuscated..... 4
4. Mesonotum densely golden pollinose, with 2 prominent stripes of black pollen on the disc (males; females unknown)..... 5
 Mesonotum not golden pollinose; or if so with 3 narrow stripes of black pollen, the outer ones arcuate anteriorly, on the disc..... 6
5. Black mesonotal stripes not much broader than the golden one separating them; no black pollinose area on scutellum.
Eulalia aureovestis, new species
 Black mesonotal stripes 3 or more times as broad as the narrow golden stripe separating them, and extending onto the scutellum.
Eulalia aureovestis subaurea, new subspecies
6. First and second segments of antenna each scarcely longer than wide..... 7
 First and second antennal segments each 2½ to 3 times as long as wide; vein r-m absent, the radial sector broadly bordering the discal cell..... 8
7. Vein r-m distinctly present, though short; vein M₁ distinct almost to wing margin; abdomen largely black in both sexes.
Eulalia maculata (de Meijere)
 Vein r-m absent, the radial sector broadly bordering the discal cell; vein M₁ distinct only at base; abdomen of female greenish yellow (male unknown)..... *Eulalia boharti*, new species
8. Eyes bare; mesonotum with dense golden or yellowish tomentum interrupted by black stripes..... *Eulalia chrysaner*, new species
 Eyes of the male (female unknown) distinctly pilose; tomentum of mesonotum wholly black..... *Eulalia subobscura*, new species
9. Second antennal segment, from inner aspect, prolonged in a fingerlike process deeply into the flagellum; lower squama transverse, without a projection; origin of vein R₂₊₃ at or slightly before cross vein r-m..... 10
 Second antennal segment, from inner aspect, at most gently rounded, not deeply produced into flagellum; lower squama with a prominent, pilose, fingerlike or lobelike process; origin of vein R₂₊₃ far beyond cross vein r-m..... 12
10. Mesonotum and abdomen bluish black; wing as long as entire body.
Ptecticus salomonensis Lindner
 Mesonotum and abdomen chiefly brown or yellow; wing about as long as thorax and abdomen combined..... 11
11. Abdomen prominently marked with blackish brown; hind tarsus white on second, third, and base of fourth segments, otherwise black.
Ptecticus isabelensis Lindner
 Abdomen, except genitalia, orange in ground color; hind tarsus yellow on second segment, sometimes also on at least parts of first and third, otherwise black or appearing so because of black hair.
Ptecticus repensans (Walker)
12. Ocellar triangle much longer than broad; eyes separated in both sexes, narrowly so in the male, somewhat more broadly so in the female.
Sargus mactans Walker

- Ocellar triangle approximately equilateral; eyes of male broadly contiguous, of female widely separated----- 13
13. Larger species, 8 to 9 mm. in length; abdomen in both sexes metallic blue or green; maximum width of anal cell but little greater than that of second basal cell, distinctly less than combined width of two basal cells.
Cephalochrysa chrysidiformis (Lindner)
 Smaller species, about 4 mm. in length; abdomen of female metallic blue or green, of male in large part yellow; maximum width of anal cell equal to combined width of two basal cells.
Microchrysa flaviventris (Wiedemann)
14. Four veins arising from discal cell; that is, media 3-branched----- 15
 Three veins arising from discal cell; that is, media only 2-branched (Pachygasterinae) ----- 18
15. Terminal segment of flagellum elongated, flattened, vanelike; the preceding two or three segments distinctly furrowed longitudinally on inner surface; abdomen parallel-sided on intermediate segments; scutellum unspined (Hermetiinae)----- 16
 Terminal segment of flagellum elongated but not flattened or vanelike; preceding segments cylindrical; abdomen oval or circular in dorsal outline (Clitellariinae) ----- 17
16. Eyes bare; mesonotum wholly black; scutellum at most pale-tipped; second abdominal segment with a pair of prominent translucent spots.
Hermetia illucens (Linnaeus)
 Eyes densely short-pilose; mesonotum with supraalar calli and usually with a spot on each lateral margin, before the suture, green; scutellum with apex broadly green; second abdominal segment without translucent spots.
Hermetia brunettii Lindner
17. Body short; abdomen globular; no spines on scutellum or on mesonotum above wing bases; orange-yellow species-----*Ruba tarsalis*, new species
 Body elongated; abdomen ovoid; a pair of apical spines on scutellum and an erect spine on mesonotum above each wing base.
Negritomyia consobrina (Bigot)
18. Scutellum prolonged apically into a long digitate process, which is as long as the rest of the scutellum and denticulate laterally.
Monacanthomyia becki, new species
 Scutellum rounded posteriorly, either unarmed, spined, or denticulate apically, but not as above described----- 19
19. Abdomen short, at least as broad as long, sometimes inflated----- 20
 Abdomen distinctly longer than broad, at most inflated basally----- 26
20. Antennal segments 5 to 7 each with a long slender, pilose process on the inner and a similar one on the outer side; segment four of the female, in addition to the above, with a similar though shorter process on the outer side----- 21
 Antennae without prominent lateral processes----- 22
21. Wing without noticeable yellow microtrichia; middle basitarsus usually at most slightly yellow; broad lateral areas of iridescent scales on mesonotum interrupted by broad lateral extensions of the dull-colored median stripe in the male only-----*Ptilocera bergi*, new species
 Wings, at least in male, with a cross band of yellow microtrichia running from stigma through discal cell; middle basitarsus distinctly yellow; broad lateral area of iridescent scales on mesonotum interrupted by broad lateral extensions of the dull-colored median stripe in male and female alike-----*Ptilocera bergi flavescens*, new subspecies

22. Second antennal segment prolonged fingerlike along inner margin of flagellum; scutellum rounded posteriorly or hornlike, without spines or denticles..... 23
 Second antennal segment transverse or at most moderately convex apically, not prolonged along inner margin of flagellum; scutellum with either a few prominent or with numerous minute denticles..... 24
23. Scutellum level with mesonotum, evenly rounded posteriorly; antennae arising from a pair of frontal prominences; style slender, aristalike; stigma much shorter than discal cell; vein R_{2+3} arising slightly beyond r-m.....*Artemitomima mirabilis*, new species
 Scutellum hornlike, extending above level of mesonotum; antennae not located on prominences; style as thick as first antennal segment; stigma as long as discal cell; vein R_{2+3} arising distinctly before r-m.
Aulana cyrtaspis (Kertész)
24. Fifth tergite with a prominent rounded process at its base medially; denticles of scutellar margin all uniformly small and arranged in one row.
Adraga australis, new species
 Fifth tergite without a definite basal prominence..... 25
25. Scutellum on its posterior margin with several pairs of setiferous cornicles, the apical pair being spinelike; basal complex of flagellum much longer than broad, spindle-shaped; body distinctly tomentose, the thorax and abdomen of the male being in large part silvery.....*Wallacea argentea* Doleschall
 Scutellum on its posterior margin with numerous small denticles arranged in several irregular transverse rows; basal complex of flagellum rounded, slightly higher than long; body bare of conspicuous hairs or tomentum.
Pegadomyia nuda, new species
26. Scutellum with two or four distinct spines..... 27
 Scutellum unspined, its margin at most with denticles..... 31
27. Arista thickened, straplike; vein R_{2+3} arising before crossvein r-m and running so close to R_1 that it is not readily apparent; vein R_{4+5} bent at a sharp angle at juncture with crossvein r-m; vein $Cu_2+2nd\ A$ fully as long as free section of Cu_2 28
 Arista thin; vein R_{2+3} arising beyond crossvein r-m; vein R_5 not angularly bent at juncture with crossvein r-m; vein $Cu_2+2nd\ A$ much shorter than free section of Cu_2 ; scutellum 4-spined..... 29
28. Scutellum with 4 spines; mesonotum and scutellum with dense silvery tomentum; wing broadly brownish near costal margin.
Acyrocera argyraspis Lindner
 Scutellum with 2 spines; mesonotum with yellowish to silvery tomentum, which is not especially dense or conspicuous; wing hyaline.
Leveromyia geniculata Lindner
29. Mesonotum in front of suture with silvery tomentum interrupted by an inverted U-shaped arch of inconspicuous black or brown tomentum..... 30
 Mesonotum, except narrow lateral margins, mostly with brown tomentum in front of suture.....*Evaza solomonensis solomonensis* Curran
30. All tibiae dark brown.....*Evaza solomonensis incidens* Curran
 Middle and hind tibiae yellowish white, at most darkened basally and apically.....*Evaza solomonensis whitneyi* Curran
31. Second antennal segment produced thumblike into flagellum on inner side; wings uniformly clouded; mesonotum covered with whitish to pale yellow tomentum, in the female, at least, interrupted by 3 longitudinal vittae of black tomentum; hind femur greatly thickened, with small, blunt spines below.....*Salduba lugubris* Walker

- Second antennal segment distinctly convex, but not produced thumblike into flagellum on inner side; mesonotum without distinct longitudinal vittae of black tomentum; hind femur slender, without spines below..... 32
32. Wings clouded, the clouding more noticeable in a median area running from base to apex, the infuscation becoming lighter toward the costal and posterior margins.....*Lophoteles vittipennis* (Lindner)
- Wings hyaline or uniformly infuscated..... 33
33. All femora conspicuously marked with black.
-*Lophoteles dentata*, new species
- All femora yellow.....*Lophoteles plumula* Loew

Genus CYPHOMYIA Wiedemann

Cyphomyia WIEDEMANN, Zool. Mag., vol. 1, pt. 3, p. 55, 1819.

CYPHOMYIA MARSHALLI Lindner

Cyphomyia marshalli LINDNER, Ann. Mag. Nat. Hist., ser. 10, vol. 20, p. 370, 1937.

Only the female of this species has previously been known. The mesonotum, except the white-haired areas mentioned by Lindner, and the scutellum are covered with a short black tomentum; in the male this black tomentum is much more prominent than in the female and the white median stripe is missing, the white-tomentose areas, therefore, being limited to a small area on each side immediately in front of the suture and to the prescutellar area of the mesonotum. The first and about the anterior half of the second abdominal tergite are dull black.

The type series came from Isabel, Tulagi, and Guadalcanal Islands. Additional records: BOUGAINVILLE ISLAND: 3 females, 1944, and April 10, 1944 (Downs); 1 male, July to September, 1944 (Gurney). GUADALCANAL ISLAND: 5 males, 3 females, August to October 1944 (Berg); 1 male, 2 females, Teneru District, August 6 to October 14, 1944 (Reinschissel and Beck).

Genus EULALIA Meigen

Eulalia MEIGEN, Nouvelle classification, p. 21, 1800.

Odontomyia MEIGEN, in Illiger's Magazine, vol. 2, p. 265, 1803.

Of the species referred to *Eulalia* in this work only *E. maculata* (de Meijere) belongs to that genus in a strict sense. New genera will almost certainly have to be proposed for some species, but until the relationships of the Indo-Australian fauna can be better determined such a step seems inadvisable.

EULALIA AUREOVESTIS, new species

Male.—Head black; vertex and front subshining, face and occiput shining. Erect pile brownish on vertex, black on front between eyes, mostly yellow on face, cheeks, and lower part of occiput; a dense patch of golden tomentum on frontal triangle and similar but more scattered

tomentum on front below ocellar triangle and on the face. Eyes bare, broadly subcontiguous. Face protruding. Oral margin yellow. Antennae slender; ratio of first segment, second segment, flagellum except style, and style 7: 11: 31: 4; style blunt apically; first and second segments and first three segments of flagellum yellow, apical segments black. Proboscis black; palpi slender, yellow.

Ground color of thorax wholly black. Mesonotum and scutellum with abundant scalelike tomentum which might almost be considered pollen; this tomentum golden, except two conspicuous black stripes beginning behind the neck and reaching base of scutellum; pleura with similar tomentum, which becomes whitish and less dense below. Pile of mesonotum and scutellum golden, even on black tomentose areas, rather abundant and about as long as second antennal segment; that of pleura similar but less dense and becoming whitish below. Scutellar spines yellow, half length of scutellum. Middle and hind coxae, last three segments of front and middle tarsi, and last four segments of hind tarsi blackish; legs otherwise yellow. Halteres yellow. Wings subhyaline; stronger veins mostly brown, but those along costal margin yellow before humeral cross vein and beyond discal cell; r-m lacking, the discal cell broadly bordering R_s ; vein R_4 wanting; M_1 present only at base; M_3 wanting.

Abdomen black with a continuous yellow border on each side which at its broadest is about one-eighth width of abdomen; venter yellow, somewhat discolored from middle of third segment to apex; genitalia yellow. Pile mostly concolorous with background, short and sparse; a few long yellow hairs toward base of second segment. Length, 6.5 mm.

Holotype.—Male, Florida Island, March 1945 (G. E. Bohart), U.S.N.M. No. 58469.

EULALIA AUREOVESTIS SUBAUREA, new subspecies

Male.—This form differs from the typical subspecies in that the black stripes of the mesonotum are much broader, occupying approximately the median half of the mesonotum and separated only by a narrow golden line; the base of the scutellum, except for a spot at the center, is likewise black; the pile of the pleura is uniformly golden; and the yellow margins of the abdomen are broader and less distinctly defined. Length, 7 mm.

Holotype.—Male, Guadalcanal Island, April 9, 1945 (Berg). In the author's collection.

Remarks.—The characters on which this subspecies is based are all relative, and may be due to individual variation. However, since a study of other members of this family seems to indicate the existence of geographical subspecies in some cases on the various islands or groups of islands it is probable that this subspecies is valid.

EULALIA MACULATA (de Meijere)

Odontomyia maculata DE MEIJERE, Tijdschr. Ent., vol. 50, p. 229, 1907.

Eulalia maculata (de Meijere) LINDNER, Ann. Mag. Nat. Hist., ser. 10, vol. 20, p. 370, 1937.

Recorded from the Solomon Islands without specific locality, by Lindner. Additional records: GUADALCANAL ISLAND: 2 females, July 1944 (Berg); 7 males, August 1944 (Berg); 1 male, 1 female, May 1945 (Berg). BOUGAINVILLE ISLAND: 1 male, August 13, 1944 (Gurney).

EULALIA BOHARTI, new species

Female.—Head black. Vertex 0.4 width of head; frons parallel-sided, largely rugulose, sparsely clothed with yellowish tomentum, the pair of calli above the antennae shining; face broadening slightly below, shining, with scattered pale yellowish tomentum; facial and occipital orbits with rather dense whitish tomentum; the latter narrow, about as wide as base of first antennal segment. Oral margin reddish yellow anteriorly, brownish posteriorly. Face tuberculate, apex of prominence about equal to apex of first antennal segment. Antenna with first segment, second segment, flagellum without style and style in ratio of 7: 9: 20: 3: style slender, sharp, last two segments of flagellum black, preceding one blackish, the others reddish yellow. Proboscis black, palpi bright yellow. Mesonotum and scutellum bluish black, the surface granular, clothed with moderately dense short yellowish tomentum which becomes whitish laterally; supraalar calli and extreme tip of scutellum, between spines, yellowish; spines one-third length of scutellum; pleura wholly black, with whitish tomentum. All coxae black, front and hind legs otherwise yellow, last three segments of fore and last two of hind tarsi blackish; middle legs probably yellow, segments beyond the trochanters missing in the type. Wings hyaline; veins yellow; becoming brownish at extreme base; R_4 wanting; r-m wanting, the discal cell broadly bordered by R_s ; M_1 and Cu_1 each plainly evident only at base, continued by a weak fold; M_2 evident more than halfway to wing margin; only a trace of M_3 indicated at base. Squamae blackish. Halteres green. Abdomen entirely greenish yellow; pile concolorous, inconspicuous. Length, 6 mm.

Holotype.—Female, Guadalcanal Island, April 7, 1945 (G. E. Bohart), U.S.N.M. No. 58470.

Remarks.—This species is closely related to *E. parallelina* (Bezzi), from Fiji, which differs from *boharti* in having the antennae wholly yellow and the front and vertex narrower (vertex 0.32 head width in my specimen; Bezzi describes the vertex as narrower than an eye); the eyes are consequently relatively more conspicuous from the anterior aspect and more tapering outwardly. *E. exigua* Lindner, from

Amboina, seems to belong to this group, but according to the description differs in the shining front with definitely arranged tomentose spots, the wholly reddish brown antennae, and the broad pale apex of the scutellum.

EULALIA CHRYSANER, new species

Male.—A rather slender species. Face and frontal triangle taken together forming an almost equilateral triangle, the base of which is about one-third head width; face from side view rather strongly but evenly convex. Head black, oral margin slightly brownish; some blackish pile on part of frontal triangle that extends narrowly between the eyes, on occiput, and on cheeks; a small patch of silvery tomentum on frontal triangle and two similar patches on each ocular orbit, one of these being opposite oral margin and one at about middle of face; face shining, with a few scattered black hairs. Eyes bare, broadly contiguous. Antenna slender, one-and-one-third times length of head; ratio of first segment, second segment, flagellum excluding style, and style, 20:25:45:5; first and second segments each three times as long as maximum width; style short, cylindrical, blunt; first and second segments yellow with black hairs; flagellum black with yellowish pollen. Proboscis black; palpi small, clavate, yellow with black hair.

Ground color of thorax, including scutellum, entirely black with a slightly bluish cast. Mesonotum and scutellum covered with dense yellow tomentum interrupted by areas of black tomentum, which takes the form of a median stripe, a lateral one on each side, and a rounded spot, immediately in front of the suture, on each side of the lateral stripe and narrowly connected with it along the suture; median stripe straight, the lateral ones curved strongly outward anteriorly; the three stripes ending slightly short of anterior margin of mesonotum and extending about halfway from suture to scutellum. Mesonotum and scutellum with scattered though plainly evident black hairs; pleura with a few yellowish hairs above and abundant silvery tomentum. Scutellum with two small yellow spines.

Coxae black; femora black, their apices yellow, broadly so on front pair, narrowly so on middle and hind pairs, tibiae yellow; tarsi yellow, the last two or three segments brownish; pile of femora largely black, that of legs otherwise mainly yellow. Wings milky; veins brownish, becoming suddenly yellow beyond discal cell; vein r-m absent, the radial sector forming the upper margin of the discal cell; veins R_4 and M_3 absent; vein M_1 distinct at base, thence continued for a short distance as a fold. Halteres yellow.

Abdomen mainly reddish yellow; first sternite, sides of first tergite, and basal angles of second tergite, blackish; fourth and fifth tergites and sides of fourth and fifth sternites black, from certain angles appearing as distinctly steel-blue. Pile and tomentum of abdomen black. Length, 7 mm.

Female.—Relative measurements of head from front view: Width of vertex, 28; width of front at base of antennae, 30; width of face at oral margin, 35; maximum width of head, 75. Frontal calli prominent; vertex, frontal calli, and face shining; silvery-tomentose areas of face as in male but much more prominent; a similar area on ocular orbit below frontal callus and a transverse band between frontal callus and vertex. Third antennal segment proportionately a little longer than in the male. Pattern of mesonotum essentially as in male except that the black areas, especially of the presutural lateral spots, are larger; the bright tomentum, however, is grayish yellow rather than golden and is not so long or dense as in the male. No erect pile on mesonotum or upper parts of pleura. Abdomen wholly black, posterior margins of first, second, and third sternites, however, very narrowly reddish; tergites with a distinct steel-blue cast; sternites bluish in certain lights. Length, 8 mm.

Holotype.—Male, Bougainville Island, 1944 (Downs), U.S.N.M. No. 57306.

Allotype.—Female, same data.

Paratype.—Female, Bougainville Island (Downs) [American Museum of Natural History].

Remarks.—This species traces, rather imperfectly because of the coloration of the legs and abdomen, to *Odontomyia finalis* (Walker) in Brunetti's key. Though both Walker's description and Brunetti's redescription fail to mention certain important characters, *finalis* is probably a closely related species.

EULALIA SUBOBSCURA new species

Male.—General coloration deep black. Eyes briefly contiguous above frontal triangle; lower facets smaller than those of upper areas, but areas not sharply defined; eyes clothed with dense, moderately long, black pile, which is denser and longer above than below. Face prominent, rounded and protruding in lateral profile, rounded in transverse section. Head entirely shining. Pile black, except for that on inner part of cheeks, next to oral margin, and on adjacent area of occiput, which is long, silky, and yellowish; a dense tuft of pile at upper angle of frontal triangle and another just below ocellar triangle, the intervening areas bare; pile otherwise regularly distributed on face, vertical triangle, and occiput. Antenna equal to length of head, yellow on first two segments and base of flagellum, blackish from middle of first segment of flagellum, and becoming black toward style; ratio of first segment, second segment, flagellum excluding style; and style, 9:10:23:2; flagellum with six segments, the penultimate one very short, the ultimate one forming the distinct, cylindrical, blunt style. First two antennal segments black-pilose. Proboscis black; labella rigid, three-fourths as long as head, rather

broad, maximum width one-third the length; palpi slender, yellow, black-haired.

Thorax mostly subshining; spines of scutellum subequal to scutellum in length, yellow; narrow extreme apex of scutellum sometimes yellowish. Pile of thorax entirely black, except, in some specimens, a tuft above each front coxa; that of mesonotum and scutellum long, erect; that of pleural and sternal areas erect to subapressed and not so long or dense. Femora black except apices; tibiae yellow to yellowish brown; tarsi bright yellow at base, last three segments of front and last two of intermediate and hind pairs brownish to black, the individual segments each becoming darker toward their apices. Wing yellowish hyaline, somewhat brownish subhyaline in the area of the stronger veins; veins yellow, becoming brownish on posterior half; R_4 wanting; m-cu wanting, the radial sector forming broad upper part of discal cell; M_1 represented by a spur and a fold; M_2 distinct almost to the wing margin; M_3 wanting. Halteres yellow.

Abdomen broader than thorax; coloration variable; tergites subopaque, becoming shining, with a bluish black reflection, apically entirely black, or with a large, subquadrate, subobscure brownish spot near each lateral margin of segments two, three, and sometimes four; venter wholly black to largely brownish. Genitalia small, black. Length, 7.5 to 8 mm.

Holotype—Male, Bougainville Island, 1944 (Downs), U.S.N.M. No. 57307.

Paratypes.—4 males, Bougainville Island, April 10, 1944 (Downs), July 13, 1944 (Gurney), and no date, 1944 (Gurney); 2 males, Empress Augusta Bay, Bougainville Island, March 1944 (Downs); 2 males, Bougainville Island (Downs).

Remarks.—In Brunetti's key this species traces to *atraria* Walker, which, according to Brunetti's redescription, has bare eyes and a weakly developed vein M_2 . *Stratiomys nexura* Walker, the type of Bigot's genus *Euceromys*, appears from the descriptions to be a similar species but the proportions of the antennal segments are different (first segment, second segment, and flagellum in the ratio 1:1:4) and, according to information furnished me by James E. Collin, cross-vein r-m is present.

Genus PTECTICUS Loew

Ptecticus LOEW, Verh. Zool. Bot. Ges. Wien, vol. 5, p. 142, 1855.

PTECTICUS SALOMONENSIS Lindner

Ptecticus longipennis salomonensis LINDNER, Ann. Mag. Nat. Hist., ser. 10, vol. 20, pp. 372-373, 1937; not *Ptecticus salomonensis* Lindner, Ann. Mag. Nat. Hist., ser. 10, vol. 20, p. 393, 1937.

I believe this form is more than a subspecies of *Ptecticus longipennis* (Wiedemann). The male genitalia are entirely different; the

wings are a little shorter than in *longipennis* and lack the clouding at the apex; the abdomen, as Lindner pointed out, is entirely bluish black dorsally, or almost so.

The type series came from Isabel Island. Additional records: GUADALCANAL ISLAND: 2 males, 1 female, December 1944, to March 1945 (Berg); 1 male, April to May 1945 (Berg); 2 females, Lunga River Valley, October 17 and 27, 1944 (Laffoon); 1 female, Malimbu River Valley, November 12, 1944 (Laffoon); 1 female, 1 male, Uma-sami River Valley, October 2, 1944 (Laffoon). FLORIDA ISLAND: 3 males, 1 female, March 1945 (Bohart). NEW GEORGIA ISLAND: 1 female, 1943 (Downs).

PTECTICUS ISABELENSIS Lindner

Ptecticus isabelensis LINDNER, Ann. Mag. Nat. Hist., ser. 10, vol. 20, p. 373, 1937.
Ptecticus salomonensis LINDNER, Ann. Mag. Nat. Hist., ser. 10, vol. 20, p. 393, 1937. ("Nachtrag" of above citation).

Lindner's published account of *P. salomonensis* seems puzzling. His description, as well as the statement that he is describing the previously undescribed male, preclude the possibility that he is referring to *longipennis salomonensis*; moreover, *P. salomonensis*, as well as *P. longipennis salomonensis*, is included in the list of new species described from the Solomon Islands (pp. 370-371), whereas *P. isabelensis*, the only other *Ptecticus* from the Solomon Islands treated in that work, is missing. This confused state of affairs is clarified in a separate sent to me personally, in which Lindner marked out *salomonensis* in the list and in the Nachtrag and wrote *isabelensis* instead.

Known only from Isabel Island, the type locality.

PTECTICUS REPENSANS (Walker)

Sargus repensans WALKER, Proc. Linn. Soc. London, vol. 4, p. 96, 1860.
Ptecticus repensans (Walker) BRUNETTI, Rec. Indian Mus., vol. 1, p. 112, 1907.

The Solomon Islands form apparently represents a variety that differs from the typical form of this species in the coloration of the hind tarsus. The first and second segments are yellow, with black hair on the basal third of the first and at the apex of the second segment, the remaining hair being yellow; the last three segments are mainly black or blackish with black hair. The last three segments of the front and middle tarsi are black. The body is orange-yellow; the abdominal segments have each a prominent patch of short black hair; the male genitalia are large and black. Length, 12-14 mm.

Collecting records. GUADALCANAL ISLAND: 1 female, November 11, 1944 (Berg); 1 male, December 1944 (Berg); 1 male, Mount Austin, 1,000 ft., November 14, 1944 (Laffoon); 1 female, Lunga River Valley,

September 16, 1944 (Laffoon). FLORIDA ISLAND: 1 female, 3 males, March 1945 (Bohart).

Genus SARGUS Fabricius

Sargus FABRICIUS, *Entomologia systematica*, Suppl., pp. 549, 566, 1798.

SARGUS MACTANS Walker

(?) *Sargus metallinus* FABRICIUS, *Systema antliatorum*, p. 258, 1805.

Sargus mactans WALKER, *Proc. Linn. Soc. London*, vol. 4, p. 97, 1860.

Sargus redhibens WALKER, *Proc. Linn. Soc. London*, vol. 4, p. 97, 1860.

Lindner has synonymized *redhibens* with *mactans*; these two forms may be mere color varieties of *metallinus*, although they may be valid geographical subspecies. In *redhibens* the femora are marked with black and the hind tibia, at least, is brown on its basal third; in *mactans* the femora are wholly yellow and the hind tibia brownish on the basal third; in *metallinus* all femora and tibiae are yellow. The United States National Museum has about 80 specimens. The series from the Solomon Islands is, as Lindner found in the material he examined, with males of *mactans* and females of *redhibens*; in other series from Singapore, India, and the Philippine Islands the forms *mactans* and *redhibens* are represented in both sexes. I can find no structural differences.

This species has been recorded by Lindner from Guadalcanal, Russell, Kolombangara, and Tulagi Islands, and by Curran from Guadalcanal and Choiseul Islands.

Additional records: GUADALCANAL ISLAND: 4 males, 5 females, August to December 1944 (Berg); 1 female, Cape Esperance, October 15, 1944 (Laffoon); 8 males, 2 females, Lunga River Valley, September 6 to October 17, 1944 (Laffoon). BOUGAINVILLE ISLAND: 1 female, April 10, 1944, and 1 male (Downs). NEW GEORGIA ISLAND: 1 female, Munda Point, 1943 (Downs).

Genus CEPHALOCHRYSA Kertész

Cephalochrysa KERTÉSZ, *Trans. Linn. Soc. London*, vol. 15, p. 99, 1912.

CEPHALOCHRYSA CHRYSIDIFORMIS (Lindner), new combination

Microchrysa chrysidiformis LINDNER, *Ann. Mag. Nat. Hist.*, ser. 10, vol. 20, pp. 373-374, 1937.

The types came from San Cristobal Island. Additional records: BOUGAINVILLE ISLAND: 1 female, 1944 (Downs); 1 female, Empress Augusta Bay, March 1944 (Downs). NEW GEORGIA ISLAND: 2 females, Munda Point, 1943 (Downs).

Genus **MICROCHRYSA** Loew

Microchrysa LOEW, Verh. Zool. Bot. Ges. Wien, vol. 5, p. 146, 1855.

MICROCHRYSA FLAVIVENTRIS (Wiedemann)

Sargus flaviventris WIEDEMANN, Analecta Ent., p. 31, 1824.

Microchrysa flaviventris (Wiedemann) OSTEN SACKEN, Ann. Mus. Genova, vol. 16, p. 417, 1881.

This common species is widely distributed throughout a large part of the oriental region and the East Indies. Lindner has recorded it from Russell Island. GUADALCANAL ISLAND: 2 males, 2 females, August to December 1944 at a garbage dump; 1 female, Poha River, September 10, 1944 (Laffoon). BOUGAINVILLE ISLAND: 2 males 1944 and April 10, 1944 (Downs). FLORIDA ISLAND: 1 male, 1 female, March 1945 (Bohart).

Genus **HERMETIA** Latreille

Hermetia LATREILLE, Histoire naturelle des crustacés et des insectes, vol. 14, p. 338, 1804.

HERMETIA ILLUCENS (Linnaeus)

Musca illucens LINNAEUS, Systema naturae, ed. 10, vol. 1, p. 589, 1758.

Hermetia illucens (Linnaeus) LATREILLE, Histoire naturelle des crustacés et des insectes, vol. 14, p. 338, 1804.

This common American species has become quite widely distributed throughout the warmer parts of the Old World, but has not been recorded in literature from the Solomon Islands, where, however, it appears to be quite common. Additional records: GUADALCANAL ISLAND: 14 males, 14 females, September 1944 to April 19, 1945 from latrines, hog wallows, coconuts, and rotten papayas (Berg); 2 males, 7 females, Tengeru District, August 6 to November 1, 1944 (Reinschissel, Beck); 6 males, 4 females, Lunga River Valley, October 3-13, 1944 (Laffoon) and December 28, 1943 (Knight). BOUGAINVILLE ISLAND: 1 female, Empress Augusta Bay, April 1944 (Downs); 1 male, 1944, and 2 females (Downs).

HERMETIA BRUNETTII Lindner

Hermetia burnettii LINDNER, Ann. Mag. Nat. Hist., ser. 10, vol. 20, pp. 381-382, 1937.

The type series came from Tulagi, Bougainville, and Shortland Islands.

Additional records: GUADALCANAL ISLAND: 3 females, November-December 1943 (Gurney); 9 females, September 1944 to June 1945 (Berg). BOUGAINVILLE ISLAND: 4 males, 3 females, 1944 (Downs). TREASURY ISLAND: 1 male, July 21, 1944 (J. H. Paullus). NEW GEORGIA ISLAND: 1 male, 1 female, Munda Point, 1943 (Downs). FLORIDA ISLAND: 3 females, March 1945 (Bohart). Two females from Guadalcanal (Berg) and the one from New Georgia lack the

presutural green spots, but otherwise they agree with the more typical specimens.

Genus RUBA Walker

Ruba WALKER, Proc. Linn. Soc. London, vol. 4, p. 100, 1860.

RUBA TARSA LIS, new species

An orange-yellow species with darkened tarsi, otherwise orange-yellow legs, and infumated wings. This color combination will readily separate this species from any of the four previously described.

Male.—Eyes broadly contiguous, clothed with short, scattered hairs; no well-defined zone of smaller facets. Ocellar triangle black; head otherwise yellow, with yellow pile. Ratio of antennal segments 12:13:15:9:9:4:6:5:7:35; first and second segments yellow, third to seventh inclusively brownish, eighth to tenth black; antennal pile black. Proboscis yellow; terminal palpal segment rounded, black. Thorax yellow, with pile mostly yellow; a longitudinal patch on middle of mesonotum, however, extending from suture to anterior margin, blackish. Legs mainly yellow; tarsi brownish, becoming mainly blackish beyond basitarsi; pile of apical half of tibiae and of tarsi black, that of tarsi quite dense. Wings infumated, with brown veins, the veins and membrane both becoming paler toward base. Abdomen yellow with short, yellow pile. Length, 8 mm.

Female.—Width of head, in micrometer units, 75; of vertex, 30; of front at narrowest point (just above base of antennae) 20; of face at oral margin, 27. Front shining. Pile of mesonotum wholly pale. Otherwise as in male. Length, 9 mm.

Types.—Holotype, male, Guadalcanal Island, February–March 1945 (Berg); U.S.N.M. No. 57308.

Allotype.—Female, same data.

Paratypes.—1 male, 1 female, same data; 1 female, Bougainville Island, 1944 (Downs); 1 female, Guadalcanal Island, 1944 (Rein-schissel); 7 females and 5 males, Guadalcanal, from larvae collected April 11 and 19, 1945 (Berg).

Genus NEGRITOMYIA Bigot

Negritomyia BIGOT, Bull. Soc. Ent. France, ser. 5, vol. 7, p. lxxiv, 1877.

NEGRITOMYIA CONSOBRINA (Bigot)

Ephippium consobrina BIGOT, Ann Soc. Ent. France, ser. 5, vol. 9, p. 208, 1879.

Negritomyia consobrina (Bigot) VAN DER WULP, Catalogue of the Diptera of South Asla, p. 53, 1896.

This species was recorded by Lindner from Florida, Guadalcanal, and Vella Lavella Islands.

Additional records: GUADALCANAL ISLAND: 32 males, 22 females, July to December 1944, and May to July 1945 (Berg); 6 females, 5 males, Teneru and Nalimbu Districts, August 6 to November 1, 1944 (Beck); 1 male, November to December 1943 (Gurney); 6 females, 12 males, Lunga River Valley, September 8 to November 11, 1944 (Laffoon); 1 male, Cape Esperance, October 15, 1944 (Laffoon). BOUGAINVILLE ISLAND: 4 males, 1944 and April 10, 1944 (Downs); 1 female, 1944 (Gurney); 1 female, Empress Augusta Bay, March 1944 (Downs). NEW GEORGIA ISLAND: 1 male, April 1944 (Berg); 1 female, Munda Point, 1943 (Downs). FLORIDA ISLAND: 1 male, March 1945 (Bohart); 1 male, 1 female, Tulagi (W. M. Mann). SAN CRISTOBAL ISLAND: 1 female, Pamua (Mann).

I believe that eventually *consobrina* (Bigot) and *maculipennis* (Macquart) will be proven synonymous, the latter name holding priority. The main characters for distinguishing the two are the color of the femora and the extent of the infuscated area at the wing apex; in *maculipennis* all femora are broadly yellow basally and the infuscation of the wing extends to the apex, whereas in *consobrina* all femora are entirely black, and the extreme apex of the wing becomes subhyaline. The Solomon Islands specimens have at most a trace of yellow at the bases of the femora, usually the femora are wholly black. In the Guadalcanal specimens the wing apex is always subhyaline; in the others it is variable, but more commonly the entire apical area is infuscated. If two geographical subspecies are present, intergradation occurs over a very wide area, extending from the Solomons through New Guinea to the Philippine Islands. The type locality of *consobrina* is "New Guinea"; that of *maculipennis* is Manila, P. I.

Genus MONACANTHOMYIA Brunetti

Monacanthomyia BRUNETTI, Rec. Indian Mus., vol. 7, p. 448, 1912.

MONACANTHOMYIA BECKI, new species

Male.—Head black; occiput shining above, bare, subshining below, with sparse yellowish tomentum; vertical triangle small, subshining; face and frontal triangle densely white-tomentose. Eyes broadly contiguous, upper facets much larger than lower ones, but line of separation not distinct. Antenna inserted on lower part of head, short; first segment subconical; second expanded and rounded apically; third reniform, its convex face in contact with second segment, distinctly higher than long; arista short-pubescent, twice length of rest of antenna combined; antenna yellow, arista, except extreme base, black. Proboscis and palpi yellow.

Thorax reddish yellow; a middorsal stripe of varying extent but apparently, when well developed, extending from anterior margin of

mesonotum to apex of scutellar process, brownish to blackish; this stripe evident on prescutum (where the pattern varies), just before scutellum, and on scutellum, at least on its apical process; scutellum sometimes blackish laterally. Thorax slightly though noticeably swollen in supraalar region and subalar regions of mesopleura, sternopleura, and pteropleura. Scutellar process equal in length to basal part of scutellum; sides of scutellum, including process, with numerous small setiferous denticles.

Legs slender; tarsi flattened; each basitarsus longer than remaining segments combined. Fore tarsus and hind tibia blackish; fore tibia brownish; hind tarsus yellow to brownish; legs otherwise reddish yellow. Wing chiefly hyaline, the stigma, the apex involving chiefly cell R_4 , and the narrow costal margin between these areas infuscated; vein R_{2+3} arising slightly before to slightly beyond cross-vein r-m. Halteres yellow.

Abdomen ovate, length about 1.25 maximum width; reddish yellow. Genitalia small, reddish yellow. Length, 3.5 to 5 mm.

Holotype.—Male, Teneru District, Guadalcanal Island, October 14, 1944 (Beck), U.S.N.M. No. 58471.

Paratype.—Male, Umasami River Valley, Guadalcanal Island, October 2, 1944 (Laffoon).

Remarks.—*Monacanthomyia annandalei* Brunetti, the genotype, is the only previously described species positively referred to this genus. According to Brunetti and Kertész, *Prostomomyia atronitens* Kertész and *Ceratothyrea nigrifemur* de Meijere probably also belong here. The yellow body and the coloration of the legs will readily distinguish *becki* from these three species.

Genus PTILOCERA Wiedemann

Ptilocera WIEDEMANN, Nova dipterorum genera, p. 7, 1820.

An interesting integumentary character of this genus is the possession of dense, microscopic, setigerous plates, each isolated from the others and, as a rule, round in outline. The setulae borne by these plates may be simple inconspicuous hairs; they may be somewhat flattened, appressed, and as a rule whitish, thus forming, in their aggregations, tomentose patches; or they may be still further flattened and broadened, in the form of iridescent scales. The integument has been erroneously described as punctured. True setigerous punctures do, however, occur on the head.

PTILCOCERA BERGI, new species

Female.—Head black. Front at narrowest point about 0.22 head width; its upper half, including vertex and ocellar triangle, with numerous piliferous punctures of irregular density and interrupted

by a small glabrous triangle on each ocular margin opposite anterior ocellus; lower half of front bare and glabrous except for a small patch of silvery tomentum adjacent to each eye. Facial and occipital orbits silvery tomentose; face, except shining median tubercle, with erect whitish pile; pile of occiput more yellowish and less erect. Antennae mainly black and black-pilose; first two segments of flagellum, taken together, about as long as broad; terminal segment of flagellum about four times as long as subterminal one, white and white-haired on its apical half or more.

Thorax black in ground color, the setigerous plates appearing greenish in certain lights; a broad median vitta, extending almost to base of scutellum, with extremely short black hair; broad sides of mesonotum, scutellum, and upper parts of the pleura with emerald-green iridescent scales which appear violet in certain lights; from certain angles these scales seem to cover only certain definite areas, but with a change of light incidence they are seen to cover the entire region as described; pleura below with yellowish to whitish hair. Scutellum two-thirds as long as broad; median spines about one-third as long as scutellum; spines wholly black to broadly yellow tipped. Legs black, the tarsi, especially intermediate ones, tending to become yellowish; pile of legs yellowish to brownish yellow, that of tarsi becoming golden to reddish yellow. Wings blackish, the intensity of the infumation decreasing toward alula, which is subhyaline.

Abdomen black in ground color; the setigerous plates, however, shining green and giving the abdomen a subshining green appearance when viewed by the naked eye; a small patch of silvery tomentum on each side of the third segment near its anterior margin and at some distance from its lateral margin; setulae of tergites otherwise black, visible only under high magnification except on the first and anterior part of the second segment; some inconspicuous pale pile ventrally. Length, 8 to 11 mm.

Male.—Eyes contiguous; patch of silvery tomentum on front and a dense patch of short erect black hair between eyes in front of the ocellar triangle. Antennae entirely black. Pile of median stripe of mesonotum sometimes with a reddish cast; the stripe more extensive than in the female, extending onto the scutellum, and crossed behind the suture by a transverse stripe of approximately equal width, thus leaving on the mesonotum a cross-shaped area which is devoid of iridescent scales. Median scutellar spines nearly half as long as scutellum, broadly yellowish at apices. Differs otherwise only sexually. Length, 7 to 10 mm.

Holotype.—Female, Guadalacanal Island, July 1944, July 1945 (Berg), U.S.N.M. No. 57309.

Allotype.—Male, same data.

Paratypes.—107 females, 109 males, same data; 5 females, 8 males, Lunga River Valley, Guadalcanal Island, September 9 to October 17, 1944 (Laffoon); 2 females, 1 male, Malimbu River Valley, Guadalcanal Island, November 12, 1944 (Laffoon); 6 females, 3 males, Teneru District, Guadalcanal Island, August 6, October 30, November 1, and December 10, 1944, and April 14, 1945 (Beck); 4 females, Guadalcanal Island (Beck); 1 female, Guadalcanal Island, July 23, 1945 (Frank Cilley).

Two males, one from "S. W. Pacific 85, Area 1," June 17, 1944 (Beck) and one from "Solomon Islands," July to August, 1909 (W. W. Froggatt), are this species, but are not included in the type series.

Remarks.—This species, a *Ptilocera* in the strict sense, may readily be distinguished from all previously described species of the genus by the absence of whitish tomentum on the fourth and fifth abdominal segments.

The Guadalcanal material seems quite uniform, except for size and minor color variations. However, specimens of *bergi* from the other islands of the Solomons group are more variable. Two females from Florida Island, March 1945 (Bohart) are like the Guadalcanal females except that the middle basitarsus is wholly yellow. A female from Santa Cruz Island (W. M. Mann) has the terminal antennal segment wholly whitish and white-haired; the legs are yellowish to brownish, but this may be due to the aging condition of the specimen. It is quite probable that when the fauna of the islands is better known several distinct subspecies may be recognized. Specimens from Bougainville Island are sufficiently distinct and numerous enough in the collection to warrant description as a subspecies; I am calling this:

PTILOCERA BERGI FLAVESCENS, new subspecies

Differs from the typical form as follows. The wing is partially transversed by a band of yellow microtrichia extending from the stigmal area through the apical half of the discal to the basal portion of the third and fourth posterior cells; this band is prominent in the male but only weakly developed in the female. The middle basitarsus is distinctly yellow. The scutellar spines are yellowish apically in both sexes. In the female, the broad lateral areas of iridescent scales on the mesonotum are interrupted by a longitudinal band of hairs to each side of the median band; all these hairs have a reddish cast. Length, 9 to 10 mm.

Holotype.—Female, Bougainville Island, April 10, 1944 (Downs), U.S.N.M. No. 57310.

Allotype.—Male, same data.

Paratypes.—3 males, same data; 1 male, Bougainville Island, 1944 (Downs); 1 male, Bougainville Island, July 1 to September 15, 1944

(Gurney); 1 female, Bougainville Island, 1944 (Gurney); 1 female, Empress Augusta Bay, Bougainville Island, February 1944 (L. J. Bennett); 1 male, Empress Augusta Bay, March, 1944 (Downs); 2 males, Bougainville Island (Downs).

ARTEMITOMIMA, new genus

Female (male unknown).—Head, excluding prominences at antennal bases, distinctly higher than long and a little broader than high; occiput concave from dorsal view, transverse below; ocellar triangle a little longer than wide, removed from occiput by a little more than its length; vertex and upper part of front narrow, parallel-sided, about 0.15 head width, then abruptly widening above antennae to width of face, which is parallel-sided and about 0.25 head width; front with a low but sharp carina beginning on each side of anterior ocellus and extending along ocular orbit to point where front begins to widen, the two carinae distinctly though narrowly separated from each other for their entire length; each frontal callus produced into a prominence which takes the form of a truncated half-cone, as high as length of first antennal segment, from the lower inner surface of which the antenna arises. Facial orbits moderately broad above but evanescent below; occipital orbits narrow, evanescent along upper posterior margin of each eye; lower posterior margin of eye concave in lateral profile; eyes bare. Proboscis short; labella large, extending when withdrawn to within length of first antennal segment from base of antenna; no distinct oral margin. Antenna porrect; first segment twice as long as wide; second from outer view about as long as wide, from inner twice as long as a result of its prolongation along side of flagellum; second segment and flagellum together forming a lanceolate complex terminating in a long slender aristalike style; flagellum composed of three major segments, strikingly oblique in outline, followed by two moderately short ones and a 3-segmented style, the basal two segments of which are short, the apical one as long as the remaining antennal segments combined.

Thorax long, its length, including scutellum, about twice maximum width, its width at wing bases about 1.6 that across humeri; propleura well developed; scutellum about as long as broad, rounded and distinctly margined behind, without spines or denticles. Legs long, slender; basitarsus of each leg longer than following tarsal segments combined; last three segments of each tarsus each no longer than broad. Wing slender, almost four times as long as wide; discal cell roughly diamond-shaped with basal and apical angles truncated, unusually large, its transverse diagonal about half wing width; stigma short, sclerotized; stem of R_1 and vein R_{2+3} each short and forming part of stigma; r-m present; R_{2+3} arising slightly behind r-m; R_4 erect short.

Abdomen roughly diamond-shaped, as broad as long, broader than maximum width of thorax, broadest at base of third segment, moderately thick and rather strongly arched behind in lateral profile.

Genotype—*Artemitomima mirabilis*, new species.

The relationships of this interesting genus are rather difficult to determine. In Kertész's ³ key to the genera of Pachygasterinae it runs best to *Ageiton*, paragraph 128, but, among other things, the antennal structure and wing venation are of an entirely different type. Perhaps the closest relationship is with *Salduba*, which has a similar though by no means identical antennal structure and which shows a number of other characters in common with *Artemitomima*; however, *Salduba* may readily be distinguished by the lack of frontal prominences, by the long, parallel-sided abdomen, and by the thickened, denticulated hind femur. The resemblance of *Artemitomima* to the genera of the *Artemita* complex, though striking, is purely superficial.

ARTEMITOMIMA MIRABILIS, new species

Female.—Lower frontal and upper facial orbits reddish yellow; head otherwise black; vertex and uppermost part of occiput rugulose; rest of upper half of occiput, upper half of front, and frontal prominences shining, bare; lower half of occiput with whitish pile; a transverse area just above frontal prominences, lower frontal orbits, facial orbits, and occipital orbits whitish tomentose. First antennal segment shining black, with black hair; second segment yellow, with black hair; flagellum yellow on ventral half of first three segments, otherwise blackish; long terminal segment of style, except extreme base, white; flagellum and style with short white to whitish pubescence. Labella brownish, yellow at base.

Thorax entirely black, mostly rugulose because of the tomentum-bearing punctures, but with several areas on the pleura and sterna bare and polished; the most noticeable of these is an area below each wing base, on the pteropleuron, the anterior part of which area is longitudinally striated. Tomentum of thorax basically black, with the following areas yellowish; and inverted Y-shaped area on the mesonotum, its stem running from anterior margin of mesonotum to suture, one arm extending to each side of scutellum; the scutellum, except its broad lateral slopes; the propleura; a band covering the front coxa and extending along anterior margin of mesopleuron onto mesonotum; a band extending from lower part of sternopleuron, near intermediate coxa, across posterior part of mesopleuron and onto mesonotum immediately in front of suture; and a band taking in metapleuron and supraalar callus and areas immediately surrounding it. Legs black;

³ Ann. Mus. Nat. Hungarici, vol. 14, pp. 127-140, 1916.

first and second segments of intermediate tarsus and most of hind basitarsus yellow. Halteres whitish. Wing brownish beyond discal cell, on narrow posterior border, and on a narrow band that almost crosses wing through apical part of basal cells and along veins Cu_2 and $Cu_2 + 2nd\ A$; membrane otherwise mainly hyaline; veins brownish, yellow at extreme base and at weakened part of costa and radius immediately before stigma; stigma brown.

Abdomen black; anterior margin of first tergite, a rounded spot on each side of third confluent with margin, an oblique band on each side of fourth, lateral margins of all tergites, entire fifth tergite, and venter yellow tomentose, abdomen otherwise black tomentose. Genitalia yellow. Length, 8 mm.

Holotype.—Female, Guadalcanal Island, 1944 (Berg). U.S.N.M. No. 57311.

Remarks.—Mr. Berg adds this note: "I took it Nov. 11, 1944, resting on underbrush about 3 feet from the ground. I was collecting well back into the foothills of the Kavo Range, on Mount Austin at an elevation of about 800 feet. Though I collected there on two more occasions, I never saw it again."

Genus AULANA Walker

Aulana WALKER, Proc. Linn. Soc. London, vol. 7, p. 204, 1864

AULANA CYRTASPIS (Kertész)

Acraspidea cyrtaspis KERTÉSZ, Ann. Mus. Nat. Hungarici, vol. 6, p. 344, 1908.

Aulana cyrtaspis (Kertész) BRUNETTI, Rec. Indian Mus., vol. 25, p. 60, 1923.

This species was recorded by Lindner, without locality, from the Solomon Islands. Additional records: BOUGAINVILLE ISLAND: 1 female, 1944 (Downs). GUADALCANAL ISLANDS: 7 females, January 6, 1945 (Berg). FLORIDA ISLAND: 2 females, Moro, 1945 (Bohart). The Florida Island specimens differ from the others in having predominantly black femora.

Genus ADRAGA Walker

Adraga WALKER, Proc. Linn. Soc. London, vol. 3, p. 82, 1859.

This genus is closely related to *Pegadomyia*. Two species have been previously described: The genotype, *A. univitta* Walker, from the Aru Islands, and subsequently redescribed by Kertész and Brunetti from Mysol, and *A. crassivena* Kertész, from Batjan. The following key will serve to separate these two species and the one described below.

1. Pile of mesonotum short and inconspicuous, uniformly black..... 2
 Mesonotum with a median stripe of yellowish pile..... *univitta* Walker
2. Abdominal tergites one to four wholly punctured..... *crassivena* Kertész
 Abdominal tergites one to four densely punctured on the disc, shining laterally..... *australis*, new species

ADRAGA AUSTRALIS, new species

Male.—Head, thorax, and abdomen black. Vertical triangle and upper angle of frontal triangle shining; most of front, face, genae, and lower postocular orbits densely whitish tomentose. Third antennal segment much higher than long; first and second segments whitish; third reddish brown outwardly, blackish apically and on inner aspect; arista blackish. Proboscis blackish. Mesonotum and scutellum with numerous punctures, each giving rise to a minute black hair; pleura largely polished and bare, but mesopleura with whitish pile, lower parts of mesopleura and of pteropleura with scattered, short black pile, and metapleura yellow-tomentose. Scutellum distinctly margined; apex and sides with about 30 dentulae. Legs largely black; hind tarsus and extreme apex of front femur yellow; front basitarsus moderately thickened and longer than remaining four segments combined. Wing subhyaline; apical half of costal cell and an oval area occupying apical half of anal cell, basal portion of the fifth posterior cell, extreme base of discal cell, and adjacent area of second basal cell, for about half its width and half its length, somewhat darker, the limits of the darkened areas poorly defined; stigma yellow; veins on basal half to middle of discal cell blackish, those on apical half yellow. Halteres yellow, the knob becoming blackish. Abdomen with numerous black-setulose punctures which become less numerous laterally and on fifth segment; the disc with dense black pollen, the broad lateral margins, except on segment 1, and the fifth segment shining; venter dulled with grayish pollen on segment one, otherwise shining, but with scattered black-setulose punctures. Genitalia small, yellow. Length 3.5 mm.

Holotype.—Male, lumbered area 2½ miles from mouth of Tenaru River, Guadalcanal Island, April 8, 1945 (Berg), U.S.N.M. No. 58472.

Remarks.—This species is evidently very close to *A. crassivena* Kertész, but it differs from the description in a number of details, the most important of which is indicated in the key.

Genus WALLACEA Doleschall

Wallacea DOLESCHALL, Nat. Tijdschr. Ned. Ind., vol. 17, p. 82, 1858.

WALLACEA ARGENTEA Doleschall

Wallacea argentea DOLESCHALL, Nat. Tijdschr. Ned. Ind., vol. 17, p. 82, 1858; not Brunetti, Rec. Indian Mus., vol. 25, p. 61, 1923, and elsewhere.

Wallacea splendida HARDY, Proc. Linn. Soc. New South Wales, vol. 58, p. 410 1933 (new synonymy).

This species is widely distributed, being known from Amboina, its type locality, to Queensland, Australia. I have compared the Solomon Islands material with specimens from New Guinea, New Hebrides, and Queensland, and find them to be conspecific. The Indian species,

which Brunetti misinterpreted as this one, is quite different. Additional records: GUADALCANAL ISLAND: 12 females, 10 males, December 6, 1944, and January 6, 1945 (Berg); 17 females, 8 males, 1944 and 1945 (Berg); 1 female, Lunga River Valley, October 3, 1944 (Laffoon). BOUGAINVILLE ISLAND: 2 females, 1944 (Downs). NEW GEORGIA ISLAND: 1 female, Munda Point, 1943 (Downs).

Genus PEGADOMYIA Kertész

Pegadomyia KERTÉSZ, Ann. Mus. Nat. Hungarici, vol. 14, pp. 182-183, 1916.

Two species of this genus have been described previously, *P. pruinosa* Kertész 1916, the genotype, from Formosa, and *P. glabra* Bezzi 1927, from Fiji. The following key, based on the descriptions, will separate these species from the one described below.

1. Thorax including scutellum in large part covered with whitish tomentum; wing blackened on basal, brownish hyaline on apical half.

pruinosa Kertész, ♂ ♀

Thorax bare of tomentum, shining or subshining; wing hyaline, veins on basal half, however, distinctly darker than those on apical half----- 2

2. Broad margin of scutellum without tubercles; hind femur broadly reddish on basal half; hind tibia broadly yellowish in middle; abdomen shining black; area of larger upper facets of eye of male sharply divided from area of smaller lower facets----- *glabra* Bezzi, ♂

Broad margin of scutellum with numerous small tubercles arranged in several irregular transverse rows; all femora and tibia wholly black; abdomen black in female, reddish in male; upper facets of eye of male distinctly larger than lower ones, but the two zones not sharply separated.

nuda, new species, ♀ ♂

PEGADOMYIA NUDA, new species

Female.—Head wholly black, broad, its width about 1.7 times its height. Front subshining, the upper part about 0.2 head width, parallel-sided, finely punctured, bare, the lower third abruptly broadening toward antennae, obliquely striated, and bare except for a transverse band of silvery tomentum, narrowly interrupted medially, on its upper part. Face with a small area of short silvery pile on each side below antennae. Proboscis, cheeks, and occiput with short scattering hairs which appear brownish but change in color with the light incidence. Antennae brownish, tending to blackish on basal segments and to reddish on flagellum; arista brownish. Proboscis large, black.

Thorax black, shining to subshining; mesonotum and scutellum strongly convex, rather coarsely and evenly punctured; scutellum about 0.45 length of mesonotum, margined and with several irregular transverse rows of small denticles on the margin; pleura, especially mesopleura, with numerous striations in the integument that suggest a fingerprint pattern. Thorax without pruinosity or tomentose areas;

a few scattered inconspicuous hairs on supraalar mesonotal slopes and on sternopleura.

Halteres yellow. Middle and hind tarsi yellow, becoming brownish on apical two or three segments and blackish at extreme apex; legs otherwise wholly black. Front femur, tibia, and tarsus distinctly enlarged but not elongated. Basitarsi of all legs longer than remaining segments combined. Middle femur with some brownish erect hairs on the posterior surface; legs otherwise with only indistinct short appressed hair. Wings hyaline, veins brownish toward base, yellowish along costal half toward the apex, and colorless on the posterior apical section.

Abdomen black shining, broad, short, curling under at apex on dried specimens; segmental divisions indistinct. Length, about 3 mm.

Male.—Eyes broadly contiguous; upper facets larger than lower, the one area merging into the other. Frontal tomentose area present as in female, but greatly reduced in size. Abdomen reddish and without so strong a tendency to curl under as in the female. Otherwise differs only sexually.

HOLOTYPE.—Female, Guadalcanal Island, from larvae collected October 28, 1944 (Berg); U.S.N.M. No. 57312.

Allotype.—Male, same data.

Paratypes.—Thirty-four males and 37 females, same data; 1 male, Poha River, Guadalcanal Island, November 3, 1944 (Laffoon); 1 female, Namatanai, New Ireland, February 26, 1940 (G. F. Gee), D 514.

Genus *ACYROCERA* Lindner

Acyrocera LINDNER, Ann. Mag. Nat. Hist., ser. 10, vol. 20, pp. 389–390, 1937.

ACYROCERA ARGYRASPI Lindner

Acyrocera argyraspis LINDNER, Ann. Mag. Nat. Hist., ser. 10, vol. 20, p. 391, 1937.

In both specimens examined by me the coloration is practically the same, except that the halteres are completely infuscated in the female. The scutellum is slightly, though distinctly, notched at the apex, between the apical pair of spines. Veins M_1 and M_2 are slightly separated at their points of origin, thus differing from the condition described and illustrated by Lindner; however, this character is of minor importance and is variable in related genera. In the female the front, at its narrowest, is about one-sixth the head width.

Described from a unique male from Guadalcanal Island. Additional records: GUADALCANAL ISLAND: 1 male 1944 (Berg). BOUGAINVILLE ISLAND: 1 female, April 10, 1944 (Downs).

Genus *LEVEROMYIA* Lindner

Leveromyia LINDNER, Ann. Mag. Nat. Hist., ser. 10, vol. 20, pp. 391–392, 1937.

LEVEROMYIA GENICULATA Lindner

Leveromyia geniculata LINDNER, Ann. Mag. Nat. Hist., ser. 10, vol. 20, pp. 392–394, 1937.

Only the female has been described. The two sexes are quite similar to each other; in the male the front is slightly narrower than the width of the ocellar triangle; in the female it is distinctly broader.

Described from Guadalcanal Island, and subsequently recorded by Lindner from San Cristobal Island. Additional records: GUADALCANAL ISLAND: 9 females, 27 males, January 28 and February 2, 1945 (Berg); Lunga River Valley, 1 female, 2 males, October 3 and 27, 1944 (Laffoon).

Genus EVAZA Walker

Evaza WALKER, Proc. Linn. Soc. London, vol. 1, p. 109, 1857.

EVAZA SOLOMONENSIS SOLOMONENSIS Curran

Evaza solomonensis CURRAN, Proc. California Acad. Sci., ser. 4, vol. 22, pp. 12–13, 1936.

Described from a male and a female from Vella Lavella Island and subsequently recorded by Lindner from San Cristobal, New Georgia, Savo, Tulagi, Guadalcanal, and Malaita Islands. Lindner did not distinguish between the forms *solomonensis* and *incidens*, which he considered absolute synonyms. Curran originally described these two, together with a third, *whitneyi*, as distinct species. Though I have not seen typical *solomonensis*, the material before me seems to justify the maintenance of the three forms as geographical races.

EVAZA SOLOMONENSIS INCIDENS Curran

Evaza incidens CURRAN, Proc. California Acad. Sci., ser. 4, vol. 22, p. 13, 1936.

Described from two females from Choiseul Island. Additional records: BOUGAINVILLE ISLAND: 3 females, 1 male 1944 and April 10, 1944 (Downs); 4 males, 1 female, July to September 1944 (Gurney); 2 females, caught in vegetation around pond, July 1, 1944 (Gurney); 1 female, Empress Augusta Bay, March 1944 (Downs) and 3 females, 1 male (Downs). NEW GEORGIA ISLAND: 1 female, Munda Point (Downs).

EVAZA SOLOMONENSIS WHITNEYI Curran

Evaza whitneyi CURRAN, Proc. California Acad. Sci., ser. 4, vol. 22, pp. 13–14, 1936.

Originally described from one male from Malaita Island. Additional records: GUADALCANAL ISLAND: 10 males, 16 females (January to April 1945 (Berg); 2 males, 1 female, 1944 (Ernest Reinschissel); 2 males, Lunga River Valley, September 6 and October 12, 1944 (Laffoon); 1 female, Umasami River, November 15, 1944 (Laffoon). FLORIDA ISLAND: 1 male, 1 female (Bohart).

Genus SALDUBA Walker

Salduba WALKER, Proc. Linn. Soc. London, vol. 3, p. 79, 1859.

SALDUBA LUGUBRIS Walker

Salduba lugubris WALKER, Proc. Linn. Soc. London, vol. 5, p. 271, 1861.

I am tentatively referring the Solomon Islands specimens to this species, which apparently is quite variable. In the specimens before me the mesonotum is covered with a short whitish (female) or pale yellowish (male) tomentum, broadly interrupted by a median and two submarginal dorsal stripes of black tomentum, which are confluent anteriorly. In this respect the Solomon Islands specimens resemble *diphysoides* Walker. The coloration of the legs differs in the two sexes, the femora of the female being chiefly black and those of the male being brownish yellow. This coloration corresponds essentially to that of the female (*lugubris*) and of the male (*singularis*) as re-described by Brunetti (Rec. Indian Mus., vol. 25, pp. 84–85, 1923), and considered by him as conspecific.

Collecting records: GUADALCANAL ISLAND: 1 male, 6 females, January to April 1945 (Berg); 1 male, Lunga River Valley, December 1943 (Knight); 1 female, Lunga River Valley, September 16, 1944 (Laffoon); 1 male, Poha River, September 3, 1944 (Laffoon); 1 female, Matanikau River Valley, November 9, 1944 (Laffoon). FLORIDA ISLAND: 3 females, 1 male, March 1945 (Bohart). NEW GEORGIA ISLAND: 1 male, April 1944 (Berg).

Genus LOPHOTELES Loew

Lophoteles LOEW, Berlin. Ent. Zeitschr., vol. 2, p. 110, 1858.

Three of the four known species of *Lophoteles* are recorded from the Solomon Islands, and may be separated by use of my key. The fourth, *L. fascipennis* Kertész, from New Guinea, is a clouded-winged species, like *L. vittipennis* (Lindner), but the clouding occurs chiefly beyond the base of discal cell, extends from the costal almost to the posterior margin, and leaves the broad apex hyaline. As Kertész has pointed out the American *L. pallidipennis* Williston belongs to an entirely different genus.

LOPHOTELES VITTIPENNIS (Lindner), new combination

Saldubella vittipennis LINDNER, Ann. Mag. Nat. Hist., ser. 10, vol. 20, p. 389, 1937.

In Kertész's key to the pachygasterine genera this species traces to *Lophoteles* and it seems to be congeneric with the other described species.

Described from Guadalcanal and Tulagi Islands. Additional records: GUADALCANAL ISLAND: 1 male, Teneru District, October 30,

1944 (Beck) ; 36 males, 20 females, August 1944 to June 1945 (Berg) ; 2 males, 1 female, Lunga River Valley, September 16 and October 3, 1944 (Laffoon). BOUGAINVILLE ISLAND: 1 male, 2 females, 1944, and April 10, 1944 (Downs) ; 1 male, 1944 (Gurney) ; 1 female, Empress Augusta Bay, March 1944 (Downs). FLORIDA ISLAND: 1 female (Bohart).

LOPHOTELES DENTATA, new species

Female.—Head black. Front narrow, at vertex 0.25, at antennal base 0.20, head width; shining, the ocellar triangle prolonged into a tapering glabrous median area, the rest of front coarsely punctate; facials whitish tomentose, the tomentum extending onto lower angles of front. Pile of front inconspicuous, that of occiput short, scattered, whitish. Antennae reddish; flagellum becoming broadly blackish laterally and apically; arista black, densely black-pilose. Thorax wholly black; mesonotum and scutellum with abundant but short and inconspicuous black tomentum; a pair of narrow whitish tomentose stripes on disc behind suture; each lateral margin of mesonotum, before the suture, with a rather conspicuous patch of silvery tomentum. Propleura white-tomentose; posterior half of each mesopleuron with a conspicuous band of silvery tomentum; sternopleura and metapleura with short, scattered, whitish hairs; other pleural areas glabrous. Scutellum in a plane with mesonotum, with a transverse preapical groove; apex medially produced into a short digitate process, which is about one-fifth length of scutellum and which bears two setiferous dentulae on each side; margin of scutellum with six to eight similar setiferous dentulae on each side of this process. Wings lightly and uniformly infumated; venation essentially as in *L. plumula*. Stalk of halteres yellow, knob blackish. Legs mainly whitish; middle coxae brownish; front femur, except broad base and apex, blackish; middle and hind femora each a preapical black annulus. Pile sparse, whitish. Abdomen 1.33 as long as broad, ovate, almost parallel-sided on segments three and four; wholly black, without pollen, and clothed with short inconspicuous brownish to blackish hairs. Length, 3.5 mm.

Holotype.—Female, Florida Island (Bohart), U.S.N.M. No. 58473.

LOPHOTELES PLUMULA Loew

Lophoteles plumula LOEW, Berl. Ent. Zeitschr., vol. 2, p. 111, 1858.

Recorded by Curran (1936) from Matema and Nupani Reef Islands, of the Santa Cruz group.