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**NEW OR LITTLE-KNOWN TIPULIDÆ  
(DIPTERA).—LXXXIX. ORIENTAL-AUS-  
TRALASIAN SPECIES.**

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wings brownish yellow, with a sparse darker pattern; stigma dark brown; cell *Sc* brown except at the yellowed outer end; conspicuous brown clouds over the anterior cord, outer end of cell 1st  $M_2$ , and *m-cu*, the wing-tip less distinctly darkened; abdominal tergites yellow, the posterior borders broadly dark brown; ovipositor with the valves unusually small and inconspicuous.

*Female*.—Length about 12 mm.; wing 12.2 mm.

Frontal prolongation of head yellow, with black setæ; palpi black, the extreme proximal end of the first segment paler. Antennæ with scape yellow, pedicel brown; a single flagellar segment remains, dark brown, subequal in length to the pedicel, indicating a short antenna. Head yellow; ommatidia of eyes delicate.

Mesonotal præscutum almost uniform testaceous brown, not or but slightly more darkened medially; posterior sclerites of notum darkened, especially the mediotergite and pleurotergite, which are dark brown or brownish black. Pleura chiefly pale yellow, the sternum somewhat more darkened. Halteres with stem weakly infuscated, knob broken. Legs with the coxæ and trochanters testaceous yellow; femora and tibiæ obscure yellow, the tips of the femora narrowly but conspicuously blackened, of the tibiæ less evidently so; tarsi passing into dark brown. Wings with the ground-colour brownish yellow, with a sparse but conspicuous darker pattern; stigma dark brown; cell *Sc* dark brown except at the yellowed outer end; conspicuous paler brown clouds over the anterior cord, outer end of cell 1st  $M_2$  and *m-cu*; wing-tips still less evidently darkened; paler, more cream-coloured areas before and beyond the stigma, and across cell 1st  $M_2$  into the bases of cells  $M_2$  and  $M_3$ ; a dusky longitudinal seam in cell *R*; veins brown, *Sc* and *R* before the stigma more yellowed. Veins unusually glabrous, with a very few scattered trichia on the distal section of vein  $R_{4+5}$ . Venation:  $Sc_2$  ending in *R* about opposite the fork of *Rs*; *Rs* and  $R_{2+3}$  subequal;  $R_1$  and  $R_2$  subequal;  $R_{1+2}$  oblique; petiole of cell  $M_1$  short, only about one-third *m*; cell 2nd *A* narrow.

Abdomen eaten by Corrodentia and describable in general terms only; tergites yellow or reddish yellow, the posterior borders broadly dark brown, sternites apparently

*New or little-known Tipulidæ (Diptera).—LXXXIX.*  
*Oriental-Australasian Species.* By CHARLES P.  
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THE crane-flies discussed at this time are all Australasian, being from New Guinea, the Solomons, New Caledonia, eastern Australia, New Zealand, and Hawaii, as discussed and acknowledged under the individual species. Except where indicated to the contrary in the text, the types of the novelties are preserved in my collection of these flies.

*Macromastix (Macromastix) binnaburræ*, sp. n.

Mesonotal præscutum almost uniformly testaceous brown, the postnotum brownish black; head yellow; femora obscure yellow, the tips narrowly blackened;

more uniformly pale. Ovipositor with all valves unusually small and inconspicuous.

*Hab.* South Queensland.

*Holotype*, ♀, Lamington Plateau, Macpherson Range, at Binna Burra Lodge, altitude 2590 feet, January 1949 (*Reginald B. Wells*).

The present fly is quite distinct from the two most similar regional species, *Macromastix (Macromastix) albicollis* Alexander and *M. (M.) aurantioiceps* Alexander, all three differing among themselves in the coloration of the body and wings and in the details of venation.

*Macromastix (Macromastix) mouicola*, sp. n.

Size large (wing, male, about 15 mm.); antennæ short; mesonotal præscutum obscure yellow, the disk with three brown stripes; lateral præscutal borders narrowly blackened; femora obscure yellow, the tips narrowly and abruptly black; wings very weakly bicoloured, dusky, the cephalic border, cell *Cu* and bases of anal cells more whitened; cell *M*<sub>1</sub> very deep, short-petiolate.

*Male*.—Length about 12–13 mm.; wing 15–15.5 mm.; antenna about 2.2–2.3 mm.

Frontal prolongation of head long and slender, exceeding in length the remainder of head, brown above, more yellowed beneath, without nasus; palpi brownish black. Antennæ (male) short, the flagellum subequal in length to the frontal prolongation; scape obscure yellow, the outer part darker, pedicel and flagellum dark brown; flagellar segments subcylindrical, longer than their verticils. Head above yellow, the central part of vertex broadly medium brown, extending from the entire vertical tubercle to the occiput.

Pronotum brown. Mesonotal præscutum with the very restricted ground obscure yellow, occupying the humeral region and the interspaces; disk with three brown stripes, the median one vaguely divided by a paler line; lateral stripes at anterior ends bent outward and reaching the margin; lateral præscutal border narrowly blackened in front; scutum chiefly darkened, the centres of the lobes a little paler, the posterior lateral angles more yellowed; scutellum testaceous yellow, parascutella infuscated; mediotergite dark, the lateral borders and a vague central

vitta more reddened. Pleura and pleurotergite obscure yellow, variegated with brownish-grey areas. Halteres with stem weakly darkened, its base and the knob restrictedly yellow, the apex of the latter more whitened. Legs with the coxæ pale, whitish pruinose; trochanters yellow; femora obscure yellow, the tips narrowly and abruptly black; tibiæ brownish yellow, the tips even more narrowly blackened; tarsi brown, the tips of the segments blackened; claws (male) bidentate. Wings very weakly bicoloured, the ground dusky, the prearcular field, cell *C*, cephalic border of cell *R*, cell *R*<sub>1</sub>, cell *Cu* and the bases of the anal cells more whitened; stigma and cell *Sc* more infuscated; veins brown. Veins unusually glabrous, *R*<sub>4+5</sub> with a very few scattered trichia. Venation: *R*<sub>s</sub> strongly arcuated at origin; *R*<sub>1+2</sub> entire, oblique; cell *M*<sub>1</sub> very deep, short-petiolate to very short-petiolate, when longest, the stem only a fraction of *m*.

Abdominal tergites reddish brown, the basal ring of certain segments heavily light grey pruinose, the alternate segments with narrower pale margins; sternites more uniformly light brown; hypopygium dark reddish brown. Male hypopygium with the ninth tergite transverse, the caudal margin very gently emarginate, fringed with abundant yellow setæ. Outer dististyle conspicuous, the setæ of its outer half unusually long and stout. Rostrum of inner dististyle elongate, with most of the spines grouped at the margin.

*Hab.* New Caledonia.

*Holotype*, ♂, Mont Mou, altitude 4000 feet, in coniferous forest, February 1949 (*L. Garrigou*). *Paratopotype*, 1 ♂, pinned with type.

Generally similar to other regional species with the frontal prolongation of the head long and slender, including *Macromastix (Macromastix) novocaledonica* Alexander and *M. (M.) productifrons* Alexander, differing in the large size and in the venation, as the very deep cell *M*<sub>1</sub>.

*Limonia (Limonia) corinna*, sp. n.

Allied to *trigonia*; general coloration of thorax dark brown, the præscutum with three more yellowish brown stripes; legs brown, the tibiæ and tarsi somewhat paler than the femora; claws (male) simple; wings with a

strong brownish tinge, very restrictedly patterned with darker brown; *m-cu* at near one-third the length of cell 1st  $M_2$ ; male hypopygium with the rostral prolongation of the ventral dististyle long and slender, with two spines, the more basal one from a long tubercle, the second spine at near two-thirds the length of the prolongation.

*Male*.—Length about 8 mm.; wing 8.8 mm.

Rostrum and mouth-parts very reduced, black. Antennæ with scape testaceous, pedicel and flagellum black; basal flagellar segments oval, with abrupt short apical necks, the outer segments more elongate, the necks narrower and less conspicuous; terminal segment long and slender, about one-fifth longer than the penultimate; flagellar segments with the longest verticils a trifle exceeding the segments. Head dark brown, the anterior vertex and the even narrower orbits grey; anterior vertex reduced to a very narrow strip that is only about as wide as a single row of ommatidia.

Pronotum dark brown. Mesonotal præscutum with the reduced ground brown, the surface virtually covered by more yellowish-brown stripes, the median one especially conspicuous, weakly divided by a capillary dark line; scutal lobes similarly brightened; scutellum dark brown, sparsely pruinose; postnotum brown. Pleura uniformly dark brown. Halteres relatively long, brownish black. Legs with the coxæ dark brown; trochanters obscure yellow; remainder of legs brown, the tibiæ and tarsi somewhat paler, more yellowish brown; claws (male) simple. Wings with a strong brownish tinge, very restrictedly patterned with darker brown, including the small stigma and seams at origin of *Rs*, cord and outer end of cell 1st  $M_2$ ; cell *C* and wing-tip narrowly darker brown than the ground; veins brown. Venation: *Sc* long,  $Sc_1$  ending just before the fork of *Rs*,  $Sc_2$  near its tip; *Rs* very strongly arcuated to virtually square at origin; free tip of  $Sc_2$  more than its own length before the level of  $R_2$ ;  $R_{1+2}$  preserved as a short spur, about one-half  $R_2$ ; outer ends of radial veins decurved; *m-cu* at near one-third to two-fifths the length of cell 1st  $M_2$ ; anal veins slightly convergent near bases.

Abdomen brown, the posterior and lateral borders of the segments narrowly more darkened. Male hypopygium with the ninth tergite transverse, the caudal

margin very feebly emarginate to form two low lobes that are provided with about twenty long setæ. Basistyle with the ventromesal lobe long, simple. Dorsal dististyle nearly straight on about the basal three-fourths to four-fifths, the outer end suddenly curved, acute at apex. Ventral dististyle relatively small, its area less than that of the basistyle; rostral prolongation long, slender, gently curved, bearing two widely separated spines, the basal one in the axil from a tubercle nearly its own length, the second spine of the same length but without a tubercle, placed at near two-thirds the length of the prolongation. Gonapophysis narrowed into an elongate slender lobe, the apex gently curved.

*Hab.* Solomon Islands.

*Holotype*, ♂, Piva River, Bougainville Island, altitude 35 feet, January 12, 1945, resting beneath a log (*Robert Staples*).

This interesting fly is named for Mrs. Robert C. Staples (Corinne Heaton Staples). The simple claws, venation and general structure of the male hypopygium indicate a relationship with members of the *trigonia* group, all of which have the wings heavily patterned and with the structure of the hypopygium quite distinct. Among such flies the present species is perhaps somewhat closer to *Limonia* (*Limonia*) *trigonoides* Alexander.

*Limonia insitiva*, sp. n.

Thorax almost uniformly reddish brown, the scutal lobes and posterior border of the scutellum darker brown; antennæ black throughout; eyes of male narrowly contiguous above; knobs of halteres infuscated; femora yellow, with a pale brown subterminal ring; wings weakly tinged with brown, sparsely patterned with dark brown; *Sc* long, *m-cu* before the fork of *M*; abdominal segments bicoloured; male hypopygium with the rostral prolongation of the ventral dististyle long and slender, the two long spines placed close together at the base.

*Male*.—Length about 9 mm.; wing 9.5 mm.

Rostrum piceous; palpi black. Antennæ black throughout; flagellar segments long-oval, some of the verticils of the outer segments very long; terminal segment about one-fifth longer than the penultimate.

Head brownish grey, clearer grey on the genæ; eyes (male) narrowly touching at the narrowest point of the anterior vertex.

Pronotum and præscutum almost uniformly reddish brown; median region of scutum and the disk of the scutellum obscure yellow, the scutal lobes and posterior border of the scutellum darker brown; mediotergite slightly more pruinose. Pleura reddish brown. Halteres with stem pale, knob infuscated. Legs with the coxæ and trochanters yellow, the fore coxæ narrowly darkened on proximal portion; femora yellow, the tips clearer yellow, preceded by a slightly wider pale brown sub-terminal ring; tibiæ and tarsi brownish yellow, the outer tarsal segments brownish black to black. Wings with a weak brownish tinge, restrictedly patterned with darker brown, including the small oval stigma and smaller spots at origin of *Rs* and fork of *Sc*; narrow and inconspicuous seams along the cord and even less evident over the outer end of cell 1st *M*<sub>2</sub>; veins brown. Venation: *Sc* long, *Sc*<sub>1</sub> ending just before level of fork of *Rs*, *Sc*<sub>2</sub> near its tip; free tip of *Sc*<sub>2</sub> and *R*<sub>2</sub> in transverse alignment; *Rs* arcuated, nearly four times the basal section of *R*<sub>4+5</sub>; cell 1st *M*<sub>2</sub> irregularly rectangular, *m* shorter than the basal section of *M*<sub>3</sub>; *m-cu* subequal to the distal section of vein *Cu*<sub>1</sub>, placed just before the fork of *M*; anal veins virtually parallel to one another on their basal portion.

Abdominal segments bicoloured, dark brown basally, the tips broadly yellow, of the sternites even more so; subterminal segments more uniform in colour but less strongly darkened; hypopygium obscure yellow. Male hypopygium with the tergite transverse, the caudal border convexly rounded and not or scarcely emarginate medially, the border on either side with about a dozen setæ of different sizes. Basistyle with ventromesal lobe simple. Dorsal dististyle subangularly bent at near two-thirds its length, thence narrowed to the acute tip. Ventral dististyle relatively small, its total area less than that of the basistyle; rostral prolongation long and slender, with two long pale spines at base, arising close together or from two very closely approximated tubercles; on face of style with a finger like lobe that terminates in two long, slightly flattened setæ. Gonapophysis with the mesal-apical angle produced into a lobe that narrows gradually

to a subacute apical point. Ædeagus broad, bilobed at apex.

*Hab.* Papua.

*Holotype*, ♂, Kokoda, altitude 1200 feet, June 1933 (*L. E. Cheesman*); No. 79; British Museum of Natural History.

The present fly is well distinguished from other regional members of the genus that have the male hypopygium of this same general structure by the coloration and venation. It may be emphasized that this type of hypopygium is found in at least three subgeneric groups in the Oriental-Australasian fauna, being the typical form in the subgenus *Libnotes* Westwood. However, by its venation the present fly cannot be placed in *Libnotes*, being more as in the typical subgenus *Limonia* Meigen. It does not seem advisable to place it subgenerically at this time.

*Limonia (Dicranomyia) haleakalæ*, sp. n.

Size medium (wing, male, about 6 mm.); general coloration of entire body uniformly pale yellow; antennæ with scape chiefly yellow, remainder of organ brownish black; knob of halteres infuscated; wings pale yellow, the small stigma light brown; *Sc*<sub>1</sub> ending before origin of *Rs*, cell 1st *M*<sub>2</sub> closed; male hypopygium with the tergite very narrowly transverse, the posterior border not emarginate; basistyle with the ventromesal lobe bearing a cylindrical dusky lobule that terminates in two strong spinous setæ; ventral dististyle with the rostral spines placed close together on small individual tubercles.

*Male*.—Length about 5.5 mm.; wing 6 mm.

*Female*.—Length about 6 mm.; wing 6–6.5 mm.

Rostrum very short and pendant, uniformly pale yellow; palpi pale brown. Antennæ with the scape chiefly yellow, the remainder of organ brownish black; flagellar segments oval. Head uniformly pale yellow.

Entire thorax pale yellow. Halteres with stem obscure yellow, knob infuscated. Legs with the coxæ and trochanters pale yellow; remainder of legs brownish yellow to pale brown, the femoral tips more or less infuscated, of the tibiæ more narrowly so; outer tarsal segments darkened. Wings pale yellow, the small stigma oval, light brown; prearcular and costal fields deeper

yellow; veins yellow. Venation;  $Sc_1$  ending some distance before origin of  $Rs$ , the distance somewhat variable, in the extreme case almost one-half the length of the latter vein, in other specimens not exceeding one-fifth the length; cell 1st  $M_2$  closed, subequal in length to vein  $M_4$  beyond it;  $m-cu$  at or very close to the fork of  $M$ .

Abdomen yellow, with various parts of the male hypopygium more darkened. Male hypopygium with the ninth tergite exceedingly narrow, transverse, the posterior border not emarginate. Basistyle with the ventromesal lobe narrowed at base, fleshy, on lower face produced into a cylindrical dusky lobule that bears two strong spinous setæ, on face of style at base of lobe with a small tubercle. Dorsal dististyle gently curved, slightly expanded near outer end, thence suddenly narrowed into a long straight spine. Ventral dististyle moderately large, pale yellow, the rostral prolongation blackened, its two spines relatively short, from a common tubercle or on two small individual tubercles that are practically united; apex of prolongation obtuse. Gonapophysis with mesal-apical lobe unusually stout.

*Hab.* Hawaiian Islands (Maui).

*Holotype*, ♂, Paliku, within the crater of Haleakala, altitude 6500 feet, August 1939 (Otto Degener). *Allotopotype*, ♀. *Paratopotypes*, ♂♀; all types in poor condition.

The name, *haleakala*, is that of the great extinct crater of Maui. *Limonia* (*Dicranomyia*) *haleakalæ* is readily told from all other Hawaiian species, with the exception of *L. (D.) swezeyi* (Alexander), by the uniformly pale yellow coloration of the body. It differs from the latter in the larger size, and in venational details, especially the closed cell 1st  $M_2$ .

*Limonia* (*Dicranomyia*) *kraussi*, sp. n.

Allied to *stygiennis*; general coloration brownish black to black, including the rostrum, antennæ, halteres and legs; wings with a strong blackish tinge; male hypopygium with the ventral dististyle relatively small, its area not exceeding twice the total area of the basistyle; rostral prolongation short and stout, conspicuously pale at apex.

*Male*.—Length about 7–7.2 mm.; wing 7.5–8 mm.

Rostrum and palpi black. Antennæ black throughout; flagellar segments oval, the outer ones passing into long-oval; verticils shorter than the segments; terminal segment a trifle exceeding the penultimate. Head dull dark brown behind, the anterior vertex velvety black, nearly twice the diameter of the scape.

Thorax almost uniformly brownish black, the surface subnitidous; scutellum and median region of scutum a trifle paler. Halteres black, the base of the stem restrictedly obscure yellow. Legs with the coxæ brownish black, trochanters a trifle paler; remainder of legs brownish black, the femoral bases a trifle brightened. Wings strongly blackened, the prearcular field a little paler; stigma oval, darker brown than the ground; very restricted to scarcely evident darker seams at origin of  $Rs$ , along cord and over the outer end of cell 1st  $M_2$ ; veins dark brown. Venation:  $Sc_1$  ending a short distance beyond the origin of  $Rs$ ,  $Sc_2$  some distance from its tip,  $Sc_1$  alone nearly twice  $r-m$ ;  $Rs$  long and nearly straight, about twice the basal section of  $R_{4+5}$ ; cell 1st  $M_2$  closed, about as long as vein  $M_3$  beyond it;  $m-cu$  a short distance before the fork of  $M$ ; cell 2nd  $A$  narrower than in *stygiennis*.

Abdominal tergites brownish black, even darker laterally; basal sternites obscure yellow, the outer segments dark brown; hypopygium black. Male hypopygium generally as in *stygiennis* but the ventral dististyle much smaller; its area not exceeding twice the total area of the basistyle. Ninth tergite narrowly transverse, the width fully three times the length. Basistyle with the body much smaller than the ventromesal lobe, the latter expanded outwardly and bearing unusually long setæ; a stout lobe on proximal half bears several strong spinous setæ. Ventral dististyle with the rostral prolongation short and stout, conspicuously pale at apex; rostral spines near base of prolongation, arising from a common tubercle, slightly unequal in size, the outer one stouter.

*Hab.* Hawaiian Islands (Maui).

*Holotype*, ♂, Olinda, June 12, 1943 (Noël L. H. Krauss). *Paratypes*, 2 ♂♂, Paliku, within the crater of Haleakala, altitude 6500 feet, August 1939 (Otto Degener).

I am very pleased to name this fly for the collector, Mr. Noël L. H. Krauss.

Very similar in its general appearance to *Limonia* (*Dicranomyia*) *stygipennis* (Alexander), differing in the somewhat smaller size and especially in the details of structure of the male hypopygium, as the small ventral dististyle. In *stygipennis* this is very large, its total area fully three times that of the basistyle.

*Limonia* (*Dicranomyia*) *wainænsis*, sp. n.

General coloration of thoracic notum brownish black, the pleura paler, variegated with dark brown; femora and tibiæ dark brown, the basitarsi slightly paler; wings with a weak brownish tinge, the prearcular and costal fields more whitened; stigma oval, slightly darker than the ground; cell  $M_2$  open by the atrophy of  $m$ ; male hypopygium with the ventromesal lobe of the basistyle distinctly bifurcate, each lobule slender, slightly unequal, the shorter inner one with spines and strong setæ.

*Male*.—Length about 4.3–4.5 mm.; wing 4.8–5 mm.

Described from a specimen mounted in balsam.

Rostrum yellow, palpi black, the terminal segment of the latter about one-half longer than the swollen penultimate. Antennæ black; flagellar segments oval. Head brownish black above, yellow beneath.

Pronotum weakly infuscated. Mesonotal præscutum blackened medially, paling to yellow on the sides; posterior scleries of notum brownish black. Pleura and pleurotergite brown, variegated with paler, the sternopleurite darkest. Halteres infuscated. Legs with the coxæ dark brown, trochanters paler; femora and tibiæ dark brown, the basitarsi paler, remaining tarsal segments darkening to brownish black; claws (male) with teeth small and inconspicuous. Wings with a weak brownish tinge, the prearcular and costal fields more evidently whitened; stigma oval, slightly darker than the ground, its limits ill-defined; veins brown. Venation:  $Sc_1$  ending immediately beyond the origin of  $R_s$ ,  $Sc_1$  relatively long, slightly exceeding the basal section of vein  $M_{1+2}$ ;  $R_s$  relatively long, about one-half longer than the basal section of  $R_{4+5}$ , angulated at origin; free tip of  $Sc_2$  and  $R_2$  both pale, in approximate transverse alignment; inner end of cell  $R_3$  lying far proximad of either cell  $R_5$  or  $M_2$ ; cell  $M_2$  open by the atrophy of  $m$ ;  $M_{3+4}$  a little exceeding

$M_4$ ;  $m-cu$  immediately before the fork of  $M$ ; anal veins slightly convergent opposite arculus.

Abdominal tergites dark brown; sternites obscure brownish yellow, the posterior margins of the segments a trifle darker; male hypopygium chiefly brownish yellow, the basistyles darker. Male hypopygium with the tergite transverse. Basistyle relatively large, the ventromesal lobe conspicuously bifurcate, the more basal or proximal lobule longer, provided with several strong setæ on outer face, with longer and more delicate ones on the lower or cephalic face, the apex terminating in a strong blackened spine; outer lobe longer, slender, near its base with a small low lobule that bears about six strong setæ from conspicuous punctures, the apex of the lobe obtuse, provided with several very long setæ. Dorsal dististyle long and slender, curved on distal third, the long tip acute. Ventral dististyle subequal in total area to the basistyle, relatively slender at base, the outer portion more or less triangular, gradually narrowed into the long prolongation; spines two, arising from approximated, slightly unequal tubercles placed at near mid-length of the prolongation, the apex of the latter very obtuse to subtruncate. Ædeagus broad, suddenly narrowed to a point at apex.

*Hab.* Hawaiian Islands (Oahu).

*Holotype*, ♂, mounted on microscope slide, Wainae Mountains, altitude 2000 feet, March 3, 1917 (*James Illingworth*). *Paratype*, 1 ♂, Heron Valley, March 29, 1918 (*James Illingworth*).

The species superficially resembles *Limonia* (*Dicranomyia*) *jacobus* (Alexander) and some allied forms, from which it is most readily told by the nature of the lobing of the basistyle of the male hypopygium. The open cell  $M_2$  of the wings is possibly a variable character.

*Limonia* (*Dicranomyia*) *ovalistigma*, sp. n.

Præscutum brownish yellow, the remainder of the thoracic dorsum chiefly darker brown; pleura pale yellow; antennæ black, the flagellar segments cylindrical, the more basal ones shorter and more crowded; legs brown; wings sybhyaline, variegated by the large oval stigmal area;  $Sc_1$  ending about opposite the origin of  $R_s$ ;  $m-cu$  at the fork of  $M$ ; abdominal tergites dark brown, the sternites

pale greenish yellow; ovipositor with the cerci long and nearly straight.

*Female*.—Length about 3.7 mm; wing 4.2 mm.

Rostrum light yellow; about two-thirds the remainder of head; palpi black. Antennæ black; basal three flagellar segments subcylindrical, short and crowded; succeeding segments separate, cylindrical, the terminal one a little more bulbous at apex; verticils shorter than the segments. Front and anterior vertex silvery grey, the latter narrow, about equal in width to the diameter of the scape; posterior part of head dark brown.

Thoracic dorsum chiefly dark brown, the præscutum brighter brownish yellow, darker in front; pleurotergite yellow. Pleura chiefly pale yellow, the sternopleurite vaguely patterned with darker. Halteres broken. Legs with the coxæ and trochanters pale yellow; remainder of legs brown, the femoral bases a little paler; claws (female) unusually long and straight, virtually unspined. Wings subhyaline, variegated only by a large short-oval brown stigma; veins brown. Venation: *Sc* moderately long, *Sc*<sub>1</sub> ending opposite or immediately beyond the origin of *Rs*, *Sc*<sub>2</sub> just beyond this origin; *Rs* gently arcuated, about twice the basal section of *R*<sub>4+5</sub>; inner end of cell *R*<sub>5</sub> lying slightly distad of cell 1st *M*<sub>2</sub>; *m-cu* at or close to the fork of *M*; anal veins at base nearly parallel, outwardly gently diverging.

Abdominal tergites dark brown, the sternites pale greenish yellow. Ovipositor with the cerci elongate, nearly straight.

*Hab.* New Caledonia.

*Holotype*, ♀, Mont Mou, altitude 900 feet, January 1948 (*L. Garrigou*).

The present fly is entirely different from the other regional members of the subgenus, including *Limonia* (*Dicranomyia*) *illingworthi* (Alexander), *L. (D.) karma* Alexander, and others. The pattern and venation of the wings are distinctive.

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

General coloration of thorax grey, the præscutum with four brown stripes; antennal flagellum simple in both sexes; femora yellow, the tips abruptly and

conspicuously blackened; wings whitish subhyaline, patterned with brown; cell *M*<sub>1</sub> shorter than its petiole; *m-cu* at near mid-length of cell 1st *M*<sub>2</sub>; ædeagus elongate.

*Male*.—Length about 10 mm.; wing 10.5 mm.; antenna about 2 mm.

*Female*.—Length about 12 mm.; wing 10 mm.; antenna about 2.1 mm.

Rostrum and palpi black. Antennæ with scape and pedicel brown, flagellum black; flagellum simple in both sexes; flagellar segments one to three large and swollen, the lower face bulging or obtusely rounded, the succeeding segments long-cylindrical, with conspicuous verticils; a series of the latter on outer face unusually long, approximately one-half longer than the segments; terminal segment stouter and about one-fourth longer than the penultimate; the bulging faces of the more proximal flagellar segments without verticils. Head grey above, with a narrow brown median line.

Mesonotal præscutum grey, with four brown stripes, the intermediate pair narrow, becoming obsolete on the posterior third of the sclerite, narrowly separated on the anterior portion; lateral stripes conspicuous, entire; pseudosutural foveæ long-oval, transverse, black; scutum grey, the lobes conspicuously patterned with brown, the median area at suture less conspicuously so; posterior sclerites of notum dark grey. Pleura uniformly dark grey, heavily pruinose; dorsopleural membrane dusky, a trifle brightened adjoining the spiracle. Halteres uniformly pale yellow, relatively short. Legs with the fore coxæ infuscated basally, the tips paler; middle coxæ more pruinose on basal portion, the distal half paling to yellow; posterior coxæ even more extensively pale; trochanters yellow; femora yellow, the tips rather broadly, abruptly and very conspicuously black, the amount subequal on all legs, on the fore legs involving about the distal eighth or ninth of the segment; tibiæ yellow, the tips narrowly blackened, the bases even more narrowly so; basitarsi obscure yellow, the tips narrowly blackened; remainder of tarsi black; tibial spurs apparently lacking. Wings with the ground-colour whitish subhyaline, patterned with brown; prearcular field clearer yellow, cells *C* and *Sc* weakly brownish yellow; the brown areas appear as extensive clouds in bases of cells *R* and *M*, at origin of *Rs*,



cord and still more narrowly at outer end of cell 1st  $M_2$ ; stigma oval, brown; marginal darkenings at ends of longitudinal veins and with extensive paler brown washes in cell  $M$  adjoining the veins, on basal half of cell  $Cu$  and near outer ends of both anal veins; in cases a cloud at fork of  $M_{1+2}$ ; veins yellow, darker in the patterned areas. Venation:  $Sc_1$  ending about opposite the fork of  $Rs$ ,  $Sc_2$  long, much exceeding  $Sc_1$ ;  $Rs$  arcuated to very weakly angulated at origin;  $R_{2+3+4}$  long, subequal in length to cell 1st  $M_2$ ;  $R_{2+3}$  shorter than  $R_2$ , the latter subequal to  $R_{1+2}$ ; cell 1st  $M_2$  nearly rectangular, slightly widened outwardly; cell  $M_1$  from about three-fifths to three-fourths its petiole;  $m-cu$  at or shortly beyond mid-length of cell 1st  $M_2$ ; vein 2nd  $A$  sinuous, cell 1st  $A$  at near mid-length very broad.

Abdomen dark brown, sparsely pruinose, especially the sternites; lateral margins obscure yellow; hypopygium brownish yellow. Male hypopygium with the tergite not or scarcely produced, as usual in other members of the subgenus. Outer dististyle having the usual conformation of the subgenus, the outer hook slender, the lower angle obtuse; surface of style with several setæ, some strong and powerful, others much smaller. Inner dististyle with the basal portion membranous, the darkened outer part sinuous, with numerous setæ. Gonapophyses appearing as slender pale sickle-shaped hooks, the tips drawn out into a delicate point.  $\mathcal{A}$ edeagus of unusual length, about as long as the total length of the basistyle.

*Hab.* Victoria.

*Holotype*, ♂, Dartmoor, January 1940 (*F. Erasmus Wilson*); type in the Wilson Collection. *Allotopotype*, ♀; Alexander Collection.

I am pleased to name this distinct fly for Mr. Anthony Reeve Woodhill, to whom I am much indebted for valuable assistance in settling the identities of certain of the species of Tipulidæ described by Skuse. From the other Australian members of the subgenus having unbranched antennæ, including *Gynoplistia (Paralimnophila incompta)* Alexander, *G. (P.) indecora* Alexander, and *G. (P.) wilsonina* Alexander, the species is readily told by the coloration of the body, wings and legs, and in the

structure of the male hypopygium, as the unusually long  $\mathcal{A}$ edeagus. It should be noted that the above-mentioned *G. (P.) wilsonina* was erroneously published as *wilsoniana* ('Victorian Naturalist,' lx, pp. 89-91, 1943), but the name should be corrected as above, since the types were distributed under this name.

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

Subapterous; general coloration of mesonotum light grey, with poorly-indicated darkenings on præscutum and scutal lobes; antennæ with nine or ten branched segments; knobs of halteres dark brown; legs chiefly black, the femora with a more or less distinct yellow subterminal ring; wings reduced in male (and undoubtedly in the female), approximately one-half the length of the body; male hypopygium with the ninth tergite terminating in two rounded knobs; interbasal lobe of basistyle produced into a hook or spine; outer dististyle bifid at apex, before the subterminal outer spine with about ten strong erect setæ.

*Male*.—Length about 10 mm.; wing  $5 \times 0.6$  mm.; antenna about 2.5 mm.

Rostrum grey; palpi black. Antennæ (male) 15 or 16-segmented, relatively short, black throughout; scape pruinose; antennal formula  $2+2+8+4$  or  $2+2+7+4$ ; branch of first segment subequal to it, of the second nearly twice as long as the segment; last branch a short stub. Head grey, more infuscated on the posterior portion; eyes relatively small; anterior vertex wide, nearly four times the diameter of the scape.

Pronotum grey, darker medially. Mesonotum light grey, with poorly indicated darkenings on lateral parts of the præscutum and on the scutal lobes; pseudosutural foveæ large and black. Pleura grey, the dorsopleural membrane buffy brown. Halteres with stem yellow, knob dark brown. Legs with the coxæ grey-pruinose, paling to reddish yellow at tips; trochanters reddish yellow; femora chiefly blackened, paler basally, with a more or less indicated subterminal yellow ring, in the holotype and one paratype virtually lacking, in the second paratype much more distinct, about equal in

extent to the darkened tip; tibiæ and basitarsi brown, the tips narrowly darkened; outer tarsal segments black. Wings reduced in size and length, as shown by the measurements, being about one-half the length of the body; yellow, patterned with brown, chiefly at the origin of *Rs*, stigma, and along the cord; veins coarse, more or less bordered by darker; veins yellowish brown to brown. Venation distorted but evident; *Rs* angulated at origin, subequal to vein *R*<sub>4</sub>; cell *M*<sub>1</sub> present, subequal to its petiole; *m-cu* near or before mid-length of cell 1st *M*<sub>2</sub>; cell 2nd *A* narrow.

Abdomen dark brown, pruinose, the lateral tergal borders paling to obscure yellow; hypopygium large, reddish brown, the tergites sparsely pruinose. Male hypopygium with the tergite large, narrowed posteriorly, the caudal border in general convexly rounded but produced into two small rounded lobes or knobs, one on either side of the median line. Basistyle with conspicuous long erect setæ; interbasal lobe a glabrous blackened structure that is produced cephalad into an acute spine or point. Outer dististyle bifid at apex, the actual tip obtuse, the surface microscopically roughened; before apex on outer margin with an appressed blackened spine; outer margin at and basad of this spine with a group of about ten strong erect setæ. Inner dististyle nearly equal in length to the outer one, more expanded on the proximal two-thirds, the lower margin sinuous or slightly emarginate; apical third strongly narrowed, the tip obtuse. Aedeagus relatively long and slender, at apex bent or about a right-angle to form a crook. Gonapophysis sinuous, at apex narrowed into a straight blackened point, its tip subacute.

*Hab.* New Zealand (North Island).

*Holotype*, ♂, Mount Holdsworth, Wellington, January 10, 1940 (*C. E. Clarke*); type in the Wilson collection. *Paratopotypes*, 2 ♂♂.

This interesting fly is named for the collector, Mr. C. E. Clarke. The allied species include *Gynoplistia* (*Gynoplistia*) *ambulator* Alexander, *G. (G.) chathamica* Alexander, *G. (G.) pedestris* Edwards, and *G. (G.) resecta* Edwards, all having reduced wings. In the present fly the wings are larger than in the others mentioned and the hypopygial structure is quite distinct.

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

Allied to *dilatata*; general coloration polished black; antennæ (male) 15-segmented, of which eight are branched; wings whitish, heavily patterned with pale brown; a nearly continuous subbasal band at the level of origin of *Rs*, extending from vein *R* to the posterior border of wing; male hypopygium with both dististyles conspicuously expanded at their bases; inner style with the apex a flattened blade; gonapophysis at apex expanded into a relatively narrow blade, its extreme apical margin microscopically denticulate.

*Male*.—Length about 5 mm.; wing 5.3 mm.; antenna about 2 mm.

Rostrum polished black; palpi black. Antennæ 15-segmented, the formula 2+2+6+5; scape, pedicel and stems of the proximal two or three flagellar segments dark brown, the branches and remaining segments more brownish black; longest branch (flagellar segments three to six) slightly more than one-half the entire flagellum; last branch about three times the segment; terminal segment about one-third longer than the penultimate. Head polished black; anterior vertex broad.

Thoracic dorsum uniformly polished black. Pleura black, the anepisternum, narrow pteropleurite, meron and metapleura heavily grey-pruinose; dorsopleural membrane dusky. Halteres very weakly darkened, the base of stem restrictedly brightened. Legs with the coxæ and trochanters obscure yellow; femora obscure yellow, the tips broadly blackened, on the posterior legs including about the distal sixth; tibiæ and tarsi brownish black. Wings with the ground-colour whitish, heavily patterned with pale brown; a restricted postarcular darkening; a cross-band at level of origin of *Rs*, ending at vein 2nd *A*, extending from *R* to the posterior border; stigma and a narrow but continuous dark seam along cord and outer end of cell 1st *M*<sub>2</sub> brown; wing-tip broadly darkened, internally merging with the ground-colour at near mid-length of the outer radial field; veins brown. Venation: *Sc*<sub>1</sub> ending just before the level of the fork of *Rs*, *Sc*<sub>2</sub> at its tip; *R*<sub>2+3+4</sub> subequal to the basal section of *R*<sub>5</sub>; petiole of cell *M*<sub>1</sub> a little shorter than the cell; *m-cu* at near mid-length of cell 1st *M*<sub>2</sub>; vein 2nd *A* gently sinuous.

Abdomen, including hypopygium, black, the surface polished. Male hypopygium with the apical blade of the basistyle large and conspicuous, directed mesad and very slightly cephalad, the surface of blade with about eight long erect setæ, the apex rather narrowly and obtusely rounded; subapical blades of mesal face of style two, directed chiefly caudad, the outermost flattened, obtuse at tip, the surface with scattered setæ. Outer dististyle broad at base, the outer basal part dilated, before apex on lower edge with two or three obtuse teeth, the style beyond this point narrowed, the apex microscopically spinulose. Inner dististyle with the inner basal portion conspicuously dilated, the apical half a flattened elongate spatula, its surface with numerous setæ of various lengths, including one major bristle on outer margin beyond mid-length of the blade. Gonapophyses large and conspicuous, the arms stout, at apex dilated into a relatively inconspicuous blade, the extreme outer margin of which is microscopically denticulate.

*Hab.* New Zealand (North Island).

*Holotype*, ♂, Lake Moana, on border of Auckland and Hawkes Bay, December 1922 (ex *John G. Myers*).

The closest allies of the present fly include *Gynoplistia* (*Gynoplistia*) *dilata* Alexander and *G. (G.) pygmaea* Alexander, both of which have the coloration and antennal formula about the same but differ evidently in the structure of the male hypopygium, particularly of the lobes of the basistyle, both dististyles and the apex of the gonapophysis.

*Gynoplistia (Gynoplistia) tillyardi acutistyla*, subsp. n.

*Male*.—Length about 10 mm.; wing 8.5 mm.

*Female*.—Length about 13 mm.; wing 10 mm.

Generally similar to *tillyardi* Alexander in the essential characters of the species, as follows:—Mesonotal præscutum metallic green, the præscutal stripes with transverse microscopic striæ. Antennæ (male) with from 17 to 19 segments, with not more than 13 branched ones. Halteres blackened. Legs with the tips of the femora and tibiæ narrowly blackened; posterior tibiæ without a differentiated bright-coloured annulus. Wings without or with but few macrotrichia on anterior branch of *Rs*. Abdomen, including hypopygium, orange; in cases the

two subterminal segments in male blackened. Male hypopygium with the gonapophysis terminating in an apical spine. Ædeagus simple.

Antennæ (male) 17-segmented, the formula being 2+2+10+3; longest branch about one-half the length of the flagellum; terminal branch about one-half the segment. Head and mesonotum metallic green, the striolæ of præscutum and scutum conspicuous. Pleura and coxæ with a very heavy silvery pruinosity. Legs with the trochanters black; femora and tibiæ orange, the tips narrowly blackened, in the female the mid-tibiæ more obscure and blackened. Wings with the dark pattern greatly reduced, the seams at origin of *Rs* and along cord narrow. Abdomen with basal segment metallic green, the succeeding ones orange, the subterminal segments darkened, two in the male, four in female; hypopygium obscure yellow. Male hypopygium with the outer dististyle less than one-half the length of the inner, narrowed to an acute tip. Gonapophysis with the apical spine dusky, straight.

*Hab.* Victoria.

*Holotype*, ♂, Mountains above Warburton, April 1931 (*F. Erasmus Wilson*). *Allotopotype*, ♀. Type in the Wilson collection.

*Gynoplistia (Gynoplistia) nigrotibialis aciculifera*,  
subsp. n.

*Male*.—Length about 9 mm.; wing 9 mm.

Almost as in typical *nigrotibialis* Alexander, differing chiefly in a hypopygial detail.

Antennæ 19-segmented, black throughout; formula 2+2+10+5; terminal segment about twice the pentultimate. Head, thorax, halteres, coxæ and trochanters black, the thoracic pleura pruinose. Legs black, the femoral bases broadly orange, including about the basal half on the fore legs, about the basal two-thirds on the posterior legs. Wings with a very faint brownish tinge, the costal region infuscated; the usual dark pattern on wing disk; extreme bases of cells *R* and *M* darkened; prearcular region orange. Abdomen with the basal segment black, the remainder, including the hypopygium, orange. Male hypopygium much as in *nigrotibialis*, the outer dististyle about the same in both races. Inner spine of gonapophysis a very slender hair-like structure

that narrows very gradually to a needle-like, feebly infuscated spine. In *nigrotibialis* this structure terminates in a bulbous swelling that is sometimes apiculate.

*Hab.* New South Wales.

*Holotype*, ♂, Brown Mountain, December 2, 1930 (L. Tonnoir); in the Tonnoir collection.

*Gynoplistia (Gynoplistia) distinctissima* Alexander.

This species ranges from shiny red to almost coal-black. The exact nature of this great range in colour is still not understood, but since the individuals found at a given place and time are constant within narrow limits, it seems best to give subspecific names to the forms in question.

*Gynoplistia (Gynoplistia) distinctissima nigrina*, subsp. n.

As in the typical form, differing as follows:—Thorax coal-black, with the following exceptions: scutal lobes deep reddish; pteropleurite and meron silvery pruinose. Abdomen black, the bases of the third and fourth segments yellowish.

*Hab.* Victoria.

*Holotype*, ♂, Mountains above Warburton, altitude 3000–3800 feet, March 2, 1930 (F. Erasmus Wilson). Type in the Wilson collection.

*Gynoplistia (Gynoplistia) distinctissima resplendens*, subsp. n.

As in the typical form, differing as follows:—

Thoracic pleura shiny red, instead of black. Abdomen entirely shiny red, only the seventh and eighth segments bronzy black. In the female, the entire abdomen is brilliant red with a capillary black lateral line.

*Hab.* New South Wales.

*Holotype*, ♂, Blundells, Federal Capital Territory, December 21, 1930 (A. L. Tonnoir). *Allotopotype*, ♀. *Paratopotype*, ♂. Type returned to Tonnoir.

*Elephantomyia (Elephantomyia) garrigouana*, sp. n.

Rostrum exceeding one-half the length of the wing; thoracic notum yellowish brown; femora and tibiae brownish black, the outer tarsal segments snowy white,

more extensive on the posterior legs; tibial spurs lacking; wings with a weak brownish tinge, stigma virtually lacking; male hypopygium with the outer dististyle subcylindrical on basal half, more dilated on outer part, the apical angle produced into a curved hook.

*Male*.—Length, excluding rostrum, about 3.5 mm.; wing 4.6 mm.; rostrum about 2.6 mm.

Rostrum brownish black, about two-thirds the remainder of body; palpi black. Antennæ with scape yellow, pedicel and flagellum black; flagellar segments short-cylindrical, the outer ones more oval; verticils relatively short and inconspicuous. Head light grey, the centre of the posterior vertex slightly darkened and sunken; anterior vertex relatively narrow, approximately one-and-one-half times the diameter of the scape.

Thoracic notum almost uniformly light brown or yellowish brown, the sides of the præscutum and the pleura more yellowed. Halteres with stem dirty white, the base more yellowed, knob infuscated. Legs with the coxæ and trochanters pale yellow; femora and tibiae brownish black, the bases of the former paler; tarsi chiefly darkened, the outer segments snowy white, more conspicuous and extensive on the posterior legs; tibial spurs lacking. Wings with a weak brownish tinge, cells *C* and *Sc* a trifle more darkened; stigma lacking or represented by a vague seam on vein *R*<sub>1</sub>; prearcular field more whitened; veins brown. Venation: *Sc*<sub>1</sub> ending almost opposite the fork of *Rs*, *Sc*<sub>2</sub> at its tip and slightly longer; basal section of *R*<sub>5</sub> short but evident, in longitudinal alignment with *Rs*; branches of the latter extending virtually parallel to one another for their entire lengths, cell *R*<sub>2</sub> at margin exceeding twice cell *R*<sub>4</sub>; cell 1st *M*<sub>2</sub> long-rectangular, a trifle exceeding the distal section of *M*<sub>3</sub>; *m-cu* at near two-thirds cell 1st *M*<sub>2</sub>; cell 2nd *A* narrow.

Abdomen dark brown; male hypopygium light yellow. Male hypopygium with the dististyles terminal in position. Outer style of peculiar structure, its basal half subcylindrical, at apex dilated into a flange, the outer angle further produced into a long curved hook that narrows into a slender spine. Inner dististyle gradually narrowed outwardly. Gonapophysis appearing as a straight narrow

blade, its tip obtuse. *Ædeagus* short and stout, the apex bent laterad and feebly dilated into a hood.

*Hab.* New Caledonia.

*Holotype*, ♂, Mont Mou, altitude 4000 feet, in coniferous forest, February 1949 (*L. Garrigou*).

This interesting and very distinct fly is named for the collector, Mr. Louis Garrigou. Among the regional species it most resembles *Elephantomyia* (*Elephantomyia*) *zealandica* Edwards, but the relationship is not particularly close.

*Trentepohlia* (*Mongoma*) *parallela*, sp. n.

General coloration of thorax chestnut-brown; halteres and legs chiefly dark brown; wings with a weak brownish tinge; cells *C* and *Sc* a trifle darker brown; vein  $R_2$  beyond the outer radial fork, a short vertical element  $R_{2+3}$  being formed; veins  $R_3$  and  $R_4$  virtually parallel to one another for more than one-half their lengths, cell  $R_2$  at margin being more extensive than cell  $R_3$ ; cell 1st  $M_2$  unusually small, irregularly hexagonal; veins  $Cu_1$  and 1st *A* entirely separate at wing-margin.

*Male*.—Length about 8.5 mm.; wing 8 mm.

Rostrum yellow; maxillary palpi dark brown. Antennæ relatively long for a member of this genus, dark brown; flagellar segments long-cylindrical, the verticils less than one-half their length. Head brown; eyes large; anterior vertex reduced to a narrow strip that is about equal to two rows of ommatidia.

Mesonotum almost uniformly chestnut-brown, the lateral præscutal borders more yellowed; scutum and scutellum concealed in the mounting medium. Pleura chestnut-brown, the metapleural area more yellowed. Halteres dark brown, the base of stem narrowly yellowed. Legs with the coxæ and trochanters yellow, the fore coxæ a little darker; remainder of legs brown; posterior basitarsi at proximal end very slightly dilated and with a dense brush or comb of setæ. Wings with a weak brownish tinge, cells *C* and *Sc* a trifle darker brown; stigma lacking; veins brown. Venation:  $R_s$  straight, subequal to the basal section of  $R_5$ ; vein  $R_2$  beyond the outer radial fork, a short vertical element  $R_{2+3}$  being formed; veins  $R_3$  and  $R_4$  virtually parallel to one another for more than

one-half their lengths, cell  $R_2$  at margin being about one-third more extensive than cell  $R_3$ ; cell 1st  $M_2$  unusually small, irregularly hexagonal, only a little longer than broad, the fusion of veins  $R_5$  and  $M_{1+2}$  being shorter than the basal section of  $M_{1+2}$ ; veins beyond cell 1st  $M_2$  unusually long; *m-cu* at or just before mid-length of cell 1st  $M_2$ ; veins  $Cu_1$  and 1st *A* entirely separate at margin, the distance between them about equal to cross-vein *m*.

Abdomen dark brown, the basal sternites obscure yellow; hypopygium more reddish brown.

*Hab.* Papua.

*Holotype*, ♂, Kokoda, altitude 1200 feet, September–October 1933 (*L. E. Cheesman*); No. 112; British Museum of Natural History.

The present fly is quite distinct from all other regional species in the venation, particularly of the outer radial field and the open cell *Cu*. In the latter character it agrees with *Trentepohlia* (*Mongoma*) *flava* (Brunetti) and a few other known species. In its general appearance and small cell 1st  $M_2$  it somewhat resembles species such as *T. (M.) brevicellula* Alexander, *T. (M.) longisetosa* Alexander, and *T. (M.) nigrescens* Alexander, differing conspicuously in the venation.

*Toxorhina* (*Ceratocheilus*) *kokodæ*, sp. n.

Size medium (wing, male, about 6 mm.); rostrum very long, about one-half longer than the wing; general coloration of mesonotum light reddish brown, the pleura more yellowed and with a broad and conspicuous dorsal brownish black stripe; legs dark brown, the extreme outer tarsal segments yellowed; wings with a brownish tinge, the costal border and outer radial field even more darkened; *Sc* relatively short; *m-cu* just before the fork of *M*; male hypopygium with the outer dististyle slender, two-pointed at apex, on mesal face of stem with a narrow hyaline blade; arms of *ædeagus* short.

*Male*.—Length, excluding rostrum, about 8 mm.; wing 6 mm.; rostrum about 9 mm.

*Female*.—Length about 7.5–9 mm.; wing 5.8–6.3 mm.; rostrum about 8–8.5 mm.

Rostrum much longer than the wings in both sexes, dark brown. Antennæ black throughout; flagellar segments elongate, with conspicuous verticils, especially

those of the outer segments, as in the genus. Head grey; anterior vertex narrow.

Mesonotum almost uniformly light reddish brown, the lateral præscutal borders narrowly pruinose, the lower surface of the projecting præscutum slightly darkened; central part of the mediotergite weakly darkened, the lateral and posterior borders clear yellow. Dorsal pleurites with a very broad and conspicuous brownish-black stripe that extends from the cervical region to the base of the abdomen; ventral pleurites yellow. Halteres with the stem light yellow, knob infuscated. Legs long and slender; coxæ and trochanters yellow; remainder of legs dark brown, the extreme tips of the tarsi paling to yellow. Wings with a brownish tinge, the costal border, and especially the outer radial field, more strongly darkened; veins brown. The paratype differs somewhat from the type in having the wings more uniformly darkened, with the centres of the cells basad of and just beyond the cord evidently paler; veins brown. Venation: *Sc* relatively short, *Sc*<sub>1</sub> ending about opposite one-fourth the length of *Rs*, the latter short and oblique, approximately three times the basal section of *R*<sub>5</sub>; cell *M*<sub>2</sub> open by the atrophy of *m*; *m-cu* just before the fork of *M*.

Abdominal tergites brown, the lateral borders narrowly blackened; sternites more uniformly brownish yellow; hypopygium brown. Male hypopygium with a longitudinal area of long yellow setæ on mesal face of proximal end of the basistyle, the tips of these bristles more or less flattened and twisted, the remaining setæ stout, normal, dark-coloured. Outer dististyle slender, narrowed before the two-pointed apex, the inner or beak portion much longer than the stouter projection at the heel or opposite end; on mesal face of style with a nearly hyaline narrowly flattened blade. Inner dististyle longer and stouter, its outer end more or less dilated, the lower margin at near mid-length produced into a finger-like lobe. Arms of the ædeagus short, less than the width of the organ across their bases.

*Hab.* Papua.

*Holotype*, ♂, Kokoda, altitude 1200 feet, August–September, 1933 (*L. E. Cheesman*); No. 239; British

Museum of Natural History. *Allotopotype*, ♀, September–October, 1933. *Paratype*, ♀, Mafulu, altitude 4000 feet, December 1933 (*L. E. Cheesman*).

The most nearly related regional species is *Toxorhina* (*Ceratocheilus*) *hoogstraali* Alexander, which is generally similar in the coloration of the body, differing in the relative proportions of the body and rostrum, and in the wing-pattern and venation. The male sex of *hoogstraali* is still undescribed.

*Toxorhina* (*Toxorhina*) *basalis*, sp. n.

Size large (wing, female, 5.8 mm.); general coloration of the mesonotal præscutum light grey, the three brownish-black stripes subconfluent; pleura grey; wings subhyaline, unpatterned; veins brownish black, clearly defined against the ground; wing petiole relatively short and abrupt; *Rs* relatively long, about three-fifths its branch, its origin unusually far basad, on the proximal half of the wing; cell *M*<sub>3</sub> deep, its petiole correspondingly shortened; *m-cu* far before the fork of *M*, the distance a little less than *r-m*; cell 2nd *A* short and broad, the vein oblique.

*Female*.—Length, excluding rostrum, about 7 mm.; wing 5.8 mm.; rostrum about 4.1 mm.

Rostrum black, more than two-thirds the length of the wing. Antennæ black throughout; flagellar segments short-cylindrical, crowded; verticils very sparse or lacking, even on the outer segments. Front and the broad orbits light grey, the remainder of the vertex and the occiput brownish black; anterior vertex broad.

Mesonotal præscutum with the disk occupied by three broad brownish-black stripes that are subconfluent or virtually so, leaving broad grey lateral margins and more yellowish-grey humeral triangles; posterior interspaces and region of the suture dark brown; scutum brownish grey, the lobes somewhat darker; scutellum and postnotum clear light grey. Pleura grey; dorsopleural membrane infuscated, the ventral sternopleurite even more so. Halteres with the stem light brown, knob darker. Legs with the coxæ light grey pruinose; trochanters brownish yellow, the fore pair darker on the anterior face; remainder of legs brown. Wings subhyaline, un-

patterned; veins brownish black, clearly defined against the ground. Wing-petiole relatively short and abrupt. Venation: *Sc* long, *Sc*<sub>1</sub> ending a short distance before *R*<sub>1+2</sub> or about opposite two-fifths the length of *Rs*; *Rs* relatively long, about three-fifths its branch, its origin unusually far basad, being on the proximal half of the wing instead of at mid-length or beyond, as in allied species; cell *M*<sub>3</sub> deep, its petiole correspondingly shortened, subequal to or a little longer than *r-m*; *m-cu* far before the fork of *M*, the distance a little less than *r-m*; cell 2nd *A* short but broad, the vein short and oblique.

Abdomen dark brown, the intermediate tergites with more reddish-brown central areas; genital segment fulvous brown; valves of ovipositor elongate, especially the slender cerci.

*Hab.* Dutch New Guinea.

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

The most similar described regional species include *Toxorhina* (*Toxorhina*) *tenebrica* Alexander and *T. (T.) trilineata* Alexander, which differ in the coloration of the body and wings and in the details of venation, especially the length of vein *Sc*, *Rs*, cell *M*<sub>3</sub>, and the position of *m-cu*.

*Styringomyia halavana*, sp. n.

General coloration yellow, patterned with brown; head and thoracic dorsum without modified setæ but with distinctive chaetotaxy; wings yellow, restrictedly patterned with brown; cell 2nd *M*<sub>2</sub> sessile to short-petiolate; male hypopygium with the ninth sternite deeply bilobed at apex; basistyle with a single spinous seta, this from a conspicuous tubercle; only two developed dististyles, the outer a narrow flattened blade; inner style narrowed to the blackened tip that bears several microscopic points and one slender spine.

*Male*.—Length about 6 mm.; wing 4.2 mm.

Rostrum yellow; palpi broken. Antennæ with scape chiefly brownish black, more yellowed above; remainder of antennæ broken. Head light yellow, more infuscated behind; setæ small and unmodified.

Pronotum yellow, the sides infuscated. Mesonotum chiefly yellow, slightly patterned with brown, especially

on the cephalic half of the præscutum, behind the humeral suture appearing as two brown lines that diverge posteriorly; mediotergite extensively infuscated, the central area very narrowly yellow, pleurotergite yellow. Thoracic setæ small and unmodified, with a definite chaetotaxy, the scutellar pair of bristles decussate. Pleura light yellow. Halteres broken. Legs with the coxæ and trochanters yellow; remainder of legs yellow, the femora and tibiæ each with two brown annuli in the usual position, the femoral pair interrupted beneath; tarsi yellow, the tips of the individual segments narrowly infuscated; terminal segment black. Wings pale yellow, with a restricted brown pattern, including spots at the anterior cord, outer end of cell 1st *M*<sub>2</sub> and over *m-cu*; marginal clouds at ends of longitudinal veins very small and inconspicuous, with the exception of the area on vein 2nd *A*; veins yellow, darkened in the clouded portions. Venation: anterior branch of *Rs* oblique; cell 2nd *M*<sub>2</sub> sessile to very short petiolate; vein 2nd *A* simple, bent into the margin at a right-angle.

Abdominal tergites yellow, the posterior borders of the segments each with a pair of brown spots on posterior border, broadly interrupted at the mid-line on segments two to four, more narrowly so on segment five, unbroken on tergite six; tergites with a further weak infuscation on the basal ring, more conspicuous on segment five, on tergite six becoming confluent with the posterior darkening; sternites chiefly yellow, much less evidently patterned. Male hypopygium with the tergite relatively simple, the median lobe short, very slightly narrowed to the obtuse tip, in the centre with a dense area of setæ, this patch expanded posteriorly. Ninth sternite relatively broad at base, strongly narrowed to mid-length, thence nearly parallel-sided, the apex with a U-shaped notch, the lateral angles produced into slender lobes, each tipped with a strong bristle. Basistyle with a single spinous seta from a slender basal tubercle that is approximately one-half as long as the spine; near base of tubercle on mesal face with a strong pale spinous point. Dististyles relatively simple; outer style a narrow flattened pale blade, its apex obtuse and narrowly darkened, the margin before the tip produced into a small acute point; lateral border of style at near mid-length bearing a further small obtuse

blackened point or flange, the margin at this point with about four setæ. Inner dististyle longer, appearing as a flattened blade that narrows gradually to the blackened spinous apex, this with three or four small points at and near tip, one subterminal point being much longer and needle-like; outer margin of style to about mid-length with several setæ; mesal part of style near base with a small darkened lobe or flange, its margin microscopically toothed, bearing a small black three-pointed comb; still more basad with a longer lobe or extension of distinctive form, bearing along its margin a comb of about ten peg-like spines, the most basal being an elongate spine; surface of lobe with additional setæ; still more basad and separated from the last only by a very narrow notch with a slender rod-like blade.

*Hab.* Solomon Islands.

*Holotype*, ♂, Halava, Florida Island, at light, December 1943 (*Richard T. Holway*).

Among the described regional species, the present fly is most like *Styringomyia biroi* Edwards and *S. kerteszi* Edwards, both of north-eastern New Guinea. It differs from all such similar species in the structure of the male hypopygium, including the tergite, sternite and both dististyles.

*Styringomyia solomonensis*, sp. n.

Allied to *ensifera*; head and thoracic notum with a characteristic chætotaxy, the mesoscutum with the apices of the setæ acute and simple; male hypopygium with the median lobe of the ninth tergite unusually long and narrow; basistyle bispinous; inner dististyle consisting of an elongate arm that bears a single row of about 24 blackened peg-like spines.

*Male*.—Length about 7–7.5 mm.; wing 4.3–4.5 mm.

Rostrum obscure yellow; palpi obscure yellow throughout. Antennæ yellow, the lower surface of the scape and pedicel lined with black. Head light yellow, with four modified flattened black setæ, the pair on the anterior vertex slightly shorter.

Pronotum clear light yellow, heavily margined on sides with brownish black, the lower side of the anterior margin with a pair of strong setæ on either side; posterior lateral

part of pronotum with a pair of even longer erect setæ that are slightly proclinate, their tips incurved. Mesonotum chiefly reddish brown, vaguely lined with darker brown, the surface more or less pruinose, the humeral and lateral regions of the præscutum restrictedly more yellowed. Chætotaxy: setæ black except where stated otherwise. Humeral setæ two, both small, directed slightly backward; a group of three or four small and weak posthumeral or discal bristles; a strong prealar bristle, directed laterad and slightly backward, with a small yellow seta immediately behind this; on the scutum with two strong setæ on each lobe, chiefly erect, the tips inclined slightly forward, all setæ with acute simple tips; scutellar setæ two, shorter and more slender than those of the scutum; mediotergite obscure yellow, more or less patterned with darker, the mid-line narrowly pale. Pleura uniformly yellow. Halteres yellow, the stem more or less obscured, knob yellow. Legs with coxæ and trochanters light yellow; femora yellow, each with the usual two brown rings, these relatively faint and interrupted on lower face; tibiæ yellow, with two similar narrow rings, the outermost terminal; tarsi pale yellow, the tips of the segments very narrowly infuscated; terminal segment uniformly blackened. Wings yellow, the costal border narrowly and inconspicuously more saturated yellow; a relatively conspicuous brown pattern, arranged as usual in the genus; dark marginal spots on veins  $R_5$  to 2nd  $A$ , inclusive, these continued backward as darkening of the veins; veins yellow, except in the patterned portions. Venation: anterior branch of  $R_s$  suberect to slightly oblique;  $m$  very short to punctiform; vein 2nd  $A$  bent rather strongly into the anal margin, less strongly so in the paratype.

Abdomen yellow, the posterior borders of the tergites narrowly infuscated, more distinct on the outer segments; basal ring of tergite less distinctly patterned, on the outer segments this becoming united with the posterior darkening as a single or narrowly double line; sternites less evidently patterned; hypopygium, excepting the spines, chiefly yellow. Male hypopygium with the median lobe of the ninth tergite unusually long and narrow, the surface with abundant long erect and retrorse setæ, those at the obtuse apex short and inconspicuous. Ninth



sternite broad, the obtuse apex a little produced on median portion into two weakly divergent points, the four strong setæ scarcely differentiated from others on the sternite. Basistyle with two strong spinous setæ, as in the group, one shorter and broader than the other. Dististyle apparently with only two branches or styles, the usual median one being closely united or approximated with the outer and inner styles. Outer dististyle with the usual long darkened arm at near mid-length of mesal face, with more than a dozen strong setæ but scarcely developed into a free lobe; at extreme base of style with the usual blackened comb of the middle style, this consisting of about nine outer and fourteen more basal spines, the two groups slightly separated. Inner dististyle distinctive, consisting primarily of an elongate arm, the mesal face with a single row of about 24 peg-like spines with obtuse tips; at base of this arm with a blackened, bispinous flange; at base with the inner arm of the usual middle dististyle, this appearing as an oval lobe provided with long pale setæ and a single compact row of about eight peg-like spines.

*Hab.* Solomon Islands.

*Holotype*, ♂, Halava, Florida Island, at light, December 1943 (*Richard T. Holway*).

Allied to species such as *Styringomyia armata* Edwards, *S. ensifera* Edwards, and *S. ensiferoides* Alexander, differing conspicuously in the chætotaxy and in all details of structure of the male hypopygium.