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THE PACHYGASTRINE GENERA *LENOMYIA*, *DIALAMPSIS*, *AIDOMYIA*, *ADRAGA*, *EUPACHYGASTER*, AND *PEGADOMYIA* IN NEW GUINEA AND THE BISMARCK ARCHIPELAGO (DIPTERA: STRATIOMYIDAE)[1,2]

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Abstract: The genera *Lenomyia*, *Aidomyia* and *Adraga* are reviewed and keys are included for New Guinea and the Bismarck Archipelago; the previously unknown female of *Dialampsis argentata* (Wulp) is described and new records are given for *Pegadomyia nuda* James. New species are: *Lenomyia grandis*, *similis*, *pyrifera*, *sedlacekorum*, *glabra*, *lucens*, *alticola* and *pallipes*; *Aidomyia tomentosa*, *nitens*, and *glabrifrons*; *Adraga dimidiata*; and *Eupachygaster flava*.

In 2 previous studies (James 1969, 1975) I have dealt with certain pachygastrine stratiomyids collected from this poorly known fauna. The present work deals with the genera that trace beyond paragraph 141 in the key of Kertész (1916), a complex which appears to be quite natural and easily separable from the other members of the subfamily in this area. The generic references of some species may be unsatisfactory, but to describe new genera to receive such species with the current status of our knowledge would be premature.

The following characters, based mostly on those used in Kertész's key, will separate the genera included here from the rest of the subfamily. The antennae are short, the scape only rarely as much as 2 × as long as wide, the pedicel never elongated, and the flagellum oval or kidney shaped, never divided (as in the Neotropical *Neochauna*) or with elongated processes (as in *Ptilocera*), never as long as high; the arista is thin, never style-like or plumose but often with short pubescence visible only at high magnifications. The prealar callus is inconspicuous, never thorn-like or spine-like as in the African *Diplephippium*. The scutellum is semi-oval or subtriangular with a rounded apex, sometimes considerably enlarged (as much as 1/2 the length of the mesonotum and proportionately broad), never with apical spines or produced into a horn-like apical projection, though often with one or more rows of setiferous microtubercles along the apical and part of the lateral margin. Vein R_4 is present; vein R_{2+3} arises interstitially with or beyond r-m. Kertész's characterization of r-m as plainly evident ("Cubitalquerader deutlich vorhanden") or shortened ("punktartig verkürzt") is difficult to use since this cross-vein is usually short in this group of genera and may be either clearly evident or not so within a single species. The abdomen is broader than the thorax at its maximum and is always

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broader than long. Some difficulty may be encountered in measuring the length of the abdomen since, particularly in males, it has a tendency to curve under toward the apex. All species studied are small or, at most, of small-medium size; none are more than 4.5 mm in length.

Unfortunately, most of the new species have had to be described from 1 sex only, usually the female, or with the association of the sexes not positively determined. When both sexes are available, a female is designated the holotype, since the most diagnostic characters seem to be those of that sex.

The specimens used in this study are mostly from the Bishop Museum, Honolulu, (BISHOP), but some are from the Commonwealth Scientific and Industrial Research Organization, Canberra, Australia (CSIRO), The California Academy of Sciences, San Francisco (CAS), and Washington State University, Pullman (WSU).

GENUS **Lenomyia** Kertész

Lenomyia Kertész, 1916, Ann. Mus. Nat. Hung. **14:** 186.

The genus *Lenomyia* was erected by Kertész to receive a single new species, *Lenomyia honesta* Kertész, described from 1 pair from Kankau, Taiwan. The 8 (or possibly 9) species treated here appear congeneric with *L. honesta* despite several minor differences. They trace to *Lenomyia* in Kertész's key if (1) cross-vein r-m is considered to be present, (2) paragraph 142(143) leading to *Gnorismomyia* is by-passed, (3) the scutellum is considered as triangular with rounded apex, paragraph 151(144), and (4) the blackening of the basal 1/2 of the wing, paragraph 152(153) is disregarded.

Actually, these discrepancies are minor. Cross-vein r-m is present (rarely punctiform) in the New Guinea and Bismarck species, though shorter than in most genera in which this vein is developed. However, Kertész states that in *Lenomyia* the cross-vein is very short. Also, he describes the scutellum as "halbelliptisch" despite the characterization in the key "Schildchen dreieckig mit abgerundeter Spitze." The clouding of the basal 1/2 of the wing, which will easily distinguish *L. honesta* from the New Guinea and Bismarck species, loses much of its significance as a generic character when one considers that there may be a strong contrast in the color of the veins, though not of the membrane, on the basal and apical halves of the wing of such species as *Lenomyia alticola*, n.sp.

The scutellum is clearly margined and denticulate laterally and apically. In profile it varies from moderately convex in *L. alticola* (FIG. 4) (or "schwach gewölbt" in *L. honesta*) to strongly and conspicuously convex in *Lenomyia pyrifera*, n. sp. (FIG. 3). From Kertész's drawing of *Gnorismomyia flavicornis*, the sole known species, the form of its scutellum in some species would fall within that range. Consequently, *L. pyrifera* and some other species might trace to *Gnorismomyia* rather than to *Lenomyia*. However, *Gnorismomyia* differs from *Lenomyia* in some important respects: the eyes of the male are widely separated; the antennae are set at approximately the middle of the head in profile; the occipital orbits of the male are much less developed below; vein R_{1+2} arises almost at r-m instead of

distinctly beyond it; and r-m is, presumably, long. In the New Guinea species of *Lenomyia* the eye facets of the male are much larger above than below and the 2 areas are clearly separated, though not by a sharp line ("mit deutlicher Teilungslinie") as Kertész describes it for *L. honesta*. In *Gnorismomyia*, according to the original description, all eye facets of the male are small.

Key to the New Guinea and Bismarck Archipelago species of *Lenomyia*

1. Stigma dark brown 2
   Stigma yellow 4
2. Front tibia dark brown to black 3
   All tibiae yellow ..... **pyrifera,** n. sp.
3. Frons between transverse sulcus and antennal bases wholly pollinose except immediately along longitudinal sulcus ..... **grandis,** n. sp.
   Frons between transverse sulcus and antennal bases with a pair of prominent, bare, glossy areas ..... **similis,** n. sp.
4. Front tibia dark brown to black 5
   Front tibia wholly yellow 6
5. Scutellum in profile strongly convex (cf FIG. 3); middle and hind tibiae yellow; length under 3 mm ..... **sedlacekorum,** n. sp.
   Scutellum in profile moderately convex (FIG. 5); all tibiae black; length over 3 mm ..... **lucens,** n. sp.
6. Scutellum in profile moderately convex (FIG. 4); femora black or brown 7
   Scutellum in profile strongly convex (FIG. 3) 8
7. Mesonotum largely subshining, set with short, appressed, regularly arranged hairs which are generally as long or longer than the distances between them ..... **alticola,** n. sp.
   Mesonotum strongly glabrous, with irregularly arranged, scattered hairs which are at least several times as far apart as their individual lengths ..... **glabra,** n. sp.
8. Coxae, trochanters, and femora black, tibiae and tarsi yellow ..... probable ♂ of **pyrifera**
   Legs wholly yellow, at most femora ringed with brown ..... **pallipes,** n. sp.

Lenomyia grandis James, new species

♀. *Head* in profile 0.60 as long and 1.25 as wide as high. Frons anterior to anterior ocellus almost parallel-sided, at narrowest 0.20 head width, widening slightly to vertex, to 0.25 at transverse sulcus, and to 0.33 at antennal bases; transverse sulcus almost straight, only slightly concave, feebly impressed; longitudinal sulcus more evidently so. Head black; upper frons shining to subshining; some white appressed hairs just before ocellar triangle next to eyes; a pair of more conspicuous patches, 1 adjacent to each eye, just above transverse sulcus; front below transverse sulcus, face, genae, and entire occipital orbits densely white tomentose with some short, white, suberect hairs, especially next to oral margin and on posterior part of lower occipital orbit; tomentum on lower frons interrupted narrowly along median sulcus, sometimes exposing part of background. Occiput black, subshining, with mostly white hairs; some hairs on upper part black. Antenna set at 0.35 head height; scape and pedicel pale yellow to yellow; flagellum reddish orange to brownish orange; arista dark orange to brown. Proboscis brown. *Thorax* black; pile of mesonotum appressed, largely white with conspicuous black areas which are variable but conform essentially to the following pattern: a median presutural vitta and a spot to each side, sometimes confluent with it; a transverse fascia just behind the suture, covering supra-alar convexities and areas between them; and a semi-oval prescutellar spot. Scutellum (FIG. 1) moderately arched; pile as on mesonotum, black basally and laterally, white medially; a fringe of short, white erect hairs at apex. Anterior and lower parts and a posterior border of mesopleuron, sternopleuron on anterior 1/2 and upper border, metapleuron, and pectus subshining with thick, white appressed pile, pleura otherwise bare and

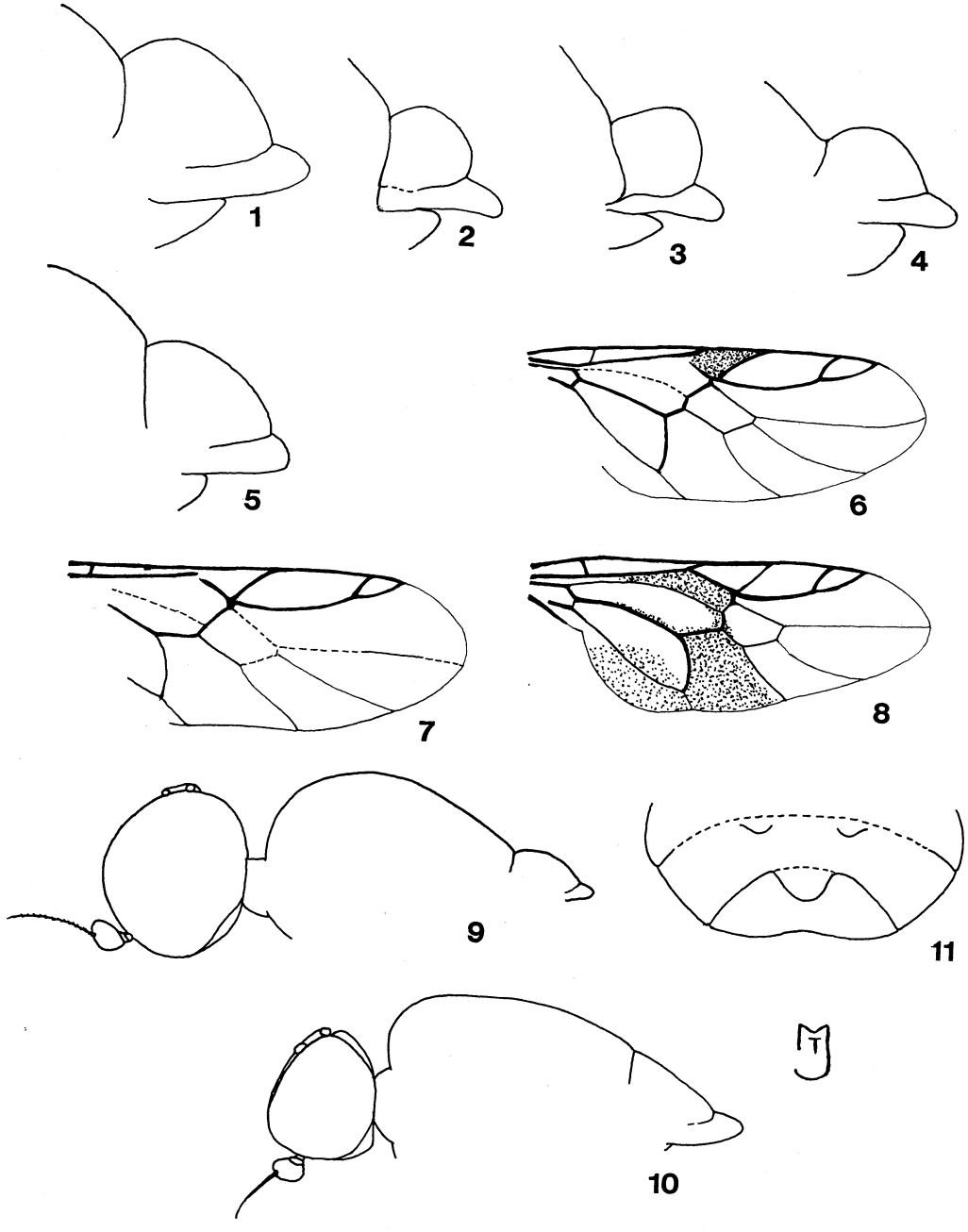

FIG. 1–11. 1–5, *Lenomyia*, profile of scutellum (pile and apical denticles omitted): 1, *L. grandis;* 2, *L. similis;* 3, *L. pyrifera;* 4, *L. alticola;* 5, *L. lucens.* 6–8, wing: 6, *Lenomyia pyrifera;* 7, *Aidomyia nitens;* 8, *Adraga dimidiata.* 9–10, profile of head, mesonotum, and scutellum: 9, *Eupachygaster flava,* ♂; 10, *Adraga dimidiata,* ♀. 11, *Adraga dimidiata,* ♀, outline of abdominal terga 4 and 5.

glossy. Legs mostly black; broad apex of front femur and sometimes narrow apices of middle and hind femora orange to reddish orange; front tarsus beyond basal 1/3 to 1/2 of basitarsus and other tarsi entirely yellow; legs with white pile. Wing hyaline, tinged with brown; veins and stigma brown. Halter mostly yellow, becoming brownish yellow toward base of stalk; knob anteriorly with a prominent triangular black spot, grading through brown to yellow. *Abdomen* black, 1.33 as wide as long and 1.33 as wide as maximum width of thorax; terga 1–3 and base of 4 thickly punctured and subshining, terga 4 and 5 and sterna 1–5 much less densely punctured and shining, sternum 1 dull; pile appressed, short, white. Ovipositor brownish black at base, otherwise brown, conjuctivae yellow; cerci very small.

Length: 3.3–4.4 mm, of holotype 3.9 mm.

♂. Unknown.

Holotype ♀ (BISHOP 10,680), PNG: New Guinea (NE): Wau, 1190 m, 11.IX.1964, malaise trap, M. Sedlacek; paratypes: 9 ♀♀, same location but 1200 m, 5.X.1962, 1000 m, 13.X.1961, and 1250 m, 7.V.1965, all J. Sedlacek; 1 ♀, same location but 1250 m, 3.IX. 1965, J. & M. Sedlacek; 1 ♀, same location but 1200 m, 1.XI.1965, P. Shanahan; 1 ♀, Wau, Mt Kaindi, 1230 m, 5.X.1964, malaise trap, J. Sedlacek; 1 ♀, Wau, Mt Missim, 1400 m, 26.IX.1964, malaise trap, M. Sedlacek; 1 ♀, Karimui, 2–3.VI.1961, malaise trap, J. L. Gressitt; 1 ♀, Prince Alexander Range, 2800 ft (853 m), IX.1959, R. Pullen; New Guinea (SE): 1 ♀, Owen Stanley Range, Goilala, Loloipa, 16–30.I.1958, W. W. Brandt. IRIAN: New Guinea (NW): 2 ♀♀, Vogelkop, Bomberi 700–900 m, 5.VI.1959, J. L. Gressitt; 1 ♀, Bokondini, 40 km N of Baliem Val., ca 1300 m, 16–23.XI.1961, L. W. Quate (BISHOP, WSU).

Lenomyia similis James, new species

Similar to *L. grandis* but smaller; differs from *L. grandis* as follows.

♀. Frons at narrowest usually broader but variable, 0.20–0.25 head width, 0.25 in holotype; transverse sulcus more clearly impressed. Frons between transverse sulcus and ocellar triangle with suberect white hairs arranged in a longitudinal vitta on each side, each 1/4 to 1/3 width of frons, well separated from longitudinal sulcus and narrowly to well separated from ocular orbit, these hairs not noticeably denser toward transverse sulcus. Lower frons on each side with a glabrous area, variable in size, sometimes small and round, sometimes covering a large part of lower frons except next to eyes and toward longitudinal sulcus, at times even extending somewhat below antennal bases laterally. Antennal flagellum brown to dark brown inwardly. Pile of mesonotum much more extensively white than in *L. grandis*, black pilose areas limited to supra-alar convexities, a poorly-defined median triangle on prescutum extending backward from anterior margin, and anterior part of scutellum. Scutellum in profile (FIG. 2) intermediate between *L. grandis* and *L. pyrifera*. Pile of pleura distributed as in *L. grandis* except much less dense and anterior part of mesopleuron bare. Legs as in *L. grandis* except front and middle tibiae wholly yellow; front basitarsus variable, wholly yellow to almost wholly black. Wing, halter, and abdomen essentially as in *L. grandis*. Length: 2.3–2.8 mm, of holotype 2.8 mm.

♂. Unknown.

Holotype ♀ (BISHOP 10,681), PNG: New Guinea (NE): Wau, 1250 m, 4.V.1965, J. H. Sedlacek; paratypes: New Guinea (SE): 1 ♀, Cape Rodney, 2–4.XI.1960, malaise trap, J. L. Gressitt; 1 ♀, Central Distr., Otomata Plantation, 1 mi (1.6 km) E of Port Moresby, 2.XI.1960, Gressitt; New Britain: 1 ♀, Gazelle Peninsula, Gaulim, 130 m, 28.X.1968, J. Sedlacek; 2 ♀♀, Gazelle Peninsula, Upper Warangoi, Illugi, 220 m, 15. XII.1962, malaise trap, Sedlacek (BISHOP, WSU).

This is a variable species and more than one may be involved, but without males and with a scant representation of females from diverse localities it is best not to describe more than 1 species at this time. Notably, the front basitarsus is wholly yellow in the New Britain specimens and at least black basally (missing in 1 paratype) in the New Guinea specimens. Perhaps the New Britain population may form at least a distinct subspecies. One ♀, PNG: New Ireland (SW): "Camp Bishop", 1 km up Kait River, 240 m, 9.VII. 1956, E. J. Ford, Jr., traces to this species in the key but does not belong here; its scutellum is strongly convex, like that of *L. pyrifera*, n. sp.

Lenomyia pyrifera James, new species

♀. *Head* in profile 0.55 as long and 1.25 as wide as high. Frons at narrowest (at transverse sulcus) 0.25 head width, broadening to 0.33 at vertex and 0.35 across antennal bases; longitudinal and transverse sulci both feebly impressed, latter almost straight to broadly V-shaped. Head black; upper frons shining with white, semi-appressed hairs in 2 irregular vittae, broadly separated from each other and from ocular margins. Lower frons, face, genae, and lower 1/2 of occipital orbits densely white tomentose; glabrosity of upper frons, however, extending in a narrow to broad (as in holotype) angle toward antennal bases along median sulcus; an oval glabrous area of variable size interrupting tomentum of lower frons between each antennal base and corresponding ocular margin. Upper occiput, including orbits, subshining with white to whitish hairs, lower occiput glabrous and mostly bare. Scape and pedicel pale yellow; flagellum orange, on inner surface partly orange-brown to brown; arista brown. Proboscis dark brown. *Thorax* black. Pile of mesonotum appressed but that of median 1/3 of prescutum and that covering a large part of supra-alar convexities black. Scutellum (FIG. 3) prominently arched, usually white pilose but with some black pile, sometimes wholly black pilose. Pleural pile white; distribution approximately as in *L. grandis* but scant on mesopleuron. Coxae, trochanters, and femora except apices black, legs otherwise yellow; hairs white to pale yellow. Wing (FIG. 6) hyaline; stigma and veins basad of it except toward posterior margin of wing brown to dark brown; radius and costa beyond stigma yellow; other veins pale yellow to white. Halter as in *L. grandis*. *Abdomen* typically black but variable, in holotype with castaneous reflections toward apex, sometimes largely castaneous to dark castaneous; 1.35 as wide as thorax, 1.25 as long as wide. Hairs white, appressed, moderately dense but inconspicuous on terga 2 and 3, otherwise scant; terga 4 and 5, apex of 3, and sterna 2–5 glabrous. Ovipositor brown, incisures, last segment, and cerci yellow.

Length: 2.6–3.2 mm, of holotype 3.0 mm.

♂. See *Lenomyia* sp., following.

Holotype ♀ (BISHOP 10,682), PNG: New Guinea (NE): Wau, 1250 m, 7.V.1965, J. Sedlacek; paratypes: 1 ♀, same data; 16 ♀♀, same location 13.X.1962, 12.I, 15.I, 20.III, 17.V, 29.VIII.1963, 3.VIII, 18.VIII.1964, 22.III, 4.V, 7.V, 16.VIII.1965, J. or J. & M. Sedlacek; 15 ♀♀, same location, 1200 m, 15.IX.1964, J. Sedlacek, and 11.IX.1964, M. Sedlacek; 19 ♀♀, same location, 1200 m, 7.VII, 29.VII, 26.X, 9.XII.1961, 5.X.1962, 15–16.I, 21.I.1963, J. Sedlacek; 3 ♀♀, same location, 1200 m, 1.XI.1965, P. Shanahan; 17 ♀♀, same location, 1050 m, 30.IX, 4.XI, 11.XI.1961, J. Sedlacek; 3 ♀♀, same location, 1100 m, 13.X.1961, J. Sedlacek; 1 ♀, same location, 1180 m, 20.IX.1964, J. Sedlacek; 1 ♀, same location, 1220 m, 26.I.1963, J. Sedlacek; 5 ♀♀, same location, 1000 m, 13.X. 1961, J. Sedlacek; 2 ♀♀, same location, 1230 m, 23.X.1964, 3.X.1965, J. & M. Sedlacek; 1 ♀, Wau, Kunai Ck, 1250 m, 26.VIII.1963, J. Sedlacek; mostly from malaise trap, a few from light trap or netted (BISHOP, WSU).

OTHER SPECIMENS EXAMINED. PNG: New Guinea (NE): 3 ♀♀, Karimui, 1080 m, 14.VII.1963, M. Sedlacek; 1 ♀, Lae, 25 km NE, 100 m, 28.IX.1961, J. Sedlacek; IRIAN: New Guinea (NW): 1 ♀, Swart Val., Karubaka, 1300 m, 7.XI.1958, J. L. Gressitt; 2 ♀♀, Star Mts, Sibil Val, 18.X–8.XI.1961, S. & L. Quate; 1 ♀, Central Mts, Archbold Lake, 760 m, 26.XI–XII.1961, L. W. Quate.

The name *pyrifera* refers to the somewhat pear-shaped profile of the scutellum.

Lenomyia sp.

This is probably the ♂ of *L. pyrifera*.

Head in profile 0.70 as long as high. Eyes contiguous about halfway from anterior ocellus to antennal bases; frontal triangle and face white tomentose, either entirely so (as in the Jimmi River specimens) or interrupted on frons by a pair of glabrous spots as in *L. pyrifera*. Antenna as in *L. pyrifera*. Pile of mesonotum similar to that of *L. pyrifera* but the black pile tending to be more extensive; pale pile mostly golden, most prominent on postscutum from base of scutellum to suture, white, however, above wing bases anterolaterad of scutellum. Scutellum as in *L. pyrifera*. Legs, halter, and wing as in *L. pyrifera* except stigma yellow. *Abdomen* varying from wholly black to almost wholly brownish yellow. Length: 2.7–2.8 mm.

MATERIAL EXAMINED. 3 ♂♂, PNG: New Guinea (NE): Wau, 1200 m, 24.VII.1961, light trap, 25.VII.1961, malaise trap, and 23–24.VII.1964, M. V. light trap; all J. Sedlacek; 7 ♂♂, Jimmi River, VII.1961, W. W. Brandt.

One ♂, PNG: New Guinea (NE): Eliptamin Valley, 1665–2530 m, 19.VI.1959, W. W. Brandt, may be this or a different species. It is very similar but the head is shorter, 0.65 as long as head height, the mesonotal pile is more extensively black, and the pale mesonotal pile is yellow. Length: 3.0 mm.

Lenomyia sedlacekorum James, new species

♀. *Head* in profile 0.55 as long and 1.20 as wide as high. Frons at narrowest (at transverse sulcus) 0.25 head width, widening to 0.30 at vertex and 0.33 across antennal bases; transverse sulcus broadly V-shaped, slightly impressed, longitudinal sulcus more evidently so. Head black; upper frons shining with scattered, white semi-appressed hairs; lower frons broadly white tomentose along transverse and longitudinal sulci, narrowly so along occipital orbits, leaving a pair of large, oval, glabrous spots; face, genae, and occipital orbits white tomentose, with some inconspicuous white hairs, occiput including upper orbits shining. Antenna set at 0.33 head height; scape and pedicel yellow, flagellum dark orange to orange-brown. Proboscis dark brown. *Thorax* black; pile short, mostly white, partly black on convexities above wing bases, black on a large, anterior, median triangle on the prescutum and over most of dorsal surface of scutellum. Scutellar profile similar to that of *L. pyrifera*. Coxae, femora except extreme bases and apices, front tibia, and base of front basitarsus black; legs otherwise yellow to pale yellow, hind tarsus almost white. Wing hyaline; stigma and most veins yellow, costa and radius basad of stigma brown. Halter as in *L. grandis*. *Abdomen* black; 1.40 as wide as maximum width of thorax and approximately 1.50 as wide as long but turned under apically and consequently difficult to measure; mostly shining to subshining with scattered white hairs, subshining on terga 2 and 3, with moderately abundant, appressed, short hairs on median 1/3 of 2 and 3 except broad apex of latter. Ovipositor brown, cerci yellow.

Length: 2.5–2.7 mm, of holotype 2.5 mm.

♂. Head length 0.60 head height. Eyes contiguous about 2/5 distance from anterior ocellus to antennal bases. Face and frontal triangle white tomentose except narrowly along median longitudinal sulcus of frons and on a large, glabrous, oval spot on each side, extending ventrad approximately to antennal bases. Antenna yellow except a prominent oval dark brown spot on inner surface of flagellum before its apex.

Thoracic pile longer and more conspicuous than in ♀, black on anterior median triangle of prescutum as in ♀, on convexities above wing bases, and on most of dorsal surface of scutellum. Abdominal pile as in ♀ but longer and more conspicuous. Genitalia yellow; dististyles elongated, flattened, oval. Length: 2.5 mm.

Holotype ♀ (BISHOP 10,683), PNG: New Guinea (NE): Wau, Morobe Distr., 1200 m, 17–20.I.1963, malaise trap, J. Sedlacek; paratypes: 2 ♀♀, same location, 21.I.1963, and 1000 m, 13.X.1961; 1 ♂, Jimmi River, VII.1961, W. W. Brandt (BISHOP, WSU).

Lenomyia glabra James, new species

♀. Readily distinguishable from other species of this genus by the brightly shining, scantly pilose mesonotum and scutellum. *Head* in profile 0.80 as long and 1.50 as wide as high. Frons at narrowest (just above transverse sulcus) 0.22 head width, widening to 0.30 at vertex and 0.30 across antennal bases; transverse sulcus straight, slightly impressed, longitudinal sulcus more evidently so. Head black; upper frons shining, almost bare just a few short, inconspicuous hairs near ocellar triangle; lower frons and face densely pale yeliow, almost white, tomentose except a narrow glossy strip encompassing lower longitudinal sulcus, continuous with glossy upper frons and extending to antennal bases. Lower occipital orbits and genae white tomentose; upper orbits and vertex behind ocellar triangle with short, appressed, yellowish white hairs; occiput mostly subshining to shining, with pale yellow, appressed hairs on upper and white ones on lower part. Antenna with scape and pedicel pale yellow, flagellum orange, a small brown blotch on inner surface before apex; arista brownish yellow. Proboscis dark brown. *Mesonotum* and upper surface of scutellum glossy, scantly set with setigerous punctures, hairs arising from them mostly abraded except on notopleuron, where they are much shorter than distance between punctures, color of hairs apparently gray; margin of scutellum more thickly and grossly punctured, hairs gray to black. Profile of scutellum similar to that of *L. alticola*. Pleura mostly glossy; hairs scant, short, gray to black. Coxae subshining, black; trochanters and femora except apices dark brown to black; middle and hind tibiae brown except broad bases and apices; front tibia and all tarsi yellow. Stigma yellow; veins basad of it dark brown to black; costa and radius beyond stigma yellow, becoming brownish yellow to pale brown apicad; veins forming discal cell and emerging from it pale yellow. Halter as in *L. grandis* but dark area less clearly defined. *Abdomen* 1.35 as wide as maximum width of thorax and 1.50 as wide as long; mostly glossy and scantily haired, as thorax, hairs short, appressed, and gray; hairs on most of tergum 1 and on median parts of 2 and 3 rather dense but short, suberect to erect, black; sternum 1 opaque. Ovipositor withdrawn in type.

Length, 2.6 mm.

Two ♂♂, PNG: New Guinea (NE): Mt Giluwe, N side Malgi, 2500 m, 25–30.V.1961, J. L. Gressitt, and Mt Kaindi, 2350 m, 30.IV.1966, malaise trap, Gressitt, may be this species. Most of the mesonotum and dorsal surface of the scutellum is thickly punctured; the hairs arising from the punctures are short, black, appressed, and hard to see at magnifications under 100 ×, though some may be as long as the distances between punctures. There is a bare, glossy area on each side of the mesonotum taking in part of the supralar convexity and extending uninterrupted across the suture toward the supra-humeral area. The much more densely punctate and much less shining mesonotum and scutellum of these males may be a sexual differentiation from the females.

Holotype ♀ (BISHOP 10,684), PNG: New Guinea (NE): Mt Missim, 7° 15′ S, 146° 48′ E, 1600 m, 5.V.1966, J. L. Gressitt.

Lenomyia lucens James, new species

♀. *Head* in profile 0.60 as long and 1.40 as wide as high. Frons almost parallel sided, at narrowest 0.20 head width, only slightly wider at vertex and at transverse sulcus, widening to about 0.30 at antennal bases;

transverse sulcus broadly V-shaped, but slightly impressed; longitudinal sulcus well impressed just above transverse one and there separating 2 low dome-like convexities, evanescent above; frons mostly shining, scantly punctured on convexities and beside ocellar triangle, setulae visible only when viewed obliquely. Head black; lower frons densely white tomentose, only a narrow median line shining; face and lower occipital orbits densely white tomentose, face with some subappressed white hairs; upper occipital orbits, vertex, and outer parts of occiput dull to subshining with short, yellow, subappressed hairs, occiput becoming glabrous toward neck. Antennal scape and pedicel yellow, flagellum orange-yellow to brownish red, darker inwardly, arista brown, becoming darker brown to brownish black toward apex. Proboscis dark brown. *Mesonotum* and upper surface of scutellum glossy, mostly regularly and moderately thickly punctured, hairs rising from punctures very short and inconspicuous, apparently gray, visible only obliquely at magnification of 100 ×, so that except for punctures these areas might ordinarily be considered bare. Scutellum similar to that of *L. grandis* but much less arched (FIG. 5). Pleura mostly glossy; propleuron well set with short, erect white to yellow hairs; metapleuron and large part of sternopleuron densely punctured, hairs, however, very short and inconspicuous, gray to black. Tarsi except large part of front basitarsus yellow, legs otherwise entirely black. Wing hyaline; stigma and veins beyond it yellow, those basad of it brown to dark brown. Halter as in *L. grandis*. *Abdomen* about 1.40 as wide as thorax and 1.40 as wide as long; black, subshining to shining, terga 1–3 subopaque medially; hairs moderately abundant but short and inconspicuous, appressed, gray to grayish white dorsally, white to yellowish ventrally; ovipositor black, at least toward apex; cerci with a reddish cast.

Length, 3.5–4.0 mm, of holotype 3.5 mm.

♂. Unknown.

Holotype ♀ (BISHOP 10,685), PNG: New Britain: Gazelle Pen., Mt Sinewit, 900 m, 7–16. IX.1962, J. Sedlacek; paratypes, 2 ♀♀, same location, 3500 ft (approx. 1065 m), 27.VI–17.IX.1963, W. W. Brandt (CSIRO, WSU).

Lenomyia alticola James, new species

♀. *Head* in profile 0.60 as long and 1.30 as wide as high. Frons at narrowest (just above transverse sulcus) 0.20 head width, broadening to 0.25 at vertex and 0.30 across antennal bases; longitudinal and transverse sulci slightly impressed, latter almost straight, only slightly produced medially ventrad into a broad V. Head black, shining, with a few scattered gray hairs; lower frons, face, genae, and lower 1/2 of occipital orbit densely white tomentose, except on lower frons narrowly along median sulcus and on an oval spot above and laterad of each antennal base; some short erect white hairs on face; upper occipital orbits narrow, subshining, with a row of short, erect, white hairs; occiput mostly shining and bare, becoming subshining with scattered hairs below. Antenna set at 0.35 head height; scape and pedicel pale yellow, flagellum orange-yellow, briefly brown at tip; arista orange-yellow at base, becoming brown and possibly darker toward tip (apical part missing in type). *Thorax* black. Pile of mesonotum short, appressed; mostly black presuturally, some laterally brown to brownish yellow; postsuturally mostly brownish yellow to yellow except over supra-alar convexities and toward postalar regions. Scutellum (FIG. 4) low-arched, pile as on mesonotum, brown to yellowish brown on disc, becoming black laterally and subapically, an apical fringe yellowish brown. Pleura mostly shining and bare, some white to whitish hairs on propleuron, upper part of sternopleuron, and posterior part of mesopleuron; metapleuron dull, with suberect white hairs. Coxae, trochanters, and femora except apices brownish black to black, legs otherwise yellow to pale yellow; hairs white. Wing hyaline; costa and radius to first furcation dark brown, stigma and rest of costa and radius yellow; veins forming and those emerging from discal cell pale yellow. Halter as in *L. grandis*. *Abdomen* black, in holotype grading to dark castaneous laterally and to yellowish brown on tergum 5, venter mostly dark castaneous (color probably variable); 1.60 as wide as broadest part of thorax and 1.70 as wide as long. Hairs appressed to semi-appressed, scattered, concolorous with background. Ovipositor dark castaneous.

Length: 2.3 mm.

Holotype ♀ (BISHOP 10,686), PNG: New Guinea (NE): Mt Missim, 7° 15′ S, 146° 48′ E, 1600 m, 25.IV.1966, malaise trap, O. R. Wilkes.

One ♂, IRIAN: New Guinea (NW): Wisselmeren, Enarotadi, 1800 m, 5.VIII.1955, light trap, J. L. Gressitt, runs here in the key and may be this species.

Lenomyia pallipes James, new species

♂. *Head* in profile 0.70 as long and 1.30 as wide as high. Eyes contiguous about 1/2 way from anterior ocellus to antennal bases. Head black; upper frons shining to subshining, bare; frontal triangle, face, genae, and occipital orbits white tomentose, without any glabrous spots but in an oblique angle background showing through on face except along eyes and oral margin; some erect to suberect hairs on face. Occipital orbits developed only on lower 1/2. Occiput shining above, becoming subshining below, with some erect hairs. Antenna set at 0.30 head height; scape and pedicel pale yellow, flagellum pale orange-yellow, extensively brown on inner surface toward apex. Arista yellow. Proboscis yellow to brownish yellow. *Mesonotum* black with appressed hairs, which are golden on median 1/3, becoming black laterally, the paler hairs most evident just before scutellum. Mesonotum moderately arched, intermediate between *L. alticola* and *L. similis* (cf FIG. 4, 2), mostly with appressed black hairs. Pleura mostly shining, black to dark castaneous; hairs scant except on pectus where they are appressed and white. Legs in holotype mostly yellow except a brown patch on hind coxa, in paratype with a pale brown area on apical 1/2 of each femur. Wing hyaline; stigma and anterior veins yellow (base of radius pale brown in paratype); other veins almost white. Halter yellow, a brown subtriangular spot on middle of lower surface. *Abdomen* 1.30 as wide as maximum width of thorax and 1.40 as wide as long; yellow, becoming brownish yellow to pale brown on parts of terga but without any definite pattern. Hairs yellow, most prominent and erect to suberect on sides of tergum 1.

Length: 2.6 mm (holotype), 2.35 mm (paratype).

♀. Unknown.

Holotype ♂ (BISHOP 10,687), PNG: New Guinea (SE): Owen Stanley Range, Goilala, Bome, 1950 m, 24.II–7.III.1958, W. W. Brandt; paratype, 1 ♂, same location, 8–15.III. 1958, Brandt (BISHOP).

GENUS **Dialampsis** Kertész

Dialampsis Kertész, 1916, Ann. Mus. Nat. Hung. **14:** 193.

This genus will trace easily in Kertész's key if cross-vein r-m is considered punctiform. In the material before me this cross-vein, though very short, is not punctiform; it is more nearly as in *Lenomyia pyrifera* (cf FIG. 6). Indeed, the venation agrees with that of *L. pyrifera* as closely as does that of the other species of *Lenomyia*, the most noticeable difference being the narrower, less-flared cell R_5, which in *Dialampsis*, is almost parallel-sided from the apex of the discal cell to near the apex of vein R_5.

The scutellum is convex, similar in profile to *Lenomyia alticola*, though not nearly as clearly margined (Kertész says "nicht gerandet," though an indistinct margin is visible) and almost on a plane with the curve of the profile of the mesonotum.

Dialampsis argentata (Wulp)

Obrapa argentata Wulp, 1898, Természetrajzi Füzetek **21:** 417.
Dialampsis argentata (Wulp), Kertész, 1916, Ann. Mus. Nat. Hung. **16:** 194.

This species was known only from 2 ♂♂, from NE New Guinea (type) and from Deslacs Island, Bismarck Archipelago. The ♂♂ recorded here agree essentially with Kertész's redescription. The antennae are paler yellow, however, hardly "rein weiss," and the extent of the pleural brownish yellow area is variable, the pleura sometimes being almost wholly black.

♀ (previously undescribed). Ratio of head length, head height, and head width 52: 65: 100; frons at narrowest (at transverse sulcus) 0.20 head width, above this almost parallel, widening to 0.22 across anterior ocellus, to 0.33 across bases of antennae, and to 0.40 at oral margin. Transverse sulcus well impressed, longitudinal one less so but distinct especially toward ocellar triangle. Occipital orbits narrow but broader than lower 1 of ♂ and well developed for their entire length. White tomentum, as in ♂, covering almost entire head except center of occiput. Antenna somewhat longer than in ♂, flagellum with an elongated brown area on inner side before apex. Thoracic pile appressed, as in ♂, with a slightly yellow cast, not as long as in ♂ but densely covering mesonotum, background showing through a little more clearly on 2 pairs of rounded spots, one presutural and one postsutural. Pleura wholly black. Abdomen murky brown, base of tergum 1, a large rounded spot on lateral margin each of 3 and 4, and most of tergum 5 brownish yellow; pile more yellowish than in ♂. Length: 3.0–3.2 mm.

MATERIAL EXAMINED. PNG: New Guinea (NE): 1 ♀, Dreikikir, Sepik Distr., 400 m, 25.VI.1961, malaise trap, J. L. & M. Gressitt; 1 ♀, Amok, 165 m, 6.I.1960, T. C. Maa; 6 ♂♂, Maprik, 150 m, 29.XII.1959–17.I.1960, Maa; New Britain: 1 ♂, Gazelle Pen., Kerawat, 60 m, 1.IX.1955, primary bush, J. L. Gressitt. IRIAN: New Guinea (NW): 1 ♂, Waris, S of Hollandia, 16–18.VII.1959, Maa; 1 ♂, Hollandia, 24.I.1960, Maa.

GENUS **Aidomyia** Kertész

Aidomyia Kertész, 1916, Ann. Mus. Nat. Hung. **14:** 191.

This genus was described to receive its type-species, *Aidomyia femoralis* Kertész, from Taiwan. James (1962) added *Aidomyia snyderi* from the Bonin Islands. The 3 species described here trace to *Aidomyia* in Kertész's (1916) key and seem to fit best into this genus. The 5 known species, however, do not form a homogenous complex and it may ultimately be necessary to recognize more than 1 genus here.

KEY TO KNOWN ♀♀ OF *Aidomyia*

1. Pile of posterior 1/2 of mesopleuron clearly evident and at least moderately abundant; over 3.5 mm in length 2
   Pile of posterior 1/2 of mesopleuron scant and easily overlooked; less than 3.0 mm in length..... 3
2. Frons at narrowest 1/6 head width; mesonotal hairs short, wholly appressed, yellow (silvery in the ♂)..... **snyderi** James
   Frons at narrowest 3/10 head width; mesonotal hairs shaggy, largely subappressed, partly black (♂ unknown)..... **tomentosa,** n. sp.
3. Antennal scape clearly longer than wide; femora brown, legs otherwise wholly yellow..... **femoralis** Kertész
   Antennal scape no longer than wide; legs wholly yellow..... 4
4. Frons densely white tomentose except along a median line between transverse sulcus and antennal bases; upper frons not elevated above..... **nitens,** n. sp.
   Frons bare and glossy between transverse sulcus and antennal bases; upper frons with a triangular elevation anterior to apex of ocellar triangle..... **glabrifrons,** n. sp.

Aidomyia tomentosa James, new species

♀. *Head* 0.75 as long and 1.20 as wide as high. Frons at narrowest (just above transverse sulcus) 0.30 head width, widening to 0.35 at vertex and 0.45 across antennal bases; transverse sulcus almost straight, forming a broad, shallow V, slightly impressed; longitudinal sulcus clearly evident from antennal bases to transverse sulcus but evanescent to lacking above. Head black; upper frons shining very narrowly adjacent to eyes and more broadly so on median line from anterior ocellus to point where longitudinal sulcus begins to appear, about 2/3 distance to transverse sulcus; upper frons and vertex otherwise with abundant, shaggy, white, subappressed to appressed hairs; lower frons, face, gena, and lower occipital orbits densely white tomentose with considerable subappressed to semierect white hairs; occiput subshining with subappressed white hairs, denser on upper orbit and behind vertex, sparser toward cervical region; some black hairs on lower gena. Antenna set at 0.30 head height, yellow, arista brownish yellow, micropubescent. Flagellum small, about 1/6 head height. Proboscis brownish black. *Thorax* black; mesonotum and scutellum densely and uniformly with shaggy, long, appressed to subappressed hairs except on extreme anterior margin of prescutum, which is bare and glossy; some semierect hairs on postscutum and scutellum; hairs mostly yellowish white to white but those on a diamond-shaped area on disc of prescutum, a broad transverse band just behind suture from wing base to wing base, and apical 1/2 of scutellum black. Scutellum about 0.40 as long as mesonotum and 0.80 as long as wide, semioval, set at an angle of about 30° with mesonotum. Pleura mostly with thick, rather long, appressed to subappressed white hairs; a shining bare area on mesopleuron from anterior coxa to notopleural suture and a larger one from mid and hind coxae, across metapleuron, posterior part of sternopleuron, and pteropleuron to wing base. Coxae black; front femur largely brown; a brown preapical spot on middle femur; front and middle legs otherwise pale yellow to almost white (hind legs missing in type). Wing hyaline; veins basad of stigma brown to dark brown, other veins yellow; stigma pale yellow. Halter almost white, stalk yellow at base. *Abdomen* 1.4 as broad as thorax and 1.2 as broad as long; black, mostly subshining, sternum 1 and extreme sides of 2 opaque; hairs mostly appressed, conspicuous, yellow to yellowish white, those on outer 1/3 to 1/4 of tergum 2 black and largely suberect to erect.

Length, 4.0 mm.

♂. Unknown.

Holotype ♀ (BISHOP 10,688), IRIAN: New Guinea (NW): Star Mts, Sibil Val., 1245 m, 18.X–8.XI.1961, S. & L. Quate.

Aidomyia nitens James, new species

♀. *Head* 0.70 as long and 1.30 as wide as high. Frons at narrowest (a short distance above transverse sulcus) 0.25 head width, widening to 0.33 at vertex and 0.33 across bases of antennae; transverse and longitudinal sulci feebly impressed. Head black; frons, vertex, genae, lower occipital orbits, and center of occiput shining; hairs of frons scant, subappressed, yellowish; frons below transverse sulcus and face densely white tomentose; occiput subshining with mostly black to blackish hairs which become yellowish above. Antenna yellow, becoming brownish yellow on flagellum, more brownish on inner surface; scape and pedicel short; flagellum large, about 0.3 head height; arista yellow, almost bare, with micropubescence visible only at magnification of 100 × or more. Proboscis yellow to brown. *Thorax* black; mesonotum and scutellum mostly thickly punctate, with appressed golden hairs; mesonotum subshining in some places when viewed obliquely, becoming bare and shining anteriorly and sparsely haired and subshining on sides from humerus to wing base. Scutellum at only a slight angle (about 10° with level of mesonotum). Pleura largely bare and shining; several inconspicuous hairs at posterior margin of mesopleuron; metapleuron, sternopleuron except posteriorly, and pectus with abundant, well-spaced, appressed hairs; prosternum very minutely punctured and micropubescent. Legs including coxae wholly yellow and yellow haired. Wing hyaline; veins C and R basad of stigma brown, stigma, rest of C and R, and other veins basad of discal cell yellow, veins forming discal cell except its base and those emerging from it faint, concolorous with membrane. Venation as in FIG. 7, similar to that of *Lenomyia pyrifera* but origin of R_{2+3}

almost interstitial with r-m. Halter pale yellow, almost white. *Abdomen* 1.40 as wide as thorax and 1.75 as wide as long; dark castaneous to black; terga medially subshining with fairly closely set, short, appressed white hairs; terga 2–4 with broad sides and tergum 5 wholly shining with very sparse, appressed, white hairs. Ovipositor and cerci yellowish brown.

Length, 2.1–2.6 mm, of holotype 2.4 mm.

♂. Unknown.

Holotype ♀ (BISHOP 10,689), PNG: New Guinea (NE): Wau, 1200 m, 14.III.1966, malaise trap, J. L. Gressitt; paratypes: 1 ♀, same data as holotype; 3 ♀♀, Wau, 1100 m, 17.I.1963, 1200 m, 16.I.1963, and 1250 m, 15.I.1963, all malaise trap, J. Sedlacek; 1 ♀, Wau, 1190 m, 11.IX.1964, malaise trap, M. Sedlacek (BISHOP, WSU).

Aidomyia glabrifrons James, new species

Very similar to *A. nitens*, from which it differs as follows.

♀. *Head* 0.70 as long and 1.14 as wide as high; frons at narrowest (across transverse sulcus) 0.24 head width, widening to 0.28 at vertex and 0.28 across antennal bases. Both transverse and longitudinal sulci feebly impressed; latter vanishing just above middle of frons where it reaches the apex of a low triangular elevation extending ventrad from the ocellar triangle and rising slightly but distinctly above adjacent sides of frons. Head black; entire frons glossy, bare except near longitudinal sulcus between upper frontal elevation and transverse sulcus, where there are some appressed white hairs; face with dense white tomentum; vertex, gena and occiput shining with white appressed hairs. Proboscis yellow. Hairs of mesonotum pale golden, those of sides distinctly less dense than on disc. Scutellum forming an angle of about 30° with level of mesonotum. A few inconspicuous scattered hairs on mesopleuron in addition to those of posterior margin, but hairs of sternopleuron and pectus much less abundant than in *A. nitens*. Cross-vein r-m well developed, about length of humeral cross-vein. Abdomen dark castaneous with scattered, appressed, white hairs, those of disc of terga not any thicker than those of sides of terga and of sterna. Length, 2.5 mm.

♂. Unknown.

Holotype ♀ (BISHOP 10,690), IRIAN: New Guinea (NW): Japen I, SSE Sumberbaba, Dawai R., jungle, 28.X.1962, light trap, H. Holtmann.

GENUS **Adraga** Walker

Adraga Walker, 1859, J. Proc. Linn. Soc. London **3:** 82.

The relationship of *Adraga* and *Pegadomyia* is close and possibly the 2 should be synonymized, the former of course holding priority. *Adraga* differs from *Pegadomyia* in that, except medially, the base of tergum 5 is on a distinctly lower plane than the apex of 4, resulting in 2 prominent transverse depressions separated by a low dome-like structure which, because of the close fusion of the abdominal terga, might at first be mistaken for a posteriorly directed extension of tergum 4, with which it is on a level (FIG. 11). The profile of the mesonotum and scutellum in *Adraga dimidiata*, n. sp (FIG. 10) is very similar to that of *Pegadomyia nuda*. The position of R_{2+3} in relation to cross-vein r-m, used by Kertész as a diagnostic character (before or over the cross-vein in *Adraga*, over or beyond it in *Pegadomyia*), is difficult to evaluate. In the species known to me R_{2+3} is interstitial with r-m in *Adraga* and beyond it in *Pegadomyia*.

The unique type specimens of the type-species of *Adraga* (*univitta* Walker) and *Pegadomyia* (*pruinosa* Kertész) are lost. Both Kertész (1916: 198) and Brunetti (1923: 51) redescribed *A. univitta* from a specimen from Mysol determined by Walker but not the type, which came from the Aru Islands. This specimen was said by Brunetti to be a female, though at the end of his description he says that it is a male. Kertész considered it, as well as the unique type of his *Adraga crassivena*, as male. However, the well-separated eyes (by 1/7 head width according to Kertész, 1/5 to 1/6 according to Brunetti) indicate quite clearly that the extant specimen is a female, in view of Walker's original statement, "Oculi connexi. . . .Eyes connected" and Brunetti's diagnosis, "Eyes contiguous in ♂, well separated in ♀."

Adraga dimidiata James, new species

♀. *Head* 0.80 as long and 1.65 as wide as high. Frons at narrowest (just above transverse sulcus) 0.15 head width, almost parallel sided halfway to ocellar triangle, widening to 0.18 at vertex and, below, to 0.24 across antennal bases; transverse sulcus feebly impressed, longitudinal one well developed near antennal bases, becoming weak above; upper occipital orbit forming a low but sharp keel, becoming very narrow and with rounded margin medially, somewhat expanded below. Head black; frons and upper occipital orbit shining, former with sharp punctures from which inconspicuous, short, gray hairs arise; frons below transverse sulcus, face, and genae densely white tomentose; occiput subshining with short gray to yellowish gray hairs and tomentum. Antenna set at 0.22 head height, orange-yellow to reddish brown; arista yellow, becoming brown toward apex; flagellum with yellow to yellowish pollen on inner surface and at apex. Proboscis brownish black. *Thorax* black. Mesonotum and scutellum shining, thickly punctate but the short white hairs barely emerging from the punctures. Pleura subshining; upper part of mesopleuron and pteropleuron shining and bare, a few scattered, short, appressed hairs on posterior part of mesopleuron; rest of pleura subshining, some inconspicuous, short, scattered hairs on propleuron, metapleuron, and posterior part of sternopleuron, most of sternopleuron and lower part of mesopleuron with punctures as on mesonotum. Scutellum about 1/2 length of mesonotum, semioval in dorsal view, fairly well margined. Front leg enlarged, as in *Pegadomyia nuda*, front femur distinctly broader and thicker than mid and hind ones, front tibia and tarsus flattened, the tibia as broad as its femur, its basitarsus 3/4 as broad as the tibia; middle and hind tarsi yellow, becoming brown toward apices, legs otherwise black. Wing with r-m short but distinct; R_{2+3} interstitial with r-m; apical 1/2 of wing, i.e., beyond stigma, hyaline and closely set with yellow microtrichia; stigma yellow; veins R_s, R_1 and costa beyond origin of R_s yellow; membrane basad of discal cell and stigma, except in areas bare of microtrichia, brown with thickly set, brown microtrichia, color of latter darker toward anterior margin; microtrichia scant in cell C, however, and absent in M and about 2/3 of Cu except adjacent to veins (FIG. 8). Halter brownish black below and black above, stalk yellowish brown. *Abdomen* 1.25 as broad as thorax and 1.40 as broad as long; black, dorsally subshining, closely punctured, with short, inconspicuous, appressed gray hairs; tergum 5 more shining than others except on its median prominence; tergum 4 (FIG. 11) with a pair of shallow, not clearly defined depressions. Sternum 1 and extreme sides of 2 opaque and granular, 2–5 mostly shining, with scant, scattered, appressed, inconspicuous yellow hairs. Cerci yellow.

Length, 3.5 mm.

♂. Head about as long and 0.80 as wide as high. Eyes contiguous about 1/3 distance from anterior ocellus to antennal bases. Upper frons and apex of frontal triangle bare, shining; a broad band of dense white tomentum occupying median 1/3–1/2, transversely, of frontal triangle, frons below this and face with less dense but still conspicuous tomentum (frons just above antennae may, on first examination, appear bare because of its slope and the light incidence). Occipital orbit undeveloped above and very narrow below; gena very narrow. Antennal flagellum smaller than in ♀. Thorax as in ♀; front tibia and tarsus distinctly broadened though not as prominently as in ♀; wing as in ♀, the infuscation less intense. Abdomen black,

1.25 as wide as thorax, about 2 × as wide as long; depressed areas on tergum 4 apparently lacking, those on 5 and prominence between them not as pronounced as in ♀. Length, 3.5 mm.

Holotype ♀ (CAS), PNG: New Guinea (NE): Finschhafen, 20.IV.1944, E. S. Ross; paratype, ♂, IRIAN: New Guinea (NW): Vogelkop, Kebar Val., W of Manokwari, 550 m, 4–31.I.1962, L. M. Quate (BISHOP). Also 1 damaged ♀, not a type, New Guinea (SE): Koitake, 2.X.1958.

Three species have previously been described in this genus, namely *A. univitta* Walker, *A. crassivena* Kertész, and *A. australis* James. James (1948) presented a key for their separation. The following is a modified expansion of it to include *A. dimidiata*, n. sp.

KEY TO SPECIES OF *Adraga*

1. Pile of mesonotum uniformly short and inconspicuous.....2
   Mesonotum with a median stripe of more conspicuous yellowish pile.....**univitta** Walker
2. Abdominal terga 1–4 wholly punctured.....3
   Abdominal terga 1–4 densely punctured on the disc, shining laterally.....**australis** James
3. Upper occipital orbit of ♀ well developed and keeled; head of ♀ 0.8 as long as high.....**dimidiata,** n. sp.
   Upper occipital orbit undeveloped in ♀; head of ♀ about 0.6 as long as high (♂ unknown) .....**crassivena** Kertész

   The pattern of wing clouding in *A. crassivena* is quite different from that of *A. dimidiata*, according to Kertész's description.

GENUS **Eupachygaster** Kertész

Eupachygaster Kertész, 1911.

Eupachygaster flava James, new species

This species does not fit well into *Eupachygaster* because of the undeveloped upper occipital orbits and narrow frons of the female. However, it traces in Kertész's key to couplet 170–171, in which *Pegadomyia* and *Eupachygaster* are separated. Though the characters used in this couplet are unsatisfactory for the separation of the 2 genera, and despite the lack of upper occipital orbits in the female, the structure of the head and antennae and the structure and proportions of the scutellum (FIG. 9), in particular, indicate a closer relationship to *Eupachygaster* than to *Pegadomyia*. The generic position of *E. flava*, n. sp. must remain tentative until more material becomes available for study.

♂. Head 0.90 as long and 1.35 as wide as high; eyes contiguous about 1/3 distance between antennal bases and anterior ocellus; gena very narrow; occipital orbits undeveloped above, narrow below. Upper facets of eye much larger than lower ones, the transition in size abrupt but not marked by a sharp line. Head black; ocellar triangle and upper frons shining, bare; frontal triangle and face subshining with short, moderately abundant, appressed to suberect black hairs, ocular orbits and sides of face opposite and just below bases of antennae with inconspicuous brown to yellowish brown tomentum. Gena with some yellowish brown suberect hairs; a fringe of similar but shorter hairs on lower ocular orbit; lower occipital orbit with some white tomentum; occiput mostly bare and shining. Antenna set at about 0.25 head height, orange-yellow; scape and pedicel short, flagellum about 0.7 as long as high and about 0.20 head height (arista missing in type). Proboscis brownish yellow. *Thorax* pale brownish yellow to yellow; mostly bare, only a few scattered yellow hairs visible on pleura; mesonotum with punctures, those on median

1/2 of postscutum and on scutellum coarse and brown, those on rest of mesonotum finer, more scattered, and concolorous with background; hairs rising from punctures, if present, not visible at magnification of 100 ×, but each tubercular process of scutellar margin with a short, stiff hair. Scutellum (FIG. 9) about 1/3 length of mesonotum, almost in a plane with its posterior slope, slightly but distinctly margined. Legs colored as thorax but becoming a little paler toward apices of tarsi. Wing hyaline; stigma yellow; stronger veins yellow to brownish yellow, becoming darker both basad and apicad of stigma, basal part of R darkest. Halter pale brownish yellow. *Abdomen* 1.40 as wide as thorax and 1.35 as wide as long; yellow to brownish yellow, in type with a C-shaped brown area (probably variable) covering a large part of tergum 4, extreme base of 5, and sublateral areas (the arms of the C) on 3; pile of terga short, inconspicuous, subappressed, black, becoming yellow on sides toward base of abdomen, that of sterna inconspicuous, yellow.

Length, 2.8 mm.

♀. A damaged specimen (abdomen and middle legs missing) agrees with the ♂ except as follows. Frons at narrowest (at transverse sulcus) 0.11 head width, widening to 0.18 at vertex and 0.30 across antennal bases; shining and with only scant subappressed brownish hairs above transverse sulcus, densely white tomentose below, this tomentum covering facial and occipital orbits, gena however, shining; upper occipital orbit undeveloped as in ♂. Antenna as in ♂; arista yellow at base, becoming brown, micropubescent. Length estimated at 2.6–2.8 mm.

Holotype ♂ (BISHOP 10,691), PNG: New Guinea (NE): Wau, Morobe Distr., 1200 m, 1–4.VIII.1962, light trap, J. Sedlacek. ♀ (not designated a type but almost certainly conspecific with ♂), Wau, 1250 m, 3.VIII.1964, malaise trap, Sedlacek (BISHOP).

GENUS **Pegadomyia** Kertész

Pegadomyia Kertész, 1916, Ann. Mus. Nat. Hung. **14:** 182.

Pegadomyia nuda James

Pegadomyia nuda James, 1948, Proc. U. S. Nat. Mus. **98:** 209.

This species, originally described from Guadalcanal, Solomon Islands, is common in New Guinea and the Bismark Archipelago. I have seen specimens from the following localities. PNG: New Ireland: Kandau. New Britain: Gazelle Pen., Upper Warangoi, Illugi. New Guinea (SE): Daradae Plantation, 80 km to Port Moresby; Aroa Estate, W of Redscar Bay; Kiunga, Fly River; Vanapa, Central District. New Guinea (NW): Nabire, S Geelvink Bay; Hollandia-Binnen. New Guinea (NE): Wau; Busu River, Lae. All were collected throughout the year, from sea level to 1300 m; some by light trap and malaise trap.

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