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RECORDS AND DESCRIPTIONS OF CHILEAN TIPULIDAE (ORDER DIPTERA).—PART I.

BY

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The most recent paper that considers the crane-fly fauna of Chile is that by the present writer, based especially on the rich collections made in 1926 by Edwards and Shannon. (*Diptera of Patagonia and South Chile. Part. I—Crane-flies*.—Published by the British Museum, London, pp. v-xvi, 1.—241, 3 text-figs., 12 pls.; 1929). Since the completion of the cited report, numerous additional Tipulidae have been sent to me for study and it is the purpose of the present series of papers

to discuss certain of the rarities and new species involved. Acknowledgements are made throughout the text.

A).—A LIST OF TIPULIDAE COLLECTED AT CAYUTUE IN JANUARY 1933, BY DR. EDWYN P. REED.

I am greatly indebted to my friend, Dr. Edwyn P. Reed for further co-operation in studying the marvelous crane-fly fauna of Chile. The species listed below were taken at Cayutue, Lago Todos los Santos, Llanquihue, altitude about 500 feet, in mid-January, 1933. The specimens were mostly taken at and near the home of Dr. Kurt Wolffhügel, distinguished scientist, to whom Dr. Reed acknowledges much kindly co-operation in collecting insects upon this particular excursion.

- Elnoretta acracanthoides* Alex.; 1 ♂, 1 ♀.  
*Tipula bigotiana* Alex.; 1 ♀.  
*T. duseni* Alex.; 1 ♂.  
*T. glaphyroptera* Phil.; 2 ♂♂.  
*T. jeannickeana* Alex.; 1 ♂ 2 ♀♀.  
*T. microspilota* Alex.; 1 ♂, 6 ♀♀.  
*T. pallidisignata* Alex.; 1 ♂.  
*T. pirioni* Alex.; 1 ♀.  
*T. reedi* sp. n.; described under Part B of this report.  
*T. spatulifera* Alex.; 1 ♂, 2 ♀♀.  
*Austrolimnophila hazelae* Alex.; 1 ♂.  
*A. microsticta* Alex.; 1 ♂.  
*A. tremula* Alex.; 1 ♂.  
*Gynoplistia manicata* Alex. 1 ♂.  
*G.* sp., probably *striatipennis* Alex., 1 ♀.

This last-mentioned specimen was found dead beneath a stone, January 13, 1933. It is subapterous but with venation evident and not greatly distorted.

B).—DESCRIPTIONS OF NEW SPECIES

**Macromastix (Araucomyia) brevihirsuta**, sp. n.

General coloration of notum brown to gray, the praescutum with four brown stripes; antennae (♂) not exceeding the wing in length; vestiture of head and thorax (♂) short and inconspicuous; wings grayish, the costal region and stigma more yellowish; prearcular region more infuscated; abdomen reddish, the tergites narrowly but conspicuously trivittate with dark brown.

*Male*.—Length, about 15 mm.; wing, 15.5 mm.

*Female*.—Length, 24-26 mm.; wing, 16-17 mm.

Frontal prolongation of head brown; palpi black; nasus long and conspicuous. Antennae (♂) of moderate length, partly broken in the type, but when complete evidently not exceeding the length of the body or of one wing; scape and pedicel reddish brown, the flagellum passing into darker brown; basal flagellar segment constricted at one-third the length; second segment little longer; third subequal to second. Head brown the anterior orbits more yellowish; vertical tubercle of moderate size, a little higher in male; head of female more pruinose; vestiture of head short, black.

Mesonotal preescutum with the ground-color yellowish, gray laterally, with four distinct brown stripes; posterior sclerites of mesonotum more yellowish gray, the scutal lobes variegated with darker. In female, the preescutum more yellowish, the vestiture relatively short and inconspicuous. Pleura chiefly yellowish gray. Halteres yellow, the knobs dark brown. Legs with the coxae weakly pruinose; remainder of legs yellow, the tips of femora and tibiae narrowly infuscated the latter more noticeably so; terminal tarsal segments passing into dark brown. Wings grayish, the costal region more yellowish, the prearcular region more infuscated; stigma yellow; a restricted dark cloud on anterior cord, especially at base of vein R4+5; veins brown, C, Sc, R, Cu and 2nd A more yellowish. Venation: Petiole of cell  $M_1$  short; *m-cu* longer than distal section of  $Cu_1$ ; cell 2nd A relatively wide.

Abdomen reddish to reddish yellow, the tergites narrowly trivittate with dark brown, more conspicuous in female; sternites more uniformly yellow, the ninth sternite of male darker. Ovipositor with powerful sclerotized cerci, as in subgenus.

*Hab.* Chile.

*Holotype*, ♂, Marga-Marga, January, 1933 (A. Pirion).

*Allotopotype*, ♀, February, 1933 (A. Pirion).

*Paratopotypes*, 3 discolored ♀♀, with allotype; one preyed upon by an Asilid, *Erax griseus* Guérin.

I am indebted to my friend, P. Anastasio Pirion, for the privilege of describing this species and retaining the types. The fly is most nearly allied to *Macromastix* (*Araucomyia*) *paulseni* (Phil.), differing especially in the shorter antennae of male, together with the short, inconspicuous vestiture of the head and thorax.

### **Tipula reedi, sp. n.**

Belongs to the *glaphyroptera* group; mesonotal praescutum gray with four dark brown stripes, in addition to a capillary dark median vitta; antennae ( $\sigma^7$ ) relatively short; wings brown, only sparsely variegated by darker brown and whitish areas; basal abdominal segments chiefly yellow, the tergites trivittate with dark brown; outer abdominal segments almost uniformly blackened; male hypopygium very large; ninth tergite long, the outer lateral angles produced; mesal lobe of basistyle a bispinous sclerotized plate; appendage of eighth sternite trifold, the median lobe longer than laterals, clothed with golden-yellow setulae.

*Male*.—Length, about 19 mm.; wing, 20 mm.; antenna, about 5 mm.

Frontal prolongation of head dark brown; nasus conspicuous; palpi black. Antennae relatively short, black, the pedicel obscure yellow; verticils subequal to the segments. Head grayish brown, clearer brown medially, the posterior orbits very narrowly yellowish gray.

Mesonotum dark gray, the praescutum with four entire dark brown stripes, the intermediate pair further separated by a capillary dark median vitta, the intermediate stripes and median vitta all quite confluent behind, attaining the suture; scutum bluish gray, the lobes variegated by brown areas; scutellum and mediotergite lighter gray, with a median brown stripe. Pleura gray, more infuscated on dorsal portion of mesopleura; dorso-pleural membrane bright orangeyellow. Halteres pale, the knobs of halteres weakly darkened at bases. Legs with the coxae gray; trochanters obscure yellow; femora brownish yellow, the tips narrowly blackened, preceded by a somewhat more yellowish subterminal annulus, the latter not well-defined; tibiae and basitarsi yellowish brown, the tips narrowly brownish black; remainder of tarsi black. Wings strongly tinged with brown, only sparsely variegated by darker brown and whitish areas; the brown color includes the entire cell *Sc* with the exception of outer end; cell *Cu*<sub>1</sub> and adjoining seams into posterior portion of cell *M*; stigma and somewhat paler brown areas on anterior cord: the whitish areas include pre-stigmal and post-stigmal brightenings; clearer white spots in center of cell 1st *M*<sub>2</sub> and outer end of cell *R*, separated by the basal section of *M*<sub>1</sub>+<sub>2</sub>; a more exten-

sive pale area at near twothirds the length of cell  $M$ , adjoining vein  $Cu_1$ ; veins brown, paler in the oblitative areas. Venation:  $R_1+2$  entire but pale, with trichia almost to tip;  $m$  shorter than petiole of cell  $M_1$ ; cell 1st  $M_2$  rather short and broad, pentagonal.

Abdomen with basal tergite brownish gray; succeeding segments yellow, narrowly and interruptedly trivittate with dark brown, the median line more broken and less distinct; lateral borders of tergites pale; outer segments and hypopygium chiefly black; sternites chiefly yellow, the outer segments blackened. Male hypopygium unusually large and conspicuous, almost the largest and most complicated of any species so far discovered in the *glaphyoptera* group. Ninth tergite large, much longer than wide, the outer half a little narrowed; each lateral angle produced caudad into a long slender lobe; caudal border between the tergal horns nearly transverse, reddish horn-colored, the median area with two parallel ridges. Basistyle with ventro-caudal lobe elongate, black, at apex with a pencil of long yellow setae that exceed one-half the length of the lobe; mesal lobe developed as polished sclerotized plate that divides into slender curved spines or horns. Eighth sternite profoundly trifid, the lateral lobes black, transversely corrugated, shorter than the median lobe, the latter blackened on sides to beyond midlength; surface of blade densely clothed with golden-yellow setulae.

*Hab.* Chile.

*Holotype*, ♂, Cayutué, Lago Todos los Santos, Llanquihue, altitude about 500 feet, mid-January 1933 (E. P. Reed); type in writer's collection.

I take the greatest pleasure in dedicating this fine new species of *Tipula* to my friend Dr. Edwyn P. Reed, to whom I am vastly indebted for help in studying the crane-flies of Chile. The species is most similar to other South Chilean and Patagonian members of the genus, as *Tipula crossospila* Alex., *T. enderleinana* Alex., *T. jaennickeana* Alex. and *T. tristillata* Alex., especially to the last-named. It differs from all of these in the median praescutal vitta and, especially, in the rather remarkable structure of the male hypopygium, notably the tergite and mesal lobe of the basistyle.

### ***Aphrophila viridinervis* sp. n.**

Size large (wing, ♀, 11 mm.); general coloration yellow, the praescutum with three more reddish brown stripes; a deli-

cate median praescutal carina; antennal flagellum black; halteres and legs yellow; wings hyaline, faintly tinted with green, most of the veins bright green;  $R_s$  long, approximately twice the basal section of  $R_5$ ; ovipositor with margins of cerci smooth.

*Female*.—Length, about 9 mm.; wing, 11 mm.

Rostrum short, yellow; palpi testaceous, the outer segments darker. Antennae with scape and pedicel yellow; flagellum black; flagellar segments oval, decreasing in size outwardly, the last one much smaller than the penultimate. Head buffy, the posterior orbits somewhat darker, the broad front and anterior vertex more yellowish.

Mesonotal praescutum obscure yellow, with three more reddish brown stripes, with a delicate median carina; posterior sclerites of notum obscure yellow. Pleura yellow. Halteres pale yellow throughout. Legs yellow, the outer two tarsal segments darkened. Wings hyaline, faintly tinted with green; stigma scarcely evident although partly obliterating the veins



Fig. 42.—Wing venation of *Aphrophila viridinervis* sp. n

transversed; a narrow brown seam along distal section of  $Cu_1$ ; no axillary darkening; veins of the Radial, Medial and Cubital fields, together with *1st A*, deep green,  $Sc$ ,  $R$  and basal half of *2nd A* more yellowish; outer costal region above the stigma similarly green. Venation:  $Sc_1$  ending a short distance beyond fork of  $R_s$ ,  $Sc_2$  at its tip;  $R_s$  relatively long, nearly twice the basal section of  $R_5$ ;  $R_2$  just beyond fork of  $R_2+3+4$ ; cell *1st M*<sub>2</sub> closed,  $m$  very short;  $m-cu$  at fork of  $M$ ; cell *2nd A* wide.

Abdomen obscure yellow, the bases of segments a little more reddish yellow than the apices. Ovipositor with cerci small, heavily sclerotized and strongly upcurved, as in the genus, but with the dorsal margins smooth, not serrate as in the other described Chilean species.

*Hab.* Chile.

*Holotype*, ♀, exact locality uncertain (see below); type in the Deutsches Entomologisches Museum.

*Aphrophila viridinervis* is very distinct from all other described Chilean species in the green veins of the wing, smooth cerci, and the large body-size, which rivals that of the two largest New Zealand species (*neozelandica* Edw., *vittipennis* Alex.). It is very probable that the body and legs, as well as the wing-veins, show green tints in living and freshly-killed specimens.

The exact locality of the species is in question. The type was received for determination from Dr. Walther Horn. It bore a small green label on which was written what looked like. «Cunto, Chile, January 2, 1930». In order to make certain of the locality, the label was re-sent to Dr. Horn and Dr. Sachtleben for their opinions. It was then affirmed that the specimen had been sent to the Museum by Professor Navas, who stated that the material had been received from P. Felix Jaffuel. However, upon my writing to P. Jaffuel for further information concerning the locality where the fly had been taken, I was informed by him that he had *not* secured this material and knew of no locality in Chile similar in spelling to the above. So the whole matter of the type-locality of the fly is still in question but the species is so desirable that it would be a matter of great importance to know exactly where the species had been secured. Any further information on this matter would be greatly appreciated by the present writer.

