

This species is known from Southern India, Ceylon, the Malayan and Pacific Islands, New Guinea, Madagascar, and the Mascarene Is. In the Mascarenes it is recorded from Réunion and Mauritius, and has recently been received from Rodrigues (Snell and Thomasset, 1918), while the Cambridge Museum also contains some older specimens from that island.

EXPLANATION OF PLATE III.

Fig. 1. *Cyrtomychus coccinelloides*, Kolbe, ♂, × 23; a, apex of elytra of ♀, × 23.

Fig. 2. *Cyrtomychus minor*, sp. n., × 28.

Fig. 3. *Geoendomychus oculatus*, sp. n., × 30.

Fig. 4. *Anagaricophilus pulchellus*, gen. et sp. n., × 25.

V.—*New or little-known Tipulidæ (Diptera)*.—XI. *Australasian Species*. By CHARLES P. ALEXANDER, Ph.D., F.E.S., Urbana, Illinois, U.S.A.

THE species of crane-flies described in the present paper, like those in the two preceding instalments, are from New Zealand, and were included in very extensive series that were sent to me by my friends Messrs. Campbell, Harris, Howes, Lindsay, and Watt, to whom I am greatly indebted for this excellent representation of Tipulidæ.

Dicranomyia nebulifera, sp. n.

Size large (wing of ♀ 13 mm.); general coloration pale brown, the præscutum with three dark brown stripes; pleura variegated with dark brown; wings subhyaline, clouded with pale brown and grey; *Sc* short; cell 1st *M*₂ short, very wide distally; basal deflection of *Cu*₁ before the fork of *M*.

Female.—Length 11 mm.; wing 13 mm.

Described from an alcoholic specimen.

Rostrum brown, the palpi dark brown. Antennæ with the scapal segments dark brown; flagellum broken. Head dark brown.

Pronotum dark brown. Mesonotal præscutum obscure brownish yellow with three conspicuous dark brown stripes, the broad median stripe becoming obliterated before the suture; a faint brown cloud on the lateral margin opposite the anterior ends of the lateral stripes; scutum pale yellowish brown, the lobes darker; scutellum and postnotum pale

yellowish brown, the latter with the caudal half dark brown. Pleura obscure yellow, the propleura, a large area on the cephalic portion of the mesepisternum, the metapleura, and the lateral sclerites of the postnotum conspicuously dark brown; sternites dark brown, paler medially. Halteres pale, the knobs slightly infuscated. Legs with the coxæ obscure yellow, broadly infuscated except at tips; trochanters brownish yellow; remainder of legs broken. Wings large and broad, subhyaline, sparsely clouded with pale brown; a small darker brown spot at origin of *Rs*; narrow pale brown seams at *r*, along the cord and outer end of cell 1st *M*₂; a small, oval, brown spot at basal third of cell *M*; stigma very pale, oval; vague grey clouds in the outer radial and medial cells; along vein *Cu*₂; before the end of cell *M*, extending into cell *Cu*; outer end of cell 1st *A*; the anal angle of the wing; veins dark brown. Venation: *Sc* short, ending immediately beyond the origin of *Rs*; *Rs* feebly angulate at origin, almost in alignment with *R*₂₊₃; *r* at the tip of *R*₁, much longer than the distal section of *R*₁, angulated before mid-length, the section nearest *R*₁ with about eight macrotrichæ; cell 1st *M*₂ pentagonal, very wide at the distal end, *m* being about one-third the outer deflection of *M*₃; basal deflection of *Cu*₁ about one-third its length before the fork of *M*, *Cu*₂ about one and one-half times the basal deflection of *Cu*₁.

Abdomen dark brown, the genital segment and ovipositor much brighter brown. Valves of the ovipositor long and straight.

Hab. New Zealand.

Holotype, ♀, alcoholic, picked off engine on SS. 'Ngatoro,' trading to Chatham Islands; possibly from Lyttelton; November 12, 1921.

Dicranomyia nephelodes, sp. n.

General coloration dull brown, the præscutum with three confluent darker brown stripes; wings whitish subhyaline, the origin of *Rs*, the cord, and outer end of cell 1st *M*₂ conspicuously clouded with dark brown; *Sc* short, *Rs* long.

Male.—Length 7 mm.; wing 7·8–8·5 mm.

Female.—Length 6·5 mm.; wing 8 mm.

Rostrum and palpi dark brown. Antennæ dark brown throughout. Head dark brown, the front somewhat brighter.

Mesonotum dull brown, the usual stripes confluent, the lateral margins paler; scutum dull, the lobes dark brown;

scutellum and postnotum pale brown, sparsely pruinose. Pleura with a very heavy, microscopic, grey pubescence that appears like a pruinosity. Halteres pale, the knobs dark brown. Legs with the coxæ and trochanters obscure yellow; femora obscure brownish yellow, the tips dark brown; tibiæ and tarsi dark brownish black. Wings whitish subhyaline, heavily clouded with brown; a large brown spot at origin of *Rs*; stigma brown, the area connected with a large spot at the fork of *Rs*; a broad, conspicuous seam along the cord and outer end of cell 1st M_2 ; a pale cloud along the entire length of vein *Cu*, beginning at arculus; veins pale brown, darker in the infuscated area. Venation: *Sc* short, Sc_1 ending just beyond the origin of *Rs*, Sc_2 a slightly greater distance before this origin; *Rs* long, arcuated, almost in alignment with R_{2+3} ; cell 1st M_2 pentagonal, longer than any of the veins beyond it; basal deflection of Cu_1 longer than or subequal to Cu_2 , at or before the fork of *M*.

Abdomen dark brown, the hypopygium fulvous; in some cases the abdomen is distinctly bicolorous, the caudal half of each segment being slightly darker brown than the basal half. Male hypopygium with the two spines on the rostrum of the ventral lobe long and powerful, straight, the distal spine a little shorter than the proximal spine, longer than the apex of the rostrum beyond them. Gonapophyses with the mesal angle produced caudad into a long digitiform lobe, directed caudad, the extreme apex a little laterad. Ovipositor with the valves slender.

Hab. New Zealand (North Island).

Holotype, ♂, Ohakune, altitude 2060 feet, October 27, 1921 (*T. R. Harris*).

Allotopotype, ♀, October 23, 1921.

Paratopotypes, 1 ♂, September 30, 1921; 1 ♂, October 14, 1921; 1 ♀, October 5, 1921.

Paratypes of *Dicranomyia nephelodes* were sent to Mr. Edwards for comparison with his types of *D. tenebrosa*, Edwards; he writes that the present species has a much heavier wing-pattern, the spot at the origin of *Rs* being far more conspicuous; *Rs* is longer and cells M_1 and 2nd M_2 are decidedly shorter. The present fly is distinguished from *D. hemimelas*, Alexander, by the dull coloration.

Dicranomyia incompta, sp. n.

General coloration grey; rostrum brownish black, about as long as the head; mesonotum dull yellowish grey with

three dark brown stripes; legs dark brown; wings subhyaline, the stigma oval, pale brown; *Sc* short, *Sc*₂ close to the tip of *Sc*₁.

Male.—Length 6.5–6.8 mm.; wing 7–7.2 mm.

Female.—Length 7 mm.; wing 8 mm.

Rostrum as long as the head, brown, almost black dorsally, the palpi dark brownish black. Antennæ dark brown, the basal flagellar segments short-oval, the apical segments more elongate. Head brown, the vertex between the eyes more golden yellow.

Mesonotum yellowish grey, the præscutum with three conspicuous dark brown stripes; scutum grey, the lobes with relatively small brown marks; scutellum and postnotum grey. Pleura grey. Halteres with the stem yellow, the knobs darker. Legs with the coxæ and trochanters yellow; remainder of the legs dark brown, the bases of the femora paler. Wings subhyaline; stigma oval, pale brown; veins brown. Venation: *Sc* short, *Sc*₁ ending just before the origin of *Rs*, *Sc*₂ at tip of *Sc*₁, *Rs* gently arcuated; cell 1st *M*₂ elongate, *m* less than one-half the outer deflection of *M*₃; basal deflection of *Cu*₁ close to the fork of *M*, variable in position.

Abdomen dark brown, the sternites a little paler, the caudal margins of the segments indistinctly greyish. Male hypopygium with the mesal apical angle of the gonapophyses produced caudad into a short curved hook. Ovipositor with the valves long and straight.

Hab. New Zealand (South Island).

Holotype, ♂, Mt. Grey, Canterbury, altitude 1200–1500 feet, November 27, 1921 (*J. W. Campbell and Stuart Lindsay*).

“On undergrowth in beech forest.”

Allotopotype, ♀.

Paratopotypes, 9 ♂ ♀.

Dicranomyia incompta resembles the smaller *D. conulifera*, Edwards, but the flagellar segments are oval and the wings unmarked except for the pale stigma.

Dicranomyia funesta, sp. n.

Male.—Length 5.6 mm.; wing 6.8 mm.

Related to *D. brookesi*, Edwards, from which it differs as follows:—

Head dark brown, including the genæ. Femora dark brownish black, the extreme tips obscure yellow, most evident on the inner face. Wings less distinctly tinged

with brown, the stigma darker. Venation: Sc_1 shorter, a little more than one-half the basal deflection of R_{4+5} ; Rs shorter, about one-third longer than the basal deflection of Cu_1 ; cell 1st M_2 larger, about as long as vein Cu_1 beyond it; vein 2nd A much straighter.

Hab. New Zealand (North Island).

Holotype, ♂, Wanganui, October 10, 1921 (*M. N. Watt*).

The type of *D. funesta* was submitted to Mr. Edwards for his expert opinion, and he agrees with the writer that it is an undescribed species. The obliteration of the subterminal yellow ring on the femur is a conspicuous character of this species.

Dicranomyia annulifera, sp. n.

Male.—Length 6.8 mm.; wing 8.1 mm.

Female.—Length 6.2 mm.; wing 7.5 mm.

Related to *D. brookesi*, Edwards, from which it differs as follows:—

Femora dark brown, the tips broadly but indistinctly obscure yellow, not with a subterminal ring as in *brookesi*. Wings with the cord and outer end of cell 1st M_2 narrowly seamed with brown; origin of Rs unmarked. Venation: Sc_1 very long, longer than the basal deflection of R_{4+5} and only a little shorter than Rs , ending opposite the origin of Rs . Abdominal segments conspicuously annulated obscure yellow and dark brown, the tergites with less than the basal half pale, the sternites with all but the narrow, dark brown posterior margin obscure yellow.

Hab. New Zealand (South Island).

Holotype, ♂, Mt. Grey, Canterbury, altitude 1200–1500 feet, November 27, 1921 (*J. W. Campbell and Stuart Lindsay*).

Allotopotype, ♀.

Paratopotype, ♂.

“On undergrowth in beech forest.”

Dicranomyia annulifera, *D. funesta*, sp. n., and *D. brookesi*, Edwards, form a natural group of closely allied species that are related to *D. vicarians*, Schiner, distinguished by the shiny coloration of the mesonotum, the shiny dark brown thoracic pleurites, and the presence of more or less yellow coloration on the femora.

Amphineurus subfatuus, sp. n.

Related to *A. fatuus* (Hutton); legs with the femora brownish black with faint indications of a broad yellow ring

near mid-length; wings with a conspicuous dark brown tinge, sparsely variegated with yellow, this including the wing-base and a narrow seam along the cord, the anal angle darkened.

Female.—Length about 6.2 mm.; wing 8 mm.

Rostrum and palpi dark brown. Antennæ with the scape dark brown, the flagellum paler brown, especially on the basal segments. Head dull greyish brown.

Mesonotum pale brown, the præscutum near the suture, the median area of the scutum and the base of the postnotum darker. Pleura conspicuously dark brown, the dorsal pleurites narrowly obscure yellow. Halteres with the stem brown, the extreme base pale yellow, the knobs obscure yellow. Legs with the coxæ brownish yellow, darker basally; remainder of the legs brownish black, the femoral bases narrowly obscure yellow; a very ill-defined yellowish ring near mid-length of the femora, best indicated on the fore femora. Wings with a conspicuous dark brown tinge, variegated with yellow, this including the bases of cells *R*, *M*, and *Cu*, the middle portions of cells 1st *A* and 2nd *A*; anal angle darkened; a narrow yellow band along the cephalic half of the cord, extending from costa to the fork of *M*; veins pale yellow in the flavous areas, darker elsewhere, much paler than in *A. fatuus*. Macrotrichiæ more extensive than in *A. fatuus*, the yellow areas destitute of these setæ being more restricted. Venation: *Rs* shorter in *A. fatuus*; basal deflection of *Cu*₁ almost transverse in position, perpendicular to *Cu* at its origin, inserted at or just before the fork of *M*; petiole of cell *M*₃ longer than the basal deflection of *Cu*₁.

Abdominal tergites obscure yellow, the caudal lateral angles of the segments broadly infuscated; pleural region dark brown.

Hab. New Zealand (North Island).

Holotype, ♀, Ohakune, altitude 2060 feet, November 13, 1921 (*T. R. Harris*).

Paratopotype, ♀, February 20, 1922 (*T. R. Harris*).

Amphineurus campbelli, sp. n.

General coloration brown; antennæ short; legs unicolorous; wings greyish subhyaline with conspicuous dark brown macrotrichiæ; cell *R*₂ sessile; cell 1st *M*₂ closed; male hypopygium with the pleurites very long and slender, the distal pleural appendages within the basal third of the

length; basal pleural appendage slender, the apex a strongly curved spine; gonapophyses strongly recurved.

Male.—Length about 5.5 mm.; wing 5.2 mm.

Female.—Length about 6 mm.; wing 6.8 mm.

Rostrum and palpi brown. Antennæ brown, relatively short in both sexes—in the male, if bent backward, extending about to the wing-root. Head dark brown with conspicuous white setæ.

Mesonotum brown, the humeral region of the præscutum obscure yellow. Pleura brown. Halteres yellow. Legs with the coxæ brown; trochanters obscure yellow; remainder of the legs brown, the terminal segments darker. Wings greyish subhyaline with abundant dark brown macrotrichiæ that almost conceal the ground-colour; veins pale brown. Venation: cell R_2 almost sessile; R_{2+3} short to practically lacking; cell 1st M_2 closed, m a little shorter than the outer deflection of M_3 ; basal deflection of Cu_1 just before the fork of M .

Abdomen dark brown, the caudal margins of the sternites paler. Male hypopygium with the pleurites exceedingly elongate, digitiform, the distal pleural appendages at less than one-third the length of the pleurites; basal pleural appendage slender, strongly curved into a black terminal spine; two distal pleural appendages, both strongly curved. Gonapophyses very strongly curved, the apical half lying parallel to the basal half, the slightly blackened point directed mesad, almost touching one another on the mid-line. Ovipositor with the elongate valves horn-coloured.

Hab. New Zealand (South Island).

Holotype, ♂, Mt. Grey, Canterbury, altitude 1200–1500 feet, November 27, 1921 (*J. W. Campbell and Stuart Lindsay*).

Allotopotype, ♀.

Paratopotype, ♂; *paratypes*, ♂ ♀, Lake Wakatipu, Otago, December 1921 (*F. S. Oliver*).

“On undergrowth in beech forest.”

Amphineurus campbelli is related to *A. perdecorus*, Edwards, and *A. senex*, Alexander, but is very distinct in the structure of the male hypopygium. It is named in honour of my friend, Dr. J. W. Campbell.

Molophilus lindsayi, sp. n.

General coloration dark brownish black; antennæ short; halteres yellow; wings pale brown; male hypopygium with

four slender elongate appendages, the terminal pair toothed near apex.

Male.—Length about 3.5 mm.; wing 5 mm.

Rostrum brown; palpi black. Antennæ short, black. Head brown, grey pruinose.

Pronotum brown, the scutellum obscure yellow. Mesonotum and pleura dark brown, sparsely pruinose. Halteres light yellow. Legs with the coxæ obscure yellow, the posterior coxæ more infuscated; trochanters obscure yellow; fore femora dark brown; mid-femora dark brown, the bases narrowly paler; posterior femora pale brown; tibiæ and tarsi brown. Wings pale brown, the veins slightly darker brown, the base a little paler; macrotrichia conspicuous. Venation: basal section of R_{2+3} about four times r ; basal deflection of Cu_1 about one-half longer than the basal deflection of M_{1+2} ; vein *2nd A* elongate, extending to about three-fourths the length of the petiole of cell M_3 .

Abdomen dark brownish black with conspicuous golden-yellow setæ, longer and more conspicuous on the genital segment. Male hypopygium with four slender, elongate, black appendages, an apical pair that are strongly curved, before the long straight apex with a single small lateral spine; second pair of appendages are on the dorsal (apparent ventral) face and are directed cephalad, appearing as slender smooth spines, strongly bent at the base and less conspicuously so at the acute tips. Penis-guard small, pale yellow.

Hab. New Zealand (South Island).

Holotype, ♂, Mt. Grey, Canterbury, altitude 1200–1500 feet, November 27, 1921 (*J. W. Campbell and Stuart Lindsay*).

Paratopotype, ♂, altitude 2000 feet, March 19, 1922.

“On undergrowth in beech forest.”

This interesting *Molophilus* is named in honour of the collector, who has secured many rare Tipulidæ on Mt. Grey.

Rhabdomastix (Sacandaga) neozelandiæ, sp. n.

Size large (wing of male over 5.5 mm.); general coloration dark brown, the thoracic pleura sparsely pruinose; wings with a strong brown suffusion; R_{2+3} about three-fourths the length of R_3 alone.

Male.—Length about 5 mm.; wing 5.6–6 mm.

Rostrum and palpi dark brown. Antennæ short, dark brown; flagellar segments oval, the terminal segments more elongate. Head greyish brown. Mesonotal præscutum

dark brown, sparsely dusted with yellowish-brown pollen, clearer brown sublaterally; scutum and scutellum more pruinose. Pleura dark brown, sparsely pruinose. Halteres pale throughout. Legs with the coxæ brown; trochanters obscure yellow; femora and tibiæ brown, the tips a little darker; tarsi dark brown. Wings with a strong brown suffusion; wing-base narrowly paler; stigma brown, distinct but pale; veins dark brown. Venation: Sc_1 ending about opposite three-fifths the length of R_s , Sc_2 barely indicated, about its own length from the tip of Sc_1 ; R_{2+3} nearly three-fourths the length of R_3 ; tip of R_2 a little more than its own length from the tip of R_1 ; cell 1st M_2 irregularly oval, the inner end narrow; m variable in length, up to three or four times as long as the outer deflection of M_3 ; basal deflection of Cu_1 just beyond mid-length of cell 1st M_2 ; vein 2nd A sinuous. Anal angle prominent.

Abdomen dark brown, the hypopygium obscure brownish yellow.

Hab. New Zealand (South Island).

Holotype, ♂, Waipori, Otago, December 5, 1921 (G. Howes).

Allotype, ♀, Lake Wakatipu, December 1921 (F. S. Oliver).

Paratypes, 2 ♂♂, Dunedin, Otago, November 26, 1921 (G. Howes).

The discovery of species of *Rhabdomastix* in New Zealand is of especial interest.

Rhabdomastix (Sacandaga) otagana, sp. n.

Size small (wing of male under 4.5 mm.); general coloration obscure yellow; wings with a faint greyish-yellow tinge; R_{2+3} about three-fifths the length of R_3 alone.

Male.—Length 3.3 mm.; wing 4.2 mm.

Rostrum brownish yellow; palpi dark brown. Antennæ short; basal segment of scape brown; the remainder of the antenna dark brown; flagellar segments oval, attenuate apically, provided with long, outspreading, white verticils. Head pale brownish grey.

Mesonotum obscure yellow without markings. Pleura pale brownish yellow. Halteres short, obscure yellow. Legs with the coxæ and trochanters obscure yellow; legs brown. Wings with a faint greyish-yellow tinge; stigma pale, oval, barely indicated; veins pale brown. Venation: Sc_1 ending beyond mid-length of R_s , Sc_2 faint, not far from the tip of Sc_1 ; R_s long and straight, R_{2+3} about two-fifths

R_3 ; tip of R_2 about its own length from the tip of R_1 ; m long, about four times the outer deflection of M_3 ; basal deflection of Cu_1 near mid-length of cell 1st M_2 ; vein 2nd A sinuous. Anal angle prominent.

Abdomen brownish yellow, the hypopygium concolorous.

Hab. New Zealand (South Island).

Holotype, ♂, Dunedin, Otago, December 14, 1921 (*G. Howes*).

Limnophila hudsoni, Edwards, *atripes*, subsp. n.

Male.—Length 12 mm.; wing 13 mm.

Differs from typical *hudsoni*, Edwards, as follows:—

Antennæ slightly longer, the flagellar segments much less conspicuously bicolorous, the extreme tips of the segments being pale, beyond mid-length of the organ passing into uniform black. Mesonotal præscutum clearer grey, the median stripe, the interspaces behind, and the lateral margins of the sclerite narrowly but distinctly lined with reddish brown. Femora brown, beyond the basal third passing into black, the extreme apices narrowly and indistinctly pale; a conspicuous subterminal yellow ring that is a little more extensive than the black ring beyond it; tibial apices distinctly blackened.

Hab. New Zealand (North Island).

Holotype, ♂, Ohakune, altitude 2060 feet, November 6, 1921 (*T. R. Harris*).

Paratopotype, ♂, November 14, 1921.

The general appearance of this fly is rather different from that of *L. hudsoni*, Edwards, due to the increase in the amount of black on the antennæ and legs, but there is no doubt of the close relationship of the two.

Limnophila cinereipleura, sp. n.

General coloration dark grey, the thoracic pleura clear ashen grey; wings greyish yellow, clearer yellow basally; stigma barely indicated; cell 2nd R_1 at wing-margin a little wider than cell R_2 ; cell M_1 small.

Male.—Length about 4 mm.; wing 5 mm.

Female.—Length 5 mm.; wing 5.6 mm.

Rostrum, palpi, and antennæ black, the latter short in both sexes. Head brownish grey.

Mesonotal præscutum yellowish grey, clearer grey laterally, with three ill-defined brown stripes, the median stripe indistinctly split by a paler vitta; scutum dark grey; scutellum and postnotum light grey. Pleura with indications of a

ventral and dorsal dark longitudinal stripe enclosing a clear ashen-grey area. Halteres pale. Legs with the coxæ dark, dusted with grey; trochanters obscure yellow, margined apically with brown; remainder of the legs dark brown. Wings greyish yellow, clearer yellow basally, the stigmal area barely indicated; veins pale brown. Venation: Sc_1 ending just before the end of R_s , Sc_2 a little more than its length from tip; R_s long, arcuated at extreme origin; R_{2+3} short, about equal to the basal deflection of R_{4+5} ; r faint, about three times its length from tip of R_1 ; cell 2nd R_1 a little wider at wing-margin than cell R_2 ; cell 1st M_2 small, rectangular; petiole of cell M_1 very long, from one to two times the length of the cell; basal deflection of Cu_1 at or just beyond the fork of M ; arculus complete.

Abdomen dark brown, including the hypopygium; each pleural appendage elongate, tapering to the acute point. Ovipositor with elongate valves, as in this group of species.

Hab. New Zealand (South Island).

Holotype, ♂, Mt. Grey, Canterbury, altitude 1200–1500 feet, November 27, 1921 (*J. W. Campbell and Stuart Lindsay*).

Allotopotype, ♀.

“On undergrowth in beech forest.”

Limnophila truncata, sp. n.

Mesonotum obscure yellow, scutal lobes and anterior half of postnotum brownish black; wings nearly hyaline with a brown spot at origin of R_s and seams along the cord and outer end of cell 1st M_2 ; r near tip of R_1 ; petiole of cell M_1 short; basal deflection of Cu_1 near mid-length of cell 1st M_2 ; abdominal segments bicolorous; hypopygium compressed, obliquely truncated.

Male.—Length 5.5 mm.; wing 7.2 mm.

Rostrum yellow, palpi brownish black. Antennæ short; basal segment of scape obscure yellow; remainder of antenna brownish black; flagellar segments elongate-oval with short verticils. Anterior part of vertex brownish yellow, the remainder of head brownish grey.

Mesonotal præscutum brownish yellow with three clearer yellow stripes that are very ill-defined; median stripe split by a capillary dark brown line that becomes obliterated before the suture; scutum obscure brownish yellow, the lobes conspicuously dark brown; scutellum pale brownish testaceous; postnotum brownish black on the cephalic half, the posterior half pale brown. Pleura brownish yellow

testaceous. Halteres elongate, pale brown, the knobs dark brown. Legs with the coxæ and trochanters yellowish testaceous; femora dark brown, the bases broadly paler, most extensively on the fore legs where more than the basal half is pale, least extensively on the posterior legs where less than the basal third is pale; tibiæ and tarsi black. Wings nearly hyaline, with a sparse brown pattern; stigma oval, dark brown; a brown spot of origin of R_s ; a brown seam along the cord, beginning at Sc_2 , continued across the fork of R_{2+3} to the basal deflection of Cu_1 ; a brown seam along the outer end of cell 1st M_2 . Venation: Sc_2 considerably longer than Sc_1 , just beyond the fork of R_{2+3} ; R_s long, arcuated at origin; R_{2+3} about one-half longer than the basal deflection of Cu_1 ; r about one and one-half its length from the tip of R_1 and on R_2 beyond mid-length; cells R_3 , R_5 , and 1st M_2 in alignment; cell M_1 deep, its petiole about equal to R_{2+3} ; m shorter than outer deflection of M_3 ; basal deflection of Cu_1 at or just before mid-length of the caudal face of cell 1st M_2 ; cell 2nd A long and narrow; anterior areculus atrophied. Wings petiolate.

Abdominal tergites dark brown, the basal half of tergite 2 pale; tergites 2 to 7 conspicuously ringed caudally with pale yellow; tergites 8 and 9 dark brown; sternites obscure yellow, less than the basal half of each segment infuscated. Hypopygium compressed, viewed laterally appearing obliquely truncated.

Hab. New Zealand (South Island).

Holotype, ♂, Mt. Grey, Canterbury, altitude 1200–1500 feet, November 27, 1921 (*J. W. Campbell and Stuart Lindsay*).

“On undergrowth in beech forest.”

Limnophila (Metalimnophila) unipuncta, sp. n.

Allied to *L. producta*, Alexander; wings with a faint brown tinge; stigma brown; a narrow brown seam along $r-m$; male hypopygium with the mesal apical angle of each pleurite produced into a stout lobe that is nearly as long as the pleurite itself; outer pleural appendage simple; inner pleural appendage strongly bent at mid-length.

Male.—Length about 5 mm.; wing 6 mm.

Rostrum and palpi black. Antennæ elongate, black. Head dark brown.

Mesonotal præscutum light brown with three darker brown stripes; scutum pale brown, the centre of the lobes dark brown; scutellum and postnotum brownish grey.

Pleura silvery grey, the pleural stripe very broad, brownish black; sides of mesosternum faintly darkened. Halteres brown, the base of stem and apex of knob pale. Wings with a faint brown tinge; stigma elongate, brown; a narrow but conspicuous dark brown seam on *r-m* and the basal deflection of *R*₄₊₅; veins dark brown. Venation: *Sc*₂ near tip of *Sc*₁ and about twice the length of the latter; petiole of cell *M*₁ one-half longer than the cell.

Abdomen dark brown, the caudal margins of the basal segments very faintly paler. Male hypopygium with the ninth tergite having two slender parallel lobes. Mesal face of pleurite produced into a very large flattened lobe, the mesal apical angle produced into a second lobe that is nearly as long as the pleurite but stout, broad at base, gradually narrowed to the blunt apex, this lobe much longer than in *L. howesi*, but shorter than in *L. producta*; outer pleural appendage a long, curved, simple blade, bearing long setæ on the outer face before the apex; inner pleural appendage slender, very strongly arcuated at mid-length. Spines of the eighth sternite arising from a pedunculate base.

Hab. New Zealand (South Island).

Holotype, ♂, Dunedin, Otago, November 26, 1921 (*G. Howes*).

Paratype, ♂, Ben Lomond, Otago, December 30, 1921 (*G. Howes*).

Macromastix pallidistigma, sp. n.

Mesonotum uniformly reddish brown, unmarked; wings pale greyish; cells *C* and *Sc* brown; stigma large, pale cream-yellow; petiole of cell *M*₁ longer than *m*; cell 2nd *A* long and narrow; abdomen pale greenish brown; ninth tergite of male hypopygium with a broad, U-shaped, median notch, the lobes short, obtusely rounded.

Male.—Length 9 mm.; wing 11.5 mm.

Frontal prolongation of the head long, pale, sparsely pruinose, the nasus long and broad. Antennæ very small; first scapal segment pale, second segment pale green; flagellum brown, the basal segments tinged with green, the terminal segments uniformly dark. Head pale brown, sparsely dusted with grey.

Pronotum tinged with green. Mesonotal præscutum uniformly reddish brown, unmarked; scutum similar, the lateral margins of the lobes dark; scutellum and postnotum a little paler, especially the former. Pleura obscure yellow. Halteres tinged with green. Legs with the coxæ concolorous

with the pleura; trochanters green; femora obscure yellow, the bases and tips narrowly tinged with green; tibiae and tarsi pale brown. Wings with a pale greyish tinge, cells *C* and *Sc* dark brown, the former a little paler; stigmal area large, pale cream-yellow; wing-base indistinctly pale; veins slender, dark brown. Venation: *Sc*₂ ending about opposite mid-length of *Rs*, the latter straight, about two-thirds *R*₂₊₃; *r* faint, with one macrotrichia near mid-length; distal section of *R*₂ pale but evident, nearly as long as *m*; petiole of cell *M*₁, a little longer than *m*; inner end of cell 1st *M*₂ pointed; cell 2nd *A* very long and narrow, parallel-sided.

Abdomen pale greenish brown, the eighth sternite indistinctly darker; hypopygium obscure greenish. Male hypopygium with the ninth tergite having a broad, U-shaped, median notch, the short lobes obtusely rounded. Region of the ninth pleurite not produced beyond the level of the end of the tergite as in *M. albistigma*, Edwards.

Hab. New Zealand (South Island).

Holotype, ♂, White Rock, Mt. Thomas, Canterbury, altitude 1000 feet, December 18, 1921 (*J. W. Campbell and Stuart Lindsay*).

Paratopotype, ♂.

Macromastix pallidistigma is by far the smallest species of the *viridis* group so far described. The second cell is very narrow for a member of this group.

Macromastix greyana, sp. n.

Male.—Length 11–12 mm.; wing 17–17.2 mm.

Related to *M. alexanderi*, Edwards, from which it differs as follows:—

Size a little larger. Frontal prolongation of head elongate, the nasus long and conspicuous. Head pale buff with a relatively small dark brown spot in the centre of the vertex. Thorax clear light grey, the præscutum with four conspicuous dark brown stripes, the intermediate pair narrowly separated by a capillary line; lateral margins of præscutum not darkened; each scutal lobe with a conspicuous dark brown area; median area of scutum, the scutellum, and postnotum pale testaceous, the caudal margin of the latter a little darkened. Pleura clear light grey. Wings relatively narrow, the pattern much darker brown; cells *M*₁ and 2nd *M*₂ clear except the extreme bases which are abruptly dark; basal half of cell *M*₃ clear, the apex with a dusky triangle; no conspicuous brown blotch in cell *M* on vein *Cu*

just before its fork, so the large clear blotch in cell *M* is constricted only on its cephalic side; bases of cells 1st *A* and 2nd *A* more extensively pale. Venation: basal section of *R*₂ short, in some cases almost lacking; *r* joining *R*₂ close beyond the fork of *R*₂₊₃; basal deflection of *R*₄₊₅ short, less than twice *r-m*; basal sections of *M*₁₊₂ and *M*₃₊₄ subequal; petiole of cell *M*₁ only a little longer than *m*. Abdomen dark brownish grey, very slightly darker dorso-medially, the basal tergites broadly ochreous on the sides; basal sternites a little more brownish than sternites 6 to 8.

Hab. New Zealand (South Island).

Holotype, ♂, Mt. Grey, Canterbury, altitude about 1000 feet, November 27, 1921 (*J. W. Campbell and Stuart Lindsay*).

Paratopotype, 1 ♂; *paratypes*, 1 ♂, White Rock, Mt. Thomas, Canterbury, altitude about 1000 feet, December 18, 1921 (*J. W. Campbell and Stuart Lindsay*); 9 ♂♂, Glentui, Ashley Co., Canterbury, December 1921 (*Stuart Lindsay*).

"Swept from tussock grass on hill-side."

Macromastix greyana is distinguished from *M. huttoni*, Edwards, by the coloration of the wings, thorax, and abdomen.

Macromastix rufibasis, sp. n.

Related to *M. rufiventris*, Edwards; mesonotal præscutum with three black stripes; wings uniformly infuscated, the pale discal blotch larger and better delimited; abdominal tergites 1 and 2 with the lateral margins rufous-orange.

Male.—Length about 9.5 mm.; wing 13.2 mm.

Differs from *M. rufiventris* as follows:—

Mesonotal præscutum light grey with three conspicuous black stripes, the median stripe entire, broadly cuneiform; scutellum and postnotum light ashy grey. Wings with the dark suffusion more uniform, the pale discal blotch at the cord larger and better defined, including the outer end of cell *R*, the basal third of cell 1st *M*₂ and a small area in cell *M*; in addition, the centre of cell *M*, the bases of cells *Cu*, 1st *A*, and 2nd *A*, and the prearcular cells are less distinctly pale; no clear oblitative area before stigma. Venation: petiole of cell *M*₁ about two-thirds *m*; basal section of *M*₃ only a little shorter than the basal section of *M*₁₊₂; cell 2nd *A* wider. Abdominal tergites with the rufous-orange colour confined to segments 1 and 2; segment 1 rather broadly infuscated medially; segment 2 narrowly infuscated

on the basal ring, very broadly so on the posterior ring, the lateral margins here being obscure orange; lateral margins of the remaining tergites broadly cinereous; the very broad dark brown median stripe on tergites 3 to 9 is split by a conspicuous grey line that becomes more diffuse on the posterior segments; sternites with the basal segments obscure brownish yellow, soon passing into grey.

Hab. New Zealand (South Island).

Holotype, ♂, Dunedin, Otago, November 20, 1921 (M. N. Watt).

“Beaten from foliage.”

Macromastix harrisi, sp. n.

General coloration pale brown; wings subhyaline, the stigma pale brown; *r* lacking; cell 1st M_2 rectangularly quadrate; basal deflection of Cu_1 some distance before the fork of M as in the genus *Nephrotoma*.

Female.—Length about 7.5 mm.; wing 11.5 mm.

Frontal prolongation of the head pale testaceous; nasus obsolete; palpi pale brown. Antennæ short, pale brown, the terminal segments darker; first flagellar segment long and tumid. Head dark, especially on the vertex, with a pale greyish-yellow pollen on the front and adjoining the margin of the eyes; a very narrow brown median vitta on vertex.

Mesonotum pale brown, the median stripe darker but ill-defined; remainder of mesonotum pale reddish brown; an indistinct brown spot at each anterior lateral angle of the postnotum. Pleura pale reddish yellow. Halteres brown, the base of the stem and the knobs obscure yellow. Legs with the coxæ and trochanters concolorous with the pleura; remainder of the legs darker brown. Wings subhyaline; stigma pale brown, entirely proximad of R_2 ; veins pale brown. Venation: Sc_1 preserved; Rs relatively short, arcuated; R_2 close to R_1 at the wing-margin, the distance about equal to Sc_1 ; *r* lacking; petiole of cell M_1 about equal to *m*; cell 1st M_2 quadrangular; *m-cu* punctiform, some distance before the fork of M , the distal section of M equal to or longer than the basal deflection of R_{4+5} ; cell 2nd A broad.

Abdomen brown, distended and discoloured with egg-masses.

Hab. New Zealand (North Island).

Holotype, ♀, Ohakune, altitude 2060 feet, November 13, 1921 (T. R. Harris).

The type is rather general. *Macromastix harrisi* is dedicated to the collector, Mr. T. R. Harris, to whom I am greatly indebted for many fine Tipulidæ from New Zealand. It is allied to *M. atridorsum*, Alexander, but differs from this species, as well as all others so far described, by the position of the basal deflection of Cu_1 , which is basad of the fork of *M* as in the genus *Nephrotoma*.

VI.—On a Collection of Mammals obtained by Capt. G. C. Shortridge in Northern Rhodesia, with Field-notes by the Collector. By P. S. KERSHAW.

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THE following is a list of the small mammals obtained by Capt. G. C. Shortridge in 1919 and 1920 in Northern Rhodesia. The bulk of the collection was secured during the construction of the aerodrome at N'dola, near the Belgian Congo frontier, at 12° 50' S., 28° 40' E. The remainder, with one or two exceptions, came from Monze, 200 miles south of N'dola. Many specimens of the genera *Nasilio*, *Crocidura*, *Taterona*, *Steatomys*, *Saccostomus*, *Acomys*, *Leggada*, *Zelotomys*, and *Cricetomys* were captured during the levelling of the numerous large ant-hills on the aerodrome.

Three new species from this collection have already been described by Hinton*. These were *Mimetillus thomasi*, *Kerivoula lucia*, and *Zelotomys shortridgei*. On a further examination of the material it has been found necessary to give names to the following forms:—*Crocidura katharina*, *Helogale brunnula ruficeps*, and *Taterona lobengulæ ndolæ*.

This opportunity has been taken to describe a new form of *Acomys*—viz., *A. sabryi*—from Helouan, near Cairo, the type and other specimens of which have been kindly presented to the British Museum by the Giza Zoological Museum.

There is also appended a list of the Ungulates obtained in various localities in Northern Rhodesia, and presented to the British Museum by Mr. D. Gordon Lancaster, Mr. and Mrs. Gordon Read, Mr. E. R. D. Hall, Capt. G. C. Shortridge, Mr. H. Wainwright, and Dr. J. Harmer, donations which I have much pleasure, on behalf of the Trustees, in acknowledging.

* Ann. & Mag. Nat. Hist. (9) vi. p. 239 (1920).