

## NEW SPECIES OF CRANE-FLIES FROM SOUTH AMERICA. PART II.\*

(Family Tipulidæ, Order Diptera).

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The majority of the crane-flies discussed at this time are from *Chile* and *Patagonia*, where they were collected by Messrs. Faz, Jaffuel and Pirion. A few additional specimens were secured by Mr. Merkle and kindly sent to me by Dr. Carlos Bruch. Additional species described in this report are from *Argentina*, collected by Mr. and Mrs. Raymond C. Shannon; *Paraguay*, taken by Mr. F. Schade; and *Ecuador*, where they were secured by Mr. G. H. H. Tate. I am very greatly indebted to all of the above named persons for the opportunity of studying this important series of Neotropical Tipulidæ. Except where stated to the contrary, the types of the novelties are preserved in my collection.

### *Microtipula* Alexander.

#### *Microtipula* (*Microtipula*) *legitima* sp. n.

General coloration buffy yellow, the praescutum with three brown stripes, the median stripe still darker; antennal flagellum black; legs black, the femora with a yellow subterminal ring; wings extensively whitish, sparsely variegated with brown; cell *C* uniformly darkened; abdominal tergites obscure yellow, with three dark brown longitudinal stripes.

*Male.* Length about 8-8.5 mm.; wing, 8.8-9.2 mm.

*Female.* Length about 10 mm.; wing, 10 mm.

Frontal prolongation of head brownish black, the nasus short and stout; palpi black. Antennæ with the scape light yellow, flagellum black; antennæ (♂) relatively elongate, if bent backward extending about to one-fourth the length of the abdomen; terminal segment very small. Antennæ (♀) shorter, if bent backward extending about to wing-root. Head greyish brown, the anterior vertex and frons more yellowish.

Pronotum buffy yellow with a dark brown median line. Mesonotal praescutum buffy yellow, with three brown stripes, the median stripe further divided by a very conspicuous black median vitta; posterior

\* Contribution from the Department of Entomology, Massachusetts Agricultural College.

sclerites of mesonotum brown, pruinose. Pleura yellow, with two greyish longitudinal stripes; dorso-pleural region pale yellow. Halteres pale, the stem a little darkened outwardly, the knobs conspicuously pale yellow. Legs with the coxæ pale buffy brown; trochanters obscure yellow; femora black, the bases very narrowly and indistinctly brightened; a narrow yellowish subterminal ring some distance before apex; remainder of legs black. Wings with the disk extensively whitish, sparsely variegated with grey clouds that are chiefly marginal; cell *C* uniformly darkened; cell *Sc* yellow with four brown areas; two or more less continuous fasciæ cross cells *R* and *M* into the cubital and anal cells; wing-apex chiefly darkened, not variegated by marginal pale areas; stigma dark brown, confluent with the dark costal cell and a conspicuous dark seam on the anterior cord; prearcular field with cells *C* and *Sc* dark, the remaining cells whitish; veins dark brown. Macrotrichia of veins relatively long and conspicuous. Venation:  $R_{1+2}$  entirely atrophied; cell 1st  $M_2$  pentagonal, narrowed outwardly; petiole of cell  $M_1$  more than twice  $m$ ; cell 2nd *A* relatively wide. In the female, the white ground-color of the wing is even more extensive, including portions of all the posterior cells, most extensive in cells  $R_5$  and  $M_4$ .

Abdominal tergites obscure yellow with three dark brown longitudinal stripes that widen out on the outer segments, restricting the ground-color; subterminal segments almost uniformly blackened; hypopygium obscure yellow; sternites obscure yellow with a median brownish black stripe. Ovipositor with the tergal valves slender, straight, or even slightly decurved.

*Habitat:* Paraguay. *Holotype*, ♂, Villarica, October 25, 1925 (F. Schade). *Allotype*, ♀, Santa Barbara, October 17, 1925 (F. Schade). *Paratopotypes*, 3 ♂, ♀, September 9—October 14, 1925; *paratypes*, 1 ♂, Caraveni, September 20, 1925; 1 ♂, with the allotype, October 10, 1925 (F. Schade).

#### ***Microtipula* (*Microtipula*) *atrovelutina* sp. n.**

General coloration yellow; praescutum with three brownish black stripes; a conspicuous velvety-black spot on lateral margin of praescutum opposite the pseudosutural foveæ; antennal flagellum black; femora obscure yellow, the tips blackened, preceded by a clearer yellow subterminal ring; wings with the disk greyish, the margin darker; cell *Sc* bright yellow with four brown areas.

*Male.* Length about 8.5 mm.; wing, 10.5 mm.

Frontal prolongation of head light yellow, brown above; nasus distinct; palpi dark brown. Antennæ (♂) relatively long, if bent backward extending about to the root of the halteres; scape yellow, the flagellum black; flagellar segments cylindrical, the basal enlargement more evident on the outer segments. Head yellow.

Pronotum light yellow. Mesonotal praescutum obscure yellow with three brownish black stripes, the median stripe narrowed and sub-obsolete behind; scutum obscure yellow, each lobe largely blackened;

posterior sclerites of notum greenish yellow. A conspicuous velvety-black spot on the lateral margin of the praescutum and dorso-pleural region, immediately laterad of the pseudosutural foveæ. Pleura obscure yellow, the ventral pleurites more infuscated. Halteres dark brown, the base of the stem obscure yellow. Legs with the coxæ obscure yellow, the fore coxæ darkened at base; trochanters obscure yellow; femora obscure yellow, the tips broadly blackened, preceded by a subequal brighter yellow ring; tibiæ brownish testaceous, a little darkened outwardly; tarsi passing into brown. Wings with the disk extensively greyish; cell *Sc* bright yellow, with four brown areas, the first extending into cell *C*; stigma dark brown, confluent with a paler brown seam along the cord; wing-apex narrowly infumed; bases of cells *R* and *M* darkened; a dusky area near midlength of vein *Cu* in cell *M*; veins brown. No macrotrichia in cells of wing. Venation:  $R_{1+2}$  entirely atrophied; *Rs* relatively long and straight; cell  $M_1$  with the petiole longer than *m*.

Abdominal tergites bright yellow, the lateral margins of the segments blackened, the subterminal segments and hypopygium blackened; sternites obscure yellow, the terminal segments blackened.

*Habitat:* Paraguay. *Holotype*, ♂, Santa Barbara, October 17, 1925 (F. Schade).

#### ***Microtipula* (*Eumicrotipula*) *iguazuensis* sp. n.**

Antennæ (♂) elongate, bicolorous; mesonotal praescutum obscure yellow, with three brownish black stripes, the median stripe paler in front except for a capillary median vitta; pleura obscure yellow, with longitudinal brown stripes; legs black, the femora with a narrow subterminal yellow ring; wings with a brownish suffusion, handsomely variegated with yellow spots, including a submarginal series in cells  $R_3$  to  $M_4$  inclusive; cell  $M_1$  sessile to short-petiolate; cells of distal half of wing with abundant macrotrichia.

*Male.* Length about 7.5 mm.; wing, 9.5 mm.

*Female.* Length about 9 mm.; wing, 10 mm.

Frontal prolongation of head obscure yellow; nasus small; palpi dark brown, the terminal segment paling into orange. Antennæ (♂) relatively elongate, if bent backward extending to about one-third the length of the abdomen; scape light yellow, the flagellar segments bicolorous, the base of each segment black, the apex yellow, the latter color becoming more obscure on the outer segments; distal flagellar segments more uniformly darkened. Antennæ (♀) short. Head infuscated, paler in front.

Mesonotal praescutum obscure yellow with three brownish black stripes, the median stripe paler in front except for a continuous median dark vitta; scutum brownish grey, each lobe with two blackish areas; scutellum yellowish testaceous, the parascutella dark; postnotum dark, more or less pruinose. Pleura obscure yellow, longitudinally striped with blackish, including a conspicuous dorsal area on the anepisternum and pteropleurite and a more ventral stripe on the sternopleurite and

meron. Halteres light yellow, the knobs infuscated, with their tips pale. Legs with the coxæ pale; trochanters obscure yellow; femora black, the bases restrictedly yellow; a narrow yellow ring before the slightly wider black tips; remainder of legs black. Wings with a strong brownish suffusion, handsomely variegated with creamy yellow spots; cell *C* chiefly darkened, variegated by a yellow subbasal and a more extensive subterminal area; post-stigmal yellow area extending to the wing-apex in cell *R*<sub>5</sub>; a series of yellow submarginal spots in cells *R*<sub>3</sub> to *M*<sub>4</sub> inclusive; cell *1st A* with two similar areas; cell *M* variegated with two large yellowish areas that cross vein *Cu*<sub>1</sub>; a conspicuous pale area at the arculus; veins dark brown, paler in the yellowish areas. Abundant macrotrichia in all cells of distal half of wing. Venation: Cell *M*<sub>1</sub> sessile or short-petiolate.

Abdomen chiefly dark brown, the basal sternites variegated with obscure yellow; caudo-lateral margins of the tergites restrictedly pale; sternites chiefly yellow; hypopygium obscure yellow.

*Habitat:* Argentina. *Holotype*, ♂, Iguazu Falls, October 3-5, 1927 (R. and E. Shannon). *Allotopotype*, ♀. *Paratopotypes*, 3 ♂ ♂. Holotype in the U. S. National Museum.

### Tipula Linnaeus.

#### *Tipula fraudulenta* sp. n.

Allied to *T. bellardiana* Alexander (Mexico); antennæ bicolorous; femora yellow with a narrow black subterminal ring; wings with a creamy ground-color, handsomely variegated with narrow brown zigzag crossbands; vein *R*<sub>1+2</sub> entirely atrophied; ovipositor with the tergal valves gently decurved.

*Female.* Length about 11 mm.; wing, 13 mm.

Frontal prolongation of head brown; palpi dark brown. Antennæ more or less bicolorous, the basal segments obscure yellow; bases of the succeeding segments darkened; outer segments more uniformly darkened.

Mesonotum discolored, the praescutum obscure yellow, with indications of a median stripe in front; scutal lobes conspicuously marked with brown; scutellum greenish yellow. Pleura obscure yellow, variegated with darker. Halteres yellow, the base of the knob a little darkened. Legs with the coxæ brown; trochanters yellow; femora yellow with a narrow black ring before the tips; tibiae obscure yellow, the tips darkened; tarsi passing into dark brown. Wings with a cream-colored ground, handsomely variegated by narrow brown crossbands; cell *C* uniformly infuscated; cell *Sc* variegated with about three brown areas; a nearly complete brown fascia extending from the stigma obliquely across the wing before the cord to vein *Cu*<sub>1</sub>, thence along this vein to the wing-margin; a broader incomplete brown fascia in cells *R*<sub>2</sub> and *R*<sub>3</sub>; a narrow brown marginal seam around the wing-apex, the veins similarly seamed with brown, leaving submarginal creamy areas of

various sizes in the centers of the cells; a narrow zigzag brown fascia crosses the wing from the origin of *Rs* to the caudal margin in cell 1st *A*; base of cell *Cu* darkened; veins yellow, darker in the infuscated areas. Venation:  $R_{1+2}$  entirely atrophied;  $R_3$  elongate, nearly straight; cell 1st  $M_2$  small, pentagonal; petiole of cell  $M_1$  a little longer than *m*.

Abdomen discolored, the tergites apparently yellowish testaceous, the outer segments darker. Ovipositor with the tergal valves slender, gently decurved toward tips; sternal valves short.

*Habitat:* Ecuador. *Holotype*, ♀, Pallatanga, altitude 4400 feet, March 28, 1922 (G. H. H. Tate).

#### *Tipula nigrovariegata* sp. n.

*Female.* Length about 17 mm.; wing, 14.5 mm.

Allied to *T. macrosterna* (Alexander) and *T. trinidadensis* (Alexander), differing especially in the arrangement of the thoracic pattern and the coloration of the legs.

Frontal prolongation of head yellow, dark brown above; palpi obscure yellow. Antennæ yellow, the outer segments darkened. Head obscure brownish yellow.

Mesonotal praescutum shiny yellow, with black stripes, the median stripe so colored only on the cephalic third, the posterior portion being more ferruginous; lateral stripes entire, curved outwardly to the margin, narrowly connected along the pretergal region with the median stripe; scutum yellow and ferruginous, each lobe with a single circular black area on cephalic lateral portion. Pleura yellow, the propleura extensively darkened; anepisternum extensively darkened. Halteres yellow, the knobs darkened. Legs with the femora brownish black, only the narrow bases obscure yellow; tibiæ obscure yellow, the tips narrowly darkened; tarsi passing into dark brown. Wings with a strong grayish yellow suffusion, the base and costal region more suffused; stigma a little darker than the ground-color; veins yellowish brown.

Abdomen with the basal tergites yellowish, the subterminal segments black; lateral margins of the intermediate segments broadly blackened. Ovipositor with the fleshy tergal valves fulvous.

*Habitat:* Ecuador. *Holotype*, ♀, Ventura, altitude 1400 feet, April 10, 1922 (G. H. H. Tate).

#### *Tipula inarmata* sp. n.

Allied to *T. armatipennis* Alexander; antennal flagellum black; wings (♂) without a costal spur; male hypopygium with the lobes of the ninth tergite slender, divergent and slightly decurved; appendage of eighth sternite with an apical emargination.

*Male.* Length about 14 mm.; wing, 14 mm.

Frontal prolongation of head relatively short, shiny ferruginous; nasus distinct; palpi obscure yellow. Antennæ (♂) relatively long, if bent backward extending to some distance beyond the base of the abdomen; scape yellow; first flagellar segment obscure yellow, darkened

outwardly; remainder of flagellum black; flagellar segments conspicuously incised, the basal and apical enlargements subequal; verticils shorter than the segments. Head buffy yellow.

Mesonotum buffy yellow, with scarcely evident stripes; posterior sclerites clearer yellow. Pleura yellow. Halteres obscure yellow, the knobs a little infuscated. Legs with the coxæ and trochanters yellow; remainder of legs yellow, the tarsi passing into dark brown. Wings yellowish grey, the prearcular and costal regions yellow; stigma brownish yellow. No spur on costa near stigma, as in *armatipennis*, this region a trifle dilated. Venation: *Rs* short and strongly arcuated; *R*<sub>1+2</sub> very short and oblique, the cell being unusually wide; cell 1st *M*<sub>2</sub> small, long-pentagonal; petiole of cell *M*<sub>1</sub> more than twice *m*.

Abdominal tergites yellow, the lateral margins broadly infuscated, most conspicuous on the intermediate segments; median dark stripe less indicated; subterminal segments black; hypopygium castaneous. Male hypopygium with the tergite broader than long, the median area further produced into two slender divergent, slightly decurved spines that are separated from one another by a V-shaped notch. Eighth sternite produced caudad to beyond the level of the remainder of the hypopygium into a shovel-like scoop, the apex of which has a U-shaped emargination.

*Habitat:* Argentina. *Holotype*, ♂, Puerto Bemberg, Misiones, October 8, 1927 (R. and E. Shannon). Holotype in the U. S. National Museum.

#### *Tipula lanigera* sp. n.

Belongs to the *glaphyoptera* group; general coloration gray, the praescutum with four brown stripes, in addition to the broad brown lateral margins; antennal flagellum dark; femora obscure yellow, the tips blackened, preceded by a narrow clearer yellow subterminal ring; wings brown, variegated with darker brown and pale areas; abdomen yellow, the tergites with sublateral dark stripes, the outer segments uniformly darkened; abdomen of male with long conspicuous white setæ on the ventral surface of sternites four to seven.

*Male.* Length about 13 mm.; wing, 16.5 mm.

Frontal prolongation of head brown; nasus long and slender; palpi brownish black. Antennæ with the scapal segments obscure yellow, the first darker above; flagellum brownish black, the basal enlargement of the segments a trifle darker in color; longest verticils about as long as the segments; antennæ of moderate length, if bent backward extending about to the halteres. Head grey, the center of the vertex infuscated.

Mesonotum gray, the praescutum with four entire brown stripes, in addition to the broad brown lateral margins; scutum gray, each lobe with two nearly contiguous brown areas; posterior sclerites of the mesonotum-lighter gray with a conspicuous median brown line. Pleura dark brownish gray; dorso-pleural region buffy, suffused with brown. Halteres brown, the base of the stem and apex of each knob paler.

Legs with the coxæ brownish gray; trochanters brownish yellow; femora brownish yellow, the tips broadly blackened, preceded by a narrow, brighter yellow, subterminal ring; tibiæ obscure yellow, the tips infuscated; tarsi brownish yellow, passing into brown. Wings with a strong brownish suffusion, variegated with darker and pale areas; dark areas in cell *Sc* extensive, only the second pale spot being conspicuous; post-stigmal pale area very small, restricted to cells *Sc*<sub>2</sub> and base of *R*<sub>2</sub>; a narrow obliterative line across cell 1st *M*<sub>2</sub>; pale areas in apices of the cells beyond *R*<sub>2</sub>; a conspicuous yellow mark near the outer end of cell *M* adjoining vein *Cu*<sub>1</sub>; veins brown; obliterative areas extensive. Venation: *R*<sub>1+2</sub> pale but entire, with macrotrichiaë only at base; distal section of vein *M*<sub>3</sub> arcuated.

Abdomen with the first tergite brown; succeeding tergites yellow, the caudal and sublateral<sup>1</sup> portions of the segments dark brown, becoming more extensive on the outer segments, the terminal segments uniformly darkened. Male hypopygium relatively small and slender. Ninth tergite extensive, the width subequal to the length, broadest just beyond midlength, thence gradually narrowed; caudal margin with a broad, very shallow emargination; viewed from the side, each lobe with two chitinized black points. Basistyle with the ventro-caudal lobe small, scarcely longer than broad, pale in color, with conspicuous setæ; mesal lobe of about the same size, dark-colored. Outer dististyle relatively small but stout, a little enlarged outwardly, with long, conspicuous setæ. Inner dististyle bifid at apex, the caudal margin near midlength with a conspicuous fringe of pale crenulate setæ. Eighth sternite with a single median appendage, relatively small, the stem portion narrow, at apex dilated into a small flattened head that is bent strongly ventrad, clothed with short silken setulæ. Ventral surface of sternites four to seven with very long conspicuous white setæ, producing a woolly appearance.

*Habitat:* Argentina (Patagonia). *Holotype*, ♂, Bariloche, L. Nahuel Huapi, April 1922 (A. Merkle); through Dr. Carlos Bruch.

#### *Tipula anthonympha* sp. n.

Belongs to the *glaphyoptera* group; allied to *hylonympha* Alexander; mesonotum gray, the praescutum with four entire brown stripes; femora yellow, the tips blackened; wings long and narrow, marbled with brown and gray; abdomen with the intermediate tergites yellow with a broad sublateral black stripe on either side; eighth sternite of male hypopygium with a conspicuous flattened bilobed appendage, the lobules fringed with long conspicuous yellow setæ.

*Male.* Length about 23 mm. wing, 25 × 5.3 mm.

Frontal prolongation of head dark brown, pruinose above; nasus long and slender; palpi black. Antennæ short, if bent backward ending far before the wing-root; first segment brown, the apex blackened; second segment obscure yellow; flagellum black; first flagellar segment elongate, subequal to the succeeding two taken together; verticils

relatively inconspicuous, shorter than the segments. Head pruinose; vertex with a dark brown median stripe; posterior orbits lined with dark brown.

Mesonotum gray, the praescutum with four entire brown stripes, the intermediate pair narrowed behind; each scutal lobe with two brown areas; posterior sclerites of mesonotum lighter gray with a median brown vitta. Pleura gray with a broad dark brown dorsal stripe extending from the cervical sclerites to the pleurotergite, the ventral portion of the latter almost whitish gray; dorso-pleural region buffy yellow. Halteres obscure yellow, the knobs infuscated. Legs with the coxæ pruinose; trochanters dark brown; femora obscure yellow, the tips broadly blackened, preceded by a vague, narrow, brighter yellow ring; tibiæ obscure yellow, the tips infuscated; tarsi light brown, passing into darker brown at tips; claws small, simple; legs very long and slender. Wings unusually long and narrow, as shown by the measurements; yellowish subhyaline, handsomely clouded and marbled with brown and gray; cells *C* and *Sc* pale yellow, the latter with four relatively small brown areas; the pale area between the second and third dark areas extensive; stigma light brown, bordered by darker brown; all medial, cubital and anal cells marbled with gray, the bases and apices of the cells with pale areas; veins brown, the obliterative areas extensive. Venation:  $R_{1+2}$  entire but pale on distal third.

Abdomen with the basal tergites dark brown, the intermediate segments obscure yellow, broadly blackened sublaterally, the lateral margins narrowly pale; terminal segments more uniformly blackened; sternites brownish yellow, the outer segments blackened. Male hypopygium with the ninth tergite extensive but wider than long, the caudal margin with a broad V-shaped median notch. Basistyle small, the ventro-caudal lobe barely evident as a microscopic black lobule that is provided with dark setæ; mesal lobe pale, relatively inconspicuous, clothed with delicate setulæ; neither the basistyle nor its lobes bear long conspicuous reddish setæ, as is the case in *hylonympha*. Outer dististyle pale at base, the apex a little expanded. Eighth sternite with the median appendage broad, conspicuously bilobed, each lobule fringed with very long, conspicuous, yellow setæ.

*Habitat:* Argentina (Patagonia). *Holotype*, ♂, Bariloche, L. Nahuel Huapi, April 1922 (A. Merkle); through Dr. Carlos Bruch.

#### ***Tipula fazi* sp. n.**

Belongs to the *glaphyoptera* group; antennæ (♂) elongate, basal three segments yellow, remainder of flagellum black; mesonotal praescutum gray with three dark brown stripes, the median stripe weakly divided; pleura partly dark, partly yellow; femora yellow, the tips broadly blackened; claws (♂) with a conspicuous basal tooth; wings suffused with yellow, the dark pattern very reduced; male hypopygium with the ventro-caudal lobe of basistyle very small; no appendage on eighth sternite.



*Male.* Length about 13 mm.; wing, 15.5 mm.; antenna about 6 mm.

Frontal prolongation of head brownish yellow; nasus long and slender, brownish black; palpi dark brown, the terminal segment pale reddish yellow. Antennæ ( $\sigma^7$ ) unusually long, if bent backward extending to some distance beyond the base of the abdomen; scape and first flagellar segment pale yellow; remainder of flagellum black; first flagellar segment elongate, a little longer than the first scapal; remaining flagellar segments elongate, only gently incised, a little longer than the longest verticils. Head gray, paler behind.

Mesonotal praescutum gray with three dark brown stripes, the median stripe except at posterior end divided by a pale line and further split by a capillary dark brown vitta; scutum gray, each lobe with two brown areas; scutellum gray, paler laterally, with a median brown line; postnotal mediotergite gray with a vague darker median line, the lateral margins narrowly pale. Pleura with the anepisternum and ventral sternopleurite dark, sparsely pruinose; remainder of pleura, including the pleurotergite and dorsal sternopleurite pale; dorso-pleural membrane yellowish. Halteres pale, the outer end of the stem and the knobs dark brown, the apices of the latter restrictedly pale. Legs with the coxæ and trochanters yellow, sparsely pruinose; femora yellow, the tips broadly and conspicuously blackened, preceded by a vaguely brighter yellow ring; tibiæ obscure yellow, the tips broadly infuscated; basal two tarsal segments pale, the tips and outer tarsal segments infuscated; claws with a long slender basal tooth. Wings with a yellowish suffusion, the distal third somewhat more infumed; stigma brown, oval; three vague brown clouds in cell *Sc*; anterior cord with a similar scarcely indicated pale brown cloud; post-stigmal pale area including the basal third of cells *R*<sub>2</sub> and *R*<sub>3</sub>; a narrow white obliterative line in outer end of cell *R* and base of cell *1st M*<sub>2</sub>, barely reaching *M*<sub>4</sub>; cell *Cu*<sub>1</sub> uniformly darkened; vein *Cu*<sub>1</sub> in cell *M* on distal two-thirds conspicuously seamed with brown, interrupted at near two-thirds the length of the cell; veins dark brown. Venation: Free tip of *Sc*<sub>2</sub> and *R*<sub>1+2</sub> entire, both with macrotrichiæ for entire length; cell *1st M*<sub>2</sub> relatively small, pentagonal.

Abdomen with the basal tergite gray; succeeding tergites yellow with a conspicuous median black stripe and scarcely indicated brown lateral stripes; on the outer segments the black is very extensive, including all of segments seven and eight and most of nine. Male hypopygium small. Ninth tergite large, black, with a large pale basal triangle; lobes abruptly yellow; caudal margin of tergite thin, with a median U-shaped notch, the lateral lobes broad, the apex of each with four or five microscopic denticles. Basistyle relatively small, complete; ventro-caudal lobe very small, subglobular, with conspicuous setiferous tubercles; mesal lobe larger but still inconspicuous, pale, when viewed from beneath subtriangular in outline; neither lobe projecting strongly beyond the genital chamber. Outer dististyle subcylindrical, terete, the outer half with long pale setæ. Eighth sternite unarmed.

*Habitat:* Chile. *Holotype*, ♂, L. Panguipulli, Valdivia, March 3, 1924 (Alf. Faz). *Holotype* in U. S. National Museum.

*Tipula fazi* is named in honor of the collector, Mr. Alfredo Faz.

***Tipula spatulifera* sp. n.**

Belongs to the *glaphyroptera* group; antennæ bicolorous; mesonotal praescutum obscure yellow with three brown stripes; male hypopygium with the appendage of the eighth sternite appearing as a conspicuous median spatula, the blade nearly as wide as long, the dorsal surface with a dense cushion of short setæ.

*Male.* Length about 14 mm.; wing, 15–15.5 mm.

Frontal prolongation of head yellow, with a narrow darker lateral line; nasus short and stout, with black setæ; palpi brownish black. Antennæ with the scape and basal flagellar segment yellow, the succeeding flagellar segments vaguely bicolorous, the basal enlargement black, the remainder obscure brownish yellow; outer flagellar segments broken; longest verticils subequal to the segments. Head ochreous, the vertex apparently marked with brown

Mesonotal praescutum obscure yellow with three brown stripes, the median stripe entire except in front where it is slightly divided by a pale vitta; scutum grayish laterally, more yellow medially, each lobe with two brown areas; posterior sclerites of mesonotum yellow with a narrow brown median vitta. Pleura variegated obscure yellow and brownish gray, the latter color on the sternopleurite, dorsal and ventral anepisternum, ventral pteropleurite and meron; remainder of pteropleurite clearer yellow with a sparse white pollen. Halteres yellow, the knobs dark brown. Legs with the coxæ obscure yellow, a little darkened at base; trochanters obscure yellow; remainder of legs broken, except the base of the fore femur which is light yellow. Wings with a brownish suffusion, conspicuously variegated with white; cells *C* and *Sc* more yellowish; three brown areas in cell *Sc*; post-stigmal crossband nearly complete; pale marginal spots in cells *R*<sub>5</sub> to *1st A* inclusive; cell *2nd A* pale.

Abdomen obscure yellow, the tergites trivittate with dark brown, on the outer segments the stripes widened to include most of the segments; subterminal segments blackened; hypopygium with the sternite and basistyle dark, the tergite and appendage of eighth sternite pale. Male hypopygium relatively large. Ninth tergite gently arched, the caudal margin slightly narrowed, with a small U-shaped median notch; lateral lobes truncate, low and broad. Basistyle complete; ventro-caudal lobe relatively long and slender, at least five times as long as thick, with long conspicuous setæ; mesal lobe conspicuous, extended caudad beyond the level of the ventral lobe, appearing as a pale structure that is densely set with microscopic setulæ; viewed ventrally the mesal appendage is seen to be conspicuously trilobed. Outer dististyle gently enlarged outwardly, with elongate setæ. Inner dististyle compressed, the caudal margin with long pale setæ. Eighth

sternite with a conspicuous median spatulate structure that is nearly as wide as long, the dorsal surface of the blade densely set with a cushion of short erect setæ.

*Habitat:* Chile. *Holotype*, ♂, L. Panguipulli, Valdivia, February 4, 1924 (Alf. Faz). *Paratopotype*, ♂. Holotype in U. S. National Museum.

#### *Tipula tersa* sp. n.

Belongs to the *glaphyoptera* group; antennæ short, bicolorous; mesonotal praescutum striped with brown and gray; wings whitish subhyaline, heavily and conspicuously variegated with brown; post-stigmal white area short and broad, extending into cell  $R_5$ ; male hypopygium with the mesal lobe of the basistyle very long, approximately twice as long as the ventro-caudal lobe, stout, gently arcuated; appendage of eighth sternite trifid, the median lobe longest.

*Male.* Length about 16 mm.; wing, 16 mm.

Frontal prolongation of head obscure yellow, darker and slightly pruinose above; nasus elongate; palpi brownish black. Antennæ relatively short, if bent backward ending some distance before the wing-root; scape and basal two flagellar segments obscure yellow, the succeeding flagellar segments bicolorous, the basal enlargement black, the remainder yellow, on the outermost segments becoming more uniform brown; flagellar segments only slightly incised, the basal enlargements small; longest verticils a little exceeding the segments, shorter on the outer segments. Head gray, the vertex a little more brownish gray.

Mesonotal praescutum with the ground-color restrictedly pale brown, with three brown and gray stripes; median stripe chiefly gray, the lateral margins on the posterior two-thirds and a capillary median vitta the entire length dark brown; lateral stripes entire, dark brown, margined with light grey; posterior interspaces pruinose, the setiferous punctures conspicuous, dark brown; lateral and humeral regions of the praescutum of the ground-color; scutum gray, each lobe with two extensive dark brownish gray areas; scutellum pale, the central portion more infuscated; postnotum gray with a dark median vitta. Pleura gray, the dorso-pleural region buffy. Halteres pale, the knobs infuscated. Legs with the coxæ sparsely pruinose; trochanters obscure yellow; femora yellow, weakly and inconspicuously darkened before the tips; tibiæ yellow, the tips infuscated; basitarsi pale, the remainder of the tarsi passing into black. Wings whitish subhyaline, heavily and conspicuously variegated with brown; post-arcular brown mark extensive, reaching the costal margin; three additional brown spots along cell  $Sc$ , the largest at origin of  $R_5$ ; stigmal area connected with a large cloud on the cord, barely interrupted by a delicate obliterative line across cell 1st  $M_2$ ; wing-apex broadly infumed; post-stigmal pale area short and broad, extending from costa into cell  $R_5$ ; apex of cell  $R_5$  pale; distal ends of cells  $M_1$  to  $M_3$  pale; a conspicuous dark area in the outer end of cell  $M$  and most of  $M_4$ ; both ends of cell  $Cu_1$  darkened; cubital

and anal cells variegated with pale brown and whitish subhyaline; veins brown, obliterative areas extensive. Venation: Distal end of  $R_{1+2}$  pale but entire.

Abdomen yellow, the tergites trivittate with dark brown, the median line narrower; subterminal segments more uniformly darkened; hypopygium yellow. Male hypopygium with the ninth tergite extensive, suddenly but slightly narrowed toward caudal end, the caudal margin with a small but very deep U-shaped median notch; lateral lobes obliquely truncated. Basistyle entire, the dorso-apical angle produced, its apex flattened and obtuse; ventro-caudal lobe small, at least four times as long as thick, with very long setæ that are longer than the lobe; mesal lobe very long and conspicuous, directed caudad, fully twice as long as the ventro-caudal lobe, appearing as a pale, gently arcuated structure that is narrowed gradually to the blunt apex, the surface with microscopic setulæ; viewed from beneath, these lobes are seen to be contiguous on basal half, the tips gently divergent. Eighth sternite with the appendage extensive, the basal portion broad; median lobe slender, fully one-half longer than the lateral lobes, the latter a little broader.

*Habitat:* Chile. *Holotype*, ♂, Bio Bio, January 1928 (A. Pirion).

#### *Tipula microspilota* sp. n.

Belongs to the *glaphyoptera* group; general coloration obscure yellow; antennæ bicolorous; mesonotal praescutum with brown stripes, the median stripe trifid; wings with a faint brownish suffusion, the stigma and a small spot on the anterior cord darker brown; male hypopygium with the appendage of the eighth sternite trilobed, all lobes slender, the median lobe a little longer.

*Male.* Length about 12.5–13 mm.; wing, 15.5–16.5 mm.

Frontal prolongation of head light brown, the nasus elongate. Antennæ with the basal three segments yellow, the succeeding segments bicolorous, the basal enlargement of each black, the remainder yellow; outer segments more suffused; flagellar segments relatively long, the longest verticils nearly equal to the segments. Head gray.

Mesonotal praescutum obscure yellow, with dark brown stripes, the median stripe trifid by a capillary yellow vitta on either side of the subequal median brown line; setigerous punctures conspicuous; scutum gray, the lobes variegated with brown; scutellum yellowish testaceous, brown medially; postnotum light gray, darker medially. Pleura yellow ochreous, more grayish pruinose in fully-colored specimens. Halteres dark brown, the base of the stem pale. Legs with the coxæ and trochanters concolorous with the pleura; femora brownish yellow, the tips scarcely darkened; tibiæ brownish testaceous, the tips scarcely darkened; tarsi passing into pale brown. Wings with a brownish yellow suffusion, the stigma and a small area on the anterior cord darker; obliterative areas before and beyond the stigma and across cell  $1st M_2$  barely evident; veins dark brown. Venation: Petiole of cell  $M_1$  longer than  $m$ .

Abdomen obscure brownish yellow, the tergites trivittate with dark brown, on the subterminal segments appearing as a blackened ring; hypopygium conspicuously yellow. Male hypopygium with the ninth tergite extensive, the caudal margin subtruncate, on either side of the median area a little produced; dorso-median region of tergite channeled; apex of tergite glabrous. Basistyle with the ventro-caudal lobe relatively short and stout, approximately three times as long as thick, tufted with long yellow setæ that exceed the lobe in length; mesal lobe relatively small, the mesal face of each with a brush of long curved reddish setæ that are decussate across the median region of the genital chamber. Eighth sternite with the appendage trilobed, the median lobe slender, a little longer than the lateral lobes; lateral lobes narrow, only a trifle wider than the median lobe, at base on mesal margin a little dilated and darkened, toward the tips a trifle narrowed and incurved to the median lobe.

*Habitat:* Chile. *Holotype*, a teneral ♂, Malleco, January 1928 (A. Pirion). *Paratype*, ♂, L. Panguipulli, Valdivia, February 1924 (Alf. Faz); U. S. National Museum.

### Holorusia Loew.

#### *Holorusia schineriana* sp. n.

Allied to *H. concinna* (Philippi); mesonotal praescutum with four blackish stripes that are narrowly margined with velvety-black; wings with the costal region yellow; wing-apex broadly brown, variegated with white areas before and beyond the stigma and at outer end of cell 1st  $M_2$ ; male hypopygium with the median notch of the ninth tergite unusually wide.

*Male.* Length about 15–16 mm.; wing, 18–19 mm.

Frontal prolongation of head brownish black, paler laterally; palpi black. Antennæ black throughout, the second scapal segment brighter at apex; terminal segment very slender, about one-third longer than the penultimate. Head obscure fulvous, the vertex with a capillary brown median line.

Mesonotum yellowish gray, the praescutum with four blackish stripes that are narrowly margined with deeper velvety-black, the posterior interspaces more obscure; scutellum brownish black; postnotum dark, with a yellowish gray pollen. Pleura black, with pruinose areas on the dorsal sternopleurite and meron; pteropleurite more reddish brown; ventral protuberance of the pleurotergite with a golden-yellow pollen; dorso-pleural region buffy yellow. Halteres dark brown, the base of the stem narrowly brighter. Legs with the coxæ dark brown, sparsely yellowish gray pruinose; femora brownish yellow, the tips blackened; tibiæ obscure yellow, the bases and tips infumed; tarsi brownish black. Wings with cells *C* and *Sc* yellow; distal third of wing brown, the stigma still darker brown; whitish areas before and beyond the stigma and in the bases of cells 2nd  $M_2$  and  $M_3$ ; distal section

of  $Cu_1$  and outer end of vein *2nd A* seamed with darker brown; pre-arcular region darkened in part; veins dark brown, the costal veins more yellowish. Venation: Cell  $M_1$  more than twice its petiole; cell *1st M<sub>2</sub>* relatively narrow.

Abdomen black, the intermediate portions of the basal sternites weakly reddish; caudal and lateral margins of the segments very narrowly pale; hypopygium dark, the styli obscure yellow. Male hypopygium with the lateral lobes of the ninth tergite relatively narrow, the tips a little narrowed and slightly divergent, the median notch wide, at outer end only a little narrower than the lobes themselves. Outer dististyle unusually long and slender, extending to some distance beyond the end of the inner dististyle.

*Habitat:* Chile. *Holotype*, ♂, Marga-marga, February 20, 1927 (A. Pirion). *Paratopotypes*, 1 ♀, September 17, 1927; 1 ♂, 1 ♀, February 14, 1928; 1 ♂, February 25, 1927; 1 ♀, January 25, 1928 (A. Pirion).

This distinct species of the *concinna* group is named in honor of the eminent Dipterologist, J. R. Schiner.

### **Limonia** Meigen.

#### **Limonia** (*Limonia*) **praeclara** sp. n.

General coloration yellow; anterior vertex silvery-white; legs black, the tips of the tibiae and central portions of the tarsi white; wings with a rich brownish suffusion, sparsely spotted and seamed with dark brown.

*Male.* Length about 8 mm.; wing, 9.5 mm.

Rostrum very reduced, obscure yellow; palpi short, brownish black, 3-segmented, the second segment longest. Antennae black throughout; basal flagellar segment enlarged, the outer segments becoming more elongate and attenuate, with long conspicuous verticils; terminal segment slender, more than one-half longer than the penultimate. Head obscure yellow, the anterior vertex with a silvery-white pruinosity; a narrow dusky line crosses the vertex opposite the posterior angles of the eyes.

Thorax with an obscure yellow dorso-median longitudinal stripe, extending from the pronotum to the abdomen, much narrower and less distinct on the postnotum; praescutum with the lateral stripes less distinct, crossing the suture onto the antero-lateral portions of the scutal lobes; interspaces of the praescutum more infuscated; posterior sclerites of mesonotum more or less infuscated. Pleura yellow; sternopleurite with a few scattered setae. Halteres of moderate length, infuscated. Legs with the coxae and trochanters yellowish testaceous; femora dark brown; tibiae black, the tips broadly and conspicuously white; tarsi black, the tips of the basitarsi and segments two and three white; outer tarsal segments darkened; claws long and slender, each with a basal and a premedial slender spine. Wings with a rich brownish suffusion, with a sparse but conspicuous darker brown pattern; con-

spicuous circular areas at origin and fork of  $R_s$  and at stigma; small restricted seams on  $Sc_2$ , along cord and outer end of cell  $1st M_2$ ; veins dark brown. Venation:  $Sc$  relatively long,  $Sc_1$  ending at near two-thirds the length of  $R_s$ ,  $Sc_2$  at its tip;  $R_s$  angulated and short-spurred at origin; free tip of  $Sc_2$  a short distance beyond  $R_2$ ; cell  $1st M_2$  large, the inner end more or less arcuated;  $m-cu$  near fork of  $M$ , longer than the distal section of  $Cu_1$ .

Abdominal tergites dark brown, with a median yellow stripe on the basal segments; outer segments and hypopygium darkened; basal sternites obscure yellowish, the outer segments darkened. Male hypopygium with the ninth tergite low, much wider than long, the caudal margin gently emarginate, each lobe short, with conspicuous setæ. Basistyle with the ventro-mesal lobe large, obtuse. Ventral dististyle smaller than the basistyle, fleshy, bilobed, the dorsal dististyle lying in the notch between the lobes; rostral prolongation slender, nearly glabrous, without distinct spines. Dorsal dististyle a powerful chitinized rod, the tip strongly curved to an acute point; stem of the style microscopically roughened. Gonapophyses conspicuously flattened, the mesal apical angle produced into a slender lobe.

*Habitat:* Argentina. *Holotype*, ♂, Iguazu Falls, October 3-5, 1927 (R. and E. Shannon).

Holotype in U. S. National Museum.

#### ***Limonia* (*Limonia*) *repanda* sp. n.**

General coloration yellow; antennal flagellum pale; mesonotal praescutum with a narrow brownish black median stripe on the anterior half; wings yellow, sparsely marked with brown;  $R_s$  square or even slightly acute at origin.

*Male.* Length about 5 mm.; wing, 6.2 mm.

*Female.* Length about 5.5 mm.; wing, 6 mm.

Rostrum and palpi black. Antennæ with the basal segment black, the second segment brown; flagellum pale yellowish white; flagellar segments subglobular, the outer segments passing into oval. Head obscure brownish yellow, the anterior vertex more silvery.

Pronotum black. Mesonotum yellow, the praescutum with a single narrow brownish black median stripe on the anterior half; postnotal mediotergite with a conspicuous brown median area that is narrowed to a point behind. Pleura yellow. Halteres relatively short, greenish testaceous. Legs with the coxæ yellow; trochanters greenish; remainder of legs pale, more or less tinged with greenish, the terminal tarsal segments a little darker. Wings yellow, the base and costal region brighter yellow; a sparse but conspicuous brown pattern, distributed as follows: An oblique seam from costa at  $Sc_1$ , across the base of  $R_s$  almost to  $M$ ; narrow seams on the posterior cord and outer end of cell  $1st M_2$ ; narrow seams on the free tip of  $Sc_2$  and  $R_2$ ; apices of veins  $M_3$ ,  $M_4$  and  $1st A$  narrowly seamed with brown; vein  $2nd A$  with a conspicuous brown seam on distal third; veins yellow, darker in the infuscated areas. Venation:  $Sc$  of moderate length only, extending a short distance

beyond the origin of  $R_s$ ,  $Sc_2$  at its tip;  $R_s$  rectangular or even bent at a slight acute angle at origin; free tip of  $Sc_2$  and  $R_2$  in alignment;  $m-cu$  at fork of  $M$ , longer than the distal section of  $Cu_1$ ; vein *2nd A* short, subangularly bent before apex.

Abdomen yellow. Male hypopygium with the ventral dististyle large and fleshy, the rostral prolongation flattened, bearing two small, subequal, gently curved spines that are placed rather close together at near midlength of the caudal margin. Ovipositor with the valves slender, the tergal valves gently upcurved.

*Habitat*: Ecuador. *Holotype*, a teneral ♂, Pallatanga, altitude 4400 feet, March 26, 1922 (G. H. H. Tate). *Allotopotype*, ♀, March 31, 1922.

**Limonia** (Peripheroptera) **incommodes** sp. n.

*Male*. Wing, 5.2 mm.

Very similar to *L. (P.) incommoda* (Osten Sacken), differing as follows: Size smaller. Coloration shiny brownish black. Wings hyaline, the tip not darkened; stigma less distinct. Venation:  $Sc$  short,  $Sc_1$  ending far before the origin of  $R_s$ , the distance about equal to  $m-cu$ ;  $R_s$  longer than the basal deflection of  $R_{4+5}$ ; basal deflection of  $M_{1+2}$  about three times  $r-m$ ; petiole of cell  $M_3$  shorter than the cell;  $m-cu$  fully its own length before the fork of  $M$ .

*Habitat*: Peru. *Holotype*, a broken ♂, Tambillo, 1895. *Holotype* in the Natural History Museum, Vienna.

**Limnophila** Macquart.

**Limnophila seclusa** sp. n.

General coloration ferruginous, the praescutum with a median brown stripe on anterior half; head pruinose; wings yellowish, the stigma and a seam on the cord very pale brown;  $R_2$  near the fork of  $R_{3+4}$ ;  $m-cu$  at or beyond midlength of cell *1st M*<sub>2</sub>.

*Female*. Length about 9.5–10 mm.; wing, 8.6–9 mm.

Rostrum obscure yellow; palpi dark brown. Antennæ with the scapal segments testaceous yellow, the first segment relatively short; flagellum broken. Head brown, pruinose, light gray on the anterior vertex and posterior vertex; head strongly narrowed behind.

Pronotum brownish yellow to ferruginous brown. Mesonotum reddish brown, the praescutum with a single black median stripe on anterior half. Pleura reddish ferruginous. Halteres pale, the knobs slightly infuscated. Legs with the coxæ concolorous with the pleura; trochanters obscure yellow; remainder of legs broken. Wings with a yellowish ground-color, the stigma pale brown; cord vaguely seamed with pale brownish; veins darker brown. Venation:  $Sc_1$  ending opposite the fork of  $R_s$ ,  $Sc_2$  at its tip;  $R_2$  variable in position, in the type before the fork of  $R_{3+4}$ , in the paratype beyond this fork on  $R_3$ , a little shorter than  $R_{1+2}$ ; cell  $M_1$  present, much shorter than its petiole;  $m-cu$  near or beyond midlength of cell *1st M*<sub>2</sub>; vein *2nd A* gently sinuous.



Abdomen relatively long and slender; tergites brown, the sternites more yellowish. Ovipositor with the valves relatively long, the tergal valves gently upcurved.

*Habitat:* Chile. *Holotype*, ♀, Pailahueque, Malleco, January, 1928 (A. Pirion). *Paratopotype*, ♀.

***Limnophila litigiosa* sp. n.**

General coloration dark brown; pleura sparsely pruinose; wings with a cream-colored ground, sparsely variegated with pale brown, including the stigma and vague seams along the cord and vein *Cu*;  $R_2$  at fork of  $R_{3+4}$ ; cell  $M_1$  present but small; *m-cu* close to the fork of  $M$ .

*Female.* Length about 9 mm.; wing, 9 mm.

Rostrum and palpi brown. Antennæ relatively short; scape black; flagellum dark brown; flagellar segments a little produced on the lower face. Head dark brown, sparsely pruinose.

Pronotum dark brown. Mesonotum brown, the praescutum with a somewhat darker median stripe, the surface with a very sparse yellowish pollen; scutellum broad, paler brown. Pleura and postnotum dark, with a sparse grayish pruinosity. Halteres pale yellow. Legs with the coxæ and trochanters brownish testaceous; femora yellowish brown, the tips somewhat darker; tibiæ pale brown, the tips scarcely darkened; tarsi pale brown; tibial spurs small. Wings cream-colored, with a sparse brown pattern; stigma oval; vague clouds at origin of  $R_s$ , along cord and as a seam along vein  $Cu_1$ ; veins pale brown. Venation:  $Sc$  relatively short,  $Sc_1$  extending to opposite the fork of  $R_s$ ,  $Sc_2$  a short distance from its tip;  $R_2$  at fork of  $R_{3+4}$ , a little shorter than  $R_{1+2}$ ;  $R_3$  and  $R_4$  rather strongly diverging; cell  $R_3$  at margin nearly twice as wide as cell  $R_2$ ; cell  $M_1$  present, less than one-half its petiole; *m-cu* close to the fork of  $M$ .

Abdomen light brown, the outer segments somewhat darker; genital segment yellowish. Ovipositor with the valves relatively short, the tergal valves yellow, gently upcurved; sternal valves subequal, blackened at base.

*Habitat:* Chile. *Holotype*, ♀, Marga-marga, February, 1928 (Jaffuel and Pirion).

I am not entirely certain that this fly is not more correctly referable to the subgenus *Paralimnophila* of *Gynoplistia*. The venation of both wings of the type is deformed in cell  $R_5$  and in the medial field, there being two adventitious cross-veins in cell  $R_5$  in each wing but in different positions on the two sides.

***Gynoplistia* Westwood.**

***Gynoplistia* (*Paralimnophila*) *pachyspila* sp. n.**

Antennæ simple; mesonotal praescutum yellowish gray with three heavy brown stripes; a conspicuous brownish black longitudinal stripe

on the dorsal thoracic pleura; femora yellow, with two brownish black rings, the broadest terminal in position; wings narrow, heavily spotted and dotted with brown; cell *2nd A* narrow.

*Male.* Length about 9 mm.; wing,  $8.2 \times 1.6$  mm.

Rostrum and palpi dark brown. Antennæ with the scapal segments obscure yellow, sparsely pruinose; flagellum broken. Head brownish gray, clearer gray in front, the anterior vertex with an obscure yellow area; a broad dark brown median stripe on the posterior vertex and occiput.

Pronotum gray, with a dark median line. Mesonotal praescutum yellowish gray with a conspicuous dark brown pattern, including three stripes that are so extensive as to reduce the interspaces to capillary lines; humeral region restrictedly darkened; a brownish black lateral marking crosses the suture onto the lateral portions of the scutal lobes; pseudosutural foveæ very large, black; posterior sclerites of mesonotum golden-yellow, heavily marked with dark brown, including the scutal lobes and a nearly continuous dark line from the suture to the abdomen. Pleura yellowish gray, with a broad brownish black longitudinal stripe from the pronotum, across the dorsal pleurites to the postnotum; sternopleurite less distinctly darkened. Halteres pale, the knobs brownish black. Legs with the coxæ yellowish gray, the tips ringed with brown; trochanters obscure yellow; femora yellow, with the tip and a narrower ring at about two-thirds the length brownish black, enclosing a clearer yellow annulus; remainder of legs broken. Wings narrow, as shown by the measurements; ground-color creamy-yellow, the base and costal region clearer yellow; stigma oval, dark brown; cells *C* and *Sc* variegated with three subequal dark brown areas, the second at origin of *R*<sub>5</sub>, the third at *Sc*<sub>2</sub>; a large area at end of vein *R*<sub>3</sub>; remaining surface of the wing with abundant brown dots and spots in all the cells; veins dark brown, the costal, subcostal and radial veins more yellowish. Venation: *R*<sub>2+3+4</sub> very short but evident; cell *2nd A* very narrow, especially on the basal half, the anal lobe very reduced.

Abdomen brownish black, including the small hypopygium; sternites testaceous yellow, the caudal margins of the segments ringed with dark brown.

*Habitat:* Chile. *Holotype*, ♂, Malleco, January, 1928 (A. Pirion).

### *Aphrophila* Edwards.

#### *Aphrophila chilena* sp. n.

General coloration yellow; antennæ black, the scape yellow; legs yellow, the tips of the femora and tibiæ slightly darkened; wings whitish subhyaline, the stigma and axillary region infumed; *R*<sub>2</sub> opposite or shortly before the fork of *R*<sub>4</sub>; cell *1st M*<sub>2</sub> closed; male hypopygium with the apex of the dististyle quadridentate.

*Male.* Length about 4.5–6 mm.; wing, 6–7 mm.

*Female.* Length about 5.5–6.5 mm.; wing, 5.5–7.5 mm.

Rostrum yellow; palpi brownish black. Antennæ with the scape yellow; flagellum black; flagellar segments short-oval, crowded. Head brownish yellow.

Mesonotal praescutum yellow with four deep fulvous stripes; scutum similar, each lobe with fulvous markings; scutellum yellow; postnotum somewhat darker. Pleura light fulvous to ochreous. Halteres pale yellow throughout. Legs with the coxæ concolorous with the pleura; trochanters yellow; remainder of legs yellow, the tips of the femora and tibiæ insensibly darkened; terminal tarsal segments passing into dark brown. Wings whitish subhyaline; stigma small, pale brown; a conspicuous brown wash in the axillary region; veins pale, veins  $R_1$  and  $R_5$  somewhat darker in color. Venation:  $Sc_2$  close to the tip of  $Sc_1$ ;  $R_s$  of moderate length, subequal to  $R_{2+3+4}$ ;  $R_2$  subequal to  $R_{1+2}$ , placed at or shortly beyond the point of departure of  $R_4$ ;  $R_{3+4}$  in alignment with  $R_{2+3+4}$  and  $R_3$ ; cell 1st  $M_2$  closed;  $m$  much shorter than the basal section of  $M_3$ ;  $m-cu$  close to the fork of  $M$ ; cell 2nd  $A$  very large.

Abdomen brownish yellow, in the male with the subterminal segments brownish black; hypopygium large, fulvous-yellow. Male hypopygium with the basistyles very large and powerful, as in the group; dististyle as in the genus, single, appearing as a powerful compressed blade, the apex quadridentate, the outer margin on basal half with long retrorse setæ. Ovipositor with the valves short and powerful, as in the genus; a pencil of setæ on either side, dorsad of the valves.

*Habitat:* Chile. *Holotype*, ♂, Province of Bio Bio, January 1928 (A. Pirion). *Allotype*, ♀, Pailahueque, January, 1928 (A. Pirion). *Paratopotypes*, ♂ ♀; *paratypes*, 7 ♂ ♀, with the allotype.

The discovery of a species of *Aphrophila* in Chile is of the greatest importance and significance in supporting the contention of a former Antarctic land-connection between southern South America and Australasia. The genus was hitherto represented only by eight species in New Zealand, where certain of the forms are common and relatively well-known. The adult flies are very similar in their habits to the Blepharoceridæ, being found close to the margins of mountain torrents, often on the faces of rocks that are wet with spray, whence the name of "Foam-loving Crane-flies." As was the case with the finding of the net-winged midge, *Edwardsina*, spp., in Australia and Tasmania, following their original discovery in Chile, the present detection of *Aphrophila*, with its restricted larval habitat in fresh, fast-flowing streams, would compel us to presuppose an extensive and rugged Archinotis, rather than a tenuous finger of land of low altitudes.