

New or little-known Tipulidæ (Diptera).—XL. Australasian Species. By CHARLES P. ALEXANDER, Ph.D., F.E.S., Massachusetts Agricultural College, Amherst, Massachusetts, U.S.A.

IN the present instalment various species of Tipuline crane-flies are described, chiefly from New South Wales, Victoria, and Tasmania. As before, the greater number were secured by Dr. Tonnoir on his 1922-23 collecting expedition to Australia. A few additional specimens were secured from the following sources: Bishop Museum, Honolulu, collected by the late R. Helms; National Museum, Victoria, including material secured by the late Mr. F. P. Spry and by Mr. G. F. Hill; University of Queensland, collected by Mr. Hardy; an interesting series from Dr. Ferguson, collected by himself and by Mr. J. Clark in Western Australia; an interesting species of *Dolichopeza* collected by Mjöberg and received in exchange from Mr. Riedel. Except where stated to the contrary, the types of the species in question have been returned to the above institutions. My sincere thanks and gratitude are extended to the many friends and colleagues who have assisted in this study.

Change of Name.—The subspecific name *tasmaniensis* applied to *Elephantomyia tasmaniensis* (Ann. & Mag. Nat. Hist. (10) i. pp. 600-601, May 1928) should be altered to *Elephantomyia tasmaniensis barringtonia*, subsp. n.

Dolichopeza ferox, sp. n.

General coloration brown, the præscutum without distinct stripes; antennæ (♂) short, not attaining the wing-root; legs dark brown, the genua restrictedly whitened; wings with a strong dusky tinge; male hypopygium with the outer dististyle flattened, broad at base, narrowed apically into an acute blackened spine.

Male.—Length about 10 mm.; wing 12·5 mm.

Frontal prolongation of the head brown, the sides broadly yellow; palpi dark brown. Antennæ relatively short, if bent backward not attaining the wing-root; scapal segments obscure yellow, the flagellum dark brown; flagellar segments gradually decreasing in length outwardly, the first nearly equal to the following two taken together. Head dark greyish brown, the vertical tubercle abruptly fulvous-yellow, the front yellowish.

Pronotum and mesonotum dark brown, the præscutum without distinct stripes, the lateral margins a trifle darker. Pleura dark brown, vaguely variegated with paler, especially on the sternopleurite and meron. Halteres dark brown, the extreme base of the stem obscure yellow. Legs with the coxæ brownish yellow, especially the tips, the middle coxæ more uniformly pale; trochanters testaceous, each with the distal half of the inner face blackened; remainder of legs dark brown, only the genua restrictedly whitened. Wings with a strong dusky tinge, paler before and beyond the stigma and just beyond the fork of M ; stigma large, darker brown; veins dark brown. Venation: Sc_1 preserved, perpendicular; cell M_1 from one-third to one-half longer than its petiole; second section of M_{1+2+3} a little shorter than M_{1+2} ; $m-cu$ about two-thirds its length before the fork of M . Conspicuous macrotrichiaë on the veins beyond the cord, but virtually lacking on the main veins proximad of the cord.

Abdomen dark brown, indistinctly annulated with obscure brownish yellow, the rings medial in position, somewhat brighter on the sternites; outer segments and the hypopygium more uniformly dark brown. Male hypopygium very different in structure from the other described Australian species. Ninth tergite with the lateral angles produced caudad into conspicuous blackened lobes, the tips of which are obliquely truncated, the broad median area broadly U-shaped, fringed with sparse long setæ, the median point with a tiny emargination. Outer dististyle a broad flattened blade that narrows into an acute black spine directed mesad; surface of the style, but especially the mesal edge, densely fringed with long setæ; extreme base of style narrowed into a slender petiole. Inner dististyle small, blackened, the tip narrowed, the outer margin with short but conspicuous setæ.

Hab. Tasmania.

Holotype, ♂, Mt. Wellington, December 1, 1922 (*A. Tonnoir*).

Dolichopeza ferox is the most distinct species of the genus so far discovered in Australia.

Dolichopeza pallidula, sp. n.

1890. *Dolichopeza cinerea*, Skuse, Proc. Linn. Soc. New South Wales, (2) 5, 64; nec *D. cinerea* (Macquart), Dipt. exot., Suppl. i. 9-10, pl. i. fig. 3 (1846).

General coloration pale ochreous-brown; legs yellowish brown; wings pale, the stigma brown, the cord seamed with

pale brown; male hypopygium with the ninth tergite having two acute spinous lobes; outer dististyle elongate, the mesal face with two teeth placed near mid-length of the style.

Male.—Length 8–9 mm.; wing 10–12 mm.

Female.—Length 8.5–10 mm.; wing 10.5–11 mm.

Frontal prolongation of head short, yellowish testaceous to ochreous; palpi darker. Antennæ of moderate length, if bent backward extending to beyond the wing-root; scapal segments paler than the brown flagellum. Head pale, the vertex in cases more infuscated behind, the orbits broadly pale.

General coloration of mesonotum pale ochreous to ochreous-brown, with poorly defined darker markings, the pleura pale yellowish testaceous. Halteres elongate, pale, the knobs dark. Legs with the coxæ yellowish testaceous; trochanters obscure yellow, the mesal face with a brown spot; remainder of legs yellowish brown, the tarsi only a trifle darkened. Wings pale, the stigma dark brown, slightly more yellowish before and beyond the stigma; cord seamed with slightly darker brown; veins brown. Venation: cell M_1 relatively short, about one-third longer than its petiole; cell 2nd *A* of moderate width.

Abdomen ochreous, the incisures of the segments narrowly dark brown; hypopygium pale. Male hypopygium with the caudal margin of the tergite produced into two slender spinous lobes, the area between U-shaped, the lobes projecting far beyond the lateral angles of the tergal region. Outer dististyle very long and pale, with two teeth on the mesal face, the broader basal tooth placed about the same distance from the base of the style as the smaller, more acute, outer tooth is placed from the apex, the distance between the teeth including one-fourth the length of the style. Inner dististyle shorter, approximately three-fifths the length of the outer style, the basal half or less with a blackened crest.

Hab. New South Wales.

Holotype, ♂, Botany Bay, September 24, 1904 (*R. Helms*).

Allotype, ♀, Sydney, March 14, 1909.

Paratypes, 2 ♂♂, Wentworth Falls, Blue Mts., November 18, 1921 (*A. Tonnoir*); 1 broken ♂, Sydney, March 14, 1909 (*R. Helms*).

Type preserved in the writer's collection.

This is the fly that Skuse identified as being *D. cinerea* (Macquart), which is a distinct species. According to Skuse *Dolichozeza pallidula* is the commonest species of the genus

in New South Wales, being generally distributed and on the wing from September to February. The flight-period is even longer than this, as can be seen from the records given above.

Dolichopeza victoriæ, sp. n.

General coloration brown, the præscutum with three confluent dark brown stripes; postnotum and pleura pruinose; legs brownish black; wings with a faint dusky tinge, the stigma and seams along the veins darker; abdomen brown, all except the terminal two segments ringed with paler; male hypopygium with the outer dististyle very long, terete; inner dististyle with the apical beak slender.

Male.—Length about 8–8.5 mm.; wing 9.3–9.8 mm.

Frontal prolongation of head yellowish brown with a narrow dusky lateral line; palpi dark brown. Antennæ brownish ochreous, the first scapal segment darker apically, the flagellum black; antennæ of moderate length, if bent backward extending to shortly beyond the wing-root. Head broad, dark grey, the anterior vertex yellow.

Mesonotal præscutum with the disk virtually covered by three confluent dark brown stripes, the lateral margins and small humeral region obscure yellow; scutum obscure yellow, each lobe largely dark brown, the posterior callus dark; scutellum paler brown, the caudal margin darker; postnotum pruinose. Pleura brown, heavily grey pruinose; dorso-pleural membrane bicolorous, the dorsal portion dark brown, the ventral portion yellow. Halteres pale, the knobs dark brown. Legs with the coxæ dark, sparsely pruinose; trochanters brownish yellow, with the usual black spot on mesal face; remainder of legs brownish black, only the femoral bases very narrowly paler. Wings with a faint dusky tinge; stigma darker brown; cells *C* and *Sc* and all the longitudinal veins except *M* and 1st *A* seamed with darker; paler areas before and beyond the stigma and across the cord at *r-m*; veins brownish black; obliterative areas along the anterior cord. Macrotrichiæ on the veins almost to the wing-base. Venation: cell *M*₁ deep, about four to five times its petiole, in some cases the cell shallower, only about two and one-half times its petiole; *m-cu* about one-half times its length before the fork of *M*.

Abdomen brown, the basal segments ringed with pale, including a conspicuous ring before the end of sternite 2, much less evident on the tergite; segments 3 and 4 at mid-length of the tergite, more distinct on the sternites; segments 5 to 7 dark basally, their tips broadly paler,

the remaining segments passing into brownish black; hypopygium dark, even the outer dististyle dusky except at extreme base. Male hypopygium with the ninth tergite gently concave, setiferous laterally, the median area nearly glabrous. Outer dististyle elongate, terete, a little dilated outwardly, approximately twice as long as the inner dististyle. Inner style yellowish at base, the remainder infuscated, the apex resembling the head of a bird, the apical subchitinized beak slender but obtuse at tip, the crest of the head very high; both inner and outer margins of the style narrowly blackened.

Hab. Victoria.

Holotype, ♂, Tyers (*Miss Jean Galbraith*).

Paratype, ♂, Eltham, April 14, 1925 (*G. F. Hill*).

Type in the collection of the National Museum, Victoria.

Dolichopeza palliditarsis, sp. n.

General coloration dark brown, the præscutum with three brownish-yellow stripes; legs dark brown, the apices of the tarsi obscure yellow, more extensive on the posterior tarsi; wings tinged with brown; cell M_1 deep; abdominal segments brown, the basal sternites ringed with yellow; male hypopygium with the ninth tergite having two broad obtuse lobes, the notch between U-shaped; outer dististyle of moderate length, cylindrical, untoothed.

Male.—Length 9 mm.; wing 10.5–11 mm.

Female.—Length 12 mm.; wing 13 mm.

Frontal prolongation of head brownish yellow to yellow, in cases darker medially; palpi dark brown. Antennæ with the scapal segments yellow, the flagellum brownish black; if bent backward extending to the base of the abdomen or slightly beyond. Head brown, the anterior portions more yellowish, in cases with a capillary median darker line.

Pronotum dark brown. Mesonotal præscutum dark brown with three brownish-yellow stripes that are sometimes poorly delimited against the ground-colour, in other cases more conspicuous; remainder of mesonotum testaceous-brown to dark brown. Pleura testaceous-yellow, the dorso-pleural region somewhat darker; posterior region of the pleurotergite darker. Halteres elongate, testaceous, the base of the stem narrowly obscure yellow, the apex of the knob dark brown. Legs with the coxæ testaceous; trochanters yellow, with the usual black spot on the mesal face; remainder of legs dark brown, the extreme base paler; terminal three tarsal segments fading into pale yellow, on the hind legs

brighter and more extensive, including the apex of segment 2. Wings with a strong brownish tinge, the large stigma dark brown; a paler brown seam on the anterior cord; a conspicuous obliterative area at the fork of *M*; veins dark brown. Macrotrichiaë beyond the cord long and conspicuous. Venation: *Rs* pale, in transverse alignment with the remaining elements of the anterior cord; R_{2+3} about two-thirds R_3 alone; cell M_1 deep, approximately two and one-half to three times its petiole; *m-cu* about two-thirds its length before the fork of *M*.

Abdominal tergites dark brown, the basal segments paler; tergites 2 to 4 with a pale lateral spot, the remaining tergites dark brown; basal sternites light brown, ringed with yellow, the outer segments darker with the caudal margins broadly pale; hypopygium yellowish brown. Male hypopygium having the tergite with a broad obtuse lobe on either side of a deep U-shaped median notch, the lobes much wider than the notch, pale in colour. Outer dististyle cylindrical, unarmed, of moderate size only, much shorter than in *D. longidigitalis*, Alexander, and allies, the base narrow, the remainder of the style cylindrical. Inner dististyle about one-half the length of the outer, broadest at base, thence narrowed to the obtuse paler apex, the style with the outer margin darkened, setiferous, with a subapical black spine; mesal face near base of style with a low setiferous tubercle.

Hab. Tasmania.

Holotype, ♂, Fern Tree, Mt. Wellington, November 11, 1922 (*A. Tonnoir*).

Allotype, ♀, Cradle Valley, January 13, 1923 (*A. Tonnoir*).

Paratypes, 2 ♂ ♀, Cradle Valley, January 20-24, 1923; 1 ♀, Zeehan, February 7, 1923 (*A. Tonnoir*).

Dolichopeza subposticata, sp. n.

General coloration dark brown, the anterior portion of the præscutum abruptly paler; pleura yellow, with brown areas on the anepisternum and sternopleurite; legs dark brown, the posterior tarsi white; wings with a dusky tinge, with pale areas before and beyond the stigma; abdomen dark, ringed with pale; male hypopygium with the ninth tergite bearing two very low lobes.

Male.—Length 7-7.5 mm.; wing 7.8 mm.

Female.—Length 8 mm.; wing 8.8 mm.

Frontal prolongation of head yellow; palpi brown. Antennæ elongate, if bent backward extending about to the

base of the third abdominal segment; scapal segments light yellow, flagellar segments brown. Head dark brown, the anterior part of the vertex and the occipital region more yellowish.

Pronotum brown. Mesonotal præscutum broadly obscure yellow to yellowish brown in front, the posterior two-thirds dark brown, the usual stripes nearly confluent in the darkened areas; scutum pale brown, the lobes extensively dark brown; scutellum obscure yellow, margined behind with dark brown; postnotum yellowish brown, somewhat darker laterally. Pleura yellow, the anepisternum and ventral half of the sternopleurite brown, the dorsal half of the sternopleurite yellow, slightly pruinose, interrupting the brown band; meron slightly darkened ventrally. Halteres pale, the knobs dark brown. Legs with the coxæ and trochanters yellow; remainder of legs dark brown, the femoral bases narrowly paler; genua slightly paler; tarsi brown, the fore tarsi yellowish brown, the posterior tarsi with segments 2 to 5 abruptly white. Wings with a dusky tinge, the apices of the radial cells darker, the stigma conspicuously dark brown; extensive whitish areas before, beneath, and beyond the stigma; brown seams on the anterior cord and less distinctly on *m-cu*, *Cu*₁, and most of the other longitudinal veins; veins dark brown. Venation: *R*₂₊₃ relatively short, a little more than one-half longer than *m-cu*; cell *M*₁ of moderate length, more than twice its petiole; cell 2nd *A* narrow.

Abdominal tergites brownish black, segment 2 with a whitish area on either side beyond mid-length, this interrupted at the mid-line; tergites 2 to 4 dark with a whitish ring near mid-length of each; remaining tergites dark brown; sternites dark brown, the base and rings near base of sternites 2 to 4 and apices of sternites 5 to 7 broadly pale yellow; hypopygium dark, the outer dististyle pale. Male hypopygium with the caudal margin of the ninth tergite with two very low lobes, the space between scarcely emarginate. Outer dististyle of moderate length, pale, cylindrical. Inner dististyle dark, about two-thirds the length of the outer, the outer margin dark, roughened into a few teeth, including a large subapical spine.

Hab. Victoria, Tasmania.

Holotype, ♂, Burnie, Tasmania, October 26, 1922 (*A. Tonnoir*).

Allotype, ♀, Mt. Wellington, Tasmania, December 7, 1922.

Paratypes, ♂, Sassafas, Dandenong Range, Victoria,

October 20, 1922; 1 ♀, Mt. Field, Tasmania, December 18 1922 (*A. Tonnoir*).

Dolichocheza subposticata is allied to *D. niveitarsis*, Skuse, differing in the interrupted transverse brown band on the thoracic pleura and the dark coloration of the legs, with only the posterior tarsi distinctly white. The type-specimens were distributed under the chirotype name of *D. posticata*, but it now seems advisable to change this latter name, since, through a *lapsus*, Brunetti in a key to the Oriental species of the genus (*Fauna Brit. India, Dipt. Nematocera*, pp. 564–565, 1912) used the name *posticata* for *Dolichocheza postica*, Brunetti.

Dolichocheza pygmæa, sp. n.

1920. *Dolichocheza niveitarsis*, Riedel, *Arkiv för Zoologi*, 13, No. 14, 6; nec *Dolichocheza niveitarsis*, Skuse, *Proc. Linn. Soc. New South Wales*, (2) 5, 62 (1890).

Size very small (♂, length less than 5 mm.; wing less than 6 mm.); antennæ more than one-half the length of the body; pleura testaceous-brown, without distinct stripes; legs dark, the terminal tarsal segments white.

Male.—Length about 4.5 mm.; wing 5.5 mm.

Frontal prolongation of head and the palpi brownish testaceous. Antennæ (♂) elongate, if bent backward extending to beyond mid-length of the abdomen, brown throughout. Head dark brown.

Pronotum dark brown. Mesonotum light brown to reddish brown, the præscutum with a darker brown median stripe, the lateral margins paler; scutal lobes slightly darker. Pleura pale testaceous-brown, without clearly defined darker markings. Halteres pale, the knobs dark brown. Legs with the coxæ light reddish brown, the trochanters yellow; femora brown, the bases paler; tibiæ and basitarsi pale brown, the tips of the posterior basitarsi and the remaining tarsal segments snowy white. Wings faintly tinged with brown, the oval stigma darker brown, the costal region faintly yellowish; veins dark brown. Venation: cells M_1 , M_2 , M_3 , and M_4 all very deep, cell M_1 being from two and one-half to three times as long as its petiole.

Abdominal tergites dark brown, with lateral whitish spots, producing a ringed effect; sternites paler. Male hypopygium small, the tergite with two low submedian lobes which are obtusely rounded, the notch between broadly U-shaped; lateral angles of tergite conspicuous, projecting caudad beyond the level of the median lobe. Outer dististyle

simple, cylindrical, with long coarse setæ. Inner dististyle gently curved into a boomerang-shaped structure, the outer margin narrowly blackened and microscopically denticulate, the outermost tooth larger; a small obtuse blackened tooth shortly before the obtuse apex.

Hab. North Queensland.

Holotype, ♂, Malanda (*E. Mjöberg*).

Type in the writer's collection; other specimens in the Riedel collection and in the Riksmuseets, Stockholm.

This tiny fly was sent to me some years ago as an exchange from Mr. Riedel. Riedel indicates that there were numerous specimens in the Mjöberg collection, taken at Atherton and Malanda, North Queensland.

Genus PLUSIOMYIA, Skuse.

EUPLUSIOMYIA, subgen. nov.

Frontal prolongation of head short and stout, with a distinct nasus, not in alignment with the remainder of the front as in the typical subgenus. Flagellar segments tripectinate. Postnotal pleurotergite with a conspicuous lateral tubercle. Legs relatively short and stout; tibial spurs long. Venation with *Rs* short, not much longer than cell 1st *M*₂; cell *M*₁ short-petiolate.

Type of the subgenus: *Plusiomyia nasalis*, Alexander (Australian Subregion).

Plusiomyia (Euplusiomyia) optima, sp. n., likewise belongs here.

Plusiomyia (Euplusiomyia) optima, sp. n.

General coloration reddish orange; head black; flagellar branches shorter than in *P. nasalis*; wings strongly tinged with brown; cell *M*₁ short-petiolate.

Male.—Length about 12.5 mm.; wing 12 mm.

Female.—Length 16–18 mm.; wing 13–15 mm.

Male. Frontal prolongation of head as in *P. nasalis*, not in alignment with the remainder of the front, dark brown; nasus small, but distinct; palpi dark brown. Antennæ with the basal flagellar segment long-unipectinate, the branch longer than the segment; flagellar segments 2 to 8 tripectinate, the basal paired branches about twice the length of the segment, much shorter than in the corresponding sex of *nasalis*; small subterminal branch shorter than the segment, gradually decreasing in length outwardly, subobsolete on the outer branched segment; terminal three flagellar segments simple, the ultimate longer than the penultimate;

scape yellow, the basal segment infuscated apically; flagellum brown. Head black, including the narrow vertical tubercle; occiput and anterior portion of vertex a little paler.

Pronotum orange-red. Mesonotum reddish brown, the præscutum with three stripes, the median stripe reddish, the lateral stripes and scutal lobes blackened; scutellum darkened; postnotal mediotergite obscure reddish, the basal half marked with black; pleurotergite produced into conspicuous tubercles. Pleura reddish, strongly infuscated, the dorso-pleural membrane obscure yellow. Halteres brown, the extreme base of the stem pale, the apices of the knobs paler. Legs with the coxæ reddish brown, more or less pruinose; trochanters reddish brown; femora orange, the tips conspicuously blackened; tibiæ black with approximately the basal two-fifths yellowish; tarsi dark brown. Wings with a strong brown tinge, the base and cells *C* and *Sc* darker brown; a brown seam along vein *Cu*; veins dark brown. Venation: *Rs* shorter than *R*₃; cell *M*₁ short-petiolate, the petiole a little less than one-half *m*; *m-cu* punctiform, just before mid-length of cell 1st *M*₂.

Abdominal tergites dull blackish, the basal half of tergite 2 and the narrow base of tergite 3 shiny obscure yellowish; hypopygium relatively small, brown; sternites obscure brownish yellow, segments 5 to 7 blackened.

Female.—Generally similar to the male. Frontal prolongation of head and nasus somewhat shorter; flagellar branches shorter; mesonotum and pleura not darkened; pale tibial bases including about one-half the segment; basal tergite reddish orange, narrowly darker medially; tergites 8 and 9 orange; valves of ovipositor elongate.

Hab. Victoria.

Holotype, ♂, without exact data.

Allotype, ♀, Ferntree Gully, Dandenong Range, November 20, 1914 (*F. P. Spry*).

Paratypes, 1 ♀; 1 ♀, Emerald, November 23, 1903 (*Mrs. G. Coghill*).

Type in the collection of the National Museum, Melbourne.

Plusiomyia clarki, sp. n.

General coloration of thorax yellowish grey, the præscutum with three brown stripes; antennæ elongate, with very long branches; first scapal segment about one-half the length of the first flagellar segment; wings tinged with dusky; cell

R_2 relatively small, at wing-margin much narrower than cell R_3 ; abdomen dark brown, the basal tergites and the sternites yellowish.

Male.—Length about 10.5 mm.; wing 11.2 mm.; antenna about 7.5 mm.

Frontal prolongation of head relatively long, nearly as long as the remainder of the head, brown, paler beneath; palpi brownish black. Antennæ elongate, with very long slender branches; scapal segments small, the first of moderate length only, not more than one-half the length of the first flagellar segment; basal flagellar segment with a single branch placed at near one-third the length of the segment; following seven segments with two very long basal branches and an additional branch that is about two-thirds as long placed near mid-length of the segment on the same plane; ninth flagellar segment very long, with the two basal branches only, these approximately as long as the segment; terminal segment relatively small, less than one-sixth the penultimate, apparently formed by the fusion or close approximation of two segments, the antennæ thus appearing only 12-segmented, the formula being $2 + 9 + 1$; scapal segments obscure yellow; flagellar segments dusky at base, all branches dark, the apices of the segments narrowly yellow, the amount decreasing on the outer segments, the terminal two being entirely dark. Head buffy brown, with a narrow dark median vitta. Vertex between the eyes produced into a very high and conspicuous nasiform tubercle, strongly compressed, the antennæ placed close together on its lateral anterior face.

Pronotum very narrow, collar-like, dark brown. Mesonotal præscutum yellowish grey with three brown stripes, the median stripe divided by a capillary paler vitta; scutum grey, each lobe with two contiguous brown spots; scutellum and postnotum light grey. Pleura grey, the pleurotergite paler, the protuberance evident. Halteres elongate, brown, the base of the stem narrowly obscure yellow. Legs with the coxæ yellowish buffy, the middle coxæ dusted with light grey; trochanters obscure yellow; femora brown, the bases narrowly yellow, the tips more broadly blackened; tibiæ brownish testaceous, the tips darker, the bases brighter, more yellowish; basal two tarsal segments testaceous-brown, the tips narrowly darker; remaining tarsal segments dark brown. Wings with a strong dusky tinge, the costal region darker; stigma small and narrow, dark brown; veins brown. Venation: cell R_2 relatively small, vein R_3 being short and

deflected cephalad at its tip, so cell R_3 is much wider at wing-margin than cell R_2 ; cell M_1 narrowly sessile; cell 2nd A wide.

Abdomen with the basal three tergites yellow, with a conspicuous black lateral stripe beginning at the base of the second segment, becoming broader behind; a similar black median stripe begins beyond the base of the second segment, widening behind, restricting the yellow ground-colour; on the third segment the yellow is more suffused with brown and little evident; tergites 4 to 8 black; hypopygium brownish yellow; sternites yellow with a narrow brown median vitta that becomes wider on the fifth segment, on the sixth to eighth sternites suffusing the segments. Male hypopygium with the ninth tergite obscure yellow, the apical half darker, with conspicuous black setæ; caudal margin of the tergite with a narrow U-shaped median notch, the lateral lobes thus formed broadly truncated; ninth sternite extensive, produced into a point at caudal end.

Hab. West Australia.

Holotype, ♂, Albany (*J. Clark*); Ferguson No. 61.

Named in honour of the collector, Mr. John Clark.

Platyphasia eximia, sp. n.

General coloration reddish brown, grey-pruinose; head black, the anterior vertex silvery; antennæ black throughout; legs black, the femoral bases reddish fulvous; all tibiæ with a broad conspicuous yellow ring shortly beyond the base; wings tinged with blackish; abdominal tergites 2 to 5 black, 6 to 9 more reddish, with heavy patches of golden pollen on the sides.

Male.—Length 17–18 mm.; wing 16.5–18 mm.

Frontal prolongation of head light to darker brown, longer than the remainder of the head; palpi black. Antennæ black throughout, 13-segmented, with seven branched segments, the formula being 2+1+7+3, the branches placed at the extreme bases of the segments; first flagellar segment shorter than those that follow, unbranched; succeeding segments gradually increasing in length to the last branched one which is only a little shorter than its branch; first simple segment beyond about one-half the length of the last branched segment. Head short, black, the centre of the vertex with a narrow silvery line; anterior vertex before the antennæ silvery pruinose.

Pronotum very narrow, reddish brown. Mesonotal præscutum buffy with three reddish-brown stripes that

almost cover the surface, restricting the ground-colour to narrow interspaces that are widest at the suture and broad lateral margins; in the paratype, the reddish stripes are narrowly margined with darker brown; interspaces provided with yellow setæ of moderate length; pseudosutural foveæ small, blackened; scutum grey, each lobe with a triangular reddish mark, continuous with the lateral præscutal stripe; scutellum and postnotum sparsely pruinose. Tubercles of the pleurotergite conspicuous. Pleura heavily grey pruinose, the dorso-pleural membrane dusky. Halteres brown, the knobs darker with a small yellowish apical spot. Legs with the coxæ reddish, heavily pruinose; trochanters reddish brown; remainder of legs black, the femoral bases reddish fulvous, narrowest on the fore legs, broadest on the hind legs; all tibiæ with a broad yellow ring shortly beyond the base, this ring subequal in extent on all the legs and including from one-third (fore tibia) to one-fourth (hind tibia) the total extent. Wings with a strong blackish tinge, the prearcular and costal regions darker; in the type, cell *C* is paler, infumed near *h*; stigma very small, darker brown; veins dark brown. Venation: R_1 meeting R_{2+3} shortly before the fork; *Rs* elongate, fully one-half longer than R_{2+3} ; cell M_1 short-petiolate; cell 1st M_2 large, pentagonal, *m-cu* near mid-length; cell 2nd *A* relatively narrow.

Abdominal tergite 1 reddish brown, heavily pruinose; tergites 2 to 5 black, each with two patches of dense golden pollen on the sides, the basal patch smaller; on the fifth segment the pollen includes the whole basal half of the segment; dorso-median line less distinctly grey pruinose; sixth and succeeding segments rich reddish fulvous, with lateral golden pollinose areas; sternites reddish, segments 3 to 5 more pruinose.

Hab. New South Wales.

Holotype, ♂, Blackheath, Blue Mts., February 26, 1922 (*E. W. Ferguson*); Ferguson No. 62.

Paratype, ♂, Gosford, April 5, 1924 (*E. W. Ferguson*).

Habromastix novella, sp. n.

Head and thorax buffy, variegated with dark brown; wings dusky, the costal region slightly darker; abdomen orange.

Female.—Length 18 mm.; wing 15 mm.; abdomen alone 15 mm.; antenna about 4.8 mm.

Frontal prolongation of head a little shorter than the remainder of the head, dark brown, without a nasus; palpi

brownish black, the terminal segment nearly as long as segments 2 and 3 taken together. Antennæ setaceous; scapal segments light brown, the second more yellowish; flagellum dark brown, the base of the first segment pale. Head fulvous-yellow, the vertex with a conspicuous dark brown triangle, the point in front, the posterior orbits being very broadly of the ground-colour.

Pronotum dark brown, the collar-like posterior notum with a yellow spot on either side. Mesonotal præscutum obscure buffy yellow with three conspicuous dark brown stripes, the broad median stripe very vaguely divided by a pale line, the cephalic end expanded laterad as far as the pseudosutural foveæ; scutum buffy, each lobe with two large dark brown areas, the larger posterior spots connected across the median line; scutellum buffy, more infuscated in certain lights, the parascutella paler and less pollinose; postnotum whitish buffy with an inverted T-shaped marking. Pleura whitish buffy, paler behind, variegated with dark brown, this including most of the propleura, the dorsal pleurites, the ventral half of the anepisternum and sternopleurite, and the posterior portion of the pleurotergite immediately before the haltere; a small shiny pit-like area on the dorso-caudal margin of the anepisternum, a second on the suture between the sternopleurite and pteropleurite above the middle coxæ, a third area immediately above the middle coxa between the sternopleurite and meron. Halteres brown, the base of the stem obscure yellow. Legs with the coxæ extensively buffy, variegated with brown, especially the bases of the fore coxæ; trochanters obscure yellow; femora brownish testaceous, the tips darker; tibiæ testaceous, the tips narrowly darkened; tarsi beyond the base passing into dark brown; tarsi long and slender, the basitarsi longer than the tibiæ. Wings with a strong dusky tinge, the stigma, costal region, and cephalic prearcular region somewhat darker; a vague darker seam on the anterior cord; cell *C* and the apical portion of the wing in cells M_1 to M_4 with minute pale droplets; veins dark brown. Venation: *Rs* short, arcuated at origin, about two-thirds the straighter R_{2+3} ; venation otherwise much as in *H. robinsoni*, Alexander.

Abdomen orange, the basal tergite testaceous, the discal portion largely dark brown; genital segment darker, shiny reddish brown; ovipositor reddish horn-colour, the valves long and straight.

Hab. South Queensland.

Holotype, ♀, Eidsvold, in yellow-pinch scrub, April 27, 1924 (*T. L. Bancroft*) ; Ferguson No. 63.

Distinguished from the allied *Habromastix robinsoni*, Alexander, by the smaller size, the conspicuously variegated head and thorax, and the short radial sector.

Phymatopsis tonnoirana, sp. n.

General coloration grey, the præscutum with three brownish-black stripes ; female subapterous ; wings of male fully developed, heavily spotted and clouded with brown ; abdomen grey, the basal segments more reddish, especially in the male, the tergites with two intermediate dark brown stripes ; genitalia of both sexes large and powerfully constructed.

Male.—Length 16–17 mm. ; wing 16·5–17 mm.

Female.—Length about 23 mm. ; wing 4·5 mm.

Male. Frontal prolongation of head long and slender, longer than the remainder of the head, entirely without a nasus, dark grey ; palpi dark brown. Antennæ 12-segmented, brownish black, the basal segment of the scape pruinose, the second segment more reddish brown ; flagellar segments cylindrical, gradually decreasing in length outwardly, the verticils relatively inconspicuous. Head buffy-grey, the vertex extensively dark brown, restricting the ground-colour to the relatively narrow posterior orbits.

Pronotum narrow, dark grey. Mesonotal præscutum grey with three conspicuous brownish-black stripes, the broad median stripe more narrowed behind, not reaching the suture, narrowly divided by a capillary line of the ground-colour, almost contiguous with the lateral stripes at the anterior ends of the latter, the interspaces strongly widened behind ; pseudosutural foveæ small ; scutum grey, each lobe with a brown triangular marking, paler behind, about touching a circular brownish-black spot in front ; scutellum light grey, the parascutella darker ; postnotum dark grey with a darker area in front on either side of the median line. Pleura light grey, the sternopleurite ventrally and a less clearly defined area on the anepisternum darker. Halteres reddish brown, the knobs darker. Legs with the coxæ light grey ; trochanters fulvous ; remainder of legs black, the femoral bases broadly fulvous, narrowest on the fore legs ; basitarsi approximately as long as the tibiæ. Wings creamy-white with a heavy spotted and clouded brown pattern, the prearcular region and cell *Sc* more fulvous ; stigma oval, darker brown ; cells *R* and *R*₁ more uniformly

infumed; veins broadly seamed with brown; two darker brown clouds in cell *M* adjoining vein *Cu*₁, these sometimes completely crossing cell *M*; apices of the Anal cells broadly darkened; the pale ground-colour is thus most evident in the bases of the Anal cells; in cell *M*; on either side of the cord in the ends of cells *M* and 1st *M*₂ and the base of cell *R*₂; cell 2nd *A* is usually dark with two creamy spots; veins brownish black, paler in the yellowish areas. Venation: *Rs* long to very long, equal to or exceeding *R*₃, which, in turn, is more than one-half longer than *R*₂₊₃; cell *M*₁ short-petiolate to sessile; *m-cu* at about one-third the length of cell 1st *M*₂.

Abdominal tergite 1 and basal half of 2 reddish brown to cinnamon-brown, the first with two brownish spots; remaining tergites grey, with two submedian brown stripes extending from the posterior half of tergite 2 to tergite 8; sternites 1 and 2 reddish brown, the base of the latter with a brown median spot, the remaining sternites grey; hypopygium reddish brown. Male hypopygium very large and powerful, the sternite-basistyle elongate, the dististyles compressed, very large and conspicuous; outer dististyle densely hairy, the subequal inner dististyle with the mesal face likewise hairy, the dorsal margin with a row of about eight scattered black spinous teeth.

Female. Generally similar to the male, but differing in several regards, chiefly sexual or correlated with the subapterous condition.

Legs short and stout, the tibiae not longer than the basitarsi. Wings reduced to narrow strap-like organs, the venation very distorted; prearcular region very extensive, occupying only a little less than the basal half of the entire wing and a little paler in colour, the disk of the wing rather uniformly dark brown. Abdomen about as in the male, but the reddish coloration of the basal segments more restricted. Ovipositor with the dorsal shield blackened; valves dark reddish horn-colour, very powerful, the tergal valves especially highly compressed, with a sharp dorsal ridge; tips of the tergal valves curved gently laterad; sternal valves approximately as long, likewise powerfully constructed, bent dorsad at the tips.

Hab. Tasmania.

Holotype, ♂, Cradle Valley, January 19, 1923 (*A. Tonnoir*).

Allotopotype, ♀.

Paratopotypes, 10 ♂♂, January 13–26, 1923 (*A. Tonnoir*).

This remarkable fly is named in honour of my friend and colleague, Dr. A. L. Tonnoir, who collected the type-series.

I am indebted to Dr. Tonnoir for the following notes on the occurrence :—

“This was found in the pupal state when digging for larvæ in the ground near the accommodation house on the Cradle Mountain. The males emerged at the end of my stay there and the female when I had already left.”

Ischnotoma skuseana, sp. n.

General coloration grey, the præscutal stripes margined with dark brown, the median stripe divided by a capillary darker brown vitta; flagellar segments strongly serrate in both sexes; wings whitish subhyaline, handsomely clouded with brown; a complete angulated white cross-band beyond the cord; cell R_2 small; abdomen orange-yellow basally, the subterminal segments black, the hypopygium light brown.

Male.—Length 13–14 mm.; wing 15–16 mm.

Female.—Length 15–16 mm.; wing 17 mm.

Frontal prolongation of head black, with a narrow obscure yellow stripe on either side, the nasus and palpi black. Antennæ black, only the extreme tips of the scapal segments a trifle paler; antennæ 12-segmented in both sexes; in the male flagellar segment 1 elongate, exceeding segments 2 and 3 taken together; remaining segments gradually decreasing in length; flagellar segments 2 to 8 with the lower face produced into a triangular tooth to give the organ a strongly serrated appearance; terminal two segments simple, nearly equal in length, the last a trifle more slender; in the female, the first flagellar segment is even longer, nearly as long as the following three segments taken together, the serrations conspicuous but scarcely involving segments 1 to 3 or the last, very conspicuous on flagellar segments 5 to 9. Head dark brown, the vertical tubercle not at all brightened, the orbits narrowly but conspicuously bordered with buffy-grey; occipital region with two small paler spots.

Pronotum narrow, dark brown, pruinose, especially laterally. Mesonotal præscutum grey to buffy with a broad median stripe of reddish brown that becomes darker behind; in the paratype male the stripe becomes buffy-yellow behind on either side of the median line; median stripe divided by a relatively broad dark brown median vitta and margined laterally by slightly narrower paler brown vittæ; lateral stripes grey, margined with dark brown, the mark encircling the anterior end of the stripe; in cases, a dark spot on lateral margin of the sclerite; pseudosutural foveæ punctiform; scutum brown, each lobe with two blue-grey spots

that are encircled with darker brown, the posterior lateral region of the lobes similarly blue-grey; scutellum relatively narrow and protuberant, grey, dark brown medially; post-notum clear light grey with an elongate dark brown triangle, the point directed backward. Pleura grey with indications of darker stripes on the sternopleurite and more dorsally across the anepisternum; anterior dorsopleural membrane, surrounding the spiracle, yellow, the more extensive posterior portion brown. Halteres yellow, the knobs dark brown. Legs with the coxæ light grey; trochanters yellowish brown, the posterior trochanters darker; femora obscure fulvous-yellow, the tips narrowly blackened; in the female, the fore femora darker; tibiæ similar, the tips very narrowly blackened; tarsi brown, passing into black on the outer segments. Wings whitish subhyaline with a handsome brown pattern; extreme base of wing yellow, the main prearcular region whitish; stigma yellowish brown; the brown marks include the wing-tip, this more or less invaded by pale washes in the cells, this dark apex preceded by a complete white angular cross-band extending from the costal margin in cell R_2 to the caudal margin in cell M_3 ; paler brown clouds in the costal region before the origin of R_s , extending across cell R , more extensive but paler in cell M ; an extensive cloud in the ends of cells M , Cu , and the extreme tip of 1st A ; other pale clouds in the outer end of cell 1st A at mid-distance between the veins and in cell 2nd A beyond mid-length of the cell; prearcular region in cell Sc , a triangular prearcular spot and a small spot at the proximal end of the stigma darker brown; veins dark brown, paler in the subhyaline areas, the oblitative areas at the cord extensive. Venation: vein R_3 sinuous, its distal portion bent strongly cephalad so cell R_2 is unusually small, at the margin only about two-thirds as wide as cell R_3 ; cell 1st M_2 elongate; petiole of cell M_1 variable in length, from much longer to much shorter than m .

Abdominal segment 1 light brown; segments 2 and 3 orange-yellow, narrowly darker sublaterally, in cases with a median dark vitta; on the succeeding tergites the colour deepens, on segments 5 to 8 black; hypopygium light brown. In the female, the general coloration of the abdomen tends to be more obscure. Ovipositor with the tergal basal shield shiny obscure yellow, the valves brownish yellow, their bases and tips dark.

Hab. Tasmania.

Holotype, ♂, Fern Tree, Mt. Wellington, November 11, 1922 (*A. Tonnoir*).

Allotopotype, ♀.

Paratypes, ♂, Adventure Bay, December 29, 1922 (*A. Tonnoir*); ♀, Mt. Wellington, November 25, 1922 (*A. Tonnoir*); 1 ♂, 1 ♀, Mt. Wellington, January 1924 (*G. H. Hardy*), in the Queensland University Collection.

This very distinct crane-fly is named in honour of the late Frederick A. A. Skuse, great pioneer student of the Tipulidæ of Australia.

Ischnotoma terminata, sp. n.

Size small (length, ♀, about 12 mm.); antennæ strongly serrate, the terminal segment elongate; general coloration grey, the præscutum with three dark brown stripes; wings with a strong brown tinge, with subhyaline areas before the stigma, the outer end of cell *M*, and the bases of cells *2nd M*₂ and *M*₄; cell *R*₂ uniformly dark; abdomen dark greyish brown, the caudal margins of the sternites and outer tergites narrowly pale.

Female.—Length about 12 mm.; wing 12.7–13 mm.

Generally similar to *I. prionoceroides*, Alexander (Tasmania), from which it differs especially in the smaller size and the elongate subuliform terminal segment of the strongly serrated antennæ.

Antennæ strongly serrate, especially flagellar segments 3 to 9, more markedly produced on flagellar segments 6 to 8; terminal segment elongate, nearly as long as to longer than the first flagellar segment. Head brown, the anterior vertex and the orbits narrowly clear grey, the latter widening out beneath.

Pronotum grey. Mesonotal præscutum grey with three broad dark brown stripes, the broader median stripe sometimes narrowly pruinose in front, with a barely indicated still darker vitta; posterior interspaces suffused with brown; scutum clear grey medially, each lobe with two contiguous dark brown areas; scutellum and postnotum clear light grey, the latter without or with bare indications of a darker marking. Pleura light grey, the sternopleurite, meron, and a narrow line across the ventral portion of the anepisternum darker grey; meron protuberant. Halteres light brown, the base of the stem narrowly darker, the knobs pale. Legs with the coxæ and trochanters dark, heavily grey pruinose; remainder of legs brownish black, the femoral bases obscure fulvous, narrowest on the fore femora where less than the basal third is included, widest on the posterior femora where about the basal two-thirds is included; only the bases of the

tibiæ are slightly brightened. Wings with a strong brownish tinge, the stigmal region darker; subhyaline areas distributed as follows: before the stigma in cell R_1 ; in the outer end of cell M ; bases of cells 2nd M_2 and M_4 ; bases of cells 1st A and 2nd A ; centres of cells M_1 and M_3 vaguely paler; cell C slightly darker brown than the ground-colour; cell Sc a little more yellowish brown; veins dark brown, the oblitative areas extensive. Venation: R_s relatively elongate; cell 1st M_2 elongate, parallel-sided; petiole of cell M_1 shorter than m ; cell 2nd A wide.

Abdominal tergites dark greyish brown, the extreme caudal margin of tergite 7 narrowly pale; in one of the paratypes the margins of segments 5 and 6 are slightly pale; sternites dark greyish brown, the caudal margins of the segments ringed with pale, the amount increasing on the outer segments, broadest on sternite 7. Ovipositor with the basal shield dark, shiny, the straight slender tergal valves horn-coloured.

Hab. Tasmania.

Holotype, ♀, Hartz Mts., December 10, 1922 (*A. Tonnoir*).

Paratypes, ♀, Mt. Field, December 18, 1922; ♀, Mt. Wellington, November 30, 1922 (*A. Tonnoir*).

Ischnotoma tarwinensis, sp. n.

Antennæ simple in both sexes; general coloration grey, variegated with dark brown, the præscutum with four brown stripes; wings with a brownish-yellow tinge, the stigma darker; abdomen obscure orange, the terminal segments darker; male hypopygium with the tergite large, with a very deep median notch.

Male.—Length about 12.5 mm.; wing 15 mm.

Frontal prolongation of head of moderate length, approximately as long as the remainder of the head, narrowly dark grey above, the sides and ventral portions of the front obscure brownish yellow; palpi black; nasus long and conspicuous. Antennæ very short, about two-thirds the total length of the head, 12-segmented, the basal segment elongate, slightly constricted near mid-length; basal six flagellar segments stouter, subcylindrical, gradually decreasing in length and diameter outwardly; terminal four segments very slender, the last elongate, only a little shorter than the preceding two taken together; scapal segments brown, the first pruinose above, the second darker; flagellum black, with conspicuous verticils. Head greyish brown, the anterior portion of the vertex conspicuously darker brown, the

frontal prolongation and the orbits narrowly margined with light grey.

Pronotum grey, brighter, more brownish, dorsally, the sclerites very thin and plate-like. Lateral pretergites obscure orange, narrow. Mesonotal præscutum yellowish grey, brighter laterally, with four long dark brown stripes, the intermediate pair separated from one another by a capillary reddish-grey line, the lateral stripes separated from the intermediates by a slightly wider dark grey line; pseudo-sutural foveæ punctiform; scutum brownish grey, each lobe almost covered by two confluent dark brown spots; scutellum black, pruinose, with an elongate-oval reddish spot in middle, parascutella yellow; postnotum light grey with a conspicuous dark brown triangle, the point directed caudad but not quite attaining the caudal margin. Pleura clear light grey, the dorso-pleural membrane brownish yellow; pleurotergite brown, sparsely pruinose, more heavily so ventrally. Halteres dark brown, the stem narrowly reddish brown at base. Legs with the coxæ pale, heavily light grey pruinose; trochanters fulvous-yellow; remainder of legs black, the basal two-thirds of the femora dark fulvous; basitarsi much longer than the tibiæ. Wings with a brownish-yellow tinge, the extreme base bright orange; stigma yellowish brown, the proximal end darker brown; cell *Sc* more yellowish brown, but cell *C* entirely clear; wing-apex in cells R_2 and R_3 a little darkened; a narrow dusky seam along veins Cu_1 and $m-cu$; veins black, with conspicuous obliterative areas at end of R_s and across the proximal end of cell 1st M_2 . Venation: R_{2+3} about four-fifths R_s ; R_{1+2} complete, R_2 about in alignment with the apex; cell R_2 relatively small, cells R_2 and R_3 at wing-margin being subequal in extent; petiole of cell M_1 a little longer than m ; $m-cu$ on M_{3+4} shortly before its fork.

Abdominal tergites obscure orange, the sides of tergite 1 dark brown, leaving a median triangle of the ground-colour, the terminal segments a little darker, more reddish brown; sternites similar, the base of the eighth sternite a little darker. Male hypopygium reddish brown, of moderate size and length. Ninth tergite large, with a deep and narrow median notch, the lateral lobes thus formed conspicuous; surface of tergite on distal half with abundant short black setæ. The fused sternite and basistyle projects caudad slightly beyond the level of the tergite, provided with sparse black setæ that become longer and light yellow on the caudal portions; suture between basistyle and sternite indicated beneath. Dististyle flattened, elongate, the dorsal portion

margined with a crown of about a dozen small black teeth, the long apical beak jutting into the notch of the tergite. Eighth sternite unarmed.

Hab. Victoria.

Holotype, ♂, Lower Tarwin, November 22, 1925 (G. F. Hill).

Type in the collection of the National Museum, Victoria.

Macromastix igniceps, sp. n.

Male.—Length about 10 mm.; wing 14.5 mm.

Generally similar to *M. aurantioceps*, Alexander (New South Wales), differing as follows:—

Frontal prolongation of head entirely fiery orange; nasus relatively conspicuous, a little darker in colour. Head fiery orange, more intense behind, the vertex wide, just behind its narrowest point a somewhat darker suffusion on the orbits.

Pronotum narrower. Mesonotal præscutum entirely dull light buffy brown, with three conspicuous dark brown stripes, the median stripe narrowly split by a capillary paler vitta; pseudosutural foveæ punctiform, with a curved line from the margin extending through the fovea; thence directed anteriorly; remainder of mesonotum pale buffy brown; scutal lobes almost covered by a dark brown marking prolonged across the suture from the lateral præscutal stripes. Pleura fulvous-yellow, without evident pruinosity. Halteres dark brown, the extreme base of the stem narrowly paler. Legs with the coxæ concolorous with the pleura; trochanters obscure yellow; femora yellow, the tips broadly blackened, especially on the fore femora where more than the distal third is included, narrowest on the posterior femora where about the distal fifth is included; tibiæ and basitarsi brown, darkened distally; remainder of tarsi black. Wings with a strong brownish-yellow tinge, the stigma and costal region darker, the costal cell a little brighter than the subcostal; veins dark brown. The left wing of the type shows paler washes in cells R_5 to $2nd\ M_2$; the right wing similar washes in the Anal cells. No pale spots before and beyond the stigma and the usual bullate areas on the cord not evident. Venation: R_s short and straight, a little shorter than R_{2+3} ; R_3 about one-half longer than R_{2+3} ; cell M_1 short-petiolate to nearly sessile; cell $2nd\ A$ relatively narrow.

Abdominal tergites obscure orange, the black triangles extensive, each produced anteriorly so as to form a complete

or nearly complete dorso-median stripe; extreme margins of the tergites narrowly blackened; sternites orange, the outer sternites darker medially; eighth segment entirely dark brown; hypopygium yellow. Male hypopygium with the caudal margin of the tergite gently emarginate, the margins of the very short lobes densely fringed with short setæ, the surface of the lobes with long conspicuous setæ. Outer dististyle flattened, extended into a slender point, the outer margin before this elongate point with a shorter conical tooth; surface of style with numerous long conspicuous setæ from conspicuous tubercles. Inner dististyle with the caudal margin expanded into a flattened wing or flange, the base or lateral portion further produced into a sharp spinous prolongation; apex of style produced mesad into a stout gently curved arm that is terminated by several stout spinous setæ. Neither of the dististyles are provided with true spines.

Hab. Tasmania.

Holotype, ♂, Burnie, February 1, 1923 (*A. Tonnoir*).

Macromastix nigropolita, sp. n.

Head dark grey; mesonotal præscutum and the scutal lobes shiny polished black, the remainder of the notum obscure yellow; mesopleura pruinose; tips of femora narrowly blackened; wings with a strong brownish tinge, the prearcular region more yellowish; abdomen yellow, the tergites trilineate with black, the sternites with a median black stripe; abdominal segments 6 and 7 entirely black; genitalia yellow.

Female.—Length about 9 mm.; wing 11.5 mm.

Frontal prolongation of head relatively short, dark brown above, obscure yellow beneath; nasus elongate, brownish black; palpi brownish black. Antennæ very short, only about as long as the head, 12-segmented; basal segment of flagellum enlarged, much stouter and longer than the next, the succeeding segments cylindrical, gradually decreasing in length and diameter, the terminal segment a little longer than the penultimate; scapal segments pale, a little darker above; flagellar segments beyond the second blackened. Head dark grey, paler grey in front, the area surrounding the antennal fossæ yellow; vertical tubercle scarcely developed.

Pronotum obscure yellow. Mesonotal præscutum shiny coal-black, highly polished, the very restricted humeral region and lateral margins a trifle paler; interspaces not different in colour, indicated only by a few short setæ behind;

suture pale; scutum obscure yellow, the antero-mesal half of each lobe entirely shiny coal-black, the median area of the scutum obscure brownish yellow; scutellum and post-notum obscure yellow, the posterior margin of the mediotergite with two confluent shiny black spots. Pleura pale, the propleura, anepisternum, sternopleurite, and ventral portion of the meron infuscated and conspicuously pruinose; pleurotergite more shiny, the ventral margin narrowly blackened. Halteres short, pale, the knobs more infuscated. Legs with the coxæ obscure yellow, very sparsely pruinose; trochanters obscure yellow; femora yellow, the tips narrowly but very conspicuously blackened, the amount subequal on all the legs; tibiæ pale brown, the bases narrowly, the tips more broadly blackened; tarsi black; tarsi slender, the basitarsi considerably longer than the tibiæ. Wings with a strong brownish tinge; prearcular region more yellowish; costal region a trifle darker than the ground-colour; stigma oval, darker brown; veins dark, the prearcular veins yellow. Venation: *Rs* straight, subequal to or a trifle shorter than R_{2+3} ; cell M_1 short-petiolate; cell *2nd A* narrow.

Abdominal tergites yellow with a broad continuous black median stripe that widens out at the posterior margins of segments 2 to 5, tergite 6 being entirely black; tergite 7 black except for a restricted pale margin on either side of the median line; tergites 8 and 9 obscure yellow; lateral margins of the tergites narrowly blackened, more broadly so on segments 2 and 3; sternites bright yellow with a median black stripe, on sternite 2 represented by two isolated spots; on sternites 3 to 5 continuous; sternites 6 and 7 entirely black; sternite 8 yellow. Ovipositor with the valves very short and blunt, as in the genus, the tergal valve single with a small caudal notch.

Hab. New South Wales.

Holotype, ♀, Mt. Wilson, Blue Mts., November 19, 1921 (*A. Tonnoir*).

Macromastix mutabilis, sp. n.

General coloration of thorax of male buffy, with fulvous stripes, of the female darker brown; antennæ short in both sexes; centre of the vertex infuscated; wings with a brown tinge, the costal and prearcular regions darker; petiole of cell M_1 longer than *m*; abdominal tergites with two rows of dark spots that are sometimes expanded into interrupted sublateral stripes.

Male.—Length about 8.5–9 mm.; wing 12.8–13.5 mm.

Female.—Length about 8 mm. ; wing 13.3 mm.

Male. Frontal prolongation of head relatively short, less than the remainder of the head, brownish yellow ; nasus short and stout ; palpi dark brown. Antennæ short, brown, the basal segment more pruinose ; flagellar segments gradually decreasing in size, the first largest, subpyriform, the succeeding three segments cylindrical, the remainder linear. Head buffy-yellow, the centre of the vertex infuscated, sending a narrow line cephalad on to the vertical tubercle.

Mesonotum buffy, the præscutum with four slightly darker fulvous stripes, the intermediate pair barely separated by a line of the ground-colour ; scutum greyish buff, the lobes more ferruginous ; scutellum and postnotum darker, sparsely pruinose, the posterior margin of the latter with two lateral paler triangles. Pleura buffy. Halteres pale brown, the base of the stem buffy. Legs with the coxæ and trochanters buffy yellow ; femora brownish yellow, the tips narrowly dark brown ; tibiæ yellowish brown, the tips narrowly infuscated ; tarsi passing into dark brown. Wings with a brownish tinge, the costal region, and especially cell *Sc*, darker brown, this clouding including the base of cell *R* and the prearcular region ; stigma darker brown ; a brown cloud on the anterior cord ; veins darker brown ; obliterative areas distinct ; a pale streak in outer end of cell *R* and the base of cell 1st *M*₂. Venation : *R*₃ nearly straight, about one-half longer than *R*₂₊₃ ; petiole of cell *M*₁ longer than *m* ; cell 1st *M*₂ relatively small, irregularly pentagonal ; cell 2nd *A* relatively narrow.

Abdominal tergites buffy, beyond the first with a dark sublateral spot on either side, those on the posterior segments more extensive ; segments 7 and 8 uniformly darkened ; sternites pale ; hypopygium obscure yellow. Male hypopygium with the ninth tergite relatively large, the caudal margin with a broad but shallow V-shaped notch, the apices of the broad lobes thus formed with an extensive area that is densely set with erect spinous setæ ; further cephalad on the sclerite the setæ become longer and larger. A single complex dististyle, relatively large, the distal half expanded into a head, the beak being short, obtuse, the ventral portion protuberant, heavily blackened and armed with abundant black spines ; on the lateral face of the style a flattened glabrous wing-like expansion ; base of style with a large fleshy setiferous lobe on ventro-mesal face ; a narrow setiferous lobule at the extreme base, directed laterad and dorsad, this continuous with the wing-like expansion above described. *Ædeagus* long and slender.

In the paratype male the præscutum is an almost uniform fulvous, the stripes not evident.

Female. The females that are referred to this species are very different in general appearance from the males, but the association is believed to be correct. The head, thorax, and abdomen are largely brown, more pruinose on the pleura. Præscutum obscure buffy-yellow with four reddish-brown stripes that are narrowly margined with darker, completely obliterating the interspaces. Abdomen greyish brown, the caudal margins of tergites 2 to 5 brighter brown; sternites brownish testaceous. In the paratype female the same dark coloration is found, but the præscutal stripes are well separated, the median stripe paler in front. The sublateral spots on the abdomen are here so extensive as to form two interrupted dorsal stripes.

Hab. Tasmania.

Holotype, ♂, Adventure Bay, December 31, 1922 (*A. Tonnoir*).

Allotype, ♀, Strahan, February 6, 1923 (*A. Tonnoir*).

Paratopotype, ♀; *paratype*, ♂, with the allotype.