

his list

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## UNDESCRIBED SPECIES OF CRANE-FLIES FROM NEW ZEALAND

(*Diptera*, Superfamily *Tipuloidea*)

By CHARLES P. ALEXANDER

The new species diagnosed in this paper were included in some extensive collections of these flies sent to me by my friends, Messrs. Campbell, Gourlay, Harris, Howes and Watt, to whom I am greatly indebted for many kindnesses in the past. The types are preserved in the collection of the writer.

### Family RHYPHIDÆ

***Trichocera aperta***, new species.

*Male*.—Length about 3.5 mm.; wing 4.4 mm.

Size larger than in most New Zealand species of the genus. General coloration dark brown, the apex of the second scapal segment paler. Mesonotum indistinctly variegated with testaceous, especially at the suture, median area of the scutum and on the scutellum. Halteres pale at the extreme base. Wings hyaline, iridescent; veins brown. Venation:  $Sc_1$  ending opposite  $r$ ; cell 1st  $M_2$  open by the atrophy of  $m$ ;  $m-cu$  and basal deflection of  $Cu_1$  nearly equal. No macrotrichiae in the cells of the wing.

Male hypopygium somewhat as in *T. lobifera* Alex.; mesal face of each pleural appendage near one-third the length with a conspicuous fleshy lobe. Gonapophyses very complicated, consisting of broad flattened blades, the apex of each set with about a score of powerful spines, the mesal spines very short, gradually increasing in size laterad; caudal margin of this

plate with a deep U-shaped notch near the mesal margin, cutting off a slender slightly curved mesal arm.

*Habitat*.—New Zealand (North Island).

Holotype, male, Ohakune, altitude 2,060 feet, May 7, 1922 (T. R. Harris).

**Trichocera macrotrichiata**, new species.

*Male*.—Length about 3.7 mm.; wing 4.5–4.6 mm.

Generally similar to *T. aperta*, differing conspicuously in the structure of the male hypopygium and the presence of macrotrichiae in cell 1st *A* of the wing.

General coloration paler, especially the pleura and lateral sclerites of the postnotum which are obscure testaceous yellow. Venation: *Sc* extending some distance beyond *r*; cell 1st *M*<sub>2</sub> open by the atrophy of *m*; *m-cu* about one-half the basal deflection of *Cu*<sub>1</sub>. Numerous macrotrichiae occupy the greater portion of cell 1st *A*; macrotrichiae of veins somewhat longer than in *T. aperta*. Male hypopygium of simple structure; pleural appendages simple, cylindrical. Gonapophyses of very simple structure, appearing as two slender curved hooks, directed dorsad, decussate above the penis-guard.

*Habitat*.—New Zealand (North Island).

Holotype, male, Ohakune, altitude 2,060 feet, April 10, 1922 (T. R. Harris).

Family TIPULIDÆ

**Dicranomyia sponsa**, new species.

*Male*.—Length about 4 mm.; wing 5.5 mm.

Rostrum and palpi brownish black. Antennae brownish black, the basal segments of the flagellum subcylindrical, the subterminal segments more oval. Head grayish brown.

Mesonotal praescutum ochraceous with three very conspicuous dark brown stripes, the lateral stripes with the anterior half confluent mesally with the median stripe, restricting the pale interspaces to narrow strips cephalad of the suture; lateral margins of the sclerite faintly darkened; scutal lobes dark brown, the median area paler; scutellum and postnotum dark

brown, sparsely pruinose. Pleura brownish gray with a narrow, velvety black longitudinal stripe beginning behind the fore coxa; posterior pleurites blackened; velvety-black areas on the ventral portions of the mesosternum between the fore and middle legs. Halteres rather long, brown, the base of the stem and the knobs conspicuously yellow. Legs with the coxae brown, the fore coxae darker brown; trochanters obscure yellowish testaceous, remainder of the legs broken. Wings tinged with gray, the center of the disk more nearly hyaline; stigma oval, brown; conspicuous brown clouds at origin of  $R_s$ , along the cord and outer end of cell  $1st\ M_2$ ; inner ends of cells  $R$  and  $M$  infuscated, preceded by a conspicuous white obliterative area at arculus; veins brown. Venation:  $Sc$  long,  $Sc_1$  extending almost to the end of  $R_s$ ,  $Sc_2$  at its tip;  $R_s$  strongly angulated to almost square at origin, feebly spurred; tip of  $R_1$  atrophied, the end of the vein being a short distance beyond  $r$ ; a supernumerary crossvein (the *apparent* tip of  $R_1$ ) present; cell  $1st\ M_2$  long, nearly as long as vein  $M_{1+2}$  beyond it; basal deflection of  $Cu_1$  immediately beyond the fork of  $M$ .

Abdomen dark brown, the hypopygium a little paler.

*Habitat*.—New Zealand (North Island).

Holotype, male, Ohakune, altitude 2,060 feet, April 10, 1922 (T. R. Harris).

***Molophilus tridentata*, new species.**

*Male*.—Length about 2.3 mm.; wing 2.8 mm.

Related to *M. gourlayi* Alexander, differing as follows: The antennae are shorter, the individual flagellar segments not extended into a long, shiny apical portion, this part of each segment being short and inconspicuous; the bead-like appearance of the antennae of *M. gourlayi* is thus largely obliterated. The pleurites are darker colored.  $R_{2+3}$  is a little longer. The structure of the male hypopygium offers the most valuable characters for the separation of the two, these being as follows: Pleural appendages more elongate, slender, tapering rapidly to the subacute apex, the appendage without distinct spinulae as in *gourlayi*. The fused gonapophyses terminate in three sub-

equal acute spines, the median spine with microscopic shoulders at the base.

*Habitat*.—New Zealand (South Island).

Holotype, male, Kaituna, Banks Peninsula, Canterbury, February 18, 1922 (J. W. Campbell).

**Gonomyia (Leiponeura) longispina**, new species.

*Male*.—Length about 2.7 mm.; wing 3.7 mm.

Generally similar to *G. (L.) nigrohalterata* Edw., differing as follows: Size smaller. Pleural brown stripe broader, restricting the ground-color, continued caudad across the posterior half of the median sclerite of the mesonotal postnotum. Apices of the knobs of the halteres conspicuously yellow. Wings somewhat more infuscated. Venation: *r-m* not more than twice the deflection of  $R_{4+5}$ ; cell 1st  $M_2$  not so strongly narrowed at its proximal end, gradually widened distally; basal deflection of  $Cu_1$  about one-half its length beyond the fork of  $M$ . Abdomen pale brown, the sternites yellowish. Male hypopygium of the unique type apparently with asymmetrical pleural appendages, the left appendage a slender blackened hook, the right appendage a long, straight black spine, much longer than the corresponding spine of *G. nigrohalterata*.

*Habitat*.—New Zealand (North Island).

Holotype, male, Ohakune, altitude 2,060 feet, April 9, 1922 (T. R. Harris).

**Limnophila stemma**, new species.

*Male*.—Length about 15 mm.; wing 16.4 mm.

Rostrum and palpi brown. Antennae rather elongate, if bent backward extending to beyond the end of the first abdominal segment; scape brownish yellow; flagellar segments black, the basal segments indistinctly paler at the incisures. Head brown, darker on the anterior part of the vertex.

Pronotum obscure orange, the sides of the scutellum darker. Mesonotal praescutum dark brown with four more or less confluent obscure yellow stripes, the intermediate pair becoming infuscated behind; scutellum and postnotum brownish testa-

ceous, the base of the latter dark brown. Pleura yellowish brown, sparsely variegated with darker. Halteres pale brown, the base of the knobs blackened. Legs with the coxae yellowish brown, darker basally; trochanters yellowish brown; femora yellow with a little less than the apical half dark brown, enclosing a conspicuous obscure yellow subterminal ring; extreme tips of the femora pale; tibiae brown, paler basally; tarsi brown. Wings with a strong yellow tinge and with a heavy brown pattern that is in large part ocellate; these circles occur at the base of cells  $R$  and  $M$ ; at origin of  $R_s$ ; at  $r-m$ ; at the basal deflection of  $Cu_1$ ;  $m$  and the fork of  $M_{1+2}$ ; solid areas at stigma;  $r$ ; tips of  $R_2$ ,  $R_3$ , and slightly paler solid areas at the ends of the other longitudinal veins, those on the anal veins largest; veins dark brown. Venation:  $Sc_2$  transverse, lying opposite the fork of  $R_{2+3}$ ;  $r$  at tip of  $R_1$ ;  $R_s$  spurred; basal deflection of  $Cu_1$  either before or beyond midlength of cell 1st  $M_2$ ; arculus broken.

Abdominal tergites obscure brown, the posterior margins of the segments a little paler; sternites obscure yellow; hypopygium and subterminal segments brownish; hypopygium large.

*Habitat*.—New Zealand (North Island).

Holotype, male, Ohakune, altitude 2,060 feet, November 18, 1921 (T. R. Harris).

Paratopotypes, 2 males, November 1–18, 1921.

By Edwards's key to the New Zealand species of *Limnophila*, the present species runs out at couplet 6 by the combination of a transverse  $Sc_2$  and an ocellate wing-pattern. A paratype was sent to Mr. Edwards for comparison with his types of *Limnophila* and he reports it as being unknown to him.

\* *Limnophila serotina*, new species.

*Female*.—Length about 16 mm.; wing 14.6 mm.

Rostrum reddish, the palpi beyond the first segment, dark brown. Antennae rather elongate for this sex, the scapal segments reddish, the basal three or four flagellar segments pale brown, thence passing into black. Head gray.

*Limnophilella serotina* (alb.).

Pronotum brown, sparsely gray pruinose. Mesonotum shiny reddish brown, darker medially, the lateral margins of the praescutum weakly pruinose; postnotum conspicuously light gray pruinose. Pleura conspicuously light gray pruinose. Halteres pale yellowish brown, the knobs dark brown. Legs with the coxae reddish, sparsely pruinose; trochanters reddish; femora dark brown, the bases broadly orange; a broad (about 2.5 mm.) orange subterminal ring before the narrow (about 1 mm.) brownish black tip; tibiae light brown, the tips narrowly darker; tarsi brown, the subterminal segments with appressed yellow pubescence. Wings very pale yellow, the costal region brighter yellow; the sparse wing-pattern resembles very much that of *Gynoplistia subfasciata* and allies; a small brown spot at origin of  $R_s$ ; a brown seam along the cord and on the outer deflection of  $M_3$ ; a small but conspicuous dark brown stigma; a brown seam along vein  $Cu$ ; wing-apex conspicuously infuscated; veins dark brown. Venation:  $Sc_2$  at tip of  $Sc_1$ , both beyond the fork of  $R_{2+3}$ ;  $r$  at tip of  $R_1$ ;  $R_s$  square and spurred at origin;  $R_{2+3}$  a little longer than the deflection of  $Cu_1$ ; cell  $M_1$  about twice its petiole; vein 2nd  $A$  long, ending beyond the origin of  $R_s$ ; arculus broken.

Abdomen brown, sparsely pruinose, the subterminal segments darker brown.

*Habitat*.—New Zealand (South Island).

Holotype, female, Riccarton Bush, Christchurch, Canterbury, April 10, 1922 (E. S. Gourlay).

**Cerozodia hudsoni** Edwards, **hemiptera**, new subspecies.

*Male*.—Length 20 mm.; wing 17.6–18 mm.

*Female*.—Length 16.5 mm.; wing 11 mm.

Generally similar to typical *hudsoni*, differing as follows: General coloration paler brown throughout, especially the abdomen and legs, the latter brownish yellow. Wings of the female well-developed though shorter than in the male (in *hudsoni*, the wings of the female measure only 3 mm.).

*Habitat*.—New Zealand (North Island).

Holotype, male, Mount Ruapehu, alpine zone, altitude 4,000–5,000 feet, January, 1921 (M. N. Watt).

Allotopotype, female.

Paratopotype, male.

The exact status of this fly is in doubt. The difference in development of the wings of the females of the two races is very conspicuous. If this difference is constant, the present form will deserve full specific rank. Types of this fly were submitted to Mr. Edwards for comparison with his types of *hudsoni*.

***Dolichopeza howesi***, new species.

*Male*.—Length 11 mm.; wing 11.8 mm.

Frontal prolongation of the head ochreous; palpi dark brown; the terminal segment reddish with the extreme tip dark. Antennae of moderate length, if bent backward extending to beyond the base of abdominal segment 2; basal segment of scape obscure yellow, darker apically; second segment brownish yellow; flagellum dark brownish black, the segments distinctly enlarged basally. Head light gray, the anterior part of vertex with an indistinct median brown line.

Mesonotum brownish ochreous, the praescutum with three broad, darker brown, stripes, the median stripe interruptedly darker medially; scutal lobes dark brown; scutellum obscure yellow; postnotum pale brown, sparsely pruinose. Pleura pale, sparsely pruinose; sternites between the fore and middle coxae darker gray. Halteres elongate, yellow, the knobs a little darker. Legs with the coxae pale, sparsely pruinose; trochanters obscure yellow, darkened apically; femora yellowish brown, this coloration less extensive on the fore femora, the tips darkened; tibiae pale brown, the tips darkened; tarsi brownish black. Wings uniformly tinged with pale brown; stigma and cell *Sc* a little darker brown; veins dark brown; obliterative areas before and beyond the stigma and at the fork of *M*. Venation: *Sc*<sub>1</sub> entirely atrophied; *Rs* oblique in position, in alignment with *Sc*<sub>2</sub>; *r-m* elongate, longer than either *Rs* or the fused portion of *Cu*<sub>1</sub>+*M*.

Abdomen almost uniformly pale brown, the basal tergite yellowish brown; hypopygium moderately large, obscure praescutum yellow.

gray      New Zealand (South Island).

Holotype, male, Mount Ida, Otago, altitude 4,500 feet, February 20, 1922 (Geo. Howes).

This very distinct fly is named in honor of the collector, Mr. W. George Howes.

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