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

THE new species described in the present instalment are all from New Zealand, where they were collected in the North Island by Mr. Thomas R. Harris, in the South Island by Messrs. Gourlay, Harris, Howes, and Tapley, and in Stewart Island by Mr. Norman J. Jensen. My deep thanks are extended to all of the above-mentioned students for the privilege of retaining the type-specimens of the species described.

*Dicranomyia (Zelandoglochina) paradisea circumcincta*,  
subsp. n.

*Male.*—Length 8·9 mm. ; wing 8·8–9·5 mm.

Generally similar to the typical form, differing as follows :—

Mesonotal præscutum with the median stripe darker and more conspicuous ; scutal lobes darkened ; postnotal medio-tergite blackened medially. Legs with the fore femora extensively infuscated near mid-length, the base and a post-medial ring obscure brownish yellow ; a nearly terminal, conspicuous black ring ; tibiæ and tarsi brown. On the

other legs the femora are less conspicuously darkened. Wings with the pattern more extensive, the apex narrowly seamed with brown; vein *Cu* in cell *M* with a conspicuous seam, as in *D. cubitalis*. Venation: *Sc*<sub>1</sub> ending a short distance beyond the origin of *Rs*, *Sc*<sub>2</sub> beyond this origin and not far from the tip of *Sc*<sub>1</sub>. Male hypopygium with the notch of the tergite small, semicircular. Mesal lobe of basistyle relatively slender, not strongly infuscated. Rostrum of ventral dististyle long and slender.

*Hab.* New Zealand (North Island).

*Holotype*, ♂, summit of Raetihi Hill, Ohakune, altitude 2800 feet, November 20, 1923 (*T. R. Harris*).

*Paratopotypes*, 5 ♂♂, November 20-30, 1923 (*T. R. Harris*).

The dark seam along vein *Cu* suggests the much smaller and otherwise very different *D. (Z.) cubitalis*, Edwards.

#### *Dicranomyia primitiva*, sp. n.

General coloration dark brown; legs brownish black; wings creamy, the ground-colour almost concealed by an extensive brown pattern; male hypopygium with the rostrum of ventral dististyle bearing a single weak spine.

*Male*.—Length about 6.5 mm.; wing 8.5 mm.

Rostrum moderately elongate, about one-half the length of the head, dark brown, the palpi concolorous. Antennæ black throughout, the incisures of the segments very indistinctly paler; flagellar segments short-oval. Head dark brown, very sparsely and indistinctly pruinose.

Mesonotum dark brown, the præscutum with three very faintly indicated, slightly darker brown stripes. Pleura dark brown, the postnotum with a somewhat paler pollen. Halteres relatively short, pale, the knobs infuscated. Legs with the coxæ and trochanters dark brown, the posterior coxæ a little pollinose; remainder of legs brownish black. Wings cream-coloured, with a very extensive diffuse brown pattern that restricts the ground-colour to areas before and beyond the origin of *Rs*, beyond the stigma, and less distinctly in the posterior and anal cells; veins darker brown. Venation: *Sc* relatively short, *Sc*<sub>1</sub> ending a short distance beyond the origin of *Rs*, *Sc*<sub>2</sub> apparently at the tip of *Sc*<sub>1</sub>; *r* elongate, extended, the cephalic two-thirds with macrotrichia; cell 1st *M*<sub>2</sub> rectangular, a little shorter than *M*<sub>1+2</sub> beyond it; basal deflection of *Cu*<sub>1</sub> a short distance before the fork of *M*.

Abdomen dark brown, the disk of the tergite a little

paler; hypopygium dark. Male hypopygium with the basistyles relatively stout, the mesal face with a stout hemispherical lobe, together with a smaller lobule. Ventral dististyle fleshy, the apex prolonged caudad as a stout fleshy lobe, the rostrum unusually stout, bearing a single weak spine before mid-length. Dorsal dististyle a relatively short, almost straight rod, the apex suddenly narrowed, acute. Gonapophyses with the mesal apical angle produced caudad into a long slender rod, the blunt tips a little blackened. *Ædeagus* stout, the base setiferous.

*Hab.* New Zealand (South Island).

*Holotype*, ♂, Pipeline between Dunedin and Waitati, Otago, September 21, 1923 (*W. Geo. Howes*).

The species apparently belongs to the *fasciata* group.

*Dicranomyia subfasciata*, sp. n.

General coloration ochreous, the posterior sclerites of the mesonotum largely dark brown; rostrum moderately elongate; antennæ black throughout; wings with a dark brown stigma and a broad diffuse greyish-brown cloud along the cord.

*Male*.—Length about 5.5 mm.; wing 6.5–6.8 mm.

*Female*.—Length 6–6.3 mm.; wing 6.5 mm.

Rostrum slender, nearly as long as the remainder of the head, brown; palpi black. Antennæ black throughout, the flagellar segments oval. Head dark brownish grey.

Pronotum ochreous yellow. Mesonotal præscutum bright ochreous to obscure fulvous, indistinctly marked behind with darker in some specimens; a narrow median line on the scutum and on the anterior portion of the scutellum pale, the remainder of these sclerites dark brown; postnotal mediotergite dark brown anteriorly, paler behind. Pleura ochreous yellow to fulvous. Halteres pale basally, the knobs dark brown. Legs with the coxæ and trochanters ochreous, more or less tinged with greenish in some specimens; remainder of the legs dark brown to brownish black, the femoral bases somewhat paler. Wings with a pale brownish tinge, cells *C* and *Sc* a trifle darker, the prearcular region paler; stigma very conspicuous, dark brown, sparsely setiferous, oval; a broad and conspicuous but diffuse greyish-brown cloud along the cord and in the outer end of cell *Cu*<sub>1</sub>; outer end of cell 1st *M*<sub>2</sub> narrowly seamed with the same colour; wing-tip and anal margin vaguely clouded with grey; veins black, the prearcular veins paler, yellowish. Macrotrichia of veins relatively long and conspicuous. Venation: *Sc*<sub>1</sub> ending opposite or just before the origin of

$R_s$ ,  $Sc_2$  a distance from its tip about equal to one-half  $R_s$ ;  $R_s$  weakly angulated and sometimes short-spurred at origin;  $r$  at extreme tip of  $R_1$ , arcuated, the cephalic half with macrotrichiae;  $R_{4+5}$  weakly angulated, a little more than one-half the sector; cell 1st  $M_2$  large, rectangular, subequal to vein  $M_{1+2}$  beyond it; basal deflection of  $Cu_1$  at or a short distance beyond the fork of  $M$ .

Abdominal tergites uniformly dark brown, the sternites more yellowish brown; hypopygium blackened. Male hypopygium with the basistyles relatively large, the mesal lobe conspicuous, with long setae. Ventral dististyle fleshy, with a long, nearly straight rostrum that narrows to the apex, the two spines borne on a conspicuous common tubercle before mid-length, one spine at the apex, the other on the dorsal face of the tubercle near the base; a large fleshy lobe on face of style at base of rostrum; dorsal dististyle heavily chitinized, nearly straight, weakly dilated before the acute, slightly decurved apex. Gonapophyses blackened, the mesal lobes appearing as acutely pointed, spinous blades. Ovipositor with long, slender, and relatively straight valves.

*Hab.* New Zealand (North Island).

*Holotype*, ♂, summit of Raetihi Hill, Ohakune, altitude 2800 feet, November 20, 1923 (*T. R. Harris*).

*Allotopotype*, ♀, November 30, 1923.

*Paratopotypes*, 2 ♂♂, November 20–30, 1923.

*Dicranomyia semicuneata*, sp. n.

General coloration brownish yellow; rostrum elongate; antennae black throughout; halteres elongate; wings subcuneiform, greyish brown;  $Sc_1$  ending shortly beyond the origin of  $R_s$ ; inner end of cell 1st  $M_2$  not conspicuously pointed; male hypopygium with the spines of the rostrum relatively short, basal in position.

*Male*.—Length 4.5 mm.; wing 5 mm.

*Female*.—Length 4.6–4.8 mm.; wing 5.5–5.8 mm.

Rostrum nearly as long as the remainder of the head, black, including the palpi. Antennae black throughout, the flagellar segments oval. Head black, very sparsely dusted with grey.

Pronotum brown. Mesonotum light brownish yellow, the humeral region of the præscutum brighter yellow; postnotum with anterior half infuscated. Pleura obscure yellow. Halteres elongate, dark brown, only the entire base slightly brighter. Legs with the coxae and trochanters yellow; remainder of the legs black. Wings with a uniform greyish-brown tinge, the stigma oval, very slightly darker than the

ground-colour, the margin delimited by a pale line; veins slightly darker brown. Wings subcuneiform, but not so marked as in *D. cuneipennis*, Alexander. Venation:  $Sc_1$  ending a short distance beyond the origin of  $Rs$ , this slightly variable, in some cases as much as one-fourth the length of the latter,  $Sc_2$  slightly before the origin;  $Sc_1$  alone nearly equal to or longer than the basal deflection of  $Cu_1$ ;  $Rs$  long, more than twice the basal deflection of  $R_{4+5}$ ; cell 1st  $M_2$  subquadrate, the inner end not or scarcely pointed; basal deflection of  $Cu_1$  just before to just beyond the fork of  $M$ .

Abdomen dark brown, the basal sternites a little paler. Male hypopygium with the mesal lobe of the basistyle conspicuous. Ventral dististyle with a long, slender, slightly decurved rod, the two spines shorter than the rostrum and located at its base, arising from small, slightly unequal papillæ; dorsal dististyle gently curved, the tip acute. Gonapophyses with the mesal lobes long and slender, gently curved, the lateral margin with microscopic spicules.  $\mathcal{A}$ edeagus slightly bifid at apex.

*Hab.* New Zealand (North Island).

*Holotype*, ♂, summit of Raetihi Hill, Ohakune, altitude 2800 feet, November 30, 1923 (*T. R. Harris*).

*Allotopotype*, ♀.

*Paratopotype*, 4 ♂ ♀, November 20–30, 1923.

*Dicranomyia pictithorax*, Alexander, *argentifera*, subsp. n.

Generally similar to the typical form, differing conspicuously in coloration. Rostrum fully as long as the remainder of the head, black, including the palpi. Antennæ black throughout, the flagellar segments subglobular to short-oval. Head black, the orbits narrowly and indistinctly grey. Mesonotal præscutum dull black with the interspaces conspicuously silvery white, the median black stripe much broader than in *pictithorax*, slightly widened behind; viewed laterally, the silvery coloration is scarcely apparent; scutal lobes dull velvety black, only the capillary median area pale; scutellum dull black; postnotum black. Black pleural stripe broader; sternopleurite infuscated ventrally. Halteres black, the base of the stem pale. Wings of the type badly damaged;  $Sc_1$  ending opposite the origin of  $Rs$ ;  $r$  just before mid-length of  $R_{2+3}$ . Abdomen dark brown.

*Hab.* New Zealand (South Island, Stewart Island).

*Holotype*, ♀, Greymouth, Coal Creek Track, Westland, February 13, 1923 (*T. R. Harris*).

*Paratype*, ♀, Half-moon Bay, Stewart Island, altitude 110 feet, November 20, 1923 (*N. J. Jensen*).

*Molophilus longiclavus*, sp. n.

Belongs to the *quadrifidus* group; allied to *M. imberbis*, Alexander; wings pale brown, the veins darker brown; vein 2nd *A* elongate; male hypopygium with the basal dististyle a long, nearly straight rod, the distal half more dilated and provided with densely set spinous setæ.

*Male*.—Length about 4.5 mm.; wing 5.8 mm.

Rostrum and palpi dark brown. Antennæ elongate, nearly as long as the body, as in the group; scape brownish testaceous, flagellum dark brown, the segments fusiform with the terminal pedicel of each segment about one-half the basal enlargement. Head greyish brown.

Mesonotum uniformly brown, very sparingly dusted, the humeral region restrictedly paler. Pleura dark brown. Halteres pale brown, the extreme base of the stem paler. Legs with the coxæ and trochanters testaceous; femora and tibiæ brown, clothed with dark setæ; tarsi dark brown. Wings with a pale brown tinge, the stigmal region very indistinctly darker; veins dark brown. Venation: petiole of cell  $R_4$  about three times  $r-m$ ; basal section of  $M_3$  about equal to  $r-m$ ; vein 2nd *A* ending about opposite one-third the length of the petiole of cell  $M_3$ .

Abdomen dark brown. Male hypopygium with the basal dististyle as in the group; a very long, relatively straight and slender rod, the basal half more slender than the distal flattened club, the latter with the apex and mesal edge densely set with appressed spines and spinous setæ.

*Hab.* New Zealand (Stewart Island).

*Holotype*, ♂, Half-moon Bay, altitude 50 feet, November 1, 1923 (*N. J. Jensen*).

*Molophilus pullatus*, sp. n.

Belongs to the *terminans* group; allied to *M. oliveri*, Alexander.

*Male*.—Length about 4 mm.; wing 5 mm.

Allied to *M. oliveri*, from which it differs chiefly in the structure of the hypopygium. Male hypopygium with the lateral dististyle slender, curved near mid-length, the apex dilated into a rather abrupt and conspicuous knob, the apex nearly pointed; at the base of the knob with an appressed spine (as in *M. lindsayi*, Alexander). Inner dististyle with the basal blade-like portion relatively narrow, the distal half suddenly narrowed into a neck, the terminal half cylindrical and very gradually narrowed to the long acute

tip, the narrowed portion of the style with a linear row of five microscopic spinules.

*Hab.* New Zealand (North Island).

*Holotype*, ♂, Taumarunui, November 19, 1923 (*T. R. Harris*).

*Molophilus hexacanthus*, sp. n.

General coloration sulphur-yellow; mesonotum orange-fulvous, margined with yellow; knobs of halteres yellow; wings uniformly light yellow; basistyles of male hypopygium each bearing three long spines along the lateral margin.

*Male*.—Length about 3 mm.; wing 4 mm.

Rostrum obscure yellow, palpi black. Antennæ short, the scape and basal flagellar segments yellowish testaceous, the remaining flagellar segments pale brown, oval. Head sulphur-yellow.

Pronotum sulphur-yellow. Mesonotum light orange-fulvous, the humeral region of the præscutum and the lateral margins of the præscutum and scutum sulphur-yellow; remainder of mesonotum yellowish fulvous. Pleura yellow with a more or less distinct longitudinal brownish stripe extending from the cervical sclerites to beneath the wing-root. Halteres testaceous, the knobs sulphur-yellow. Legs with the coxæ and trochanters yellowish testaceous; femora brownish yellow; tibiæ concolorous, the tips slightly darker; tarsi pale brown, the terminal segments dark brown. Wings with a uniform light yellow tinge, the veins slightly darker yellow; macrotrichiæ pale brownish yellow. Venation: vein *2nd A* relatively long, ending about opposite one-fifth the length of the petiole of cell *M*<sub>3</sub>.

Abdomen pale brownish yellow, the hypopygium brighter. Male hypopygium with each basal dististyle a straight powerful chitinized rod, bearing three long spines, directed laterad, along the outer margin; basal spine shorter (on one style shorter than on the opposite side) and emerging just beyond mid-length; terminal spine borne immediately before the microscopic spinous apex, a little more slender than the intermediate spine. Outer dististyle bifid as in the group, the mesal arm blunt.

*Hab.* New Zealand (North Island).

*Holotype*, ♂, summit of Raetihi Hill, Ohakune, altitude 2800 feet, November 20, 1923 (*T. R. Harris*).

*Molophilus sylvicolus*, sp. n.

General coloration pale fulvous-yellow; wings tinged with yellow; vein *2nd A* long; male hypopygium with the basal

dististyle a straight broad-based rod, tapering to the subacute apex, the apical half blackened and with microscopic appressed spinulæ.

*Male*.—Length about 3·5 mm.; wing 4·2–4·5 mm.

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

Rostrum yellowish testaceous, the palpi dark brown. Antennæ short, the scape sulphur-yellow, the flagellum dark brown. Head sulphur-yellow, slightly darker behind.

Mesonotum and pleura uniformly pale fulvous-yellow, the humeral region and narrow lateral margins of the præscutum and the dorso-pleural membranes sulphur-yellow. Halteres pale, the knobs sulphur-yellow. Legs with the coxæ and trochanters yellowish testaceous; femora yellow; tibiæ brownish yellow; tarsi pale brown. Wings with a pale yellowish tinge, the veins a little darker yellow; macrotrichiæ pale brown; wings narrower than in *M. analis*, Alexander. Venation: vein 2nd *A* long, ending opposite or just beyond mid-length of the petiole of cell *M*<sub>3</sub>.

Abdominal segments pale yellowish brown, the caudal margins of the segments narrowly brighter yellow. Male hypopygium with the apex of the basistyle produced into a slender, decurved, blackened beak. Basal dististyle a straight broad-based rod that tapers rapidly to the narrow subacute tip, the style blackened on approximately the distal half, the surface with microscopic appressed spinulæ that continue basad to near mid-length. Outer dististyle bifid as in the group.

The females have the thorax more uniform fulvous than described for the males, and the antennal scape is less brightly coloured.

*Hab.* New Zealand (North Island).

*Holotype*, ♂, Karioi, Wellington, in beech forest, November 7, 1923 (*T. R. Harris*).

*Allotopotype*, ♀.

*Paratopotype*, 1 ♂, 1 ♀.

#### *Molophilus jenseni*, sp. n.

General coloration fulvous-yellow; wings tinged with pale yellow; male hypopygium with the beak of the basistyle very deep; basal dististyle bispinous; ninth tergite with a median chitinized furcula.

*Male*.—Length about 2·8 mm.; wing 3·7–4 mm.

*Female*.—Length about 3·3–3·5 mm.; wing 4·6 mm.

Rostrum yellow, the palpi dark brown. Antennæ short, the scapal segments yellow, the flagellar segments passing

into a testaceous-brown; flagellar segments oval. Head sulphur-yellow in front, infuscated behind and on the genæ.

Mesonotum uniform fulvous-yellow, unmarked, the lateral margins of the præscutum narrowly sulphur-yellow. Pleura obscure fulvous-yellow. Halteres pale, with yellowish-orange knobs. Legs with the coxæ and trochanters yellowish testaceous; remainder of the legs yellow, the terminal tarsal segments passing into brownish black; fore tibiæ of male with a basal, slightly dilated ring, as in the group. Wings tinged with pale yellow, veins pale, *Sc*, *R*, and *Cu* more yellowish; macrotrichiæ pale brown. Venation: vein 2nd *A* ending just beyond the origin of the petiole of cell *M*<sub>3</sub>.

Abdomen brownish yellow, the terminal segments and hypopygium brighter-coloured. Male hypopygium with the apical beak of the basistyle extremely deep, blackened, approximately as broad as long. Basal dististyle a powerful black rod, gently dilated near mid-length, the apex produced into an acute spine, at its base bearing a smaller and more slender acute spine. Outer dististyle feebly bifid. Ninth tergite with a very conspicuous black median furcula, the arms gently diverging.

*Hab.* New Zealand (Stewart Island).

*Holotype*, ♂, Half-moon Bay, altitude 80 feet, October 26, 1923 (*N. J. Jensen*).

*Allotopotype*, ♀, October 31, 1923.

*Paratopotypes*, 22 ♂ ♀. October 26–November 20, 1923, altitudes 80–110 feet (*N. J. Jensen*).

This very distinct fly is named in honour of the collector, **Mr. Norman J. Jensen**, to whom I am indebted for many interesting Tipulidæ from Stewart Island.

***Amphineurus (Nothormosia) meridionalis*, sp. n.**

Allied to *A. (N.) harrisi*, Alexander, differing conspicuously in the structure of the male hypopygium; gonapophyses fused with the ædeagus, beyond mid-length breaking away as slender blackened rods, directed laterad, the apex of each terminating in several large and smaller spines.

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

Rostrum pale brown, the elongate palpi black. Antennæ elongate, approximately as long as the body, the scapal segments brownish yellow, the basal flagellar segment brownish testaceous; remaining flagellar segments passing into uniform dark brown; all flagellar segments elongate-fusiform, with conspicuous erect setæ. Head greyish brown.

Mesonotum rather uniformly light brown, the præscutal interspaces a little darkened and provided with black setæ and setigerous punctures; scutal lobes, scutellum, and postnotum weakly infuscated. Pleura brownish testaceous. Halteres pale, the knobs slightly infuscated. Legs with the coxæ and trochanters pale brownish testaceous; remainder of legs broken. Wings with a brownish-yellow tinge; *r* and *Cu* narrowly seamed with pale brown; veins dark brown. Venation: almost as in *A. harrisi*; basal deflection of *Cu*<sub>1</sub> approximately one-half its length before the fork of *M*.

Abdomen uniformly brown. Male hypopygium somewhat as in *A. harrisi*, differing conspicuously in the details of structure. Tergite heavily blackened, terminating in two broad-based spines, without lateral shoulders, the notch between V-shaped. Basistyles produced into moderately long terminal lobes, the mesal face at apex closely set with abundant black spinules. Outer dististyle with the base slender, dilated into an asymmetrical blade, the lateral angle of which is further produced caudad into a slender, gently curved apical lobe that is about equal in length to the base of the style; inner dististyle very short and compact, each with two appressed black spines (thumbs), the base at the caudal-lateral angle with a small, erect, black spine. Gonapophyses united basally with ædeagus, beyond mid-length projecting laterad as slender, blackened rods, the apex of each terminating in a powerful blackened spine with several smaller subterminal spines.

*Hab.* New Zealand (Stewart Island).

*Holotype*, ♂. Half-moon Bay, altitude 90 feet, November 6, 1923 (*N. J. Jensen*).

*Amphineurus (Amphineurus) stewartiæ*, sp. n.

General coloration dark brown, the coloration almost concealed by dense white setæ and scales; antennæ of male approximately as long as the body, the flagellum black.

*Male*.—Length about 5·5–6·5 mm.; wing 6·2–6·8 mm.; antenna 6–6·5 mm.

Rostrum and palpi black, the second scapal segment fulvous, the incisures of the basal flagellar segments indistinctly paler; antennæ elongate, approximately as long as the body. Head dark brown, with dense white setæ.

Mesonotum dark brown with dense white setæ, the humeral region of the præscutum brighter; pseudosutural foveæ elongate, black. Pleura dark brown, the ground-colour almost concealed by the long, dense, white setæ.

Halteres brown, the base of the stem, and the knobs clothed with long, pale, silken setæ. Legs with the coxæ dark brown; trochanters brownish yellow; remainder of the legs obscure yellow, the colour virtually concealed by abundant, appressed, dark setæ, the tarsi passing into brownish black at tips. Wings tinged with yellowish, the costal region more suffused, the ground-colour almost concealed by dense brown macrotrichæ; stigmal region a little darker; veins brownish yellow. Venation:  $R_s$  rectangular and spurred at origin; cell  $R_2$  sessile, the basal deflection of  $R_{2+3}$  angulated, a little longer than  $r$ , which is about equal to the petiole of cell  $R_4$ ; cell 1st  $M_2$  very small, rectangular.

Abdomen dark brown, the surface with dense white setæ and scales; hypopygium paler brown. Male hypopygium with the basistyles produced into long, attenuate, pale-tipped lobes. Basal dististyle with the apical third dilated into a small blade which is blackened and serrulate, the apex prolonged into a powerful spine. Both arms of outer dististyle bifid at apices. Gonapophyses lyriform, the apical portion of each gently sinuous, the long acute tips blackened.

*Hab.* New Zealand (Stewart Island).

*Holotype*, ♂, Half-moon Bay, altitude 80 feet, October 28, 1923 (*N. J. Jensen*).

*Paratopotypes*, 3 ♂ ♂, November 1, 1923, altitude 50 feet; 1 ♂, November 17, 1923, altitude 100 feet (*N. J. Jensen*).

*Amphineurus (Amphineurus) perarmatus*, sp. n.

Size large (wing, male, over 8 mm.); antennæ nearly as long as the body, scapal segments yellow; basal flagellar segments bicolorous; wings with a yellowish tinge; male hypopygium with the gonapophyses bearing a conspicuous spine on mesal face beyond mid-length.

*Male*.—Length about 7.5 mm.; wing 8.8 mm.

*Rostrum and palpi black*. Antennæ very long, nearly equal in length to the body; basal segment of scape brownish yellow; second segment light yellow; flagellar segments bicolorous, the basal swelling of each with a conspicuous black ring, the remainder obscure yellow; near mid-length, the flagellum passes into a uniform brownish black. Head dark grey with conspicuous white flattened setæ.

Pronotum obscure yellow. Mesonotal præscutum clove-brown, the humeral region surrounding the elongate pseudo-sutural foveæ brighter, more ochreous; scutal lobes and postnotum dark brown, the scutellum paler. Pleura dark brown, clothed with conspicuous white setæ. Halteres

obscure yellow, the knobs weakly infuscated. Legs with the coxæ infuscated, especially the posterior coxæ; trochanters yellow; femora yellow, clothed with dark setæ, the tips narrowly and weakly infuscated; tibiæ and tarsi yellow, with black scaly setæ that obscure the ground-colour. Wings with a yellowish tinge, the costal region a little more suffused; wing-margin a little darker, brownish yellow, than the centre of the disk; stigma darker brown; veins brownish yellow; macrotrichiæ of wings mostly dark-coloured. Venation: cell  $R_3$  sessile or short-petiolate;  $r$  about its own length beyond the origin of  $R_2$ ; cell 1st  $M_2$  relatively small and narrow,  $m$  less than one-half the outer deflection of  $M_3$ ; basal deflection of  $Cu_1$  more than one-half its length beyond the fork of  $M$ .

Abdomen dark brown, the basal sternites paler; surface of abdomen with abundant white setæ. Male hypopygium with the armature unusually developed. Basistyles with the apical lobes relatively short, not attenuated. Basal dististyle a narrow yellow blade, strongly curved to the long, straight, apical black spine. Both arms of outer dististyle simple. Gonapophyses slender, the two together appearing sublyriform, the apical half blackened, just beyond mid-length on mesal face produced into a long black spine that is about one-half as long as the straight black apex. What appears to be part of the ædeagal complex is a conspicuous T-shaped rod, the cross-bar terminating in acute black tips.

*Hab.* New Zealand (South Island).

*Holotype*, ♂, Waitati, Otago, November 26, 1923 (*W. Geo. Howes*).

*Gonomyia (Lipophleps) banksiana*, sp. n.

Wings with a strong brownish tinge;  $Sc_1$  nearly as long as the basal deflection of  $Cu_1$ ;  $Rs$  shorter than  $R_{2+3}$ ; outer dististyle of male hypopygium terminating in a broad-based spine.

*Male*.—Length about 4 mm.; wing 4.7 mm.

*Female*.—Length about 6 mm.; wing 6.2 mm.

Rostrum light reddish orange, very conspicuous, the palpi black. Antennæ black throughout. Head strongly infuscated, the centre of the vertex more yellowish, the anterior part passing into orange.

Pronotum and margins of mesonotal præscutum sulphur-yellow, the disk of the præscutum and the scutal lobes brown; scutellum and postnotal mediotergite yellowish. Pleura yellow with a narrow but very conspicuous dark brown dorsal stripe extending from the cervical sclerites to

the base of the halter; sternopleurite and meron more reddish. Halteres dark brown, the apices of the knobs a little paler. Legs with the coxæ and trochanters yellowish testaceous; remainder of the legs dark brown, the femoral bases a little paler. Wings with a strong brownish tinge, the stigma ill-defined and only a little darker than the ground-colour; veins dark brown. Venation:  $Sc_1$  ending opposite the origin of  $Rs$ ,  $Sc_2$  some distance from its tip;  $Sc_1$  alone nearly as long as the basal deflection of  $Cu_1$ ;  $Rs$  much shorter than  $R_{2+3}$ ; cell 1st  $M_2$  relatively short, its inner end about as long as  $m$ ; basal deflection of  $Cu_1$  at the fork of  $M$ .

Abdomen with the tergites dark brown, the caudal margins of the segments narrowly obscure yellow; sternites reddish yellow, the margins as in the tergites. Male hypopygium with the fleshy prolongations of the basistyles very stout; outer dististyle relatively small, the apex a broad-based black spine; fleshy dististyle a little shorter, setiferous, the apex with a powerful seta.

*Hab.* New Zealand (South Island).

*Holotype*, ♂, Governor's Bay, Banks Peninsula, Canterbury, October 19, 1923 (*J. F. Tapley*).

*Allotopotype*, ♀.

"Sweeping *Fuchsia* shrubs in moist situations."

*Gonomyia (Lipophleps) circumcincta*, sp. n.

Pleura with a dark brown longitudinal stripe that passes across the caudal margin of the postnotum, completely encircling the body; wings with  $Sc_2$  at the extreme tip of  $Sc_1$ ; male hypopygium with the dististyles symmetrical, the outer one relatively long and slender, terminating in an acute spine.

*Male*.—Length about 4.2 mm.; wing 5.2 mm.

Rostrum brownish yellow, the palpi black. Antennæ black throughout. Head obscure yellow, the vertex darker behind.

Pronotum sulphur-yellow. Mesonotal præscutum brown, the lateral margins behind the humeri sulphur-yellow; scutum broadly yellow, the lobes marked with dark brown; scutellum bright shiny yellow; postnotum sulphur-yellow with two confluent dark marks behind. Pleura yellow, with a conspicuous but narrow dark brown longitudinal stripe extending from the propleura to the mediotergite of the postnotum, as above described, thus passing completely around the body; sternopleura and meron more reddish

yellow. Halteres black, the apices of the knobs indistinctly brighter. Legs with the coxæ yellow, the trochanters testaceous; remainder of the legs dark brown. Wings with a pale brownish tinge, the stigma vaguely darker; veins darker brown. Venation:  $Sc_1$  ending opposite the origin of  $R_s$ ,  $Sc_2$  at its extreme tip;  $R_s$  strongly angulated at origin, a very little shorter than  $R_{2+3}$ .

Abdominal tergites dark brown, the lateral margins paler; sternites yellowish. Male hypopygium with the outer or chitinized dististyle symmetrical as in *G. (L.) banksiana*, sp. n. (asymmetrical in *G. (L.) nigrohalterata*, Edwards, and *G. (L.) longispina*, Alexander). These styli are a very little longer than the stout caudal lobes of the basistyles, relatively long and slender, the apex of each produced into an acute spinous beak, the surface of the style without a conspicuous sub-apical seta (as in *banksiana*).

*Hab.* New Zealand (North Island).

*Holotype*, ♂, Taumarunui, December 24, 1922 (*T. R. Harris*).

*Gnophomyia harrisiana*, sp. n.

General coloration dark brown; legs with the femora yellow, the tips broadly blackened; tips of the tibiæ dark brown; tarsi brownish black; tibiæ with conspicuous erect setæ; wings tinged with brown, the base light yellow; stigma brown; cord narrowly seamed with brown.

*Female*.—Length about 5·5·4 mm.; wing 5·6–5·8 mm.

Rostrum and palpi black. Antennæ short, black throughout. Head dull black, sparsely pruinose.

Pronotum dark brown or brownish black, brighter posteriorly. Mesonotal præscutum with three confluent black stripes, the humeral region brighter, reddish brown, the lateral margins broadly of the same colour and interrupted by a dark spot opposite anterior ends of the lateral stripes; scutal lobes dark brown; scutellum dark brown, the caudal margin narrowly paler; postnotum dark. Pleura dark brown, the postnotal pleurotergite near the wing-root more reddish. Halteres obscure yellow, the knobs infuscated. Legs with the coxæ and trochanters yellow, the fore and middle coxæ slightly infuscated; femora yellow, the tips broadly and conspicuously blackened; tibiæ obscure yellow, the tips narrowly dark brown; tarsi short, brownish black throughout; tibiæ and tarsi with conspicuous erect setæ. Wings tinged with brown, the prearcular region conspicuously light yellow; cells *C*, *Sc*, and *Sc*, yellowish; stigma oval, brown; narrow but conspicuous brown seams along the

cord and outer end of cell 1st  $M_2$ ; a conspicuous yellow suffusion along vein  $Cu$  throughout its length; veins darker brown,  $Cu$  and the prearcular veins yellowish. Venation:  $Sc_1$  ending opposite three-fourths the length of  $Rs$ ,  $Sc_2$  near its tip; basal deflection of  $Cu_1$  longer than the fused portion of  $M_3$  and  $Cu_1$ .

Abdomen dark brown, the ovipositor horn-coloured, with the long slender tergal valves slightly upcurved.

*Hab.* New Zealand (North Island).

*Holotype*, ♀, Taumarunui, November 19, 1923 (*T. R. Harris*).

*Paratopotype*, ♀.

This interesting fly is named in honour of the collector, Mr. Thomas R. Harris, to whom we are vastly indebted for invaluable material from the Ohakune District and Tongariro National Park.

*Gynoplistia ambulator*, sp. n.

Nearly wingless in both sexes; male hypopygium with the outer dististyle bearing a conspicuous blackened tubercle on the outer margin before mid-length.

*Male*.—Length 10 mm.; wing 2 mm.

*Female*.—Length 13 mm.; wing 2 mm.

Rostrum grey, the palpi brownish black. Antennæ 16-segmented, the formula being 2+3+8+3; longest branch about three times as long as the segment that bears it; branch of eleventh flagellar segment shorter than the segment; scapal segments and extreme base of the first flagellar segment reddish brown; remainder of organ black. Head light grey, the centre of vertex infuscated.

Pronotum brown, dusted with grey, with an indistinct median line. Mesonotal præscutum relatively flattened, grey, with three brownish stripes, the median stripe better indicated behind; a brownish tinge at the humeral region; pseudosutural foveæ large, oval, chestnut-brown; remainder of mesonotum grey; scutum and scutellum flattened and united into a single piece. Pleura grey. Halteres ochreous, the knobs infuscated. Legs with the coxæ large, pale, dusted with silvery grey; trochanters obscure yellow; femora brownish yellow, with a faintly indicated narrow subterminal brownish ring; tibiæ brownish yellow, the tips narrowly infuscated; basitarsi brown, the tips and remainder of the tarsi dark brown. Wings reduced to mere rudiments in both sexes, as indicated by the measurements; yellow, the costal region infuscated; veins a little darker than the ground-colour. Venation distorted.

Abdominal tergites reddish brown with an interrupted median brown stripe, the caudal margins of the segments very narrowly obscure yellow; seventh and eighth segments brownish black to form a subterminal ring, the eighth tergite small, largely telescoped beneath the seventh; hypopygium reddish brown. Male hypopygium with the caudal margin of the ninth tergite nearly truncate. Basistyles relatively stout, the interbasal lobe small, slender, smooth, directed cephalad. Outer dististyle pale, the apex roughly truncate, microscopically serrulate, immediately before the apex with one or two small subterminal spines; outer margin before mid-length bearing a tubercle that is more or less produced into a blackened spine, the face of the style opposite this point hollowed out and setiferous; inner dististyle relatively slender, shorter than outer style. Gonapophyses slender, not conspicuously projecting. Ædeagus slender, the decurved apex with the margins weakly serrate.

*Hab.* New Zealand (South Island).

*Holotype*, ♂, Riverton Beach, Southland, October 10, 1923 (*W. Geo. Howes*).

*Allotopotype*, ♀.

*Paratopotypes*, 7 ♂ ♀.

“Walking about on sandy beach.”

The other species of the genus, in which both sexes are nearly apterous, are *Gynoplistia pedestris*, Edwards, and *G. resecta*, Edwards.

*Gynoplistia luteicineta*, sp. n.

Allied to *G. niveicineta*, Alexander; antennæ 22-segmented, with eighteen branched segments; posterior tibiæ with a conspicuous light yellow ring; wings pale yellow, the base conspicuously light yellow; cell *Sc* dark brown; male hypopygium with the interbasal process terminating in an acute blackened spine.

*Male*.—Length about 11 mm.; wing 9.2 mm.

Rostrum shiny dark brown, the palpi black. Antennæ 22-segmented, the formula being 2+2+16+2; terminal segment twice as long as the penultimate and apparently formed by the fusion of two segments; antepenultimate segment with a short subterminal branch; basal branches in spiral alignment, the longest branch being about two-fifths the length of the flagellum; antennæ black, the branches paling into brown. Head black throughout.

Pronotum brown. Mesonotal præscutum with three confluent dark greenish stripes, the humeral region encircling

the large, oval, pale pseudosutural foveæ brownish; remainder of mesonotum, except the pale median area of the scutum and the lateral margins of the scutellum, shiny greenish black. Pleura dark chestnut-brown, the dorso-pleural region dark brown; pteropleurite, hypopleuron, and metapleural katepisternum densely covered with a microscopic grey pubescence. Halteres obscure orange-fulvous. Legs with the coxæ chestnut-brown; trochanters obscure brownish yellow; femora yellow, the tips blackened, the amount proportionally subequal on all the legs, including the terminal third or a little less; remainder of the legs black; posterior tibia with a conspicuous light yellow ring beyond mid-length, this subequal to or a little shorter than the black apex. Wings with a pale yellowish tinge, the base conspicuously light yellow; cells *Sc* and *Sc*<sub>1</sub> uniformly darkened; a conspicuous brown pattern, distributed as follows: at origin of *Rs*; at stigma and anterior cord; narrow brown seams on posterior cord and outer end of cell 1st *M*<sub>2</sub>; a very small cloud in cell 1st *A* opposite the origin of *Rs*; wing-tip extensively but indistinctly darkened; veins black, the prearcular veins obscure yellow. No distinct darkening at bases of cells *R* and *M*. Venation: *Sc*<sub>1</sub> ending just beyond the fork of *Rs*, *Sc*<sub>2</sub> near its tip; *R*<sub>2</sub> rectangular at origin, as in the group; veins *R*<sub>2</sub> and *R*<sub>3</sub> conspicuously diverging; cell 1st *M*<sub>2</sub> rectangular; basal deflection of *Cu*<sub>1</sub> just before mid-length.

Abdomen black, with only faint and ill-defined purplish reflexions; hypopygium paler. Male hypopygium with the mesal face of basistyle produced into a flattened, obtusely rounded lobe and a more distal conical knob; apex produced into a conspicuous blade, the apex obliquely truncated, without setæ on the outer fifth. Outer dististyle terminating in a narrow decurved point; inner dististyle distinctly infuscated outwardly. Interbasal process relatively stout, pale, the apex suddenly narrowed into an acute black spine.

*Hab.* New Zealand (North Island).

*Holotype*, ♂, Ohakune, altitude 2060 feet, December 12, 1922 (*T. R. Harris*).

*Paratype*, ♂, Karioi, Wellington, in beech forest, November 7, 1923 (*T. R. Harris*).

*Gynoplistia subformosa*, sp. n.

Allied to *G. formosa*, Hutton; head and antennæ black throughout; mesonotal præscutum shiny chestnut-brown, with three black stripes; posterior tibiæ dark brown with an

ill-defined orange band before the tip; wings pale yellow with a brown pattern, including a dark spot in bases of cells *R* and *M*; male hypopygium with the apices of the basistyles produced into conspicuous truncate blades, the apical fourth of each without setæ.

*Male*.—Length about 13 mm.; wing 10·5 mm.

Rostrum shiny black, the palpi dull black. Antennæ 21-segmented, the formula being 2+2+13+4; branches elongate, the longest approximately one-half the flagellum; antennæ black throughout. Head shiny coal-black throughout.

Pronotum black anteriorly, more reddish behind. Mesonotal præscutum obscure shiny chestnut with three black stripes, the pseudosutural foveæ very large, oval in outline; scutum dark brown, the lobes extensively blackened; scutellum shiny brown, the parascutella black; postnotal mediotergite black, the cephalic lateral region paler. Pleura shiny brownish black, the pteropleurite, hypopimeron, and metapleural katapisternum with microscopic, appressed, grey pubescence. Halteres obscure orange-yellow. Legs with the coxæ dark shiny brown; trochanters obscure orange; femora orange, the tips narrowly infuscated; remainder of legs black, the posterior tibiæ with a broad (more than 2 mm.) ill-delimited orange band beyond mid-length, the setæ on this ring in part dark-coloured. Wings with a pale yellowish tinge, the base and cells *C* and *Sc* brighter yellow; a conspicuous dark brown pattern that includes a large circular area at the origin of *Rs*; a conspicuous mark at stigma and on anterior cord; posterior cord and outer end of cell 1st *M*<sub>2</sub> narrowly seamed with brown; a conspicuous brown marking in the bases of *R* and *M*; a paler wash in cell 1st *A* opposite the origin of *Rs*; wing-apex very faintly darkened; veins dark brown, paler at the wing-base. Venation: *Sc*<sub>1</sub> ending just before the fork of *Rs*, *Sc*<sub>2</sub> at its tip; *Rs* spurred at origin; *r* about its length from the tip of *R*<sub>1</sub>; cell 1st *M*<sub>2</sub> about equal to the petiole of cell *M*<sub>1</sub>; basal deflection of *Cu*<sub>1</sub> more than one-half its length beyond the fork of *M*.

Abdomen shiny brown, the segments darker posteriorly, with conspicuous purplish to violaceous reflexions. Male hypopygium with the basistyle stout, the mesal face of each produced into small lobes, the distal one smaller and with dense black setæ; apex of basistyle produced into a relatively long blade, the apex subtruncate, the surface with conspicuous setæ except on the distal fourth. Outer dististyle

terminating in a slender decurved point; inner dististyle a flattened blade with the apex obtuse. Interbasal process appearing as a flattened blade, tapering gradually to the acute concolorous tips.

*Hab.* New Zealand (South Island).

*Holotype*, ♂, Mt. Grey, Canterbury, altitude 500–800 feet, March 1916 (*E. S. Gourlay*).

LXXII.—*Land Mollusca from the Maritime Province of Siberia.* By T. D. A. COCKERELL, University of Colorado.

THE new species will be figured later in 'Proceedings of United States National Museum.' The fauna is wholly Palearctic in character. The species of *Succinea* and *Agriolimax* will be dealt with later.

#### Helicidæ.

EULOTA, Hartmann.

*Eulota eulemnisca*, sp. n.

Shell-diameter, max. 26, min. 22.5 mm.; alt. 19 mm.

Spire low-conoid; whorls  $6\frac{3}{4}$ , rounded, the last whorl with very obtuse periphery; nucleus without evident sculpture; surface of shell somewhat shining, the whorls with coarse growth-lines above periphery, and above and below with fine spiral lines; sutures moderately impressed; umbilicus deep and open, with a diameter of about  $3\frac{1}{2}$  mm., slightly overlapped on one side by the broad reflected lip; aperture rounded, the lip white, forming approximately  $\frac{3}{4}$  of a circle, the lower inner margin with a slight rib; colour very pale yellowish (cream-colour), slightly flushed with red behind the aperture below the periphery; a strong dark brown band, nearly 2 mm. wide, above the periphery; band-formula 00300; umbilical region not darkened.

Low Lighthouse, between Valentine Bay and Olga, coast of Siberia, July 13, 1923. Collected by Mr. A. I. Lavrushin. Found on a bank overlooking the sea.

Intermediate between *E. maackii* and *E. middendorffi*, but quite distinct.

*Eulota weyrichii* (Schrenck).

Rather common at Okeanskaja, Kongaus, and Olga, in the Maritime Province of Siberia, July–August 1923 (*Cockerell*).