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XI. — *New or little-known Tipulidæ (Diptera).* — VIII.
Australasian Species. By CHARLES P. ALEXANDER, Ph.D.,
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THE material upon which the present paper is based is largely from New Zealand, and is supplementary to the recent monographic treatment of the New Zealand Tipuloidea by Mr. Edwards. The extensive collections used in the preparation of the present instalment and others in press were received from several collectors, to whom my deepest thanks are due. These gentlemen are as follows: Dr. Tillyard and Mr. Philpott of the Cawthron Institute; Mr. David Miller; Dr. Campbell, who sent extensive lots of material collected by Gourlay, Harris, and himself; highly interesting collections from the alpine zones of certain mountains in the North Island, sent by Mr. Watt. In addition to the New Zealand crane-flies, a few Australian species are included, based on some interesting collections kindly sent to me for study by Mr. Edwards. Unless stated to the contrary, the holotypes are preserved in the writer's collection.

Molophilus philpotti, sp. n.

General coloration light yellow, including the wings; abdominal tergites bicolorous, the basal portion of each segment infuscated.

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Female.—Length 4.2–4.5 mm.; wing 4.7–5 mm.

Rostrum and palpi obscure yellow. Basal segments of antennæ yellow; flagellum broken. Head light yellow.

Mesonotum shiny pale reddish yellow, the pronotum and lateral margins of the præscutum more nearly whitish. Picura yellow. Halteres yellow. Legs yellow, the terminal tarsal segments dark brown. Wings with a strong yellowish tinge; veins yellow, the macrotrichiæ pale brown. Venation: base of vein R_{2+3} atrophied or very indistinct, unprovided with macrotrichiæ; anal veins convergent.

Abdominal tergites bicolorous, the basal two-thirds of each segment brown, the caudal third yellow; sternites uniformly yellow.

Hab. New Zealand (South Island).

Holotype, ♀, Nelson, December 9, 1920 (*A. Philpott*).

Paratype, ♀, Dun Mt., Nelson, altitude 2000 ft., December 14, 1920 (*A. Philpott*).

Type in the collection of the Cawthron Institute.

Molophilus philpotti is dedicated to the collector, Mr. A. Philpott, to whom I am indebted for many kindnesses in the past. This species and the next bear a resemblance to the Nearctic *M. pubipennis* (Osten-Sacken).

Molophilus parvulus, sp. n.

Size small (wing, ♀, under 4 mm.); general coloration pale yellowish brown; wings yellowish grey; anal veins divergent.

Female.—Length 3.8–4 mm.; wing 3.8 mm.

Described from alcoholic specimens.

Rostrum and palpi light brown. Antennæ with the enlarged scapal segments yellowish; flagellum pale brown. Head yellowish brown.

Thorax, including the pleura, pale yellowish brown without markings. Halteres large, pale yellow. Legs yellow, the tips of the femora and tibiæ scarcely darkened; terminal tarsal segments infuscated. Wings with a yellowish-grey tinge; veins pale. Venation: origin of R_{2+3} distinct, longer than r ; deflection of R_3 and $r-m$ subequal; basal deflection of Cu_1 ($m-cu$ of Tillyard) arcuated, nearly three times as long as the basal deflection of M_3 ; anal veins divergent.

Abdomen pale yellowish brown.

Hab. New Zealand (North Island).

Holotype, ♀, Ohakune, altitude 2018 feet, November 10, 1920 (*T. R. Harris*); in alcohol.

Paratopotypes, 6 alcoholic ♀ ♀.

Molophilus cruciferus, sp. n.

General coloration light yellow; a blackish longitudinal stripe on the thoracic and abdominal pleura; wings light yellow with a cruciform brown mark that extends the length of the organ, the cross-arm lying along the cord.

Female.—Length about 4 mm.; wing 4.2 mm.

Rostrum and palpi dark brown. Antennæ with the basal segments dark brown; flagellar segments a little paler. Head obscure brownish yellow, the anterior part of the vertex darkened; a patch of erect, black, flattened hairs on the posterior part of the vertex.

Mesonotum shiny yellow, the præscutum with a pale brown median line that crosses the suture on to the scutum and scutellum. Pleura largely destroyed by the large pin, yellow, apparently with a blackish longitudinal stripe. Halteres yellow. Legs with the coxæ and trochanters yellow; femora yellow; all but the bases of the fore femora dark brown and provided with conspicuous long blackish hairs; tibiæ yellow, the fore tibiæ obscure yellow with the bases and tips conspicuously dark brown; tarsi dark brown. Wings light yellow with a very conspicuous cruciform infuscation, the long arm of which extends from the wing-root in the anal and cubital cells along veins *Cu* and *M* to the wing-apex; at the level of the cord a narrower dark mark extends from *r*, crossing the longitudinal arm and following along vein *Cu*₂ almost to the posterior margin; the membrane in the infuscated areas is slightly darkened, but the chief cause of the dusky appearance is the dark brown macrotrichiæ and the dark veins; veins and macrotrichiæ elsewhere on the wing light yellow. Venation: vein *2nd A* very long, bent toward *1st A*, but diverging slightly at the tip.

Abdomen obscure yellow with golden-yellow hairs; a series of linear dark brown marks along the pleural region, this being a continuation caudad of the thoracic pleural stripe, the line being narrowly interrupted at the base of each abdominal segment.

Hab. New Zealand (North Island).

Holotype, ♀, Te Wairoa, Hot Springs Region, November 15, 1919 (*D. Miller*).

Type in the collection of David Miller.

Molophilus cruciferus is an easily recognized fly that is allied to *M. pulcherrimus*, Edwards, but very distinct.

Trimicra confluens, sp. n.

General coloration yellow; mesonotal præscutum with

confluent brown stripes; wings with a faint greyish-brown tinge, unmarked except for the pale brown stigma; cell 1st M_2 confluent with cell M_3 .

Male.—Length 7–7.4 mm.; wing 7–9.2 mm.

Female.—Length 5.5 mm.; wing 6.5 mm.

Rostrum obscure yellow; palpi dark brown. Antennæ brownish black. Head grey.

Pronotum yellowish, dark brown medially. Mesonotal præscutum yellow, the disk practically covered by three confluent dark brown stripes; tuberculate pits large, separated by a distance a little less than the diameter of one; scutum with the lobes brown, yellowish posteriorly; scutellum obscure yellow; postnotum dark brown on the posterior two-thirds, obscure yellow on the basal third. Pleura yellow, indistinctly marked with darker. Halteres brown, the base of the stem and tips of the knobs yellow. Legs with the coxæ and trochanters obscure yellow; remainder of the legs obscure yellow, the terminal tarsal segments infuscated; legs with conspicuous erect setæ. Wings with faint greyish-brown tinge; stigma pale brown; veins brown. Venation: Sc_1 ending opposite the end of r , Sc_2 only a little distance beyond the origin of Rs ; Rs straight; r on R_2 about one-half or less its length beyond the fork; cell 1st M_2 open by the atrophy of the outer deflection of M_3 , so cells 1st M_2 and M_3 are confluent; basal deflection of Cu_1 at the fork of M ; vein 2nd A straight, a little sinuous at the outer end.

Abdomen dark brown; genital segment paler, especially in the female. Male hypopygium large and powerful, especially the pleurites; outer pleural appendage terminating in a powerful black spine; inner pleural appendage with the apex obtuse, slightly dilated; gonapophyses appearing as long, slender, gently curved horns.

Hab. New Zealand (South Island).

Holotype, ♂, Christchurch, October 10, 1917 (*J. W. Campbell*); mounted in balsam.

Allotype, ♀, Blackball, West Coast, March 1920 (*J. W. Campbell*).

Paratopotype, ♂; mounted in balsam.

The beautiful slides of this species and other Tipulidæ in my collection were prepared by Dr. Campbell, to whom I am greatly indebted for many favours.

Trimicra inconstans, sp. n.

General coloration yellow with brown markings; præscutum with brownish-grey stripes, the interspaces and a

capillary median line dark brown; wings subhyaline, conspicuously spotted with brown; cell 1st M_2 closed or open, the venation in this region inconstant.

Male.—Length 7–7.5 mm.; wing 8.8–10 mm.

Female.—Length about 5 mm.; wing about 6 mm.

Rostrum obscure yellow; palpi dark brown. Antennæ brownish black. Head grey.

Mesonotal præscutum buffy yellow with three brownish-grey stripes, the interspaces and a capillary median line dark brown; scutal lobes brown; scutellum yellow, the base darker; postnotum grey. Pleura greyish with a short yellowish longitudinal stripe ending immediately before the halteres; dorso-pleural area obscure yellow. Halteres pale, the knobs slightly darker. Legs with the coxæ and trochanters obscure yellow; remainder of the legs obscure yellow, the terminal tarsal segments infuscated. Wings subhyaline, conspicuously spotted with brown as follows:—Origin of R_s ; at Sc_2 ; along the cord and outer end of cell 1st M_2 ; small but distinct clouds at the ends of the longitudinal veins; veins dark brown. Venation: Sc_1 ending opposite the fork of R_{2+3} , Sc_2 a short distance beyond the origin of R_s ; r on R_2 a short distance beyond its origin; cell 1st M_2 closed or open; when closed, m is short, transverse, the outer deflection of M_3 in one wing of the paratype elongated and rectangularly bent near mid-length; in the holotype, the right wing has cell 1st M_2 confluent with cell 2nd M_2 by the atrophy of m , the left wing has both m and the deflection of M_3 atrophied so that the distal section of M_3 lies free in the membrane as in certain Blepharoceridæ: these unstable conditions indicate an inconstant venation for the species; basal deflection of Cu_1 oblique, some distance before the fork of M .

Abdomen dark brown, the lateral margins of the segments broadly, the caudal margins more narrowly, yellowish; hypopygium brownish yellow. Male hypopygium somewhat as in *T. confluens*, but the gonapophyses are shorter and more strongly curved.

Hab. New Zealand (South Island).

Holotype, ♂, Spreydon, Canterbury, December 1920 (*J. W. Campbell*).

Allotype, alcoholic ♀, Riccarton Bush, Christchurch, Canterbury, 1921 (*E. S. Gourlay*).

Paratype, ♂, Old Man Range, Central Otago, January 1920 (*Geo. Howes*).

Gnophomyia flavopygialis, sp. n.

Size small (wing under 8 mm.); general coloration reddish brown, the præscutum and scutum marked with darker brown; femora and tibiæ yellow, tipped with dark brown; wings faintly yellowish, stigma small, dark brown; mostly lying distad of *r*; hypopygium yellowish; pleural appendages tapering to a single apical spine.

Male.—Length 4.5–5.5 mm.; wing 6.3–7.8 mm.

Female.—Length 5.5–5.8 mm.; wing 5.9–7 mm.

Rostrum reddish; palpi dark brown. Antennæ dark brown, the basal segments a little more reddish; flagellar segments oval-cylindrical. Head grey.

Mesonotum light reddish brown. The præscutum with three darker brown stripes; median stripe broad, becoming obliterated before the suture, very indistinctly split by a capillary darker line; lateral stripes less distinct, better delimited internally; scutal lobes dark brown; scutellum dark brown; postnotum reddish anteriorly, passing into brown behind. Pleura reddish brown; an interrupted dorsal brown longitudinal stripe extending to the halteres; mesosternum dark medially and as a narrow line cephalad of the mesocoxa. Halteres yellow. Legs with the coxæ and trochanters reddish brown; femora and tibiæ obscure yellow, the tips narrowly dark brown; tarsi dark brown. Wings with a faint yellow tinge, the costal cell faintly infuscated, especially basally; stigma small, dark brown, almost all lying distad of *r*; veins dark brown. Venation: Sc_2 at the extreme tip of Sc_1 , so Sc_2 alone is about equal to $r-m$; r just before the fork of M .

Abdomen dark brown; hypopygium reddish yellow, this coloration including the pleurites and appendages. Male hypopygium with the pleurites stout, tapering to the apex; the single pleural appendage is situated at the apex of the pleurite, slender, tapering to the single acute apical spine; before the tip on the cephalic face with a small weakly setigerous lobule; no brush of setæ at base of caudal-lateral angle of appendage.

The paratypes are smaller than the type with Sc_1 a little longer and the stigmal spot fainter, but the coloration and structure of the male hypopygium is quite the same.

Hab. New Zealand (South Island).

Holotype, ♂, Blackball, West Coast, March 1920 (*J. W. Campbell*).

Allotype, ♀, Nelson, January 1, 1920 (*A. Philpott*).

Paratopotype, 1 ♂; *paratypes*, 2 ♂ ♂, Nelson; 2 ♂ ♂, 1 ♀, Takaka, Nelson, February 6, 1920 (*R. J. Tillyard*).

The allotype and certain paratypes in the collection of the Cawthron Institute.

G. flavopygialis is allied to *G. neozelandica*, Edwards. In his splendid revision of the Tipuloidea of New Zealand, Mr. Edwards has proposed a new subgeneric term for this latter species. Since this was written, the remarkable aquatic larvæ and pupæ of the flies of this genus have been discovered by Dr. Campbell and Dr. Tillyard, and there can be no doubt but that Edwards's group deserves full generic ranking.

Atarba (Atarba) filicornis, sp. n.

Antennæ of male only a little shorter than the entire body; cell 1st M_2 small; male hypopygium with an erect chitinized spike near the base of each pleural appendage, the latter bifid with one arm appearing as a slender chitinized spine.

Male.—Length 6 mm.; wing 6.3 mm.; antenna 5.4 mm.

Female.—Length 6.2 mm.; wing 6.5 mm.

Rostrum and palpi dark brown. Antennæ of the male very long, only a little shorter than the body, dark brown; basal segments a little more testaceous; flagellar segments elongate-cylindrical, provided with abundant erect hairs. In the female the flagellar segments are distinctly bicolorous, the basal half of each flagellar segment brown, the distal half distinctly pale. Head reddish brown, the vertex with a golden-yellow pollen.

Mesonotum shiny obscure yellow without darker markings. Pleura yellow, the dorsal pleurites a little darkened. Halteres brown, the knobs dark brown. Legs obscure yellow, only the terminal tarsal segments dark brown; tibial spurs present. Wings with a strong yellowish-grey suffusion, highly iridescent; cells *C* and *Sc* more yellowish; stigma pale yellowish brown; veins brown. Venation: *Sc* short, *Sc*₁ ending about opposite one-fourth the length of *Rs*, *Sc*₂ immediately before the origin of *Rs*; *Rs* comparatively short and rather strongly arcuated at origin; veins *R*₂₊₃ and *R*₄₊₅ parallel for almost their entire length; cell 1st M_2 small, nearly square; basal deflection of *Cu*₁ at the fork of *M*.

Abdomen obscure yellowish brown; in the male a brownish-black subterminal ring; hypopygium obscure yellow.

Male hypopygium with the blackened pleural appendage with a conspicuous black spike at base, the tip with small black spinulæ; each pleural appendage terminates in an elongate, slender, gently curved spine, immediately below which is a pale cylindrical lobe terminating in a seta; this seems to be a single complex appendage rather than two approximated appendages, but this cannot be definitely affirmed without treating the hypopygium.

Hab. New Zealand (South Island).

Holotype, ♂, Dun Mt., Nelson, altitude 2500 ft., January 27, 1921 (*A. Philpott*).

Allotopotype, ♀, altitude 3000 ft., January 24, 1921.

Type in the collection of the Cawthron Institute.

Limnophila watti, sp. n.

General coloration dark brown, the pleura grey pruinose; halteres yellow; legs yellow, the terminal tarsal segments brownish black; wings greyish yellow, the base and costal region clearer yellow; *r* far from tip of R_1 ; cell M_1 present, a little shorter than its petiole.

Female.—Length about 6.5 mm.; wing 7 mm.

Rostrum, palpi, and antennæ brown. Head with a greyish-yellow pollen.

Pronotum dark brown with a greyish-yellow pollen. Mesonotal præscutum shiny dark brown, the interspaces and lateral margins more pollinose; humeral region obscure brownish yellow; pseudosutural foveæ conspicuous, black; tuberculate pits elongate, lying a little before the level of the pseudosutural foveæ; remainder of mesonotum heavily pruinose, the scutellum more testaceous. Pleura dark with a delicate grey appressed pubescence, the dorsal sclerites more infuscated. Halteres yellow. Legs with the coxæ brown, covered with microscopic hairs; trochanters brown; femora and tibiæ obscure yellow, the tibial tips narrowly darkened; metatarsi brownish yellow, the tips narrowly darkened; terminal tarsal segments brownish black. Wings with a greyish-yellow tinge, clearer yellow at the base of wing and in cells *C*, *Sc*, and behind vein *Cu*; stigma pale brown; veins brown. Venation: Sc_1 ending opposite the end of Rs , Sc_2 slightly removed from the tip of Sc_1 , the latter alone a little longer than R_{2+3} ; Rs long, arcuated at origin; R_{2+3} shorter than the deflection of R_{4+5} ; R_2 strongly arcuated at origin; *r* faint, far from the tip of R_1 , near mid-distance between fork of R_{2+3} and tip of R_1 ; inner

ends of cells R_3 , R_5 , and 1st M_2 about in alignment; cell 1st M_2 small, pentagonal; cell M_1 only a little shorter than its petiole; basal deflection of Cu_1 rather close to the fork of M , at about one-sixth the length of cell 1st M_2 .

Abdomen dark brown. Ovipositor dark horn-colour, elongate-acicular.

Hab. New Zealand (North Island).

Holotype, ♀, Mt. Ruapehu, alpine zone, altitude 4000–5000 ft., January 1921 (*M. N. Watt*).

“Collected in thick bush.”

Limnophila watti is named in honour of the collector, Mr. Morris N. Watt, to whom the writer is indebted for many fine crane-flies from the alpine zones of Mts. Egmont and Ruapehu.

Limnophila ruapehuensis, sp. n.

General coloration yellow; mesonotal præscutum with indistinct darker stripes; head yellow; legs yellow, only the terminal tarsal segments darkened; wings light yellow, r very indistinct, far from the tip of R_1 ; cell M_1 small, only about one-half the length of its petiole.

Female.—Length 6 mm.; wing 6.2–6.3 mm.

Rostrum and palpi dark brown. Antennæ dark brown, the basal segment paler. Head with a brownish-yellow pollen.

Mesonotum with a brownish-yellow pollen, the præscutum with three very faint darker stripes, the humeral region yellowish; tuberculate pits as in *L. watti*, elongate, situated far caudad and lying close together. Pleura yellow, the dorsal pleurites marked with brown. Halteres yellow. Legs with the coxæ and trochanters yellow; remainder of the legs yellow, the terminal tarsal segments infuscated. Wings light yellow; veins brownish yellow. Venation: Sc_1 about twice the length of Sc_2 ; R_{2+3} shorter than the deflection of R_{4+5} ; r very indistinct, far removed from the tip of R_1 ; cell M_1 small, about one-half the length of its petiole; basal deflection of Cu_1 at about one-fifth the length of cell 1st M_2 .

Abdominal segments distinctly annulated, the basal two-fifths or less of each segment dark brown, the distal three-fifths or more yellowish. Ovipositor elongate, yellowish horn-colour.

Hab. New Zealand (North Island).

Holotype, ♀, Mt. Ruapehu, alpine zone, altitude 4000–5000 ft., January 1921 (*M. N. Watt*).

Paratopotypes, 3 ♀ ♀.

"Collected in thick bush."

Limnophila ruapehuensis and *L. watti* appear to be related to the Nearctic *L. brevifurca*, Osten-Sacken.

Gynoplistia dimidiata, sp. n.

General coloration shiny coal-black; antennæ with fifteen segments; flagellar segments 1 to 9 with long flagellations, the longest about one-half as long as the flagellum; fore tibia black throughout; posterior tibia with an obscure whitish ring; wings indistinctly dimidiate, the cells beyond the cord conspicuously darker than cells *R* and *M*; base of cell *R* clear; *r* present.

Male.—Length 5.2 mm.; wing 5.8 mm.

Rostrum and palpi black. Antennæ black throughout; 13 flagellar segments, segments 1 to 9 with long flagellations, the longest (on segments 3 and 4) approximately one-half the length of the entire flagellum; terminal four segments simple. Head shiny coal-black.

Pronotum and mesonotum shiny coal-black. Pleura coal-black without pruinosity. Halteres pale, the knobs dark brown. Legs with the coxæ brown, paler apically; trochanters obscure yellow; fore femora obscure yellow on basal three-fifths, the dilated apex black, fore tibia and tarsi black; hind legs similar, but the posterior tibiæ with an obscure whitish wing near mid-length that is about as wide as the dark apex beyond it; pubescence of legs not conspicuous; middle legs lacking. Wings with the area basad of the cord greyish subhyaline, beyond the cord conspicuously infuscated to give the wing a dimidiate appearance; cell *Sc* darker than cell *C*; stigmal area large, brown, continued caudad as a seam along the cord; a narrow brown seam at origin of *Rs*; a faint brown clouding near the bases of cells *M* and *Cu* and including the outer ends of cells *Cu*, 1st *A*, and 2nd *A*; base of cell *R* entirely clear; veins dark brownish black. Venation: *Sc* short, ending just beyond mid-length of the short, strongly arcuated sector; *Sc*₂ at the tip of *Sc*₁; *R*₂₊₃ very short, about equal to *r*; *r* faint but evident, near mid-distance between the fork of *R*₂₊₃ and the tip of *R*₁; deflection of *R*₄₊₅ elongate, without macrotrichiæ; cell *M*₁ about one-half longer than its petiole; basal deflection of *Cu*₁ near one-third the length of cell 1st *M*₂.

Abdomen shiny coal-black, the pleural appendages of the hypopygium obscure yellow.

Hab. New Zealand (South Island).

Holotype, ♂, Dun Mt., Nelson, altitude 2000 ft., January 20, 1921 (*A. Philpott*).

Type in the collection of the Cawthron Institute.

Gynoplistia campbelli, sp. n.

General coloration shiny black with conspicuous metallic-blue reflexions; antennæ with fifteen segments; flagellar segments one to eight with long flabellations; terminal five segments simple; wings subhyaline with an extensive but indistinct cross-banded pale brown pattern, in addition to larger and darker marks at the origin of *Rs* and the stigma; cell *M*₁ lacking.

Male.—Length 6.7 mm.; wing 6.4 mm.

Rostrum and palpi black. Antennæ black, 15-segmented; flagellar segments 1 to 8 with long flabellations; terminal five segments simple; longest flabellations about two-fifths the length of the flagellum. Head shiny black, with faint bluish reflexions.

Mesonotum shiny black with faint bluish reflexions. Pleura concolorous with the mesonotum with a narrow line of appressed grey pubescence extending from the fore coxa almost to the wing-root. Halteres broken. Legs with the coxæ shiny black; trochanters dark brown; remainder of the legs black, the femoral bases broadly paler. Wings subhyaline with an extensive pale brown pattern; a large darker brown area at the origin of *Rs*, not reaching vein *M*; stigmal area large, dark brown, continued caudad along the cord to cell 1st *M*₂; the wing-tip, a band in the cubital cell opposite the level of the cord, a band in cells *M*, *Cu*, and 1st *A* opposite to the origin of *Rs*, and cell 2nd *A*, with the exception of the base, paler brown; veins dark brown. Venation: *Sc*₂ ending just before the end of *Rs*, *Sc*₁ indistinct; *Rs* long, angulated at origin; *R*₂₊₃ short, about equal to *r*; *r* beyond mid-length of the distance between origin of *R*₂ and the tip of *R*₁; cell *M*₁ lacking; basal deflection of *Cu*₁ at one-fourth the length of cell 1st *M*₂.

Abdomen black with conspicuous metallic-blue reflexions; hypopygium small, obscure chestnut-brown.

Hab. New Zealand.

Holotype, ♂, exact locality unknown, but probably Blackball, South Island (*J. W. Campbell*).

Gynoplistia campbelli is dedicated to my friend, Dr. J. W. Campbell, to whom I am indebted for many specimens of

New Zealand Tipulidæ, as well as valuable notes and observations. It is the only New Zealand species with cell M_1 lacking, a character possessed only by *G. jucunda*, Osten-Sacken, and *G. octofasciata*, Brunetti (Celebes), among the described species of the genus.

Gynoplistia fulviventris, sp. n.

Related to *G. bimaculata*, Skuse; size smaller (wing, ♂, 7.2 mm.); mesonotum heavily pollinose; halteres orange throughout; wings uniformly tinged with brown; conspicuous darker brown spots at origin of *Rs* and at the deflection of R_{4+5} ; male hypopygium with a single pleural appendage, the tip of which is strongly curved.

Male.—Length 7.5 mm.; wing 7.2 mm.

Rostrum and palpi dark brown. Antennæ injured in the type, apparently with twelve branched flageller segments, dark brown throughout. Head dark brown with a sparse yellow pollen.

Mesonotum and pleura with a very heavy yellow pollen, which nearly conceals the brown or black ground-colour; pseudosutural foveæ large, conspicuous, broadly triangular in outline, the surface microscopically punctulate. Halteres orange throughout. Legs with the coxæ dark, yellowish-grey pruinose; trochanters dark brown; femora and tibiæ yellow, the tips of each rather narrowly dark brown; metatarsi brown, the tips dark brown; remainder of tarsi dark brown. Wings with a strong brown tinge; stigma darker brown, this colour continued along the cord as a conspicuous seam at the deflection of R_{4+5} ; a smaller but conspicuous spot at origin of *Rs*; veins brown. Venation: *Rs* strongly arcuated at origin; R_{2+3} short, about equal to *m*; *r-m* shorter than *m*; petiole of cell M_1 shorter than the cell; basal deflection of Cu_1 just before mid-length of cell 1st M_2 .

Abdomen fulvous, a little darker toward the apex of the organ; basal tergite infuscated, but not blackened. Male hypopygium with each pleurite slender, tapering gradually to the narrow apex, the outer face clothed with conspicuous reddish setæ; a single pleural appendage, narrow basally, dilated before mid-length, thence narrowed to the acute, strongly curved point; on the cephalic or proximal margin are two protuberances, one opposite the subbasal dilation, the second appearing as a small triangular wing some distance before the tip. Gonapophyses complex, each bearing two laterally-directed curved hooks, the more caudal of which is very slender and delicate.

Hab. Tasmania.

Holotype, ♂, Mangalore, January 25, 1913 (*A. White*).

Type in the collection of the British Museum (Natural History) from the White collection, No. 1917. 104.

Gynoplistia simplex, sp. n.

General coloration shiny coal-black without blue or metallic reflexions; thoracic pleura and coxæ silvery pruinose; antenna of male with eleven pectinate segments; male hypopygium with a single pleural appendage that is curved, the apex subacute.

Male.—Length about 10 mm.; wing 9.5 mm.

Rostrum and palpi brownish black. Antennæ with eleven pectinate flagellar segments; tip of antenna broken, there being a total of fifteen segments present; basal two flagellar segments with long pectinations; flagellar segments 3 to 11 pectinate, the pectination of the last segment longer than the two simple segments following; antenna black throughout. Head shiny coal-black.

Mesonotum shiny black. Pleura heavily silvery pruinose. Halteres dark brown. Legs with the coxæ pruinose; trochanters black; remainder of the legs broken. Wings subhyaline, the apex clouded with brown, this including the outer ends of cells R_2 , R_3 , R_5 , 2nd M_2 , and most of M_1 ; conspicuous dark brown spots at stigma, extending along the cord to $r-m$; a large spot at origin of R_s and a less distinct area in the base of cell R ; remaining veins of the cord indistinctly seamed with brown; cells C and Sc brown, the latter darker. Venation: Sc_1 ending near mid-length of R_{2+3} ; R_{2+3} and deflection of R_{4+5} subequal or the former shorter; cell M_1 present; basal deflection of Cu_1 before or at mid-length of cell 1st M_2 .

Abdomen entirely coal-black, including the hypopygium. Male hypopygium with a single pleural appendage, this broadest basally, thence gently curved and narrowed to the subacute apex.

Hab. Tasmania.

Holotype, ♂, Mangalore, October 19, 1911 (*A. White*).

Type in the collection of the British Museum (Natural History), from the White collection, No. 1917. 104.

Cerozodia victoria, sp. n.

General coloration dark brown, the head and thorax pruinose; mesonotal præscutum with three black stripes;

legs dark brown; wings subhyaline, heavily cross-banded with dark brown.

Male.—Length about 13·5 mm.; wing 12·2 mm.

Rostrum and palpi dark brown. Antennæ dark brown, the scapal segments slightly pruinose; only nine flagellar segments are present in the unique type, these all branched and with the branches in the same plane; the terminal pectinations are shortened and the total number of antennal segments is presumably not more than sixteen or eighteen. Head dark, sparsely pruinose, clearer grey adjoining the inner margin of the eyes.

Mesonotum clear grey, the præscutum with three black stripes; pseudosutural foveæ conspicuous, triangular, black. Pleura dark, sparsely pruinose. Halteres dark brown. Legs with the coxæ black, sparsely pruinose; remainder of the legs dark brown, including the tarsi. Wings subhyaline, very heavily spotted and cross-banded with dark brown; cells *C* and *Sc* dark brown; arcular cell dark; a spot in cell *R* mid-distant between arculus and origin of *Rs*; a large quadrate area at origin of *Rs*; a very broad cross-band at the cord, including the stigma, continued caudad along the cord and outer end of cell 1st *M*₂ to the caudal margin of the wing in cell *Cu*₁, the centre of cell 1st *M*₂ subhyaline; the terminal dark band occupies the wing-tip, in the extreme outer end of cell 2nd *R*₁; distal two-fifths of cells *R*₂ and *R*₃; about the distal half of cells *R*₅ and 2nd *M*₂; all of *M*₁ and the extreme tip of *M*₃; conspicuous brown clouds in the basal half of *Cu*, the outer quarter of cell 1st *A*, and the outer half of cell 2nd *A*; veins dark brown. Venation: *Rs* in alignment with *R*₂₊₃; *r* near mid-distance between the fork of *R*₂₊₃ and the tip of *R*₁; cell 1st *M*₂ rectangular; petiole of cell *M*₁ elongate, only a little shorter than the cell itself; basal deflection *Cu*₁ at one-third the length of cell 1st *M*₂.

Abdominal tergites shiny brownish black, including the hypopygium; sternites slightly pruinose.

Hab. Victoria.

Holotype, ♂, collected by C. French.

Type in the collection of the British Museum (Natural History), No. 1912. 491.

Cerozodia victoria is slightly larger than the Tasmanian *C. minuscula*, Alex.

Clytocosmus edwardsi, sp. n.

Female.—Length about 27 mm.; wing 20·5 mm.

Generally similar to *C. tillyardi*, Alex., differing principally in the structure of the antennæ and the coloration of the abdominal tergites.

First antennal segment orange, the remaining segments dark brown; flagellar segments 1 to 4 broadly pyriform, decreasing in size from the first to the fourth; segments beyond the fourth cylindrical and provided with very long verticils.

Mesonotum and pleura with orange stripes. Legs black. Wings with a strong yellowish tinge, more infuscated on the distal half, the centres of cells *M*, *Cu*₁, and 1st *A* paler.

Abdominal tergites black, only the eighth and ninth segments orange. First tergite with a large, triangular, white area on each side; second tergite black, unmarked except for a large, elongate, transverse, white area on either side, only narrowly separated on the median line; tergite 3 black with a small, rounded, white spot near the lateral margin and an even smaller pair lying more cephalad and closer to the median line; tergite 4 with only the rounded lateral spots; tergite 5 with the lateral spots slightly larger, and in addition with two much larger white areas closer to the median line, these latter areas larger than the black space separating them; tergites 6 and 7 black with large and conspicuous white lateral spots; segment 8 orange; segment 9 and the ovipositor more castaneous. Sternites orange, the lateral margins narrowly but conspicuously blackened.

Hab. Victoria.

Holotype, ♀, labelled "F. N. Gully, 12. 4. 1909."

Type in the collection of the British Museum (Natural History) from the White Collection, No. 1917. 104.

Mr. Edwards writes that Brunetti has two additional females of this species from Monbulk, Victoria.

The genus *Clytocosmus* includes the most magnificent crane-flies so far discovered. The five known species may be separated by the accompanying key:—

- | | |
|---|----------------------------|
| 1. Stripes of the mesonotal præcutum black. | 2. |
| Stripes of the mesonotal præcutum orange. | 3. |
| 2. Basal three flagellar segments subpyriform; abdomen black, tergites 2-4 bright yellow. (North Queensland.) | <i>lichtwardti</i> , Ried. |
| Basal seven flagellar segments cordiform; abdomen black, the basal half of tergite 2 orange. (New South Wales.) | <i>skusei</i> , Alex. |
| 3. Prothorax, mesonotal scutellum, and postnotum black; thoracic pleura black, | |

- spotted with white. (New South Wales.) *helmsi*, Skuse; genotype.
 Prothorax, mesonotal scutellum, and post-notum orange; thoracic pleura orange, spotted with white 4.
 4. Abdominal tergites 1 and 2 with orange markings; tergite 7 orange. (New South Wales.) *tillyardi*, Alex.
 Abdominal tergites 1-7 black, spotted with white, without orange markings. (Victoria.) *edwardsi*, sp. n.

Clytocosmus edwardsi is dedicated to Mr. F. W. Edwards, of the British Museum of Natural History, in appreciation of the many favours he has shown the writer in his studies on the Tipulidæ.

XII.—Notes on *Myriapoda*.—XXVI. *The Names of some Iulidæ and Blaniulidæ*. By the Rev. S. GRAHAM BRADE-BIRKS, M.Sc. (Manchester), Lecturer in Zoology and Geology, S.E. Agricultural College (University of London), Wye, Kent.

It is clear from a study of two recent papers—one by Chamberlin (1921), the other by Brölemann (1921)—that we must make certain alterations of names in our faunal lists.

As a result of correspondence with both authors and a perusal of these papers, the writer is able to make the following remarks:—

Cylindroiulus londinensis, var. *cæruleocinctus* (Wood, 1864),
 = *C. londinensis*, var. *teutonicus* (Pocock, 1900).

The form we have known recently in this country under the name of *Cylindroiulus londinensis*, var. *teutonicus* (Pocock), also occurs in North America, where, as on the continent of Europe, it seems to have been regarded as the typical form of Leach's "*Iulus londinensis*." Chamberlin, taking the view that *Cylindroiulus*, Verhoeff, is a synonym of *Diploiulus*, Berlese, 1883, calls the animal *Diploiulus londinensis* (Leach). Some authors regard *Diploiulus* as a synonym of *Iulus*. An important point for us is that Chamberlin includes in his synonymy of this form "1864. *Iulus cæruleo-cinctus* Wood, Proc. Acad. Sci. Phil., p. 14." *In litt.* Chamberlin says, "Our form is the var. *teutonicus*, agreeing fully with European specimens identified as *londinensis* by Meinert and