which is known to me only from literature. It differs from *P. microlobata* in having no yellowish brown area on the anterior margin of the frons, in its dark brown femora, in the convex margin of the tenth tergite, and in the presence of a small downcurved hook at the upper apical angle of the sub-anal plate.

Kamimuria latior Klapalek.

Kapalek, 1912, Cas. Ces. Spol. Ent. ix. pp. 91, 105.
Kapalek, 1923, Coll. Zool. Selys Longch. iv. (2), p. 24.
Wu, 1936, Peking Nat. Hist. Bull. xi. (2), p. 184.

TIBET, no other data, 1 ♂, 4 ♀♀, from the McLachlan collection.

Kamimuria sp.

TIBET, Gyangtse, 13,000 ft., vi. 1904, 1 ♀ (*H. J. Walton*), Tibet Expedition.

Kamimuria sp.

TIBET, Chumbi, 10,000 ft., 18. vi. 1924, 1 ♀ (*Major R. W. G. Hingston*). This specimen is decidedly brachypterous.

LXXII.—*New or little-known* Tipulidæ (*Diptera*).—LXXVII. *Oriental-Australasian Species.* By CHARLES P. ALEXANDER, Ph.D., F.R.E.S., Massachusetts State College, Amherst, Massachusetts, U.S.A.

IN the present and following parts under this title I hope to discuss the rich fauna of the combined Oriental and Australasian regions. Such a combination seems justified in the light of our present knowledge of distribution of plants and animals. The former clear-cut demarcation between the two great regions no longer seems to exist, and the idea is being replaced by a belief in a major transition area lying between Wallace's Line on the west and Weber's Line on the east, this area commonly being referred to as Wallacea. The following short bibliography concerning his problem is cited :—

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Scrivenor, J. B., T. H. Burkill, M. A. Smith, A. St. Corbet, H. K. Airy Shaw, P. W. Richards, and F. E. Zeuner. 1943. "A discussion of the biogeographic division of the Indo-Australian Archipelago." Proc. Linn. Soc. London, Sess. 154, pp. 120–165.

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At this time I am discussing a part of the very rich collections made in New Guinea, and the outlying islands of Waigeu and Japen, by Miss L. Evelyn Cheesman, who has done so very much to make known the insect fauna of this intensely interesting area. Miss Cheesman's fascinating books, 'Land of the Red Bird' and 'The two roads of Papua,' as well as articles in the 'Geographica Journal,' 1938, 1940 and 1941, should be consulted. The latter articles include "The Cyclops Mountains of Dutch New Guinea," *l. c.* xci. pp. 21–30, plates, map, 1938, and "Two unexplored islands off Dutch New Guinea: Waigeu and Japen," *l. c.* xcv. pp. 208–217, plates, map, 1940. All holotypes of the new species here described, with a single exception, are preserved in the British Museum (Natural History); certain of the paratypes in my collection. I wish to express my very deep thanks to Miss Cheesman and to the authorities of the British Museum, particularly Mr. Riley and Dr. Smart, for the opportunity of studying this outstanding series of Tipulidæ. All species here treated belong to the tribe Hexatomini.

Austrolimnophila (*Austrolimnophila*) *discoboloides*, sp. n.

Dorsal thoracic pleura and anterior portion of præscutum brown, the remainder of disc of mesonotum yellow,

sparsely pruinose; wings pale yellow, with an ocelliform brown pattern that is much as in certain species of *Discobola*; male hypopygium with the tergite terminating in two smooth blackened lobes that are separated by a deep and narrow notch; inner dististyle irregular in outline.

Male.—Length about 10 mm.; wing 10 mm.; antenna about 4 mm.

Female.—Length about 10 mm.; wing 10·5 mm.

Rostrum dark brown; palpi black. Antennæ with basal three segments yellow, succeeding segments bicoloured, the bases brownish black, the remainder yellow, the dark colour occupying less than one-half the segment, becoming slightly more extensive on outer segments; flagellar segments long-cylindrical, longer than the verticils. Head with the front and anterior vertex grey pruinose, the posterior vertex more infuscated, paling to obscure yellow behind.

Pronotum yellow. Mesonotal præscutum with the disc yellow, sparsely pruinose, the cephalic and lateral borders broadly brown, the colour continued backward over the dorsal pleurites to the pleurotergite, most intense beneath the wing-root; posterior sclerites of notum brownish grey, each scutal lobe with a major brown area, pleurotergite less heavily darkened. Halteres elongate, uniformly pale yellow. Legs with the coxæ and trochanters yellow; femora brown, the tips rather narrowly but conspicuously yellow; tibiæ and tarsi yellow. Wings pale yellow, with an ocelliform brown pattern that is generally similar in appearance and arrangement to certain species of *Limonia*, subgenus *Discobola*, as *annulata*; ocelli centring above arculus; origin of *Rs*; fork of M_{1+2}; ends of all longitudinal veins, those in radial field solid but pale brown; a very large ocellate area encircles the entire cord and outer end of cell 1*st* M_2, completely crossing the wing from costa to vein 1*st* *A* at margin; an incomplete area in axillary region; veins yellow, darker in the patterned areas. Venation: *Rs* relatively short, weakly angulated at origin; R_2 lying far distad, only a little shorter than vein $R_1{}^{+}{}_2$; anterior cord oblique, the inner end of cell 1*st* M_2 lying most basad; petiole of cell M_1 about one-third the cell; cell 1*st* M_2 relatively small, with *m–cu* at near two-fifths to one-half the length; cell 2*nd* *A* narrow.

Abdomen reddish brown, the caudal borders of the segments restrictedly paler; basal sternites pale yellow; genital shield pale; cerci long and slender, gently upcurved to the acute tips. Male hypopygium with the caudal margin of tergite produced into two heavily blackened lobes that are separated by a very deep and narrow median notch; lobes smooth, obtusely rounded; surface of tergite back from the lobes with numerous setæ, some of the lateral ones large. Basistyle on mesal face before apex bearing a glabrous finger-like lobe, its apex obtuse. Outer dististyle broadly flattened, narrowed gradually to the acute tip, the surface microscopically setulose. Inner dististyle very irregular in outline, more or less expanded at apex, which is further produced into a strong spine; ventral margin of style near base with a strong tooth-like lobe. Interbases appearing as very strongly-curved hooks, narrowed gradually to the acute tips.

Hab. Papua.

Holotype, ♂, Mount Tafa, altitude 8500 feet, March, 1934 (*L. E. Cheesman*). *Allotopotype*, ♀, in author's collection.

Austrolimnophila (*Austrolimnophila*) *discoboloides* is entirely different in its wing-pattern from all other regional members of the subgenus. The wing coloration is strikingly like that of various species of the genus *Limonia*, subgenus *Discobola*, such a *annulata* (Linnæus), and also similar to certain Neotropical species of the genus *Epiphragma*.

Austrolimnophila (*Austrolimnophila*) *cyclopica*, sp. n.

Mesonotum light reddish brown in front, including nearly the cephalic half of the præscutum, the remainder of notum light ashen grey, without pattern; antennæ and legs yellow or brownish yellow; wings very pale yellow, handsomely patterned with brown, including about five major costal darkenings, the third at stigma; seams over cord and outer end of cell 1*st* M_2; marginal spots at ends of all veins excepting R_5 and M_1; inner end of cell 1*st* M_2 arcuated, lying far proximad of the other elements of cord; *m-cu* at near two-thirds the length of cell 1*st* M_2; male hypopygium with the dististyles complex, the outer style with the base expanded and densely set with microscopic points; inner style with its lower margin toothed or erose.

Male.—Length about 8 mm.; wing 8·8 mm.; antenna about 3 mm.

Female.—Length about 9–10 mm.; wing 9–9·5 mm.

Rostrum and palpi light yellow. Antennæ relatively long, especially in male, yellow, the outer segments slightly more brownish yellow; flagellar segments long-cylindrical, with scattered verticils, the longest only a little more than one-half the segments. Head dark grey, lighter grey in front; anterior vertex narrow in both sexes but especially in male, at the narrowest point about equal to two rows of ommatidia.

Pronotum buffy yellow. Mesonotum light reddish brown in front, including nearly the cephalic half of the præscutum, the remainder of notum light ashen grey, without pattern; pleurotergite reddish brown. Pleura grey, the sternopleurite infuscated; propleura yellow. Halteres elongate, pale yellow, the apex of knob a trifle darker. Legs with the coxæ pale yellow, sparsely pruinose; trochanters yellow; remainder of legs pale yellow or brownish yellow, the outer tarsal segments a trifle darker. Wings with a very pale yellow ground, handsomely patterned with brown, as follows:—about five major costal darkenings, the first at and above the arculus, extending from *C* to *Cu*; second at origin of *Rs*, extending from *C* to *M*, constricted in centre; third area largest, at stigma, extending from *C* to vein R_4, barely connected with a smaller area over the anterior cord; other large areas at R_2 and R_{1+2} and at end of vein R_3; narrower seams over cord, outer end of cell 1*st* M_2, fork of M_{1+2} and as marginal spots at ends of the veins, the largest one over 1*st A* where it is confluent with the seam over *m–cu*; no darkenings on veins R_5 or M_1; a further conspicuous dark area in cell 2*nd A* at near mid-length; cell 1*st* M_2 pale; veins yellow, pale brown in the clouded portions. Venation: Sc_1 ending shortly beyond fork of R_{2+3+5}, Sc_2 at its tip; R_{1+2} about twice R_2; R_{2+3+4} almost in longitudinal alignment with *Rs*; vein R_{2+3} perpendicular at origin; inner end of cell 1*st* M_2 arcuated, lying far proximad of the other elements of cord; *m–cu* at near two-thirds the length of cell 1*st* M_2; cell M_1 deep, almost twice its petiole; cell 2*nd A* relatively narrow.

Abdominal tergites testaceous brown or yellowish brown, without clearly-defined pattern; sternites more bi-

coloured, chiefly obscure yellow with about the proximal third brown, the sides more narrowly infuscated; hypopygium dark brown. Male hypopygium with the central area of caudal border of tergite produced and bilobed, the lobes separated by a V-shaped notch, rounded, each with a low darkened apical flange. Basistyle slender, the mesal surface emarginate or sinuous, with a finger-like lobe before apex. Dististyles complex, the outer style expanded at base, narrowed into an elongate rostral portion; expanded part densely set with microscopic points, each of which terminates in a bristle; inner style larger and longer than the above, its lower margin conspicuously toothed or erose. Interbase appearing as a flattened plate that terminates in a strong curved spine.

Hab. Dutch New Guinea.

Holotype, ♂, Mount Cyclops, Cyclops Mountains, altitude 7500 feet, March 1936 (*L. E. Cheesman*). *Allotype*, ♀, Cyclops Mountains, altitude 3500 feet, March, 1936 (*L. E. Cheesman*). *Paratopotype*, 1 ♀, with the holotype; 1 ♀ with the allotype.

Among the previously-described regional species, the present fly is closest to *Austrolimnophila* (*Austrolimnophila*) *fluxa* Alexander and *A.* (*A.*) *interjecta* Alexander. From the former it differs in the heavy wing-pattern, with a conspicuous costal pattern; from the latter it differs in the venation and wing-pattern, including the broken dark band over the cord, leaving cell 1*st* M_2 chiefly pale, and the long cell 1st M_2 with its inner end strongly arcuated.

Austrolimnophila (*Austrolimnophila*) *jobiensis*, sp. n.

Thoracic pleura and anterior portion of præscutum dark brown, the remainder of disc of mesonotum more uniformly brownish grey; wings with the ground-colour yellow, restrictedly patterned with brown; vein R_{2+3+4} about one-half as long as *Rs*; male hypopygium with the caudal border of the tergite broadly emarginate, the lateral angles produced, each bearing a strong black spine on ventral surface; outer dististyle slender, nearly parallel-sided, the tip slightly decurved.

Male.—Length about 8–8·5 mm.; wing 10–10·5 mm.; antenna about 3·5 mm.

Female.—Length about 10–10·5 mm.; wing 10–11 mm.

Rostrum brown; palpi darker brown. Antennæ with the proximal segments testaceous brown or pale brown, the outer ones darker brown, in cases relatively pale or feebly bicoloured; scape more or less pruinose; flagellar segments elongate, exceeding the longest verticils. Head dark brown; anterior vertex (male) much reduced, only about as wide as two rows of ommatidia.

Pronotum and the broad anterior border of præscutum dark brown, the colour continued over the entire pleura; posterior sclerites of notum, including the disc of præscutum, uniformly brownish grey. Halteres elongate, pale brown. Legs with all coxæ dark brown; trochanters obscure yellow; fore femora brown, the tips paler; posterior femora more nearly uniformly pale; fore tibiæ and tarsi apparently darker than those of the other legs. Wings with the ground-colour yellow, the prearcular and costal fields somewhat clearer yellow; a relatively restricted but conspicuous brown pattern that is confined to the vicinity of the veins, arranged as follows:—a marginal series of spots, lacking on R_5; spots at arculus; origin of *Rs*; cord and outer end of cell 1*st* M_2, and fork of M_{1+2}; a larger stigmal area over the forks of *Sc* and R_{2+3+4}; veins yellow darker in the patterned areas. Venation: Sc_1 ending beyond fork of R_{2+3+4}, the longer Sc_2 near its tip; *Rs* strongly arcuated at origin; R_{2+3+4} about one-half *Rs*; R_{1+2} nearly three times R_2; inner end of cell 1*st* M_2 lying a short distance proximad of cells R_3 and R_5; cell M_1 less than twice its petiole; *m–cu* at near two-thirds the length of the long cell 1*st* M_2.

Abdomen with the tergites brown, basal sternites more yellowed, the large conspicuous hypopygium dark brown. Male hypopygium with the tergite large, the caudal margin with a broad rounded notch, the outer angles more produced, on their lower face with a blackened spine. Basistyle conspicuously hairy at tips; interbases very slender, only moderately curved. Outer dististyle slender, nearly parallel-sided, the tip narrowed and slightly decurved; on outer margin near base with a slightly tumid area provided with abundant erect setæ. Inner dististyle a little longer, more blackened, setiferous at base, at apex expanded into an outer or dorsal spinous point, the ventral angle broadly obtuse.

Hab. Northern Dutch New Guinea.

Holotype, ♂, Camp 2, Mount Eiori, Japen, altitude 2000 feet, September, 1938 (*L. E. Cheesman*). *Allotopotype*, ♀. *Paratopotypes*, 3 ♂ ♀, all badly broken.

Most similar to *Austrolimnophila* (*Austrolimnophila*) *cyclopica*, sp. n., differing very conspicuously in the structure of the male hypopygium and in various details of coloration.

Austrolimnophila (*Austrolimnophila*) *japenensis*, sp. n.

Cephalic portion of mesonotum brown, the colour continued backward over the pleura, the remainder of the mesonotum brownish grey; knob of halteres infuscated; legs yellow; wings yellow, with a restricted brown pattern, including areas over the cord, forks of veins and as marginal spots at ends of all longitudinal veins except R_5; *Rs* short, nearly square at origin; R_{2+3+4} a trifle longer than cell 1*st* M_2; male hypopygium with the caudal margin of tergite notched and heavily blackened; interbases appearing as flattened plates, the apical border with several long points to appear fimbriate; three dististyles, the outer a slender spine.

Male.—Length about 7·5 mm.; wing 9 mm.

The unique type is badly damaged and discoloured. Rostrum and palpi black. Antennæ with the scape black; pedicel dark brown; flagellum broken. Head black, heavily grey pruinose; anterior vertex relatively narrow, a trifle less than the diameter of scape.

Pronotum and anterior portion of præscutum brown, the colour continued backward over the dorsal pleura as a broad stripe; remainder of mesonotum pale brown, sparsely pruinose to appear brownish grey. Ventral pleura somewhat paler than the dorsal part. Halteres elongate, stem obscure yellow, knob infuscated. Legs with the coxæ brown; trochanters obscure yellow; femora obscure brownish yellow, the tibiæ and tarsi clearer yellow. Wings with the ground-colour yellow, restrictedly patterned with brown, including isolated spots, as follows:—over arculus; origin of *Rs*; cord and outer end of cell 1*st* M_2, and forks of R_{2+3+4} and M_{1+2}; marginal spots at ends of all longitudinal veins excepting R_5, larger in the outer radial and medial fields; veins pale brown or brownish yellow, darker in the patterned areas. Venation: Sc_1 ending shortly beyond the origin of R_{2+3},

Sc_2 at its tip; *Rs* short, nearly square at origin; R_{2+3+4} nearly straight, a trifle longer than cell 1*st* M_2; R_{1+2} nearly twice R_2; petiole of cell M_1 about one-half the cell; *m–cu* just before mid-length of cell 1*st* M_2.

Abdominal tergites brown, the caudal margins and lateral borders narrowly darker; sternites more yellowed, the posterior borders darkened. Male hypopygium with the tergite transverse, the caudal margin with a narrow U-shaped median notch, the broad lobes obliquely truncate, their margins heavily blackened. Basistyle with the interbase appearing as a flattened plate, its apical border with long strong fimbriate points. Three dististyles, including a slender outer spine. The normally outer style is fleshy, near its apex the ventral angle further produced into a spinous, narrowly cultrate blade. Inner dististyle longer, appearing as a flattened narrow paddle, the lower margin with long coarse setæ. Ædeagus narrow, its apex bilobed or scoop-like.

Hab. Northern Dutch New Guinea.

Holotype, ♂, Camp 3, Central Range, Mount Oud, altitude 3500 feet, November, 1938 (*L. E. Cheesman*).

The most similar species include *Austrolimnophila* (*Austrolimnophila*) *cyclopica*, sp. n., and *A.* (*A.*) *linæ*, sp. n.; the former differs conspicuously in the structure of the male hypopygium, the latter, still known only from the female, in all details of wing venation.

Austrolimnophila (*Austrolimnophila*) *linæ*, sp. n.

General coloration of mesonotum medium brown, sparsely pruinose, the broad anterior and lateral portions of the præscutum darker brown, this colour continued back over the dorsal pleura; femora brown, the tips narrowly paler, tibiæ and tarsi yellow; wings yellow, restrictedly patterned with brown spots that are confined to the vicinity of the veins; no dark pattern on proximal fourth of wing; R_{2+3+4} very long, only a little shorter than *Rs*; inner ends of cells R_4 and 1*st* M_2 arcuated, lying proximad of cell R_5; cell 1*st* M_2 long, with *m–cu* at near mid-length.

Female.—Length about 9 mm.; wing 8·5 mm.

Rostrum and palpi black. Antennæ with the scape and pedicel black; flagellum broken. Head black, discoloured, presumably more or less pruinose in fresh

specimens; anterior vertex relatively narrow, subequal in width to the diameter of scape.

Pronotum and anterior portion of præscutum dark brown, appearing deepest when viewed from above, the colour of the latter involving the broad anterior and lateral borders, thence continued ventrad over the entire pleura excepting the paler brown ventral portion; remainder of mesonotum light reddish brown to medium brown, virtually unpatterned, the surface sparsely pruinose. Halteres elongate, the stem pale, vaguely more darkened at base, knob weakly infuscated. Legs with the coxæ and trochanters pale reddish brown, concolorous with the ventral pleura; femora brown, the tips very narrowly and vaguely paler; tibiæ and tarsi yellow, the terminal tarsal segments darkened. Wings with the ground-colour yellow, restrictedly patterned with brown, including a marginal series of relatively small spots at the ends of the longitudinal veins, very small on R_5; additional small areas at origin of *Rs*; cord and outer end of cell 1*st* M_2, and over the forks of R_{2+3+4} and M_{1+2}; no darkenings on proximal fourth of wing; veins yellow, brown in the patterned areas. Venation: *Rs* very strongly arcuated at origin, R_{2+3+4} very long, only a little shorter than *Rs* and subequal to cell 1*st* M_2; R_{1+2} about twice R_2; inner ends of cells R_4 and 1*st* M_2 lying about on a level and proximad of cell R_5; cell M_1 about one-third to one-half longer than its petiole; *m–cu* nearly opposite mid-length of the long subrectangular cell 1*st* M_2.

Abdominal tergites pale brown, the sternites more yellowed; genital shield yellow; cerci slender, gently upcurved to the acute tips.

Hab. Dutch New Guinea.

Holotype, ♀, Mount Lina, Cyclops Mountains, altitude 3500–4500 feet, March, 1936 (*L. E. Cheesman*).

Among the known regional species the present fly is closest to *Austrolimnophila* (*Austrolimnophila*) *japenensis*, sp. n., which differs in the coloration of the body and wings and in all details of venation. Both species have vein R_{2+3+4} unusually long.

Gynoplistia (*Paralimnophila*) *isolata*, sp. n.

Thorax almost uniformly orange, the præscutum with a narrow, more infuscated median line; head black,

sparsely pruinose; legs black, the femoral bases, particularly of the fore legs, restrictedly yellow; wings dark brown, patterned with yellow, including the prearcular field, abroad complete band before mid-length, and, in the female only, an isolated subcircular spot beyond the cord; cell M_1 lacking; abdomen orange, the seventh tergite abruptly dark brown, the outer segments a little paler brown.

Male.—Length about 7·5–8 mm.; wing 8–8·5 mm.

Female.—Length about 9–10 mm.; wing 8–9·5 mm.

Rostrum short, brown; palpi brownish black. Antennæ with the scape and pedical obscure yellow, flagellum black; flagellar segments oval, simple in both sexes. Head black, sparsely pruinose, more heavily so surrounding the antennal bases; anterior vertex broad, slightly more than five times the diameter of scape.

Thorax orange throughout, virtually unpatterned, the præscutum with a narrow, more infuscated median line that does not reach either margin. Halteres with stem obscure brownish yellow, knob blackened. Legs with the coxæ orange; trochanters orange-yellow; remainder of legs black, the femoral bases restrictedly yellow, more extensively so on the fore pair where about one-sixth is included. Wings handsomely patterned with yellow and dark brown, the more extensive ground of the latter colour; prearcular field chiefly yellow, the extreme wing base a very little more darkened; a broad yellow band completely traverses the wing, its outer border at near mid-length, the band almost parallel-sided or a little widened behind; in the female only an isolated subcircular yellow spot beyond the cord, at mid-length of cells R_4, R_5 and *2nd* M_2, inclusive; veins brown, luteous in the yellow areas. Outer radial branches with numerous macrotrichia, in medial field these restricted to less than outer half of distal section of vein M_{1+2}. Venation: Sc_1 ending beyond fork of R_{2+3+4}, Sc_2 some distance from its tip, Sc_1 alone about twice R_{2+3+4}; *Rs* sinuous, in direct longitudinal alignment with R_{2+3+4}, the latter less than half the basal section of R_5; vein R_2 faint; cell M_1 lacking; cell *1st* M_2 rectangular, with *m–cu* at near mid-length; *m–cu* and distal section of Cu_1 subequal; vein *2nd A* strongly sinuous.

Abdomen relatively long, in female with the basal six segments orange, the seventh tergite abruptly dark brown,

the outer segments more chestnut or liver-brown; in male, outer three segments uniformly blackened. Ovipositor with valves horn-yellow, long and slender.

Hab. Northern Dutch New Guinea.

Holotype, ♀, Cyclops Mountains, altitude 1000 feet, March, 1945 (*Jean Laffoon*); Alexander Collection. *Allotype*, ♂, Iffar, Lake Sentani, August, 1936 (*L. E. Cheesman*). *Paratypes*, 9 ♂ ♀, Sabron, Cyclops Mountains, altitude 930 feet, May 5, 1936 (*L. E. Cheesman*).

In its peculiar wing-pattern this fly is entirely different from all other members of the subgenus so far discovered. Superficially the wings suggest various Oriental species of the genus *Hexatoma*, subgenus *Eriocera*. The sexual difference in wing-pattern is noteworthy.

Gynoplistia (*Paralimnophila*) *euryphæa*, sp. n.

General coloration of thorax dark liver-brown, the posterior sclerites and pleura still darker brown; antennæ 14-segmented, flagellar segments simple; legs black, the femora with the bases and a conspicuous subterminal ring yellow; wings pale yellow, very heavily and conspicuously patterned with brown, the areas more or less cross-banded; cell M_1 present; male hypopygium with the gonapophyses needle-like.

Male.—Length about 12 mm.; wing 12 mm.

The unique type-specimen is badly molded. Rostrum and palpi black. Antennæ (male) 14-segmented, relatively short, if bent backward ending some distance before the wing-root; scape and pedicel black, basal flagellar segments brownish yellow, the outer ones passing into black; flagellar segments simple, oval, with long conspicuous verticils. Head black, very sparsely pruinose; anterior vertex about three times the diameter of scape.

Pronotum dark brown, more blackened medially. Mesonotum almost uniformly dark liver-brown, the posterior sclerites and the pleura still darker brown. Halteres yellow. Legs long and slender; coxæ dark brown (fore pair invisible); trochanters dark brown; femora black, the bases yellow, more broadly so on fore legs where about one-fourth is included, narrower on posterior legs; all femora with a conspicuous yellow subterminal ring that is about two-thirds as long as the darkened apex; tibiæ and tarsi black. Wings with the ground-colour yellow, conspicuously variegated with brown, the

pattern more or less cross-banded; a very extensive area in bases of cells *R* and *M*, especially the former; a second area at origin of *Rs*, extending from costa to *M* where it is confluent with a broad conspicuous seam extending outward to the cord, the centre of area at origin of *Rs* slightly brightened; a major oblique band at cord, more or less forked at anterior end and enclosing a small yellow area at end of vein *Sc*, the band extended obliquely backward along the cord, the cephalic portion with the centre again paler than the border; further extensive darkenings in outer radial field, leaving cell R_4 pale on its outer fourth; outer end of cell 1*st* M_2 and a mark covering the adjoining part of cell R_5, together with a seam along vein M_2 to the margin, broadly brown; further brown marginal spots at ends of veins M_1, M_3 and M_4; cubital and anal cells extensively variegated brown and pale yellow; costal border chiefly darkened, prearcular field extensively pale; veins yellow in the ground areas, brown in the darkened portions. Venation: cell R_3 very short-petiolate to nearly sessile; cell M_1 deep, about three to four times its petiole; cell 1*st* M_2 large, with *m–cu* just beyond mid-length.

Abdomen with basal segment dark brown, the succeeding tergites obscure yellow; sternites a trifle darker, more infuscated; outer segments and hypopygium more uniformly blackened. Male hypopygium with the caudal margin of tergite truncate, the outer lateral angles rounded and narrowly blackened. Outer dististyle moderately flattened, the apical spine relatively slender; inner dististyle narrowed to the obtuse tip, the surface with abundant scattered yellow setæ, some very long; at base of styles with a large conspicuous pale lobe, its surface with numerous coarse setæ, two of unusual length, extending caudad to beyond the apex of the outer dististyle. Gonapophyses appearing as long needle-like spines from slightly enlarged bases. Ædeagus long and sinuous, with a paler protecting sheath for much of the length. Proctiger large but nearly hyaline and therefore relatively inconspicuous.

Hab. Papua.

Holotype, ♂, Mount Tafa, altitude 8500 feet, February 1934 (*L. E. Cheesman*).

The only other regional member of the subgenus so far made known is *Gynoplistia* (*Paralimnophila*) *isolata*, sp. n.,

an entirely different fly that has cell M_1 of the wings lacking.

Gynoplistia (*Gynoplistia*) *evelynæ*, sp. n.

Thorax uniformly pale yellow; head black; antennæ with 11 branched segments in male; legs black; wings bicoloured, the basal third pale yellow, the remainder strongly infuscated; abdomen with basal five segments yellow, the remainder, including hypopygium, purplish black.

Male.—Length about 9·5–10 mm.; wing 8 mm.; antenna about 3 mm.

Rostrum and palpi black. Antennæ (male) black throughout; 16-segmented, the formula being 2+2+9+3; branches long, those at near mid-length of organ being approximately two-fifths the entire antenna; last branch still elongate, slightly exceeding the three simple segments combined. Head black, the surface very sparsely pruinose.

Thorax uniformly pale yellow or orange-yellow, opaque, unpatterned; præscutal vestiture short and sparse. Halteres with stem obscure yellow, brightest at base, the large knob black. Legs, including all coxæ and trochanters, black, contrasting markedly with the yellow thorax. Wings bicoloured, the basal third or a little more pale yellow, extending to the level of origin of *Rs*, the remainder of wing strongly infuscated, even more intensely so in the stigmal region and over the anterior cord; veins brown in the darkened portion, clear light yellow in the pale basal region. All outer medial branches excepting M_1 pale and weak, without macrotrichia. Venation: *Rs* moderately long, in direct alignment with R_{1+3+4}, the latter short, subequal to *r–m*; R_2 a little shorter than R_{1+2}; cell M_1 a little less than twice its petiole; *m–cu* at or shortly before mid-length of the relatively small cell 1*st* M_2. The right wing of a paratype has cell M_2 open by the atrophy of *m*.

Abdomen with the basal five segments uniformly yellow or light orange, the remaining segments, including the hypopygium, purplish black. Male hypopygium relatively small; ninth tergite with the posterior margin convexly rounded. Basistyle produced beyond the point of insertion of the dististyle as a small lobe, pointed at apex; the opposite inner angle produced mesad into a smaller

acute angle. Dististyle single, relatively slender, its apex a decurved spine; lower margin toward tip microscopically toothed; surface of style with numerous scattered pale punctures. Phallosome relatively small and simple; ædeagus stout, the apex paling to membrane that is densely set with small pale spines; apophyses appearing as closely approximated strong horns, becoming more divergent near their tips.

Hab. Papua.

Holotype, ♂, Mafulu, altitude 4000 feet, January, 1934 (*L. E. Cheesman*). *Paratopotypes*, 2 ♂♂, December, 1933, January, 1934.

I take unusual pleasure in dedicating this beautiful crane-fly to Miss Cheesman, in recognition of her work in making known the insect fauna of many of the Pacific Islands. The species has no regional ally so far made known that is even remotely similar. It is more like *Gynoplistia* (*Gynoplistia*) *williamsiana* Alexander, of New Caledonia, but the actual relationship is not close.

Gynoplistia (*Gynoplistia*) *xanthocera*, sp. n.

Size medium (wing, male, about 8 mm.); mesonotal præscutum with three polished black stripes on posterior portion; antennæ small, entirely yellow; fore femora stout, densely clothed with black setæ; wings weakly tinged with brown, with three large but diffuse darker brown areas; abdomen, including hypopygium, with abundant erect black setæ; male hypopygium with the basistyle terminating in two unequal spinous points; gonapophyses appearing as blackened rods that bear a few lateral spinous points; ædeagus terminating in two large divergent flaps.

Male.—Length about 11 mm.; wing 8·2 mm.

Rostrum very short, yellow; palpi uniformly yellow. Antennæ small, uniformly yellow, broken at the tenth segment; all flagellar segments to this point with single relatively short branches, the longest (about flagellar segments 5 or 6) about five to six times the segment, on the eighth flagellar segment about three times the segment. Head brown, with black vestiture.

Pronotum reddish brown, heavily yellow pollinose. Mesonotal præscutum with three short polished black

stripes, the cephalic fifth of the sclerite more uniformly reddish or reddish brown, the posterior interspaces with a greyish yellow pollen and with setæ; each scutal lobe chiefly covered by a polished black area, the remainder of the scutum and scutellum brown, sparsely pollinose; mediotergite testaceous yellow, somewhat darkened behind; pleurotergite and metapleura brownish black. Pleura with the propleura and anterior portion of mesopleura yellow, delicately pollinose; mesepisternum black, forming a transverse girdle, the mesepimeron pale, with yellow pollen. Halteres yellow, knob dark brown. Legs with the fore coxæ pale, yellow pollinose; trochanter yellow; fore femur stout, black, yellow basally, with abundant semi-erect black setæ; tibia pale yellow, the tip brownish black; basal tarsal segments dirty white, the outer ones passing into black; middle and hind coxæ and trochanters more blackened, especially the posterior ones; middle femur yellow, the tip narrowly darkened, setæ pale and inconspicuous but long; tibia whitened, the tip narrowly dark brown; basal tarsal segments dirty white, the tips narrowly darkened; posterior legs broken, the coxæ with conspicuous black setæ. Wings with a weak brownish tinge, with three large but diffuse darker brown areas, the first post-arcular in the bases of cells *R* and *M*; second area at origin of *Rs*, third a major darkening extending from stigma over the anterior cord to cell 1*st* M_2; prearcular field more yellowed; veins yellowish brown to pale brown. Venation: Cell R_3 nearly sessile, R_{2+3+4} being very short; veins R_3 and R_4 strongly divergent so cell R_3 at margin is very wide, R_2 correspondingly narrow, scarcely one-fourth as extensive; cell M_1 about one-fourth longer than its petiole; *m–cu* at near one-third the length of cell 1*st* M_2.

Abdomen, including hypopygium, black with very abundant erect black setæ to present a shaggy appearance. Male hypopygium with the basistyle relatively slender, terminating in a large dorsal black spine and a smaller ventral one, between them the single dististyle; this latter is slender, gently curved, its apex a rounded knob set off by a ventral constriction, the surface with scattered punctures. Phallosome consisting of two blackened apophyses that terminate in a blackened spine, with about five strong lateral spines or points to produce a branched

appearance. Ædeagus slender, at apex expanded into two very large divergent lobes or flaps.

Hab. Northern Dutch New Guinea.

Holotype, ♂, Cyclops Mountains, Sabron, altitude 900 feet, May, 1936 (*L. E. Cheesman*).

The present fly is so different from the other described regional species that comparison seems unnecessary. The very hairy body and unusually small yellow antennæ, together with a characteristic structure and pattern of the legs, wings and male hypopygium, mark the species as being very distinct.

Gynoplistia (*Gynoplistia*) *chalybeata*, sp. n.

General coloration of mesothorax almost uniformly steel blue, the postnotum heavily grey pruinose; head testaceous yellow; antennæ 16-segmented, with nine branched segments, the longest branch about six times the segment; fore and middle femora yellow, the tips narrowly brownish black; posterior femora brownish black, with a broad yellow subterminal ring; wings whitish subhyaline, with a restricted brown pattern, including three darker costal areas; wing-tip broadly paler brown; abdomen shiny black.

Male.—Length about 6·5 mm.; wing 6·7 mm.

Rostrum obscure yellow; palpi black, the first segment brownish yellow. Antennæ (male) 16-segmented, the formula being 2+2+7+5; scape and pedicel pale yellow, flagellum, including the branches, black, the stems of the more proximal segments obscure yellow, of the following two or three with the incisures more restrictedly pale; branch of first flagellar segment a little less than three times the segment, of the second nearly five times the segment; longest branch (about flagellar segment 6) nearly six times the segment. Head with the front obscure yellow, the broad posterior vertex more testaceous yellow.

Pronotum brown. Mesonotum almost uniformly steel blue, the surface with a sparse grey pruinosity, this becoming very heavy on the mediotergite and pleurotergite, especially conspicuous when the two latter are viewed from above; vestiture of thorax very sparse, pale and inconspicuous. Pleura brownish black, sparsely pruinose. Halteres with stem yellow, knob dark brown. Legs with all coxæ black, grey pruinose: trochanters

black; fore and middle femora light yellow, with about the distal eighth brownish black; tibiæ brown, the tips darker; tarsi brown, the basitarsi a trifle more whitened; posterior femora brownish black with a broad subterminal yellow ring, this about three times the dark tip or approximately one-fifth the total length of the segment; tibia brown, darkest on basal half, the tip brownish black; tarsi coloured about as on the other legs. Wings with the ground whitish subhyaline, with a restricted pattern; three darker brown areas, including arculus, origin of *Rs*, and a major triangular mark at stigma and over the anterior cord, extending to *r–m*; a further weak brown cloud on vein 1*st A*, including both cells *Cu* and 1*st A*, in transverse alignment with the dark area at origin of *Rs*; narrow but evident brown seams over the posterior cord and outer end of cell 1*st* M_2; wing tip extensively very pale brown, extending nearly as far basad as the fork of M_{1+2}; veins dark brown. Venation: Sc_1 ending nearly opposite the fork of *Rs*, the latter long, exceeding the anterior branch of *Rs*; R_{2+3+4} short, subequal to *m*; veins R_3 and R_4 strongly divergent so cell R_3 at margin is very extensive, cell R_2 correspondingly reduced, only from one-fifth to one-sixth cell R_3; cell M_1 subequal to its petiole; *m–cu* about one-third its length beyond the fork of *M*; both anal veins strongly sinuous in opposite directions so cell 1*st A* at near mid-length is unusually wide.

Abdomen shiny black, the bases of the more proximal segments more piceous; outer segments, with the hypopygium, uniformly black; vestiture dark, of moderate length only, relatively inconspicuous. The hypopygium is imbedded in the mounting medium on a point and cannot be described.

Hab. Northern Dutch New Guinea.

Holotype, ♂, Humboldt Bay, Hollandia, sea-level. February, 1936 (*L. E. Cheesman*).

Among the described species, the present fly is most similar to *Gynoplistia* (*Gynoplistia*) *occipitalis* de Meijere, differing in the structure of the antennæ and in all details of coloration of the legs, wings and abdomen.

Gynoplistia (*Gynoplistia*) *dileuca*, sp. n.

Size very small (wing, female, 5 mm.); general coloration of thorax and abdomen black; head brownish

yellow; antennæ (female) 16-segmented, very weakly serrate; posterior tibia with a white basal ring, the proximal two tarsal segments snowy white; wings subhyaline, with two more or less broken cross-bands, the wing-tip very vaguely darkened; *Sc* relatively short, Sc_1 ending at near four-fifths the length of *Rs*, the latter strongly angulated at origin; cell M_1 small, a little more than one-third its petiole; cell 1*st* M_2 almost square.

Female.—Length about 5 mm.; wing 5 mm.

Rostrum yellow; palpi pale brown. Antennæ (female) 16-segmented; scape and pedicel yellow, flagellum brown; flagellar segments 1 and 2 scarcely serrate, with glabrous apical pedicels; segments 3 to 6, inclusive, with a short production on one face, giving a very weak serrate appearance, the toothing most pronounced on flagellar segment 3; apical pedicels becoming shorter, obsolete on the last serrated segment; outer segments short and crowded, the terminal one again elongate, about as long as the preceding three segments combined. Head brownish yellow.

Mesonotum chiefly blackened, the cephalic portion of præscutum and the pronotum paler, obscure yellow. Pleura with the dorsal sclerites, as well as the pleurotergite, blackened, the lower edge passing beneath the root of the halteres; ventral pleurites more narrowly yellow, with a silvery pruinosity. Halteres strongly infuscated. Legs with the coxæ and trochanters pale yellow; fore femora yellow with about the outer fifth brownish black and slightly dilated; tibiæ pale yellow, the tips narrowly darkened; tarsi yellow, the outer two segments broken; middle femora about as on fore pair, tibiæ pale brown with a narrow silvery white ring at base; basitarsi dirty white, the remainder of middle tarsi broken; posterior femora yellow with the outer fifth dilated and darkened; tibiæ with a conspicuous white basal ring, including more than the proximal fourth of segment, the remainder a little more darkened, the tip narrowly brownish black; proximal two tarsal segments snowy white, the outer three a trifle darker. Wings with the ground-colour subhyaline, patterned with brown, chiefly appearing as two cross-bands, the first at the level of origin of *Rs*, appearing as a quadrate area in cell *R*, with more or less interrupted areas behind to cell 1*st* *A*, not quite reaching the margin; second band

completely traversing the wing at the stigma and cord, nearly parallel-sided, narrowed at the posterior border and leaving the centre of cell 1*st* M_2 partly of the ground; stigma slightly more darkened; wing-tip very vaguely darkened, merging with the ground in the cells beyond the cord; veins light brown, a trifle darker in the patterned portions. Venation: *Sc* relatively short, Sc_1 ending about opposite four-fifths to five-sixths the length of *Rs*, Sc_2 at its tip; *Rs* very strongly angulated at origin; veins R_3 and R_4 strongly divergent, cell R_2 at margin about one-fourth R_3; R_{2+3+4} a little longer than *r–m*; cell M_1 small, a little more than one-third its petiole, cell 1*st* M_2 almost square, with *m–cu* at mid-length of the lower face.

Abdomen brownish black, with short, inconspicuous setæ; genital shield polished black, the valves, and especially the elongate cerci, yellow.

Hab. Papua.

Holotype, ♀, Mafulu, altitude 4000 feet, December, 1933 (*L. E. Cheesman*).

The present fly is entirely distinct from all other small regional species of the genus, being most like forms such as *Gynoplistia* (*Gynoplistia*) *siebersi* Edwards, yet differing in all details of coloration and venation. The very reduced serration of the female antennæ should be emphasized.

Gynoplistia (*Gynoplistia*) *waigeuensis*, sp. n.

Mesonotum reddish yellow; antennæ (male) 16-segmented, with 12 long-branched segments; legs obscure yellow, the outer tarsal segments blackened; wings whitish subhyaline, with two brown areas, the larger over the stigma and anterior cord; cell M_1 lacking; male hypopygium with the basistyle terminating in two blackened points, the outer a flattened lobe that is armed with about five spines; inner gonapophysis appearing as a slender black spine bearing a more slender spinous branch on mesal face near base.

Male.—Length about 7·5 mm.; wing 7 mm.

Rostrum reddish yellow; palpi yellow. Antennæ (male) 16-segmented; formula 2+2+10+2; scape yellowish brown, pedicel a trifle darker brown; flagellum, including branches, black with a silvery pubescence; longest branch exceeding one-third the total length of organ; terminal segment elongate, fully one-half longer

than the penultimate. Head dark brown, sparsely pruinose, more reddish brown above.

Pronotum yellow. Mesonotum reddish yellow, the præscutum a trifle darker; postnotum clearer yellow. Pleura yellow, the mesepisternum more reddened; dorsopleural membrane yellow. Halteres with stem obscure yellow, knob brown. Legs with the coxæ and trochanters yellow; remainder of legs obscure yellow, the tarsal segments slightly darker at tips; outer segments more uniformly blackened. Wings whitish subhyaline, with a very restricted brown pattern that includes a small spot over origin of *Rs* and a major area along the cord, extending from costa to *r–m*; veins brown. Venation: veins R_3 and R_4 strongly divergent, cell R_2 small, at margin very narrow, only about one-tenth as extensive as cell R_3; R_{2+3+4} short, slightly more than one-third *r–m*, in direct longitudinal alignment with *Rs* and R_4; cell M_1 lacking; cell *2nd* M_2 twice as long as *1st* M_2; *m–cu* at near two-fifths the length of cell *1st* M_2.

Abdominal tergites fulvous orange, vaguely patterned with darker, this presumably resulting from discoloration; outer segments and hypopygium darker brown. Male hypopygium with the ninth tergite large, its caudal margin convexly rounded. Basistyle terminating in two blackened structures, the outer a flattened lobe that is armed with four or five spines and points, the outermost stouter, its tip blunt and microscopically denticulate; inner point extended into a long slender spine. Dististyle a single simple rod, at tip slightly constricted into an apical button. Phallosome with the lateral apophysis pale, appearing as a branched rod, the outer arm slender and weak; inner apophysis heavily blackened, a straight black spine, its inner margin near base produced at a right angle into a more slender and slightly shorter spine. Ædeagus short.

Hab. Northern Dutch New Guinea.

Holotype, ♂, Camp Nok, Waigeu, altitude 2500 feet, April, 1938 (*L. E. Cheesman*).

There are now several species in this general region that lack cell M_1 of the wings. The most similar of these to the present fly is *Gynoplistia* (*Gynoplistia*) *perjucunda* Riedel, which differs in the coloration, structure of the antennæ, and in the details of the male hypopygium.

Troglophila tafana, sp. n.

General coloration of thorax medium brown, the abdominal tergites darker; antennæ (male) nearly as long as the wing; wings with a weak brownish tinge, unpatterned; Sc_1 ending nearly opposite *r–m*; R_{2+3+4} nearly as long as the more arcuated *Rs*; *m–cu* about one-fourth its own length before fork of *M*; male hypopygium with inner dististyle pale, narrowed to the subacute tip, on face of style with a single very long bristle.

Male.—Length about 4–4·2 mm.; wing 5–5·4 mm.; antenna about 5–5·2 mm.

Rostrum light yellowish brown; palpi dark brown. Antennæ (male) elongate, nearly as long as the wing; dark brown, the scape and pedicel a very little paler; flagellar segments elongate-cylindrical, with very long outspreading verticils scattered over virtually the whole length, the longest of these nearly equal to the segments; additional shorter erect setæ that are approximately one-fifth as long as the segment. Head dark brown, sparsely pruinose; anterior vertex reduced to a narrow strip that is only about one-third as wide as the scape, the eyes correspondingly large.

Thorax almost uniformly medium brown, the pleura a trifle paler than the notum, more yellowish brown. Halteres obscure, the knobs weakly darkened. Legs with the coxæ yellow; trochanters testaceous yellow; remainder of legs brown; tibial spurs distinct; claws small. Wings with a weak brownish tinge, unpatterned; veins light brown. Venation: Sc_1 ending nearly opposite *r–m*, Sc_2 a short distance from its tip, Sc_1 alone a little shorter than *r–m*; R_{2+3+4} nearly as long as the more arcuated *Rs*; R_{2+3} suberect and more or less arcuated, subequal in length to or shorter than R_{1+2}; R_2 about twice as long as Sc_2; cell 1*st* M_2 nearly one-half the length of outer section of vein M_3; *m–cu* about one-fourth its length before the fork of *M*.

Abdominal tergites dark brown; sternites obscure yellow; hypopygium more brownish yellow. Male hypopygium of simple construction, the outer dististyle a slender curved blackened rod, split at tip, the lower or outer point more flattened. Inner dististyle pale, narrowed to the subacute tip which bears a terminal seta; on face

of style at near mid-length with a single very long and strong bristle that is approximately one-half as long as the style. Gonapophyses appearing as pale flattened blades, the tips shortly acute.

Hab. Papua.

Holotype, ♂, Mount Tafa, altitude 8500 feet, March, 1934 (*L. E. Cheesman*).

The most closely-related species are *Troglophila cotobatoensis* Alexander, of Mindanao, and *T. monticola* Edwards, of Borneo, which differ especially in the details of venation and in other characters. The present is the first record of occurrence of the genus in the Australasian Region.

Elephantomyia (*Elephantomyodes*) *dædalus*, sp. n.

Size relatively large (wing, male, to 9 mm.); rostrum long, fully one-half the length of wing; mesonotum uniformly orange, the anterior thoracic pleurites more darkened; legs brownish black, the femoral bases restrictedly obscure yellow; wings with a strong brownish tinge, conspicuously patterned with darker brown; abdomen dimidiate, the segments yellow on basal rings, the posterior half or more blackened.

Male.—Length, excluding rostrum, about 7–8 mm.; wing 8–9 mm.; rostrum about 4·5–5 mm.

Rostrum black, fully one-half the length of wing. Antennæ black throughout, 14-segmented; flagellar segments elongate-cylindrical, with very long conspicuous verticils. Head brownish black, sparsely pruinose to produce a plumbeous appearance, the posterior portions more reddened; anterior vertex relatively narrow, subequal to the diameter of scape.

Pronotum obscure fulvous. Mesonotum uniformly orange, without pattern. Pleura with the propleura, dorsal mesopleura, anepisternum and anterior sternopleurite darkened, the remainder, including all posterior sclerites, orange. Halteres with stem yellow, knob brownish black. Legs with fore coxæ infuscated, remaining coxæ orange; all trochanters testaceous yellow; remainder of legs brownish black, the femoral bases restrictedly obscure yellow; femora and tibiæ with scattered semierect setæ. Wings with a strong brownish tinge, restrictedly but conspicuously patterned with still

darker brown, including the stigma and broad seams at origin of *Rs*, along cord and over outer end of cell 1*st* M_2, the last narrower; distal half of outer radial cells darkened; a more or less distinct pale longitudinal streak in cell *M* adjoining the vein; prearcular medial cell not brightened; veins dark brown. Venation: Sc_1 ending a short distance beyond fork of *Rs*; Sc_2 near its tip; *Rs* short, strongly arcuated to almost square at origin, in direct longitudinal alignment with R_5; anterior branch of *Rs* running generally parallel and very close to R_{+2}, cell R_2 at margin narrow; *m–cu* at near one-th rd the length of cell 1*st* M_2; cell 2*nd A* relatively wide on basal third, thence gradually narrowed to the acute outer end.

Abdomen more or less bicoloured; basal tergite yellow, succeeding four or five segments yellow basally, brownish black on more than the posterior half; outer segments, including hypopygium, uniformly blackened; basal sternites more uniformly pale, narrowly darkened beyond mid-length.

Hab. Papua.

Holotype, ♂, Ishurava, altitude 3000 feet, July, 1933 (*L. E. Cheesman*). *Paratopotypes*, 2 ♂♂.

In its wing-pattern and venation, the present fly is most similar to *Elephantomyia* (*Elephantomyodes*) *argenteocincta* (Walker), of Borneo, a black species with conspicuous silvery rings on the abdomen and with the venational details distinct.

Elephantomyia (*Elephantomyodes*) *diligens*, sp. n.

Size medium (wing, male, 8 mm.); rostrum about one-half the length of the wing; thorax almost uniformly brownish yellow, unpatterned, the vestiture sparse or lacking; legs brownish black; wings with a strong brownish tinge, virtually unpatterned except for the narrow darker brown costal border; prearcular field unbrightened, concolorous with the ground; abdomen dimidiate, the segments obscure yellow, ringed posteriorly with dark brown; hypopygium obscure yellow.

Male.—Length, excluding rostrum, about 6 mm.; wing 8 mm.; rostrum about 4 mm.

Rostrum brownish black, about one-half the length of wing. Antennæ black throughout; flagellar segments

elongate, with the usual very long verticils. Head above dark brown; anterior vertex relatively narrow, about as wide as three rows of ommatidia or approximately two-thirds as wide as the diameter of the scape.

Pronotum and mesonotum almost uniformly brownish yellow, unpatterned; præscutum with sparse but long scattered setæ, mediotergite glabrous or virtually so (as compared with *hyalibasis*). Pleura somewhat darker, especially ventrally. Halteres blackened, the base of stem restrictedly paler. Legs with the coxæ pale brown or yellowish brown; trochanters yellow; femora brown, somewhat darker outwardly; tibiæ and tarsi darker brown or brownish black. Wings with a strong brownish tinge, virtually unpatterned except for the narrow darker brown costal border that involves cells *C* and *Sc*, continued distad to the termination of vein R_5; veins comprising the cord not or scarcely seamed; prearcular field not at all brightened, as in *hyalibasis*, concolorous with the ground; veins dark brown. Venation: *Rs* moderately long, subequal to or exceeding in length cell *1st* M_2, nearly square at origin; anterior branch of *Rs* beyond origin nearly straight, vein R_5 deflected strongly toward the wing-tip; cell *1st* M_2 rectangular, relatively large, about as long as the distal section of M_{1+2}, *m–cu* about opposite one-third the length; cell *2nd A* narrow, a little more widened on proximal third.

Abdomen conspicuously dimidiate, the segments obscure yellow, ringed posteriorly with dark brown, the yellow including segment 1 and the broad basal rings of segments 2 to 7, inclusive, the dark apices narrower; eighth segment more uniformly darkened; hypopygium obscure yellow, more darkened apically.

Hab. Papua.

Holotype, ♂, Kokoda, altitude 1200 feet, August–September, 1933 (*L. E. Cheesman*); Collector's No. 89.

Among the described regional species the present fly is closest to *Elephantomyia* (*Elephantomyodes*) *hyalibasis* Alexander, of north-east New Guinea. The latter differs in coloration, especially of the wings and in the rather conspicuously hairy mesonotum.

Elephantomyia (*Elephantomyodes*) *argyrophora*, sp. n.

Size small (wing less than 6 mm.); rostrum about one-half the length of wing; thorax uniformly brownish

black ; wings with a very strong brownish tinge, patterned with still darker brown, this including very broad seams over the entire length of *Rs* and the cord as far caudad as vein *M* ; in cases with a supernumerary or adventitious cross vein in cell R_5 ; *Rs* almost square at origin ; abdomen black, the third to sixth tergites with nacreous or silvery basal rings, the subterminal segments uniformly opaque black.

Female.—Length, excluding rostrum, about 6 mm. ; wing 5·5–5·8 mm. ; rostrum about 3–3·1 mm.

Rostrum black, moderately long, about one-half the remainder of body. Antennæ black throughout ; flagellar segments (female) long-oval, with very long verticils. Head dull black.

Thorax uniformly brownish black, the surface polished. Halteres brownish black. Legs brownish black throughout. Wings with a very strong brownish tinge, patterned with still darker brown, the colour including very broad seams over the entire length of *Rs* and the cord as far back as *M*, likewise involving the basal fourth of cell R_3 and adjoining parts ; outer end of cell 1*st* M_2 more narrowly darkened, with a dusky cloud in cell R_5 immediately cephalad, the latter covering the supernumerary cross-vein when this is present ; costal border and outer radial margin a trifle darker than the ground ; veins dark brown. Venation : *Rs* almost square at origin ; *m–cu* at near one-third the length of cell 1*st* M_2, the latter about as long as vein M_4 ; cell 2*nd A* moderately broad, a trifle wider before mid-length ; in the type a supernumerary or adventitious cross-vein in cell R_5 opposite or just beyond the level of *m* ; in the paratype, which seems unquestionably to be conspecific, this vein is lacking but is represented by the dark pattern described above.

Abdomen black, the third to sixth tergites, inclusive, with nacreous or silvery basal rings, the subterminal segments uniformly opaque black. Ovipositor with the genital shield brownish black, the long valves horn-yellow to brown.

Hab. Papua.

Holotype, ♀, Kokoda, altitude 1200 feet, June, 1933 (*L. E. Cheesman*). *Paratopotype*, ♀, September–October, 1933 (*L. E. Cheesman*) ; Collector's No. 112.

In its black colour and very heavily-patterned wings, this fly agrees most closely with the Bornean *Elephantomyia* (*Elephantomyodes*) *argentocincta* (Walker), which differs in the details of coloration and in venation. I possess a homotype specimen of the latter, determined by Edwards, and it is evidently a distinct species.

Elephantomyia (*Elephantomyodes*) *brachyrhyncha*, sp. n.

Size small (wing, female, 6 mm.); rostrum very short, less than one-third the wing; thorax uniformly brownish black, polished; legs black; wings with a strong brownish tinge, virtually unpatterned except for the darker costal border; abdomen velvety black, both the tergites and sternites with basal silvery or nacreous rings, involving segments 2 through 7.

Female.—Length, excluding rostrum, about 6·5 mm.; wing 6 mm.; rostrum about 2 mm.

Rostrum unusually short, only about one-third the wing or body, brown basally, passing into black at outer end. Antennæ with scape and pedicel dark brown or brownish black, flagellum black; flagellar segments long-oval, with very long verticils. Head black, sparsely pruinose; anterior vertex about as wide as the diameter of the pedicel.

Thorax uniformly brownish black, polished. Halteres brownish black. Legs with the coxæ and trochanters brownish black; remainder of legs medium to dark brown, the femoral bases restrictedly more yellowed. Wings with a strong brownish tinge, virtually unpatterned except for the narrow darker brown costal border, this including cells *C* and *Sc*, continued outward to the tip of vein R_5; prearcular medial cell concolorous with the ground; veins brown. Venation: *Rs* strongly arcuated at origin; R_{2+3+4} perpendicular at base; cell 1*st* M_2 subequal in length to distal section of vein M_{1+2}, with *m–cu* at near one-third its length; cell 2*nd* *A* narrow, a very little widened on proximal third.

Abdomen velvety black, both tergites and sternites ringed with nacreous or silvery, this colour occurring as broad basal rings on segments 2 to 7, inclusive, on the three outer of these rings about equal in width to the blackened tips, on the more proximal segments somewhat narrower; outer segments more uniformly blackened;

valves of ovipositor blackened basally, more horn-yellow outwardly.

Hab. Papua.

Holotype, ♀, Mafulu, altitude 4000 feet, December, 1933 (*L. E. Cheesman*); Collector's No. 129.

The most similar regional species is *Elephantomyia* (*Elephantomyodes*) *argyrophora*, sp. n., which differs conspicuously in the long rostrum and heavily-patterned wings, as well as having fewer silvery abdominal rings. What seems to represent the present species is a single female from Kokoda, Papua, altitude 1200 feet, June, 1933, taken by Miss Cheesman, where the entire thorax is light reddish brown. This may represent a general condition or may perhaps indicate a distinct race or species.

LXXIII.—*Notes on Species of the Genus* Pectinopygus (*s. l.*). (*Mallophaga*).—III.* By Gordon B. Thompson (Assistant Curator, Science Museum, Institute of Jamaica, Kingston, Jamaica).

[Plate XVI.]

In this part, the third of my series dealing with the species of *Pectinopygus*, I propose to deal with the species occurring on the Cormorant (*Phalacrocorax c. carbo* Linn.) and the Shag (*Phalacrocorax a. aristotelis* (Linn.)).

1. *Pectinopygus* (*Philichthyophaga*) *gyricornis* (Denny).

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