with three pairs of black subtriangular spots; fore femur on apical half, fore tibia except base and all of fore tarsi black, mid and hind tarsi fuscous.

Length 3.5-4.5 mm.

Type, male, allotype, three male and six female paratypes, Coimbatore, S. India, viii.-ix. 1915, reared from cholam (*Andropogon sorghum*). Paratypes, 16 specimens from same locality, i.-ii. 1914, reared from cholam stubble (*Y. Ramachandra Rao.*).

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

THE present paper is based upon New Zealand species, collected by my friends Messrs. Campbell, Harris, Lindsay, Tapley, and Watt. The types are preserved in the writer's collection through the kindness and generosity of the collectors.

Dicranomyia canterburiana, sp. n.

Belongs to the *huttoni* group; rostrum ochreous-yellow; antennal segments with short basal pedicels; mesonotal præscutum with three brown stripes; pleura heavily greypruinose; wings tinged with grey, the stigma and seams along the cord and outer end of cell 1st M_2 pale brown; a supernumerary cross-vein in cell Sc; male hypopygium with the ventral dististyle large and fleshy.

Male.-Length 7-7.2 mm.; wing 8.3-8.7 mm.

Rostrum a little shorter than the head, ochreous-yellow; palpi black. Antennæ black, the base of the first scapal segment paler; flagellar segments black, the face of each produced into a moderately long serration, the shiny basal pedicel short. Head grey.

Mesonotal præscutum brownish ochreous, with three brown stripes that become obscured to obliterated shortly before the suture; scutum similar, the lobes slightly darkened; scutellum and postnotum pale, sparsely pruinose. Pleura for the most part dark-coloured, heavily greypruinose; dorsal region of sterno-pleura a little paler; anterior region of postnotal pleurotergite paler. Haltercs pale, the knobs large. Legs with the coxæ obscure brownish

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yellow, the outer face of the fore coxa darkened; trochanters obscure brownish yellow; femora brownish yellow, the tips faintly darkened; tibiæ and tarsi light brown, the terminal tarsal segments passing into dark brown. Wings tinged with grey; stigma pale brown; moderately broad, pale brown seams along the cord, outer end of cell 1st M_{2} , along vein Cu, and around the apical margin of the wing; a brown cloud at origin of Rs; veins brown. Venation: Sc_1 ending opposite the origin of Rs; a supernumerary cross-vein beyond mid-length of cell Sc; Rs about twice the basal deflection of R_{4+5} ; r long, arcuated; cell 1st M_2 large, approximately as long as vein M_{1+2} beyond it; basal deflection of Cu_1 at the fork of M.

Abdomen dark brown, the genitalia brownish yellow. Male hypopygium with the mesal apical face of each basistyle produced into a densely setiferous cushion; immediately cephalad of this a small setiferous lobule. Ventral dististyle large and fleshy, the rostrum short with two small subequal black spines that are directed strongly basad. Ninth tergite with a small setiferous tubercle on either side of the median line, the space between them broadly **U**-shaped.

Hab. New Zealand (South Island).

Holotype, 3, Governor's Bay, Banks Peninsula, Canterbury, November 25, 1922 (J. F. Tapley).

Paratopotypes, 2 5 3, November 16, 1922 (J. F. Tapley). The male hypopygium is of a different structure from the other members of the *huttoni* group, but the details of the antennæ require that the species be placed in this group of flies.

Dicranomyia harrisi, sp. n.

Belongs to the *huttoni* group; mesonotal præscutum with a single broad brown stripe; pleura yellow with a more or less distinct brown spot on the mesepisternum; femora with a dark brown subterminal ring; wings tinged with yellow; stigma oval, dark brown; veins with long macrotrichiæ; abdominal tergites dark brown, the caudal margins of the segments conspicuously obscure yellow.

Male.—Length, including rostrum, about 6.5 mm.; wing 7.3-7.5 mm.

Rostrum nearly twice the length of the head, dark brown, including the palpi. Antennæ with the scape obscure brownish yellow; flagellum dark brown, the segments with relatively long pubescent servations and slender glabrous apical pedicels. Head light grey; vertex between the eyes narrow.

Mesonotal præscutum shiny Pronotum dark brown. brownish yellow with a conspicuous median brown stripe : scutal lobes, scutellum, and mediotergite of postnotum dark brown, with a continuous yellow median stripe traversing all three sclerites. Pleura yellow with a more or less distinct brown spot on the mesepisternum. Halteres rather short, obscure yellow, the knobs dark brown. Legs with the coxæ and trochanters yellow; femora yellow with a conspicuous, dark brown, subterminal annulus; tibiæ brownish yellow, the tips narrowly dark brown; tarsal segments brown with the tips of the segments blackened. Wings tinged with yellow, the base and costal region a little brighter; stigma oval, dark brown; very narrow brown seams along the cord and outer end of the cell 1st M_2 ; wing-veins with long conspicuous macrotrichiæ. Venation : Sc_1 ending about opposite one-third to one-fourth the length of Rs, Sc_2 immediately beyond this origin; inner ends of cells R_2 and 1st M_2 lying more basad than cell R_3 ; basal deflection of Cu_1 at or close to the fork of M.

Abdominal tergites dark brown, the caudal margins of the segments conspicuously obscure yellow; basal sternites clear yellow, the terminal segments infuscated; hypopygium obscure reddish brown. Male hypopygium with the tergite semicircular in outline, with a small U-shaped median notch, the lateral lobes blackened and sparsely setiferous. Basistyles with large hairy lobes on mesal face. Ventral dististyle relatively small, the chitinized rostrum bearing two separated spines, the more distal one being about twothirds the length of the basal spine; dorsal dististyle only slightly curved, blackened. Ædeagus bifid at apex.

Hab. New Zealand (North Island).

Holotype, 3, Ohakune to mountain-hut on Ruapehu, altitude 3000-4000 feet, January 12, 1923 (T. R. Harris).

Paratopotypes, 2 & &; paratype, &, Ohakune, altitude 2060 feet, December 31, 1922 (T. R. Harris).

This interesting crane-fly is named in honour of the collector, my friend Mr. T. R. Harris.

Dicranomyia luteipes, sp. n.

Male.-Length 6-6.5 mm.; wing 7.5-8.5 mm.

Female.—Length 6.5 mm.; wing 8.5 mm.

 mediotergite of the postnotum with the median area darkened. Pleura and sternum greenish yellow, unmarked with darker. Halteres pale throughout. Legs uniformly yellow, the tarsal segments passing into brown. Wings with a yellow tinge, the base and costal region clearer; stigma brown; very narrow brown seams along cord and outer end of cell 1st M_2 ; a tiny brown cloud at origin of Rs. No dark seams on Sc_2 and no dark clouding along veins Cu and 2nd A. Venation: Sc_1 shorter; Rs less strongly arcuated. Abdominal tergites dark brown with about the basal half of each of segments 3 to 8 obscure yellow; sternites uniformly yellow. Ventral lobes of male hypopygium large and fleshy.

Hab. New Zealand (both Islands).

Holotype, &, Mt. Grey, Canterbury, altitude 1200-1500 feet, November 27, 1921 (J. W. Campbell and S. Lindsay).

Allotype, 9, Ohakune, Wellington, altitude 2060 feet, November 18, 1921 (T. R. Harris).

Paratypes, 1 3, with the allotype; 1 3, Ohakune, December 10, 1922 (T. R. Harris).

The type was swept from undergrowth in a beech forest. One of the paratypes was found hanging around a waterfall, associated with the types of *Dicranomyia torrens*, Alexander.

Dicranomyia diversispina, sp. n.

Belongs to the monilicornis group; general coloration light ochreous-yellow; antennæ black, the basal segment light yellow; wings hyaline, stigma lacking; cell 2nd A narrow; male hypopygium with the rostrum of ventral dististyle bearing two curved spines of different shapes and sizes.

Male.-Length 5 mm.; wing 6 mm.

Rostrum only a little shorter than the head, ochreous; palpi dark brown, the basal segment paler. Antennæ black, the basal segment of the scape abruptly light yellow; flagellar segments oval. Head light brownish yellow.

Pronotum, mesonotum, and pleura uniformly shiny ochreous-yellow, unmarked with darker. Halteres elongate, pale, the knobs dark brown. Legs long and slender, the coxæ and trochanters concolorous with the pleura; femora brownish yellow; tibiæ brown; terminal tarsal segments passing into darker brown. Wings hyaline; stigma lacking; veins pale brown. Venation: Sc short, Sc_1 ending a distance before the origin of Rs that is longer than the basal deflection of Cu_1 ; Sc_1 alone about equal to this same distance; Rs strongly angulated at mid-length; cell 1st M_2 relatively small, the basal deflection of Cu_1 at its base; cell 2nd A long and narrow.

Abdominal tergites dark brown, the lateral margins yellowish; sternites yellow. Male hypopygium with the rostrum of the ventral dististyle short, bispinous, the outer spine long and slender, curved gently basad, arising from a conspicuous papilla; the second spine is at the base of the rostrum, about one-half the length of the first, but very stout and curved strongly basad, the apex acute; cephalic margin of rostrum with a fringe of about six strong setæ.

Hab. New Zealand (North Island).

Holotype, 3, Ohakune, altitude 2060 feet, October 31, 1922 (T. R. Harris).

Molophilus latipennis, sp. n.

Antennæ short; general coloration of mesonotum reddish brown; thoracic pleura dark brown; femora and tibiæ yellow; wings very broad, yellow, the base of cell R and a seam along the cord brown.

Male.-Length 4.8-5 mm.; wing 6 mm.

Female.-Length 5-5.4 mm.; wing 5.6-6.3 mm.

Rostrum and palpi brownish black. Antennæ short in both sexes, the scape reddish brown; flagellar segments brown with a dense white pubescence. In the female, the antennæ are almost entirely pale yellow. Head dark grey.

Pronotum dark brown. Mesonotal præscutum reddish brown, the median area a little darker anteriorly, the lateral margins of the sclerite behind the pseudosutural foveæ narrowly dark brown; remainder of mesonotum reddish brown. Pleura shiny dark brown, the sterno-pleura obscure brownish yellow. Halteres dark brown, the base of the stem whitish, the knobs obscure reddish brown. Legs with the coxæ obscure yellow; remainder of the legs yellow, the terminal tarsal segments dark brown. Wings very broad, strongly tinged with yellow; a conspicuous brown cloud along the cord, continued on the basal deflection of Cu_1 ; basal two-thirds of cell R infuscated; macrotrichiæ dark brown, the costal fringe black; veins yellowish, brown in the darkened areas. Venation: cell R_3 narrowly sessile; vein 2nd A long, ending just before the base of cell M_3 .

Abdomen light brown, the lateral margins of the tergites broadly dark brown; sternites yellowish testaceous, the caudal margins of the segments darkened; hypopygium obscure yellowish brown. Male hypopygium with the apex of the basistyle blackened, terminating in a small black tubercle, the mesal face setiferous. Outer dististyle bifd, the largest arm a black flattened blade whose rounded apex is microscopically serrate; basal dististyle a chitinized rod, shaped somewhat like a ten-pin, the basal region expanded, the neck slender with the apex truncate or feebly toothed. Gonapophyses appearing as oblong setiferous cushions.

Hab. New Zealand (North Island).

Holotype, 3, Ohakune to mountain-hut on Ruapehu, altitude 3000-4500 feet, January 12, 1923 (T. R. Harris).

Allotype, 9, January 1921 (M. N. Watt).

Paratopotypes, $2 \notin 3$, with the type; $1 \notin$, with the allotype.

Molophilus latipennis is the largest species of the genus so far discovered in New Zealand. The female specimens were taken along the trail to the mountain-hut in the zone of silver beech (Nothofagus Menziesii, Hooker f.), associated with other Tipulidæ such as Discobola tesselata, Osten-Sacken, Ceratocheilus ochraceus, Edwards, Limnophila ruapehuensis, Alexander, L. watti, Alexander, Cerozodia hudsoni hemiptera, Alexander, Macromastix ferruginosa ruapehuensis, Alexander, and other subalpine species.

Molophilus uniplagiatus, sp. n.

Related to *M. latipennis*, sp. n.; mesonotal præscutum dark brown with three conspicuous ochreous-yellow stripes, the median stripe split by a capillary dark brown line; pleura dark brown, indistinctly striped longitudinally with paler; wings dark brown, with a conspicuous light yellow blotch near the centre of the wing.

Male.-Length about 3.6 mm.; wing 4.5-4.6 mm.

Female.-Length about 3.5 mm.; wing 4.3 mm.

Rostrum and palpi black. Antennæ short; scape brown, the flagellum pale brown to brown, with a dense white pubescence. Head dark brown.

Pronotum dark brown. Mesonotal præscutum dark brown, with three conspicuous ochreous-yellow stripes, the median stripe bisected by a capillary dark brown line that is broadest in front, gradually narrowed to a point at the suture; extreme lateral margin of the præscutum behind the pseudosutural foveæ ochreous; scutum with the lobes ochreous-yellow, the median area dark brown; scutellum dark brown; mediotergite of postnotum infuscated on cephalic half, the posterior half largely ochreous. Pleura shiny dark brown with a more or less distinct longitudinal pale line across the ventral pleurites to the base of the halteres; dorso-pleural membrane paler; sterno-pleura ochreous. Halteres dark brown, the base of the stem pale. Legs with the coxæ dark brown; trochauters obscure yellow; remainder of the legs pale, clothed with dark brown and a few paler setæ. Wings tinged with brown, the base, costal and stigmal regions yellowish, but more or less obscured by the macrotrichiæ; a conspicuous blotch near the middle of the wing before the cord light yellow; veins brown; macrotrichiæ dark brown. Venation: vein 2nd A long, ending before mid-length of the petiole of cell M_8 .

Abdominal tergites dark brown, the bases of the segments paler; sternites yellow; hypopygium dark. In the females, the tergites are more uniformly darkened. Male hypopygium complex in structure. Basistyles produced caudad into stout lobes, the mesal faces of which are provided with numerous black setiferous tubercles. Outer dististyle with an outer chitinized blade as in *M. latipennis*, the margin microscopically serrate; two basal styles, one very slender, beyond the base appearing as an acute spine; the other style is a flattened blade, the apex curved and acutely pointed.

Hab. New Zealand (North Island).

Holotype, \mathcal{F} , Ohakune to mountain-hut on Ruapehu, altitude 3000-4500 feet, January 12, 1923 (*T. R. Harris*). Allotopotype, \mathcal{Q} .

Paratopotypes, 5 $\mathcal{J} \ \mathcal{Q}$, January 12–15, 1923; paratypes, 1 \mathcal{J} , 1 \mathcal{Q} , Ohakune, altitude 2060 feet, December 31, 1922 (T. R. Harris).

Molophilus secundus, sp. n.

Male.—Length about 3.5 mm.; wing 4.3 mm.

Very closely related to *M. multispinosus*, Alexander (South Island), from which it differs as follows :---

Wings greyish subhyaline (instead of light yellow), the veins slightly darker grey; macrotrichiæ dark brown. Abdomen and hypopygium paler than in *multispinosus*. Male hypopygium with the enlarged base of the inner dististyle projecting beyond the level of the base of the chitinized apex; the latter is a powerful, strongly chitinized rod terminating in a long apical point, before this apex a group of long spines on the inner face. Outer dististyle similar to *multispinosus*, but the apical ear-shaped lobe with a small lateral tooth at the base.

Hab. New Zealand (North Island).

Holotype, 3, Ohakune, altitude 2060 feet, December 13, 1922 (T. R. Harris).

Molophilus oppositus, sp. n.

Related to *M. sepositus*, Alexander; general coloration dark brown, the mesonotal præscutum more yellowish brown; halteres brownish black, the base of the stem pale; male hypopygium with the outer dististyle bidentate at apex; gonapophyses very long, curved spines.

Male .-- Length 3.6-3.7 mm.; wing 3.9-4 mm.

Rostrum and palpi brownish black. Antennæ moderately long, if bent backward extending to just beyond the wingroot, brown to dark brownish black. Head dark.

Pronotum dark brown. Mesonotal præscutum shiny yellowish brown, the anterior and lateral margins and the interspaces darker brown, the latter with conspicuous, erect, black setæ; remainder of the mesonotum dark brown, the scutal lobes paler laterally. Pleura brownish black. Halteres brownish black, the base of the stem pale. Legs with the coxæ concolorous with the pleura, the posterior coxæ more testaceous; trochanters brownish testaceous; femora and tibiæ pale brown, clothed with black trichiæ; tarsi dark brown. Wings tinged with brown; veins darker; macrotrichiæ dark brown. Venation: r just beyond the level of r-m; vein 2nd A moderately long, ending just beyond the fork of M.

Abdomen brownish black, including the hypopygium. Male hypopygium with each basistyle stout basally, produced caudad into a slender, unarmed, digitiform lobe that extends beyond the level of the other elements of the hypopygium. the lateral faces densely hairy. Dististyles arising from the mesal face of the basal enlargement of the basistyle; outer dististyle a straight rod, gradually enlarged to the apex. this blackened and terminating in two acute black spines that lie opposite one another, the mesal one directed mesad, the lateral one directed caudad; inner dististyle subequal in length, a brown rod, very nearly straight, gently narrowed to the blunt apex. Gonapophyses very conspicuous, longer than the dististyles, each a very long, slender, curved spine, the acute tips more or less decussate across the genital chamber in prepared slides, but in a normal position directed ventrad.

Hab. New Zealand (North Island).

Holotype, 3, Ohakune to the mountain-hut on Ruapehu, altitude 3000-4500 feet, January 12, 1923 (T. R. Harris).

Paratopotypes, 2 3 3.

Molophilus bidens, sp. n.

Belongs to the *terminans* group; general coloration dark brown halteres pale, the knobs silken-yellow; wings tinged with brown; male hypopygium with the outer dististyle terminating in an acute spine, before the apex of which is a bidentate blade.

Male .-- Length about 3.8-4 mm.; wing 5-5.3 mm.

Rostrum and palpi dark brownish black. Antennæ short; scapal segments pale brown, the flagellar segments dark brown with elongate verticils. Head black, grey-pruinose.

Pronotum and mesonotum dark brown, the posterior portion of the postnotal scutellum and lateral margins of the præscutum dull yellow. Pleura shiny dark brown. Halteres pale, the knobs silken-yellow. Legs with the fore coxæ dark brown; the other coxæ and the trochanters obscure yellowish testaceous; femora brown, the bases paler; tibiæ and tarsi dark brown. Wings tinged with brown; veins pale brown; macrotrichiæ dark brown, evenly distributed. Venation: vein 2nd A long, ending opposite or beyond mid-length of the relatively short petiole of cell M_3 .

Abdomen dark brown, including the hypopygium. Male hypopygium of the type of M. terminans, Alexander. Outer dististyle very complex in structure, a heavily chitinized, curved arm terminating in a straight, acute, black spine; before this apex bearing laterally a flattened blade that terminates in two acute points, one spine shorter, more slender, and heavily chitinized, the entire blade roughly suggesting a seed of the genus *Bidens*; inner dististyle cylindrical, strongly curved at mid-length, the base and apex straight, the tip produced into an acute straight spine, the base of which is surrounded by numerous microscopic setæ; surface of this style with 10–12 microscopic spinulæ.

Hab. New Zealand (North Island).

Holotype, 3, Ohakune, altitude 2060 feet, December 10, 1922 (T. R. Harris).

Paratopotype, 3; paratype, 3, Ohakune to mountainhut on Ruapehu, altitude 3000-4500 feet, January 12, 1923 (T. R. Harris).

Molophilus tenuissimus, sp. n.

Belongs to the *terminans* group; general coloration dark brown; halteres pale; wings strongly tinged with brown; male hypopygium with the outer dististyle elongate, ribbonlike, tapering to the acute tip.

Male.—Length about 3.6 mm.; wing 4.3 mm.

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

Pronotum and mesonotum dark brown, the extreme lateral margin of the præscutum paler. Pleura dark brown. Halteres pale, the knobs yellowish white. Legs with the coxæ brown, paler apically; trochanters brownish yellow; remainder of legs dark brown; the femoral bases paler. Wings strongly tinged with brown; veins darker brown; macrotrichiæ brownish black. Venation: basal section of R_{2+3} twice the basal deflection of R_{4+5} ; vein 2nd A ending about opposite mid-length of the petiole of cell M_3 .

Abdomen dark brownish black, including the hypopygium. Male hypopygium of the type of *M. terminans*, Alexander, and most similar among the described species to *M. tenuistylus*, Alexander. Longest dististyle a long, curved, ribbon-like blade that tapers gradually to the acute apex, the margins unarmed; inner dististyle about one-half the length of the outer, broad-based, the apical three-fifths a curved horn that tapers gradually to the acute apex, this portion set with about nine conical spinulæ similar to those found in *M. tenuistylus*.

Hab. New Zealand (North Island).

Holotype, 3, Ohakune, altitude 2060 feet, December 13, 1922 (T. R. Harris).

Gnophomyia alpina fumipennis, subsp. n.

Male.-Length about 3.5 mm.; wing 4.4 mm.

Differs from the typical form in the following regards:— Legs dark brownish black. Wings with a very strong brown suffusion that is almost as intense as the stigmal area itself; veins about as dark as in the typical form, but not contrasting strongly against the dark background. Venation: Sc_2 about twice its length from the tip of Sc_1 .

Hab. New Zealand (North Island).

Holotype, \mathcal{J} , Ohakune, altitude 2060 feet, December 13, 1922 (T. R. Harris).

Gnophomyia alpina fulvipleura, subsp. n.

Female.- Length about 4 mm.; wing 4.6 mm.

 tinged with grey or pale brown, the stigma oval, slightly darker brown.

Hab. New Zealand (North Island).

Holotype, 2, Ohakune, altitude 2060 feet, December 1, 1922 (T. R. Harris).

Paratopotype, 2.

Elephantomyia (Elephantomyodes) ruapehuensis, sp. n.

Mesonotal præscutum with three brownish-black stripes, the lateral margins of the scierite broadly golden-yellow; pleura dark grey; wings tinged with yellow; cord and outer end of cell $1st M_2$ seamed with brown; cell $1st M_2$ large, rectangular; abdominal tergites dark brown, the bases of the segments broadly obscure yellow.

Female.—Length, excluding rostrum, 7.5 mm.; wing 83 mm.; rostrum about 44 mm.

Rostrum a little more than one-half the length of the body, black, the palpi concolorous. Antennæ with the scape light yellow; flagellum black, apparently only 11-segmented, with all except the basal two or three segments with conspicuous elongate verticils. Head dark brown, the orbital region and anterior part of the vertex and front light grey.

Pronotum grey. Mesonotum golden-yellow, the disk largely covered by three nearly confluent brownish-black stripes, the humeral region and broad lateral margins remaining of the ground-colour; scutal lobes and scutellum brownish black, the centres yellowish-grey pruinose; mediotergite of postnotum black, grey-pruinose medially. Pleura dark grey, especially the sterno-pleura ; dorsal pleurites and pleuro-tergite lighter grey. Halteres yellow, the knobs dark brown. Legs with the coxæ brown, sparsely pruinose, the tips passing into yellow; trochanters yellow; femora brown, the bases pale, the tips narrowly dark brown ; tibiæ brown, the tips darker brown; tarsi black; all segments of the legs, except the three terminal tarsal segments, with scattered, erect, bristles; tibial spurs lacking. Wings tinged with yellow; stigma elongate-oval, dark brown; wing-apex broadly infuscated; conspicuous brown seams along cord and outer end of cell 1st M_2 ; a small brown spot at origin of Rs; a faint brown seam along vein Cu; veins dark. Venation: Sc_2 at tip of Sc_1 ; Rs elongate, angulated and spurred at origin; basal deflection of R_{4+5} only a little longer than r-m; cell 1st M_2 large, rectangular; m less than one-half the outer deflection of M_3 ; basal deflection of Cu_1 from

two-fifths to one-half the length of cell 1st M_2 ; vein 2nd A short, the cell being correspondingly short but narrow.

Abdominal tergites dark brown, the basal quarter of each segment obscure yellow, the extreme caudal margin of each narrowly of the same colour; sternites obscure yellow, infuscated medially, this more distinct on the subterminal segments. Ovipositor long and slender, horn-coloured.

Hab. New Zealand (North Island).

Holotype, \mathfrak{P} , Mountain Track, Ohakune to mountain-hut on Ruapehu, altitude 3000-4500 feet, January 15, 1923 (T. R. Harris).

Gynoplistia bilobata, sp. n.

Male.-Length about 14 mm.; wing 13-13.5 mm.

Female.—Length about 17 mm.; wing 14 mm.

Closely allied to G. subfasciata, Walker, from which it differs as follows :---

Mesonotal præscutum with a capillary dark brown median Halteres yellow, with only the knobs dark brown. vitta. Wings with the tips distinctly darkened in both sexes, this infuscation including the apex beyond the fork of M_{1+2} . The chief distinctions are found in the structure of the male hypopygium, which shows the long pointed median lobe of the ninth tergite found in subfasciata. The blackened lobe on the mesal face of the basistyle is truncated apically (rounded in *subfasciata*), and at its base bears a smaller but similar lobe, which in subfasciata is represented only by a small lobule. Outer dististyle with the spinulose apex broader, more depressed, projecting far beyond the apex of the small, subapical, smooth spine. In subfasciata these spines are subequal in length. Inner dististyle with the slender distal portion neither so strongly curved nor clavate in appearance.

Hab. New Zealand (North Island).

Holotype, 3, Ohakune, altitude 2060 feet, December 1, 1922 (T. R. Harris).

Allotopotype, \mathfrak{P} , in copulâ; pinned with type.

Paratopotypes, 3 3 3, November 16-25, 1921 (T. R. Harris).

Gynoplistia pallidistigma, sp. n.

General coloration grey, the præscutum with three brown stripes; antennæ with 17 segments, the branches moderately long; femora dark brown with a barely distinct subterminal ring; wings tinged with yellow, the stigma pale; abdomen grey, the subterminal tergites ringed caudally with pale; male hypopygium with the ninth sternite and mesal margins of basistyles with setiferous lobes; outer dististyle very strongly expanded at apex.

Male.--Length 10.5-11 mm.; wing 11.2-11.4 mm.

Female.-Length 15 mm.; wing 9.5 mm.

Rostrum and palpi brownish black. Antennæ 17-segmented in both sexes, the formula in the \mathcal{S} being 2+2+8+5; first scapal segment brown, dusted with grey, the second scapal and flagellar segments entirely black, including the branches; flagellar branches moderately elongate, the longest not quite three times the length of the segment that bears it. In the \mathfrak{P} the basal six flagellar segments are short-pectinate. Head light grey.

Pronotum grey. Mesonotal præscutum grey with three narrow but conspicuous brown stripes, the median stripe broader in front, strongly narrowed behind, extending to the suture; humeral angles darkened; remainder of mesonotum grey, the scutal lobes darkened. Pleura light grey. Halteres obscure yellow, the knobs dark brown. Legs with the coxæ reddish, light grey pruinose to appear salmoncoloured; coxæ fulvous-yellow; femora dark brown, the bases broadly brownish yellow; a very indistinct reddish subterminal ring; tibiæ brownish yellow, the tips conspicuously blackened; tarsal segments 1 and $\hat{2}$ light brown, the tips blackened; remainder of tarsi black. In the \mathfrak{P} the reddish femoral rings are entirely lacking. Wings tinged with yellow, the costal region and wing-base brighter yellow; stigma yellow, the apex (a narrow seam at r) dark brown; wing-markings almost obsolete, consisting of tiny clouds at origin of Rs; along cord and outer end of cell 1st M_2 ; fork of M_{1+2} and the wing-apex; veins dark brown. Venation: Rs long, angulated and spurred at origin; R_{2+3} a little shorter than the deflection of R_{4+5} ; petiole of cell M_1 nearly twice m; basal deflection of Cu_1 near mid-length of cell 1st M_2 . Wings of the \Im proportionately smaller than those of the \mathcal{J} , but normal in other regards.

Abdominal tergites dark grey; segments 2 to 5 with a dark median blotch; tergites 5 to 7 narrowly ringed caudally with obscure yellow; hypopygium reddish brown; sternites light brown, the caudal margins broadly and conspicuously pale. Male hypopygium with the ninth tergite narrowed apically, the tip with a small U-shaped notch. Ninth sternite profoundly incised medially, each meso-apical angle produced into a slender blackened lobe that bears a conspicuous tuft of yellow setæ. Basistyles slender, the mesal face of each produced into a conspicuous, pale, clavate lobe that is densely tufted with yellow setæ; outer dististyle very strongly expanded at apex into a triangular blackened blade, the margin truncated to feebly concave; inner dististyle pale, the apex suddenly narrowed. Ædeagus slender, the margin near apex serrulate. Ovipositor with very long, slender valves.

Hab. New Zealand (South Island).

Holotype, &, Hunter Range, Lake Manapouri, Southland, altitude 4000 feet, January 1-7, 1923 (S. Lindsay).

Allotopotype, ♀. Paratopotype, ♂.

Gynoplistia bituberculata, sp. n.

General coloration grey, the præscutum with three broad but rather ill-defined brown stripes; antennæ with 16 segments, the branches short; femora dark brown, with a rather ill-defined reddish subterminal ring; wings relatively narrow, yellowish, the cord and base of Rs seamed with brown; abdomen dark grey; male hypopygium reddish, the outer dististyle notched at apex.

Male.-Length about 10.5 mm.; wing 9.5 mm.

Female.—Length about 12 mm.; wing 7.5 mm.

Rostrum and palpi black. Antennæ 16-segmented in both sexes, the formula in the \mathcal{J} being 2+2+7+5, the last segment being enlarged and nearly as long as the preceding two segments taken together and evidently a fusionproduct; antennæ black, the basal segment pruinose; longest flagellar branch only a trifle greater than twice the length of the segment. In the \mathfrak{P} the basal four segments are short-pectinate. Head grey, the vertex on either side of the median line infuscated, forming a **N**-shaped marking.

Mesonotum dull grey, the præscutum with rather illdefined brown stripes, the median stripe becoming obliterated near mid-length of the sclerite, the lateral stripes broader than usual and lying far laterad; pseudosutural foveæ very conspicuous, black; scutal lobes darkened. Pleura light grey. Halteres pale brownish yellow, the apices of the knobs dark brown. Legs with the coxæ salmon-coloured; trochanters obscure yellow; femora brown, the bases brownish yellow; a rather ill-defined reddish ring before the subcqual dark tips of the femora; tibiæ light brownish yellow, the tips very indistinctly darkened; tarsal segments 1 to 3 brownish yellow, the tips blackened; terminal tarsal segments black. Wings relatively long and narrow, strongly tinged with yellow, the base and costal region more saturated; stigma dark brown; narrow but elongate brown seams at origin of Rs, along the cord and the outer end of cell 1st M_2 ; veins yellow, dark brown in the infuscated areas. Venation: $Rs \log ; R_{2+3}$ about twice the arcuated basal deflection of R_{4+5} ; cell M_1 about one-third longer than its petiole; basal deflection of Cu_1 at near mid-length of cell 1st M_2 .

Abdomen dark grey, the tergites with a nearly continuous brown median stripe, narrowly interrupted at the extreme apex of each segment; hypopygium reddish; sternites reddish brown with a capillary median brown line; subterminal sternites in 2 darkened. Male hypopygium with the ninth tergite terminating in two small rounded tubercles, separated from one another by a space about equal in Basistyles slender, at base of each a slender, width to one. curved, blackened hook; outer dististyle rather short, the apex notched, thus appearing to form two short acute spines at extreme tip; surface of dististyle with about six long conspicuous setæ; inner dististyle about equal in length, the basal three-fifths dilated, the apical two-fifths Ædeagus bifid at apex. Ovipositor with the slender. valves long and slender.

Hab. New Zealand (South Island).

Holotype, ♂, Hunter Range, Laké Manapouri, Southland, altitude 4000 feet, January 1-7, 1923 (S. Lindsay). Allotopotype, ♀.

Gynoplistia pleuralis, sp. n.

General coloration of dorsum shiny brown; dorsal pleurites dark brown, the sterno-pleura, coxæ, and trochanters light yellow; wings tinged with grey, with two incomplete brown cross-bands, the one at the cord very broad; dorso-apical lobe of basistyles of male hypopygium a flattened blade.

Male.—Length, excluding head, about 6.8 mm.; wing 8 mm.

Rostrum shiny testaceous, the mouth-parts and palpi brownish black. Antennæ 16-segmented, the formula being 2+2+9+3, or, in cases, 2+2+10+2; scape and rhachis of two basal flagellar segments brownish yellow, the remainder of the organ black. Head dark brownish grey.

Mesonotal præscutum shiny yellowish brown, unmarked, the remainder of the mesonotum a little darker brown. Dorsal pleurites, including the dorso-pleural membrane, dark brown, this broad stripe including the dorsal portions

of the sterno-pleura and the entire pleuro-tergite of the postnotum; remainder of sterno-pleura and the meron light vellow. Halteres pale brown, the knobs and distal portion of the stem dark brown. Legs with the coxæ and trochanters light yellow; femora brown, the terminal tarsal segments darker; tibial spurs slender with appressed black Wings tinged with grey; an interrupted brown setæ. cross-band at the level of the origin of Rs this rather broad, interrupted at vein Cu; a very broad band extending from the stigma to the fork of Cu, leaving the centre of cell 1st M_{\circ} of the ground-colour; wing-apex clear; veins dark brown. Venation : Sc1 ending just before the fork of Rs, Sc2 at its tip: R_{2+3} very short, about equal to m; veins R_2 and R_3 divergent; cell 1st M_2 short-rectangular; basal deflection of Cu_1 about two-fifths its length beyond the fork of M.

Abdominal tergites dark brown, the sternites obscure brownish yellow; hypopygium dark. Male hypopygium with the dorso-apical angle of basistyle produced caudomesad into a flattened blade, this slightly expanded distally, the caudal margin gently rounded, the surface with sparse long setæ; outer dististyle slender, sinuous, the apex bifid, the inner margin beyond mid-length expanded into a weak wing; inner dististyle shorter, more nearly straight, with numerous tiny setæ and a few longer ones along the cephalic margin. Gonapophyses appearing as long blades, widest beyond mid-length, thence tapering rapidly to the apex. Interbasal lobes appearing as stout spines directed caudad along the mesal face of the basistyle. Ædeagus very broad at base.

Hab. New Zealand (both Islands).

Holotype, 3, Ohakune to mountain-hut on Ruapehu, altitude 3000-4500 feet, January 12, 1923 (T. R. Harris).

Paratypes, 4 3 3, Greymouth, Westland, Coal Creek track, February 13, 1923 (T. R. Harris).

In its general coloration, Gynoplistia pleuralis suggests the smaller G. trifasciata, Edwards, an otherwise different fly.

Gynoplistia lobulifera, sp. n.

General coloration shiny black, including the hypopygium; dorsal thoracic pleurites conspicuously silvery; legs black, the femoral bases broadly obscure yellow; wings with a conspicuous brown pattern, the wing-apex broadly clouded; male hypopygium with the mesal face of basistyle bearing a slender setiferous lobule that is directed cephalad.

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Male .-- Length about 4.8 mm. ; wing 5.6-6 mm.

Rostrum and palpi black. Antennæ probably with fifteen segments, the terminal segments broken, the formula being 2+2+6+?; antennæ brownish black throughout, the longest flabellation approximately one-half the length of the flagellum. Head shiny black.

Pronotum and mesonotum entirely shiny black. Pleura black, the dorsal pleurites with an extensive microscopic silvery pubescence that simulates a bloom. Sterna shiny black. Halteres obscure yellow, the knobs infuscated. Legs with coxæ black; trochanters obscure yellow; femora obscure yellow, the tips enlarged and blackened, this more extensive and accentuated on the posterior femora; tibiæ brownish black; tarsi black. Wings subhyaline, with a conspicuous brown pattern; a large circular area at origin of Rs; stigma brown, sending a broad seam along the cord almost to the wing-margin; wing-tip extensively clouded with paler brown, this including all of cell M_1 ; a pale brown seam occupies the basal half or more of cell Cu; veins black. Venation: Sc_1 ending just before the fork of Rs, Sc_2 at its tip; R_{2+3} about two-thirds the deflection of R_{4+5} ; r about twice its length from the tip of R_1 ; cell 1st M_2 small, rectangular; petiole of cell M_1 shorter than or equal to the cell; basal deflection of Cu_1 near mid-length of cell 1st M_2 .

Abdomen black, including the hypopygium. Male hypopygium with the basistyles stout, the apical angle produced caudad into a slender digitiform lobe; mesal face of basistyle with a small but conspicuous lobule, directed cephalad, the surface densely provided with conspicuous setiferous tubercles, the terminal setæ longest; interbasal lobe a sinuous chitinized spine, broadest basally. Outer dististyle yellow, slender, the apex dilated into a conspicuous bifid blade; inner style a little shorter, the apex feebly expanded, the surface with microscopic setulæ. Gonapophyses appearing as broad blades directed caudad and slightly mesad, profoundly bifid at apex, the lateral arm being very slender, acute. Ædeagus broad-based.

Ilab. New Žealand (North Island).

Holotype, 3, Ohakune to mountain-hut on Ruapehu, altitude 3000-4500 feet, January 12, 1923 (T. R. Harris). Paratopotype, 3, January 15, 1923.

Gynoplistia recurvata, sp. n.

General coloration shiny black, including the pleura and hypopygium; antennæ with fifteen segments; wings with a conspicuous brown pattern, the apex clear; Rs long, Sc ending about opposite two-thirds its length; male hypopygium with the gonapophyses very large and powerful, recurved, the apices being directed mesad.

Male.—Length about 5 mm.; wing 5.5-5.6 mm.

Female.-Length 6.3 mm.; wing 5.7 mm.

Rostrum black, the mouth-parts brownish yellow; palpi dark brown. Antennæ 15-segmented, the formula being 2+2+6+5; basal segment of scape dark, the second segment obscure yellow; basal flagellar segments with the apex of each obscure yellow, the remainder of the organ black; longest flabellation fully three-fifths the length of the flagellum. Head shiny black.

Pronotum, mesonotum, and pleura shiny black. Halteres obscure yellow, the knobs conspicuously dark brown. Legs with the coxæ and trochanters light yellow; femora yellow, the tips clubbed and blackened, most extensively on the posterior legs; tibiæ brown, the tips blackened, the posterior tibiæ paler, dirty brownish white, the tips dark brown; tarsi brownish black. Wings subhyaline with a brown pattern; a large subquadrate area at origin of Rs, in alignment with a cloud in the outer end of cell 1st A, but cell M entirely clear; a conspicuous seam along the cord, extending more or less completely across the wing but leaving the centre of cell $1st M_2$ clear; wing-apex clear; veins dark brown. Venation: Sc short, Sc1 ending about opposite two-thirds the length of the long Rs, Sc2 close to its tip; Rs long, angulated at origin; R_{2+3} short to very short; veins R_2 and R_3 strongly divergent; cell 1st M_2 subirregular, m being about one-half the outer deflection of M_3 ; petiole of cell M_1 variable, sometimes a little shorter, in other cases a little longer than the cell; basal deflection of Cu_1 at or beyond mid-length of cell 1st M_2 .

Abdomen black, including the hypopygium. Male hypopygium very complex in structure. Basistyles stout, the apical angle produced caudad and mesad into a slender glabrous lobe; the interbasal structure terminates in a large yellow blade, the caudal margin of which is coarsely serrate. Dististyles narrowly united basally; outer style tapering to the simple slightly curved pale apex; innerstyle shorter but broader, setiferous apically. Gonapophyses arising as powerful arms on either side of the ædeagus, directed laterad, thence caudad, and finally curved back upon themselves, directed mesad, their apices overlying one another in the median field of the genital chamber; apex of each arm dilated into an oval, terminating in a nipple.

Ovip sitor with the very long, slender valves obscure hornyellow.

Hab. New Zealand (North Island).

Holotype, 3, Ohakune, altitude 2060 feet, December 5, 1922 (T. R. Harris).

Allotopotype, 9, December 12, 1922 (T. R. Harris).

Paratopotypes, 7 & J, December 1-12, 1922 (T. R. Harris).

Macromastix holochlora angustior, subsp. n.

Male.-Length 11.5-12 mm.; wing 15.5-16 mm.

Generally similar to typical holochlora (Nowicky), differing as follows :---

First flagellar segment distinctly shorter than the second. Femoral and tibial apices dark brown. Wings with a strong greyish tinge, the stigma infuscated; veins dark brown instead of green. Venation: Rs shorter and straighter; cell 2nd A long and narrow. Apical tergites of abdomen distinctly infuscated. Lobes of the ninth tergite of male hypopygium more evenly rounded.

Hab. New Zealand (both Islands).

Holotype, 3, Ohakune, altitude 2060 feet, December 31, 1922 (T. R. Harris).

Paratopotype, 3, January 5, 1923 (T. R. Harris).

In his recent revision of the New Zealand Tipuloidea, Edwards recognised this subspecies as distinct (as his variety b), but did not give it a name. His material of this nace was from Te Wairoa, North Island, and West Plains, South Island. Both subspecies have the pronotum clear green, the præscutum with three obscure orange stripes; the scutal lobes with obscure orange centres; the head green with the orbits and genæ obscure orange.

> XXII.—Papers on Oriental Carabidæ.—X. By H. E. ANDREWES.

In this paper 1 am describing some new species from Indo-China, some of which occur also in North India, and one species from Quelpart Island, Korea. The type-specimens, except as otherwise indicated, are in my collection.

S CARITINI.

Scarites estriatus, Fairm. Ann. Soc. Ent. Belg. 1887, p. 93.

Until quite recently I had seen no example of this species,