

in others the tubercles are associated only with plates situated towards the periphery of the disc, whilst in the larger specimens the tubercles are found here and there upon the plates. It is quite possible to trace in the specimens before me the gradual disappearance of these bead-like tubercles from the dorsal surface of the disc. There is, too, a considerable difference in the calcification of the plates; in some specimens the plates are very heavily calcified, whilst in others new plates appear to be in process of formation, and may be seen lying in the integument separated from one another. Further, there is some variation in the shape of the disc, which may be flat and regularly pentagonal or convex and round; it appears possible that there is a correlation between this variation and the ripening of the ovaries.

Despite the variation in the shape and ornamentation of the disc, I have no hesitation in referring all the specimens to the same species. It is by no means clear, as has been assumed by Bell and some other authors, that specimens with imperfectly calcified plates are necessarily young. The occurrence of comparatively large specimens in this condition suggests rather that partial decalcification may possibly be a recurrent phase in the life-history.

This species resembles *Ophiolebes paucispina*, H. L. Clark, in the arrangement of the plates and tubercles on the dorsal surface of the disc, but differs from it in the shape of the mouth-papillæ and the division of the ventral arm-plate, as figured by H. L. Clark in his "Report on the Ophiurans of the Philippine and Adjacent Waters," Bull. U.S. Nat. Mus. lxxv. 1911, p. 246, fig. 119.

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

THE new species described in this paper were collected in the Province of Westland, New Zealand, by Mr. Thomas R. Harris, and in New South Wales by Dr. E. W. Ferguson. I am very greatly indebted to the collectors for the privilege of studying these extensive series of crane-flies. Unless stated to the contrary, the types are preserved in the writer's collection.

Dicranomyia unijuga, sp. n.

Belongs to the *huttoni* group; thoracic pleura extensively darkened; femora with a narrow dark brown subterminal ring; wings yellow, sparsely variegated with dark brown; abdomen yellow with a subterminal or terminal brown cross-band on the basal tergites.

Male.—Length 6 mm.; wing 7.2–7.5 mm.

Female.—Length 6.5 mm.; wing 7.2 mm.

Rostrum from one-third to one-half longer than the head, dark brown, including the palpi. Antennæ with the scape light brown; flagellum black, the extreme apex of the pedicel of each segment yellow. Head grey.

Mesonotum ochreous, rather shiny. Pleura extensively dark brown, this including the postnotal pleurotergites; sternopleura pale. Halteres brown, the knobs obscure yellow. Legs with the coxæ and trochanters obscure yellow; femora yellow, each with a narrow black ring at a little more than its own length before the apex; tibiæ and basal three segments of tarsi yellow, the terminal tarsal segments blackened. Wings strongly tinged with yellow; stigma brown, distinct; a small brown spot at origin of *Rs*; narrow but distinct brown seams along the cord and outer end of cell 1st *M*₂; veins pale, darker in the infuscated areas. Venation: *Sc* short, ending opposite the origin of *Rs*, *Sc*₂ close to the tip of *Sc*₁; *Rs* gently angulated at origin, about two and one-half times the basal deflection of *R*₄₊₅; basal deflection of *Cu*₁ just before the fork of *M*.

Abdominal tergites yellow, the basal segments with a relatively narrow, transverse cross-band of brown before the still narrower yellow apex, the bases of these segments broadly yellow; on the subterminal segments the brown colour includes all the segments; in some specimens the yellow apex is obliterated so the segments appear yellow and dark brown, dimidiate; hypopygium reddish brown. Male hypopygium with the ninth tergite gently notched, the lobes setiferous. What appears to be the anal tube appears as a conspicuous median lobe that exceeds in length the lateral tergal lobes and is conspicuously setiferous. Basistyles with the mesal lobes globular, setiferous; ventral dististyle relatively small, the rostrum extensively blackened, near its base with two small subequal spines that are in transverse alignment or nearly so. *Ædeagus* broad.

Hab. New Zealand (South Island).

Holotype, ♂, Ross, Westland, February 21, 1923 (*T. R. Harris*).

Allotopotype, ♀, February 23, 1923 (*T. R. Harris*).

Paratopotypes, 2 ♂♂, February 21-23, 1923; *paratype*, 1 ♂, Rewanui, Paparoa Range, Westland, altitude 600-800 feet, February 15, 1923 (*T. R. Harris*).

Dicranomyia crassispina, sp. n.

General coloration brownish yellow; median area of scutum and scutellum broadly pale yellow, the remainder dark brown; femora dark brown, each with a narrow yellow subterminal ring; wings with a strong brown tinge; cord narrowly seamed with darker brown; abdominal segments indistinctly bicolorous; outer spine of rostrum of male hypopygium incrassate.

Male.—Length 6·8-7 mm.; wing 8·5-8·6 mm.

Rostrum and palpi black. Antennæ black throughout, the basal flagellar segments oval, the terminal segments becoming more attenuate. Head dark grey.

Pronotum dark brown medially, paler laterally. Mesonotal præscutum obscure yellow, the median area broadly dark brown, widened behind; scutum and scutellum broadly pale yellow medially, the lateral portions dark brown; central portion of postnotal mediotergite dark brown. Pleura obscure brownish yellow, with greenish tints. Halteres dark brown, the base of the stem light yellow. Legs with the coxæ and trochanters greenish testaceous; femora brown, paler basally, passing into dark brown toward the tips; a relatively narrow but conspicuous yellow ring a little less than its own length before the blackened tips; tibiæ and tarsi brownish black. Wings with a strong brown tinge; stigma slightly darker brown; restricted but conspicuous dark brown seams at origin of *Rs*, along cord and outer end of cell 1st *M*₂; veins dark brown. Venation: *Sc*₁ ending just beyond origin of *Rs*, *Sc*₂ some distance from its tip, *Sc*₁ alone equal to or a little shorter than the basal deflection of *Cu*₁; *Rs* gently arcuate, about one-half longer than the basal deflection of *R*₄₊₅; cell 1st *M*₂ relatively short and broad, subquadrate; basal deflection of *Cu*₁ at or just beyond the fork of *M*.

Abdomen dimidiate, the base of each segment yellow, the apex brown, this becoming more restricted on the subterminal segments. Male hypopygium with the caudal margin of the ninth tergite only gently concave, the median area with only four or five setæ. Basistyles with mesal lobe oval, provided with numerous setæ, including about five long, powerful ones; ventral dististyle very large and fleshy,

the rostrum broader basally, the distal half narrower, this portion with a powerful spine that is longer and stouter than the inner spine situated on the declivity that marks the end of the broadened base; apex of rostrum beneath with a few (about six) slender setæ. Dorsal dististyle moderately curved. Gonapophyses appearing as extensive flattened blades, the mesal angle produced into a slender, gently curved lobe, the caudal margin of the apophyse adjoining this lobe weakly crenulate or serrulate.

Hab. New Zealand (South Island).

Holotype, ♂, Ross, Westland, February 19, 1923 (*T. R. Harris*).

Paratopotype, ♂, *paratype*, ♂, Mahinapau, Westland, February 24, 1923 (*T. R. Harris*).

Dicranomyia pendulifera, sp. n.

General coloration shiny brownish yellow, the thoracic pleura dark brown; wings subhyaline, the stigma scarcely darker; male hypopygium with the rostrum pendulous, directed cephalad.

Male.—Length about 4.8 mm.; wing 5.5 mm.

Rostrum brown, the palpi somewhat darker. Antennæ dark brown throughout, the basal flagellar segments suboval, the outer ones becoming more slender. Head dark grey.

Mesonotum shiny brownish yellow, only a little darker medially, the scutellum more testaceous. Pleura dark brown, the sternopleura abruptly paler. Halteres infuscated. Legs with the coxæ and trochanters yellowish testaceous; remainder of the legs dark brown. Wings subhyaline, with a faint greenish tinge, the stigma scarcely darker; veins brown. Venation: Sc_1 ending opposite the origin of R_s ; R_s arcuated, about one-third longer than the basal deflection R_{4+5} ; cell 1st M_2 rectangular, about two-thirds as long as cell 2nd M_2 ; basal deflection of Cu_1 at the fork of M .

Abdominal tergites dark brown, the sternites and hypopygium somewhat paler. Male hypopygium with the ninth tergite having a U-shaped median notch, the lateral lobes setiferous, the median area with about two setæ. Basistyles with the mesal lobes large and conspicuous. Ventral dististyle very large and fleshy, the rostrum long and slender, directed strongly cephalad, with two spines near its base, these spines subequal in size, the proximal one a trifle longer; dorsal dististyle strongly curved, sickle-shaped. Gonapophyses with the mesal lobe long, the caudal margin of the apophyse appearing to have a U-shaped incision due

to the fact that the lateral angle is produced strongly caudad.

Hab. New Zealand (South Island).

Holotype, ♂, Ross, Westland, February 17, 1923 (*T. R. Harris*).

Molophilus abruptus, sp. n.

Male.—Length about 3·8 mm.; wing 4·8 mm.

Belongs to the *macrocerus* group and is very closely related to *M. remotus*, Alexander, from which it differs as follows:—

Humeral and lateral regions of the præscutum a little paler. Vein 2nd *A* ending about opposite mid-length of the petiole of cell *M*₃. The chief specific distinctions are found in the structure of the male hypopygium. The basal dististyle is much shorter, the basal half stout and straight, the apical half or a little less gradually narrowed into a powerful spine; at the base of this spine on the mesal face a large area of smaller spines; a few additional scattered spines on the mesal face of the apical spine.

Hab. New Zealand (South Island).

Holotype, ♂, Ross, Westland, February 17, 1923 (*T. R. Harris*).

Molophilus acanthus, sp. n.

General coloration yellowish ochreous; antennæ short; basistyles of male hypopygium produced caudad into erect subtruncate lobes; basal dististyle shaped like a ten-pin.

Male.—Length 3·5–3·8 mm.; wing 4·5–4·6 mm.

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

Rostrum and palpi black. Antennæ short in both sexes, the scapal segments obscure testaceous, especially the basal one; flagellar segments dark brown. Head dark brownish grey.

Mesonotum yellowish ochreous, scarcely variegated with darker. Pleura testaceous, the dorsal pleurites somewhat darker. Halteres yellowish, the knobs infuscated except apically. Legs with the coxæ and trochanters concolorous with the pleura; femora yellow with dark macrotrichia; tibiae and tarsi gradually passing into dark brown. Wings strongly tinged with yellow; a conspicuous pale brown cloud along the cord, interrupted along the fork of *M* but faintly shown as a seam along the basal deflection of *Cu*₁; veins pale, darker in the infuscated areas. Venation: vein 2nd *A* ending nearly opposite mid-length of the petiole of cell *M*₃.

Abdomen dark brown, the hypopygium obscure testaceous yellow. Male hypopygium of the general structure of the *tillyardi* group. Basistyles produced caudad into erect subtruncate lobes, the apex terminating in two blunt, blackened teeth which extend down the face of the lobe as chitinized and feebly serrulate ridges, the area between concave. Outer dististyle trifid, the outer lobe larger, the two inner lobes more slender. Basal dististyle shaped somewhat like a ten-pin, broadly dilated on basal two-fifths, the distal three-fifths slender, blackened, nearly straight, toward the tip with a few weak denticles. *Ædeagus* curved at apex.

Hab. New Zealand (South Island).

Holotype, ♂, Ross, Westland, February 21, 1923 (*T. R. Harris*).

Allotopotype, ♀.

Paratopotypes, 20 ♂ ♀, February 21–23, 1923; *paratypes*, 1 ♂, Greymouth, Westland, February 11, 1923; 5 ♂ ♀, Rewanui, Paparoa Range, Westland, altitude 600–800 feet, February 15, 1923 (*T. R. Harris*).

Amphineurus (Nothormosia) tortuosus, sp. n.

Closely allied to *A. subglaber*, Edwards; wings narrow, the basal section of R_2 subperpendicular; outer dististyle of male hypopygium a short flattened blade, the apex obtuse.

Male.—Length about 3.6 mm.; wing 4.6 mm.

Rostrum and palpi dark brown. Antennæ broken. Head dark brownish grey.

Mesonotum light brown without distinct markings. Pleura yellowish brown. Halteres dark brown, the base of the stem obscure yellow. Legs with the coxæ yellowish brown; trochanters testaceous; remainder of legs dark brown, the femoral bases paler. Wings narrow, strongly tinged with brown, the veins darker brown. Venation: R_{2+3} about as long as the basal deflection of Cu_1 and gently arcuated; basal section of R_2 subperpendicular, about twice r ; basal deflection of R_{4+5} and $r-m$ subequal; petiole of cell M_3 about one-half longer than the basal deflection of Cu_1 .

Abdomen light brown, including the hypopygium. Male hypopygium with the ninth tergite only feebly chitinized, with a caudal U-shaped median notch, each lateral lobe with a small rounded apical notch. Basistyle produced caudad into a moderately long, fleshy lobe. Outer dististyle shorter than this lobe, appearing as a flattened blade, the apex obtuse. Inner dististyle blackened, suddenly narrowed near mid-length, the slender apex curved gently mesad.

Basal dististyle a slender chitinized rod, somewhat as in *A. recurvans*, Alexander, the apex strongly curved, sinuous. Gonapophyses flattened, rather weakly chitinized.

Hab. New Zealand (South Island).

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

Amphineurus flexuosus, sp. n.

Related to *A. molophilinus*, Alexander; male hypopygium with the basal dististyle weakly toothed toward apex; gonapophyses very slender, blackened on distal half.

Male.—Length about 5 mm.; wing 6 mm.

Female.—Length 6.5 mm.; wing 6–6.2 mm.

Rostrum and palpi brownish black. Antennæ relatively long, if bent backward, extending about to the base of the abdomen, brownish black throughout. Head dark greyish black, the ground-colour almost concealed by abundant white setæ.

Mesonotum and pleura greyish black, the interspaces and pleura very heavily covered by dense whitish setæ. Halteres pale brown, the knobs dark brown. Legs with the coxæ concolorous with the pleura; trochanters and femora orange; tibiæ similar, a little darkened at tip; tarsi black; segments of leg provided with abundant setæ that tend to obscure the ground-colour. Wings with a strong brown tinge, the stigmal area conspicuously light yellow; membrane almost concealed by abundant brown and black macrotrichia distributed to produce a somewhat variegated appearance; costal fringe tawny; anal fringe double, black. Venation: *Rs* long-spurred at origin; cell *R*₃ sessile; basal deflection of *Cu*₁ immediately before the fork of *M*.

Abdomen greyish black, the colour almost concealed by dense cream-coloured setæ. Male hypopygium of the general structure of *A. perdecorus*, Edwards, and *A. submolophilinus*, Alexander; basistyles produced caudad into elongate, attenuate, pale apices; basal dististyle slender, brownish yellow at base, the blackened apex with a few conspicuous teeth. Gonapophyses lyriform, yellowish basally, near mid-length suddenly narrowed into a slender black apex that is gently bent immediately before apex.

Hab. New Zealand (South Island).

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

Allotopotype, ♀.

Paratopotypes, ♂ ♀ in copula, 1 additional ♂.

Amphineurus flexuosus minor, subsp. n.

Very similar to the typical form but smaller (male, length about 4 mm.; wing 5 mm.) and with the genitalia slightly different in form. Gonapophyses with the extreme tips slightly upcurved to produce a sinuous appearance. The basal two-thirds of the basal dististyle are brighter yellow and the subapical teeth are larger and more conspicuous.

Hab. New Zealand (South Island).

Holotype, ♂, Ross, Westland, February 19, 1923 (*T. R. Harris*).

Paratopotypes, 2 ♂♂.

Amphineurus tumidus, sp. n.

General coloration dark brown, the mesonotal præscutum and scutum shiny reddish brown; halteres with the knobs yellow; wings tinged with greyish yellow, covered with abundant dark macrotrichiæ; male hypopygium with the gonapophyses very tumid, lyriform.

Male.—Length 4·8–5 mm.; wing 5·6–6 mm.

Rostrum and palpi dark brown. Antennæ of moderate length, the basal segment of the scape obscure yellow; remainder of antenna dark brown. Head brownish grey, with abundant flattened setæ.

Mesonotal præscutum shiny reddish brown, the lateral margins darker brown; scutal lobes reddish brown; scutellum and postnotum dark brown. Pleura dark brown with an indistinct paler area immediately above the mid-coxæ. Halteres brown, the extreme base of the stem and the knobs conspicuously light yellow. Legs with the coxæ and trochanters obscure yellow; femora obscure yellow, densely clothed with brown setæ to almost conceal the ground-colour; tibiæ and tarsi passing into darker brown. Wings tinged with greyish yellow and densely covered with dark macrotrichiæ; veins yellow and brown. Venation: cell R_2 very short-petiolate to sessile; basal deflection of Cu_1 close to proximal end of cell 1st M_2 .

Abdominal tergites dark brown, the sternites and pleural membrane brownish yellow; hypopygium dark brown, the attenuate apices of the basistyles a little paler. Male hypopygium having the general structure of *M. senex* and allies. Basistyles attenuate; outer dististyles two, the lower flattened, sometimes with a small marginal spine near mid-length, and with the subtruncate apex feebly serrulate; basal dististyle slender, almost straight, the base a little

enlarged, gradually narrowed to the attenuate acute apex which is narrowly blackened. Gonapophyses very powerful and swollen, somewhat lyriform in shape, thickest beyond mid-length, the apex abruptly narrowed into a long apical spine that is surrounded by a dense tuft of setæ.

Hab. New Zealand (South Island).

Holotype, ♂, Rewanui, Paparoa Range, Westland, altitude 600–800 feet, February 15, 1923 (*T. R. Harris*).

Paratopotypes, 2 ♂♂.

LIMNOPHILA, Macquart.

Subgenus PARALIMNOPHILA, Alexander.

1921. *Paralimnophila*, Alexander, Ann. & Mag. Nat. Hist. (9) viii. pp. 559–560.

The subgeneric term *Paralimnophila* was proposed in 1921, with *Limnophila leucophæta*, Skuse, as type. The accession of three new species described herewith requires a modification of the subgeneric definition. The number of antennal segments varies from 16 to 18, with the basal flagellar segments rather strongly serrate in both sexes, where these are known. The legs are bicolorous only in the *leucophæta* group (*cairnensis*, Alexander, and *serraticornis*, sp. n.). The relative position of *r* and the basal deflection of *Cu*₁ vary with the species, in *L. (P.) fergusonii*, sp. n., *r* being at the tip of *R*₁ and the basal deflection of *Cu*₁ near mid-length of cell 1st *M*₂. It is possible that the latter species should be removed from the group under consideration, but until male specimens of more of the species are discovered it is inadvisable to divide the group more closely. There can be no question but that the present group and the Tasmanian *Xenolimnophila*, Alexander, are connecting units between *Limnophila* and *Gynoplistia*.

Limnophila (Paralimnophila) fergusonii, sp. n.

General coloration shiny reddish brown, varied with black; femora obscure yellow with brownish-black premedial and subterminal rings; wings whitish hyaline, handsomely cross-banded with dark brown.

Male.—Length 21 mm.; wing 19.5 mm.; hind leg, femur 14.5 mm., tibia 18.6 mm.

Female.—Length 24 mm.; wing 17 mm.

Rostrum and palpi reddish orange. Antennæ 17-segmented in both sexes; apex of each of the basal flagellar segments slightly produced, giving to the organ a slightly serrate appearance. Head rich chestnut-brown, subshiny, strongly narrowed behind.

Mesonotal præscutum dark brown with three bright reddish-brown stripes that cover most of the surface, the median stripe indistinctly divided by a capillary darker line; scutum darkened, the lobes extensively reddish brown; scutellum dark brown; postnotum with the medio-tergite pale reddish with a capillary brown median vitta, the pleuro-tergites extensively darkened and sparsely pruinose. Pleura reddish brown. Halteres pale, the knobs infuscated. Legs with the coxæ and trochanters reddish brown; femora obscure yellow with a broad brown ring before mid-length and a narrower brownish-black subterminal ring, the extreme apex pale; tibiæ light brown, the extreme tips blackened; tarsi brownish black. Wing whitish hyaline; cells *C* and *Sc* brownish black, except a narrow margin adjoining costa which is pale; membrane heavily cross-banded with dark brown; in some specimens a conspicuous area at the wing-base in cells *R* and *M*, continued as a seam along vein *Cu*, sending a conspicuous branch caudad, this including the middle of cell *Cu* and the outer ends of cells *1st A* and *2nd A*; a spot at origin of *Rs* (smaller in type ♂); a conspicuous band extending from the concolorous stigma across the wing, leaving the centre of cell *1st M*₂ narrowly pale; wing-apex broadly darkened; anal and posterior margin of wing very narrowly seamed with brown; veins dark brown, paler in the hyaline areas. Venation: *Sc* long, *Sc*₁ ending beyond the base of *R*₂, *Sc*₂ near its tip; *r* at the tip of *R*₁; an indistinct spur on *R*₂ near origin; *Rs* elongate; *R*₂₊₃ shorter than the basal deflection of *R*₄₊₅; cell *M*₁ longer than its petiole; cell *1st M*₂ short-rectangular, the basal deflection of *Cu*₁ near mid-length; arculus complete.

Abdominal tergites shiny chestnut-brown, narrowly trilineate with black, the median stripe narrowly interrupted at the posterior margins of the segments; sternites somewhat similar, but the black areas more diffuse; hypopygium dark. Ovipositor with the valves elongate.

Hab. New South Wales.

Holotype, ♂, Mt. Kosciusko, December 17, 1922 (*Goldfinch*).

Allotopotype, ♀, December 5, 1921 (*E. W. Ferguson*).

Paratopotype, ♀, with the allotype.

Types returned to the Health Department of New South Wales.

This elegant crane-fly is named in honour of Dr. E. W. Ferguson, to whom I am indebted for critical co-operation in a study of Australian Tipulidæ.

Limnophila (Paralimnophila) aurantiipennis, sp. n.

General coloration orange; wings orange, the costal cell dark brown.

Female.—Length 17–18 mm.; wing 15–16 mm.

Rostrum and palpi brown. Antennæ 16-segmented, the basal six segments with their lower apical angles produced into a short branch; scape and basal flagellar segments light brown, the terminal segments passing into dark brown. Head strongly narrowed posteriorly and transversely wrinkled, reddish brown, sparsely grey-pruinose.

Pronotum and mesonotum orange, the præscutum with three reddish-brown stripes, the extreme cephalic end of the median stripe darker and more clearly indicated; scutellum slightly darkened. Pleura orange. Halteres brown, the extreme base of the stem and the knobs indistinctly paler. Legs with the coxæ and trochanters reddish orange; femora brown, the subglabrous bases obscure yellow; tibiæ and tarsi dark brown. Wings strongly suffused with orange, the costal cell conspicuously dark brown; small brown spots at origin of *Rs* and at tips of veins *R*₁ and *R*₂; stigma very pale brown; veins yellow. Venation: *Sc*₁ ending just before the end of *R*₂₊₃, *Sc*₂ not far from its tip; *Rs* very long, in alignment with *R*₂₊₃; cell *M*₁ about one-half longer than its petiole; cell 1st *M*₂ subrectangular, gently widened distally; basal deflection of *Cu*₁ not far beyond its inner end.

Abdomen obscure orange-brown. Ovipositor with the tergal valves very long and slender, horn-coloured.

Hab. New South Wales.

Holotype, ♀, Blue Mountains, March 4, 1922 (*E. W. Ferguson*).

Paratopotype, ♀, January 7, 1922 (*E. W. Ferguson*).

Type returned to the Health Department of New South Wales.

Limnophila (Paralimnophila) serraticornis, sp. n.

General coloration light grey, the præscutum with three brown stripes; antennæ 18-segmented, the basal flagellar segments serrate beneath; tips of femora and most of tarsi white; wings tinged with brown, with a sparse darker brown pattern.

Female.—Length 15–17 mm.; wing 14·5–15·5 mm.

Rostrum and palpi black. Antennæ 18-segmented, black throughout, the basal segment pruinose; basal 9 or 10

flagellar segments produced at apex beneath into a conspicuous lobe, the organ thus appearing strongly serrate; terminal flagellar segments simple, the last elongate. Head dark grey, the vertex with a triangular brown mark with its point directed caudad.

Mesonotal præscutum light grey, with three conspicuous brown stripes; a capillary median vitta and the interspaces still darker brown; scutal lobes brown, the median area weakly pruinose; scutellum brownish medially; postnotum light grey with a capillary brown vitta that is clouded with paler brown at its cephalic end. Pleura light grey-pruinose, the dorsal pleurites darker. Halteres dark brown, the stem pale. Legs with the coxæ and trochanters dark grey-pruinose; femora brown, on the posterior legs soon passing into black, on the fore and middle legs with the pale bases very extensive; extreme tips of femora abruptly pinkish white; tibiæ brownish black; metatarsi black with about the apical fourth or a little less creamy-white; terminal tarsal segments infuscated to blackened; paired spurs at tips of tarsal segments 1 and 2. Wings tinged with brown, more marked in the anal and cubital cells; cells *C* and *Sc* dark brown; a rather sparse dark brown pattern, distributed as follows: at origin of *Rs* and on vein *R* at mid-distance between arculus and origin of *Rs*; stigma; smaller brown spots at forks of *Rs*, R_{2+3} , M_{1+2} ; along the cord and at the distal end of vein R_2 ; wing-apex faintly darkened; veins brownish black. Venation: Sc_1 ending just before the tip of R_{2+3} , Sc_2 opposite the end of *Rs*; *Rs* nearly straight; *r* about three times its length before the arcuated distal section of R_1 ; cell M_1 from two to two and one-half times the length of its petiole; basal deflection of Cu_1 close to proximal end of cell 1st M_2 .

Abdomen dark brown, grey-pruinose. Ovipositor with the slender elongate tergal valves horn-coloured, their bases darker.

Hab. New South Wales.

Holotype, ♀, Blue Mountains, January 7, 1922 (*E. W. Ferguson*).

Paratopotype, ♀, January 29, 1922.

Type returned to the Health Department of New South Wales.

Limnophila (Metalimnophila) apicispina, sp. n.

Male.—Length about 5.5 mm.; wing 6.2 mm.

Generally similar to *L. (M.) simplicis*, Alexander, differing as follows:—

General coloration paler. Flagellar segments a little shorter. Mesonotal præscutum with three darker stripes, the broad median stripe grey, margined with darker; lateral stripes brown; lateral margins of præscutum and interspaces behind greyish; humeral region and anterior interspaces light ochreous. Femora stouter, the tips less darkened. Male hypopygium of the simple structure of *L. simplicis*, the outer dististyle bottle-shaped, terminating in a powerful acute spine, the mesal face of the style very densely set with long erect setæ; inner style short and broad, the apex narrowed. Mesal face of basistyle with oblique parallel rows of conspicuous setæ. Gonapophyses small, scoop-like, each with a marginal spine.

Hab. New Zealand (South Island).

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

Limnophila latistyla, sp. n.

General coloration brown, the thoracic pleura light grey; antennæ short; wings relatively narrow, distinctly tinged with brown; Sc_2 at extreme tip of Sc_1 ; male hypopygium with inner dististyle very short and broad.

Male.—Length about 3·8 mm.; wing 4·5 mm.

Rostrum and palpi dark brown. Antennæ short, brownish black, the first segment dusted with grey; flagellar segments oval, with moderately long verticils. Head dark grey.

Pronotum and mesonotum brown, unmarked; pseudo-sutural foveæ black; tuberculate pits opposite the foveæ. Pleura and postnotum dusted with grey. Halteres pale, the knobs a little darker. Legs with the coxæ and trochanters light brown; remainder of legs brownish black, the femoral bases a little brighter. Wings relatively narrow, distinctly tinged with brown, the elongate-oval stigma a little darker brown; veins dark brown. Venation: Sc long, ending opposite from four-fifths to five-sixths the length of R_s , Sc_2 at the extreme tip of Sc_1 ; R_s elongate; r subobsolete; R_{2+3} shorter than the deflection of R_{4+5} ; cell M_1 about two-thirds the length of its petiole; cell 1st M_2 small, rectangular; basal deflection of Cu_1 before mid-length of cell 1st M_2 .

Abdomen dark brown, sparsely pruinose; sternites a little paler; hypopygium yellow. Male hypopygium with each basistyle elongate; dististyles two, the outermost more slender, chitinized, terminating in a powerful chitinized spine, with a smaller tooth on outer margin at base of apical spine; outer portion of style with setiferous tubercles; inner dististyle very broad, plate-like, the apex produced

into a slender beak that terminates in a conspicuous seta. Gonapophyses slender, gently curved, directed chiefly caudad and mesad.

Hab. New Zealand (South Island).

Holotype, ♂, Rewanui, Paparoa Range, Westland, altitude 600–800 feet, February 15, 1923 (*T. R. Harris*).

Linnophila nebulifera, sp. n.

General coloration brownish black; antennæ short; legs black, the femoral bases narrowly obscure yellow; wings cream-coloured, very extensively suffused with brown, the ground-colour reduced to small scattered spots; Sc_1 equal to R_{2+3} .

Male.—Length about 4.5 mm.; wing 5.6 mm.

Rostrum and palpi dark brown. Antennæ short, dark brown throughout; verticils relatively conspicuous. Head dark brown.

Mesonotum brownish black without markings. Pleura dark brown. Halteres brown, the knobs slightly paler. Legs with the coxæ and trochanters brown; remainder of the legs black, the femoral bases narrowly obscure yellow, more extensive on the fore legs. Wings cream-coloured, very extensively clouded with brown to almost obliterate the ground-colour; stigma slightly darker brown; the spots of the ground-colour are as follows:—in cell *R* before and beyond the origin of *R*s; before and beyond the stigma; in cells R_2 , R_3 , and R_5 ; near outer end of cell *M*; in outer ends of cells *Cu*, 1st *A*, and 2nd *A*; veins dark brown. Venation: *Sc* long, Sc_1 ending just before the end of *R*s, Sc_2 some distance from its tip, Sc_1 alone about equal to R_{2+3} ; veins R_2 and R_3 divergent; inner ends of cells R_3 , R_5 , and 1st M_2 in approximate alignment; cell M_1 subequal to its petiole; basal deflection of Cu_1 before mid-length of cell 1st M_2 .

Abdomen brownish black. Male hypopygium with the apex of basistyle produced caudad into a slender fleshy lobe that is about as long as the inner dististyle. Outer dististyle a relatively slender, chitinized rod, gently dilated distally, the apex terminating in a spine, before the apex with numerous appressed setæ and spinulæ; inner dististyle short and stout, fleshy, provided with abundant elongate setæ. Gonapophyses directed caudad, appearing as irregular, flattened, chitinized blades.

Hab. New Zealand (South Island).

Holotype, ♂, Rewanui, Paparoa Range, Westland, altitude 600–800 feet, February 15, 1923 (*T. R. Harris*).

HARRISOMYIA, gen. nov.

Antennæ presumably with 16 segments, the terminal flagellar segments broken; second scapal segment oval, tumid; flagellar segments with long verticils. Wings with *Sc* relatively short, ending a short distance beyond mid-length of the long *Rs*; cell *R*₂ small, *R*₂₊₃ about one-half longer than *R*₂; *r* lacking; cell *M*₁ lacking; cell 2nd *M*₂ sessile, *m* being obliterated by the approximation of adjoining veins. Tibial spurs setiferous at base; claws simple; empodia distinct. Male hypopygium with basistyles simple, short and stout; dististyles two, the outer chitinized, bidentate at apex; gonapophyses slender, bent at a right angle near mid-length, not curved.

Genotype, *Harrisomyia bicuspidata*, sp. n. (Maorian Sub-region).

This interesting group of Hexatomine crane-flies is named in honour of Mr. Thomas R. Harris, whose untiring efforts have done so much to make known the remarkable Tipuloidean fauna of New Zealand. The genus is apparently allied to *Zelandomyia*, Alexander, from which it differs in venational and genitalic characters. The gonapophyses are bent at a right angle near mid-length but lie in a single plane, in *Zelandomyia* being twisted or curved. I would now modify the definition of *Zelandomyia* to include several New Zealand Tipulidæ described as species of *Limnophila*, including *L. angusta*, Alexander, *L. cinereipleura*, Alexander, *L. deviata*, Alexander, *L. otagensis*, Alexander, *L. ruapehuensis*, Alexander, and *L. watti*, Alexander.

Harrisomyia bicuspidata, sp. n.

General coloration brown, the præscutum darker medially; wings faintly tinged with brown; cell *R*₂ small; cell *M*₁ lacking; *m* obliterated by the approximation of adjoining veins.

Male.—Length about 3·8 mm.; wing 4·3 mm.

Rostrum dark brown, the palpi brownish black. Antennæ short, dark brown throughout. Head dark brown, sparsely dusted with dark grey.

Pronotum dark brown. Mesonotal præscutum brown, subshiny, the median area broadly dark brown, the lateral margins obscure yellow. Pleura rather dark brown. Halteres brown, the base of the stem narrowly yellow. Legs with the coxæ testaceous; remainder of the legs brownish testaceous, the terminal tarsal segments darker; legs moderately hairy. Wings faintly tinged with brown, the

stigma a little darker brown; veins dark brown. Venation: *Sc* relatively short, *Sc*₁ ending near three-fifths the length of *Rs*, *Sc*₂ a short distance from the tip of *Sc*₁; distance on costa between the tips of veins *R*₁ and *R*₂, shorter than the basal deflection of *Cu*₁; inner ends of cells *R*₃, *R*₅, and 1st *M*₂ in alignment; *m* obliterated by contact of *M*₁₊₂ and *M*₂; basal deflection of *Cu*₁ about one-fourth its length beyond the fork of *M*.

Abdomen brown, including the hypopygium. Male hypopygium with the basistyles relatively short and stout; dististyles two, the outer style relatively short and stout; flattened, terminating in a long straight tooth, with a smaller but conspicuous lateral tooth on the outer face before the apex. Inner style a little longer than the outer, stout and fleshy, with setiferous tubercles, terminating in a powerful elongate seta. Gonapophyses relatively slender, chitinized, each bent at a right angle near mid-length, the long straight apex directed mesad, the tips being decussate or nearly so.

Hab. New Zealand (South Island).

Holotype, ♂, Rewanui, Paparoa Range, Westland, altitude 600–800 feet, February 15, 1923 (*T. R. Harris*).

Gynoplistia nigrobimbo, sp. n.

General coloration shiny coal-black; antennæ 15-segmented; wings subhyaline with a sparse brown pattern; cell *M*₁ present; male hypopygium with the basistyles produced into a slender digitiform lobe that is about equal in length to the style itself.

Male.—Length 3.5–3.8 mm.; wing 4–4.5 mm.

Rostrum black, the palpi dark brown. Antennæ 15-segmented, the formula being 2+2+7+4; basal segment of scape brownish black, second segment brown; rhachis of basal two flagellar segments obscure brownish yellow; remainder of antennæ black; antennal flabellations elongate, the longest exceeding one-half the length of the flagellum. Head shiny coal-black.

Mesonotum and pleura shiny coal-black; very small areas of microscopic grey pubescence on meron and pteropleurite. Halteres yellow, the knobs infuscated. Legs with the coxæ yellow, faintly infuscated; trochanters obscure yellow; legs brownish black, the femoral bases extensively obscure yellow. Wings subhyaline, with a sparse brown pattern, including a spot at origin of *Rs*; stigma and a seam therefrom along the cord and outer end of cell 1st *M*₂; a cloud

near outer end of cell 1st *A*; veins dark brown. Venation: *Rs* rather long, feebly angulated at origin; cell 1st *M*₂ subpentagonal; cell *M*₁ equal to or shorter than its petiole; basal deflection of *Cu*₁ at or beyond mid-length of cell 1st *M*₂.

Abdomen black, including the hypopygium. Male hypopygium with the apical angle of basistyle produced caudad into a slender, straight, digitiform lobe that is about as long as the basistyle or inner dististyle, the apex broadly glabrous; mesal face of basistyle produced mesad and caudad into a conspicuous flattened pale blade whose outer margin near apex is microscopically serrulate. Dististyles two, the outer one glabrous, broad basally, gradually narrowed to the slender obtuse apex; inner style weakly setiferous toward apex. Gonapophyses simple, broad-based, gradually narrowed to the slender, nearly acute apices.

Hab. New Zealand (South Island).

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

Paratopotype, ♂.

Gynoplistia bucera, sp. n.

General coloration shiny black; antennæ 15-segmented, the branches relatively short; wings subhyaline, with an extensive brown pattern; cell *M*₁ lacking; male hypopygium with mesal face of basistyle produced into a slender curved horn.

Male.—Length 5.5–6 mm.; wing 5.5–6 mm.

Rostrum and palpi black. Antennæ 15-segmented, the formula being 2+2+6+5; antennæ black throughout; flagellar branches relatively short, the longest less than one-half the length of flagellum. Head shiny coal-black.

Mesonotum and pleura shiny coal-black; a longitudinal strip of brownish-grey microscopic pubescence extends from behind the fore coxæ to just before the wing-root; caudal margin of pteropleurite punctured. Halteres dark brown. Legs with the coxæ shiny brownish black; trochanters a little paler; remainder of legs black, the femoral bases extensively yellow, narrowest on fore legs where the basal third is included, broadest on posterior legs where the basal two-thirds is included; femoral tips swollen, especially those of posterior legs. Wings subhyaline with an extensive but relatively clear-cut brown pattern, including the bases of cells *R* and *M*, extending distad in cell *M* to

opposite the origin of *Rs*, thence deflected caudad into cells *Cu* and *1st A*; a conspicuous circular spot at origin of *Rs*; a broad band extending from stigma along the cord to the posterior margin of wing, the centre of cell *1st M*₂ remaining pale; wing-apex broadly darkened; veins dark brown. Venation: *Rs* long, angulated at origin; cell *M*₁ lacking; basal deflection of *Cu*₁ before mid-length of the rectangular cell *1st M*₂.

Abdomen shiny black with violaceous reflexions. Male hypopygium with the dorsal angle of basistyle produced caudad into a powerful black conical tooth that is glabrous or nearly so, at its base on mesal face of style with a conspicuous curved horn; ventral apical angle of style produced into a pale, broadly rounded, setiferous blade. Dististyles two, broad, the inner one setiferous. Gonapophyses slender, the base of each dilated, gradually narrowed to the acutely pointed apex.

Hab. New Zealand (South Island).

Holotype, ♂, Rewanui, Paparoa Range, Westland, altitude 600–800 feet, February 15, 1923 (*T. R. Harris*).

Paratopotypes, 2 ♂ ♂.

XLIII.—*Les Trechinæ* [*Coleoptera*, *Carabidæ*] de la Région Orientale. Par le DR. A. JEANNEL.

ON connaissait jusqu'à présent bien peu de *Trechinæ* de la région orientale, et le présent travail a pour but de faire connaître toute une série de genres et d'espèces nouvelles de cette région. Cette première énumération fixera l'état actuel de nos connaissances sur les *Trechinæ* orientaux et pourra servir de base à des travaux futurs, car il est bien certain que les explorations de l'Himalaya, à peine ébauchées jusqu'à ce jour, doivent amener la découverte de quantité d'autres espèces aptères plus ou moins localisées, comparables à celles qui peuplent nos massifs montagneux de l'Europe.

Les matériaux les plus importants dont j'ai pu disposer pour cette étude, m'ont été soumis par M. H. E. Andrewes, qui les avait lui-même reçus du Forest Research Institute à Delhi Dun et de ses amis MM. H. G. Champion et H. Stevens.

Qu'il me soit donc tout d'abord permis de remercier chaudement ici M. H. E. Andrewes de la confiance qu'il a