

NEW OR LITTLE-KNOWN SOUTH AMERICAN
CRANE-FLIES
(Diptera Tipulidae)

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El género *Austrolimnophila* Alexander contiene aproximadamente cien especies, de las cuales algo más de la mitad existen en Sudamérica. En este trabajo se describen cuatro especies nuevas, de las cuales dos, *martinezi* y *sternolobata* han sido colectadas en Cochabamba, Bolivia. *A. nahuelicola* y *A. percara* corresponden a la región sur de Chile. Se describe el alótipo macho de *Austrolimnophila celestissima* Alexander.

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In this paper I am discussing some uncommon or undescribed species of the genus *Austrolimnophila* Alexander, almost all from South Chile where they were collected by Mr. Luis E. Peña, whose expeditions have added vastly to our knowledge of insects of many groups. Two additional species from Bolivia are included, taken by Mr. Antonio Martínez, of Buenos Aires, specialist in the Coleoptera. I wish to express my deep thanks to Señores Martínez and Peña for the attention that they have devoted to the collecting of these fragile and often neglected flies.

The genus *Austrolimnophila*, as at present known, includes approximately 100 species, of which slightly more than one-half occur in South America, the vast majority in Patagonia and South Chile, and again in southern Brazil. Fewer species are found in the north, as far as Panama and Costa Rica. The genus is well represented in South and Central Africa, including Madagascar, and in Australasia, particularly in New Zealand, eastern Australia and New Guinea. In the northern hemisphere only a few scattered forms occur throughout the Holarctic Region. From the great concentration of species in the southern hemisphere an Antarctic origin for the genus must be postulated. A more detailed account of the Neotropical species has been given by the writer in another report (Rev. de Entomología, 19: 153-168; 1948).

The two expeditions by Peña to the Nahuelbuta, in the Province of Arauco, South Chile, were of unusual interest in that they provided the most northerly known records for a number of Chilean Tipulidae, including

in the genus *Austrolimnophila*, *A. chilocana*, *hazelae*, *infidelis*, *macropyga*, *microsticta* and *tergifera*. Two further species, *A. celestissima* Alexander and *A. nahuelicola*, sp. n., are found only in the Nahuelbuta, as at present known. The itinerary of Peña's expeditions to Nahuelbuta is as follows: 1953- Contulmo (Palo Botado), 1,500 meters, February 1-3; Caramávida, 1,000 meters, February 5-10; Chacay, 1,500 meters, February 11-12; Pichinahuel (Alto de Nahuelbuta), February 12-20; Butamalal, 1,400-1,600 meters, February 21-25. 1954 and late 1953- Pelluhue, 600 meters, December 2, 1953; Chovellen, December 5; Tregualemu, December 7; Caramávida, 1,000-1,300 meters, December 25, 1953 to January 6, 1954; Alto Caicupil, 1,200-1,300 meters, January 7, 1954; Pillim Pilli, 600-800 meters, January 15-17; Pichinahuel, Butamalar, 1,100-1,400 meters, January 23-31, 1954.

In February and March 1955, Peña undertook still further trips to the provinces of South Chile, including the Nahuelbuta, the coast of Osorno at Pucatrihue, and the coast of Valdivia at Chaihuin. Working eastward toward the Andes from Osorno, he visited Lago Peyehue, Golgol, and Antillanca, the last close to the Patagonian border and not far distant from Correntoso and Lago Nahuel Huapi in Patagonia, where Edwards and Shannon had amassed great collections of Diptera in 1926. A further excursion to the east from Valdivia enabled him to collect at Lago Riñihue, Enco, Puerto Fui, Lago Neltume, and other interesting stations. Only a part of the crane-flies of this expedition have been studied to the present time. When all the materials have been examined it seems certain that still further important additions to the list will be made. I am very greatly indebted to Peña for this great series of Chilean Tipulidae.

1. *Austrolimnophila* (*Limnophilella*) *patagonica* (Alexander).

Limnophilella patagonica Alexander; Journ. N. Y. Ent. Soc., 36: 51-52; 1928.

Austrolimnophila (*Limnophilella*) *patagonica* Alexander; Rev. de Entomología, 19: 159-160, fig. 8 (♂ hypopygium); 1948.

The unique type was from Bariloche, Lago Nahuel Huapi, Patagonia, taken in April 1922 by A. Merkle.

South Chile: Antillanca, 400 meters, March 18, 1955; Chanchán, 120-600 meters, March 2, 1955; Pucatrihue, 10-60 meters, March 12, 1955; Puerto Fui, 600-800 meters, March 4, 1955; Río Golgol, 300-400 meters, March 13-19, 1955 (Luis E. Peña).

The position of crossvein *m-cu* varies from being approximately at the fork of *M* to nearly its own length before this fork.

2. *Austrolimnophila* (*Austrolimnophila*) *celestissima* Alexander.

Austrolimnophila (*Austrolimnophila*) *celestissima* Alexander; Agr. Técnica, Chile, 5: 17-19, fig. 9 (wing); 1945.

The unique type, a female, was taken on Nahuelbuta, in the Araucarian forests, altitude 600 meters, December 8, 1943, by Bullock.

South Chile: Contulmo, Palo Botado, Nahuelbuta, February 1, 1953; Caramávida, Nahuelbuta, 1,000 meters, February 5-10, 1953 (Luis E. Peña).

Allotype, male, Caramávida, as above.

Male. — Length about 5.5 mm.; wing 6 mm.; antenna about 1.4 mm.

Characters much as in the female. Male hypopygium (fig. 5) with the posterior border of the tergite subtruncate to vaguely emarginate at the midline. Basistyle simple. Outer dististyle, *d*, blackened, entirely glabrous, bidentate at tip, the outer spine a little smaller; inner dististyle subequal in length, pale, narrowed to the obtuse tip, the surface with microscopic setae and setulae. Phallosome including a central plate; aedeagus slender, subtended by strong curved black hooks that are interpreted as being gonapophyses.

The discovery of the male sex of this attractive fly brings into question the strict generic position. The entirely glabrous outer dististyle of the male hypopygium, in conjunction with the very simple structure of the latter, are characters not possessed by other members of the genus. However, the broken arculus indicates that it is correctly placed in the close vicinity of *Austrolimnophila* and until more evidence becomes available I am continuing it to the present genus.

3. *Austrolimnophila* (*Austrolimnophila*) *chiloana* Alexander.

Austrolimnophila (*Austrolimnophila*) *chiloana* Alexander; Agr. Técnica, Chile, 13: 15-16, fig. 9 (wing), fig. 13 (♂ hypopygium); 1953.

The types were from Aucar, Chiloé Island, taken in January 1952 by Peña.

South Chile: Butamalal, Nahuelbuta, 1,400-1,600 meters, February 21, 1953; Pichinahuel, 1,400-1,600 meters, February 12-20, 1953 (Luis E. Peña). Chaihuin, 810 meters, March 20, 1955 (Luis E. Peña).

4. *Austrolimnophila* (*Austrolimnophila*) *eutaeniata* (Bigot).

Limnophila eutaeniata Bigot; Miss. Sci. Cape Horn, 6, Zool. part 2: 9-10, pl. 2, fig. 3 (wing); (1888) 1891.

Austrolimnophila eutaeniata Alexander; Arkiv för Zoologi, 13, no. 6: 5; 1920.

Austrolimnophila eutaeniata Alexander; Diptera Patagonia and South Chile, 1: 115; 1929.

Austrolimnophila (*Austrolimnophila*) *eutaeniata* Alexander; Rev. de Entomología 19: 163, fig. 11 (♂ hypopygium); 1948.

Bigot's type was from Tierra del Fuego.

Additional records: Rio Azopardo near Admiralty Sound, Tierra del Fuego, March 1896 (Ohlin). Falkland Islands, East Falkland (Skottsberg), in Vienna Museum. Cayutúe, Llanquihue, South Chile, May 18, 1939 (K. Wolffhügel).

5. *Austrolimnophila (Austrolimnophila) hazelae* Alexander.

Austrolimnophila hazelae Alexander; Diptera Patagonia and South Chile, 1: 125-126, pl. 3, fig. 51 (wing); 1929.

Austrolimnophila (Austrolimnophila) hazelae Alexander; Rev. de Entomología, 19: 163-164, fig. 12 (♂ hypopygium); 1948.

The types were from various stations in South Patagonia and South Chile, including Chiloé Island, taken in late 1926 by Edwards and Shannon.

South Chile: Caramávida, Nahuelbuta, 1,000 meters, February 5-10, 1955. Neltume, 480 meters, March 3, 1955; Enco, 1,400-1,600 meters, March 6, 1955; Pucatrihue, 10-60 meters, March 12, 1955 (Luis E. Peña).

6. *Austrolimnophila (Austrolimnophila) infidelis* Alexander.

Austrolimnophila infidelis Alexander; Diptera Patagonia and South Chile, 1: 122-123, pl. 3, fig. 63 (wing), pl. 10, fig. 200 (♂ hypopygium); 1929.

The types were from various stations in South Chile, including Chiloé Island.

South Chile: Caramávida, Nahuelbuta, 1,000 meters, February 5-10, 1953 (Luis E. Peña).

7. *Austrolimnophila (Austrolimnophila) joana* Alexander.

Austrolimnophila joana Alexander; Diptera Patagonia and South Chile, 1: 126-127, pl. 3, fig. 66 (wing), pl. 10, fig. 201 (♂ hypopygium); 1929.

The type was from Casa Pangué, Llanquihue, taken in December 1926 by Edwards and Shannon.

South Chile: Chaihuín, 810 meters, March 19, 1955; Pucatrihue, 10-60 meters, March 12, 1955 (Luis E. Peña).

8. *Austrolimnophila (Austrolimnophila) macropyga* Alexander.

Austrolimnophila (Austrolimnophila) macropyga Alexander; Agr. Técnica, Chile, 13: 12-14, fig. 7 (wing), fig. 11 (♂ hypopygium); 1953.

The types and previously known specimens were from Chepu, Chiloé Island, taken in February 1952 by Peña.

South Chile: Pichinahuel, Nahuelbuta, 1,400-1,600 meters, February 12-20, 1953. Chanchán, 120-600 meters, March 2, 1955; Pucatríhue, 60 meters, March 1-13, 1955 (Luis E. Peña).

9. *Ausrolimnophila* (*Austrolimnophila*) *martinezi*, sp. n.

Size relatively large (wing, male, 12 mm.); mesonotal praescutum with three discal stripes and the lateral borders brown, the narrow interspaces brownish yellow; pleura buffy yellow with a brown dorsal stripe; legs brown; wings brownish yellow, with a restricted brown spotted and dotted pattern; cell M_1 deep, its petiole subequal to m ; abdomen dark brown, the basal sternites patterned with yellow; male hypopygium with the posterior border of the tergite truncate; interbasal lobe large, obtuse at tip; outer dististyle terminating in a long acute spine; inner dististyle dilated at apex into a blade; gonapophysis terminating in a long recurved spine.

Male.—Length about 11 mm.; wing 12 mm.; antenna about 2.3 mm.

Rostrum above buffy yellow, the sides darker; palpi black. Antennae with basal segments dark brown, the flagellum a little paler, the organ of moderate length, as shown by the measurements; flagellar segments long-oval, with verticils that slightly exceed the segments. Head brownish gray.

Pronotum obscure buffy, darker medially above. Mesonotal praescutum with the restricted ground brownish yellow, the disk with three broad brown stripes, the lateral and humeral regions even more darkened; scutal lobes buffy brown; scutellum testaceous, postnotum slightly darker. Pleura buffy yellow, with a conspicuous brown dorsal stripe extending from the cervical region to beneath the wing root. Halteres relatively long, pale brown, the base of the stem more yellowed, knob dark brown. Legs with the coxae and trochanters yellow, the latter more darkened on inner faces; remainder of legs dark brown. Wings (fig. 1) with the ground brownish yellow, with a restricted brown spotted and dotted pattern, the larger and darker spots at fork of Sc. R_2 , tip of R_{1+2} and tip of vein R_3 ; the paler brown dots more abundant in outer medial, cubital and anal fields, fewer and more scattered on the disk; veins brown. Venation: R_{1+2} about twice R_3 ; cell M_1 deep, its petiole subequal to m ; $m-cu$ at near midlength of cell 1st M_2 .

Abdominal tergites dark brown, basal sternites yellow, ringed basally with somewhat paler brown; outer segments more uniformly darkened; hypopygium and eighth segment still darker brown. Male hypopygium (fig. 6) with the posterior border of the tergite, t , truncate or virtually so. Basistyle, b , with the interbasal lobe large, obtuse at tip, shaped about as illustrated. Outer dististyle, d , gradually widened about to three-fourths the length, thence suddenly narrowed into an acute spine; setae long and conspicuous; inner dististyle approximately as long, the stem slender, the

outer half dilated into a blade. Gonapophysis appearing as a broad plate, at apex produced into a long recurved spine. Aedeagus short and stout.

Holotype, ♂, El Limbo, Chapare, Cochabamba, Bolivia, altitude 2,000 meters, November 5, 1953 (A. Martínez).

I am very pleased to name this distinct fly for the collector, Señor Antonio Martínez, of Buenos Aires. The species is most similar to *Austrolimnophila* (*Austrolimnophila*) *bradleyi* Alexander, *A. (A.) merklei* Alexander, and *A. (A.) nahuelicola*, sp. n., in the general appearance and spotted wings, differing from all in the structure of the male hypopygium. In the unusually short petiole of cell M_1 it is most like *bradleyi* of Argentina but the relationship is not close.

10. *Austrolimnophila* (*Austrolimnophila*) *merklei* Alexander.

Austrolimnophila merklei Alexander; Journ. N. Y. Ent. Soc., 36: 50-51; 1928.

Austrolimnophila merklei Alexander; Diptera Patagonia and South Chile, 1: 116; 1929.

Austrolimnophila (*Austrolimnophila*) *merklei* Alexander; Rev. de Entomología, 19: 164, fig. 13 (♂ hypopygium); 1948.

The type was from Bariloche, Lago Nahuel Huapi, Patagonia, taken in April 1922 by A. Merkle.

South Chile: Termas Río Blanco, Curacautín, 1,050 meters, March 30, 1938 (D. S. Bullock).

11. *Austrolimnophila* (*Austrolimnophila*) *microsticta* Alexander.

Austrolimnophila microsticta Alexander; Diptera Patagonia and South Chile, 1: 119-121, pl. 3, fig. 49 (wing); 1929.

Austrolimnophila (*Austrolimnophila*) *microsticta* Alexander; Rev. de Entomología, 19: 164, fig. 14 (♂ hypopygium); 1948.

The types were from various stations in South Patagonia and South Chile, including Chiloé Island, collected in late 1926 by Edwards and Shannon.

South Chile: Caramávida, Nahuelbuta, 1,000 meters, February 5-10, 1953; Butamalal, Nahuelbuta, 1,600 meters, February 21-23, 1953; Pucatrihue, 10-60 meters, March 12, 1955; Toi-Goi, Chiloé, February 1-3, 1952 (Luis E. Peña).

12. *Austrolimnophila* (*Austrolimnophila*) *nahuelicola*, sp. n.

Size medium (wing over 10 mm.); mesonotal praescutum buffy brown, with two submedian brown stripes; pleura buffy brown, striped longitudinally with darker brown; legs pale brown; wings pale yellow, with an abundant spotted and dotted pale brown pattern; Sc_2 longer than Sc_1 ; *m-cu* beyond midlength of cell $1st M_2$; male hypopygium with the outer lateral angles of the tergite produced caudad into stout glabrous lobes with

obtuse tips; outer dististyle terminating in a slightly curved black spine; gonapophysis appearing as a strong slightly curved horn.

Male. — Length about 11-12 mm.; wing 10.5-11.5 mm.; antenna about 2.6-2.7 mm.

Rostrum brownish gray; palpi brown. Antennae with the scape testaceous, its tip brown; pedicel and flagellum brown; flagellar segments elongate, the verticils conspicuous. Head dark gray.

Pronotum buffy. Mesonotal praescutum buffy brown, with two submedian brown stripes, separated by a capillary ground line, the stripes very narrow at their anterior ends, widened to the suture; lateral praescutal borders narrowly darkened; scutal lobes dark brown, median region and the scutellum more testaceous; mediotergite dark brown, paler on sides; pleurotergite with posterior part testaceous, the anterior half included in the brown pleural stripe described below. Pleura buffy brown, with a dorsal brown stripe beginning on the propleura, widened behind; ventral sternopleurite and meron less distinctly infuscated. Halteres with stem brown, very restrictedly brightened at base, knob darker brown. Legs with the coxae testaceous, the bases of the fore and middle pairs a little darkened; trochanters obscure yellow; remainder of legs yellowish brown to pale brown, the outer tarsal segments a little darker. Wings (fig. 3) pale yellow, with an abundant spotted and dotted pale brown pattern; the larger areas at arculus, origin of R_s , stigma and anterior cord; remaining dots circular, almost evenly distributed over the surface; veins dark brown. Venation: Sc_2 longer than Sc_1 , in cases much longer; R_{1+2} variable in length, in cases longer than R_2 (including the holotype), in others shorter than R_2 ; petiole of cell M_1 long, from about one-half to nearly equal in length to the cell; $m-cu$ beyond midlength of cell 1st M_2 .

Abdominal tergites dark brown, the extreme tips of the more proximal segments paler; basal sternites yellow, their bases weakly darkened; outer segments, including the hypopygium, darker brown; tips of tergal lobes paler. Male hypopygium (fig. 7) with the tergite, t , large, the outer lateral angles produced caudad and slightly inward as stout lobes, separated by a transverse emargination; lobes glabrous, the tips obtuse. Basistyle, b , relatively long; interbasal lobes small and ill-defined. Outer dististyle, d , a simple slender rod that narrows gradually to a slightly curved black spine; surface of style with a very short dense pubescence and fewer setae; inner dististyle nearly as long, the proximal half widened, with a conspicuous basal flange, the tip narrowly obtuse. Gonapophysis, g , appearing as a strong slightly curved horn, the two narrowly interconnected across the midline. Aedeagus relatively stout, with a linear lacuna behind.

Holotype, ♂, Pichinahuel, Nahuelbuta, Arauco, Chile, 1,400-1,600 meters, February 12-20, 1953 (Luis E. Peña). Paratopotypes, 2 ♂♂.

The most similar species include *Austrolimnophila (Austrolimnophila) bradleyi* Alexander, *A. (A.) merklei* Alexander, and *A. (A.) martinczi*, sp. n., all differing among themselves in details of coloration and, especially, in the very distinct male hypopygia.

13. *Austrolimnophila (Austrolimnophila) neuquenensis* Alexander.

Austrolimnophila (Austrolimnophila) neuquenensis Alexander; Acta Zoologica Lilloana, 10: 90-91, fig. 5 (wing), fig. 7 (♂ hypopygium); 1952.

The type and only previously known specimen was from San Martín de los Andes, Neuquén, Patagonia, taken January 22, 1950, by S. Schachovskoy.

South Chile: Chaihuín, 810 meters, March 19-20, 1955 (Luis E. Peña).

14. *Austrolimnophila (Austrolimnophila) percara*, sp. n.

Size medium (wing, male, 8.5 mm.); mesonotal praescutum and scutum dark brown, the posterior sclerites of the notum testaceous yellow, the mediotergite with a darkened lateral spot; dorsal pleurites darkened, the ventral parts extensively whitened; legs dark brown, tarsi black; wings yellow, with a conspicuous brown pattern; male hypopygium with the posterior border of tergite produced into two slender fingerlike lobes; outer dististyle terminating in a slender black spine; inner dististyle a simple straight yellow rod.

Male.—Length about 9 mm.; wing 8.5 mm.; antenna about 1.8 mm.

Rostrum light yellow, labella darker; palpi black. Antennae (male) moderately long scape brown, pedicel and flagellum black; flagellar segments long-oval to elongate, with conspicuous verticils. Head with front, anterior vertex, orbits and lower surface yellowish white, the posterior vertex solidly darkened.

Pronotum above dark brown, paler laterally, the scutellum and pretergites more testaceous. Mesonotal praescutum chiefly dark brown, vaguely more yellowed on sides before the suture; scutum chiefly dark brown; scutellum and postnotum testaceous yellow, the mediotergite with a darkened spot on either side. Pleura brown dorsally, including the still darker dorsopleural membrane, the central pleurites and meron extensively whitened; ventral sternopleurite weakly darkened. Halteres with stem yellow, knob weakly infuscated. Legs with all coxae yellowish white; trochanters slightly darker; remainder of legs dark brown, the tarsi passing into black. Wings (fig. 4) with the ground color yellow, with a conspicuous brown pattern, arranged as follows: Near arculus; origin of *Rs*; cord and fork

of R_{2+3+4} ; for of R_{1+2} and R_2 , the two latter areas virtually confluent but enclosing a ground area in cell R_3 ; outer end of cell $1st M_3$ and tip of vein R_3 ; no darkenings at ends of Anal veins; veins dark brown. Venation: Sc long, both Sc_1 and Sc_2 lying beyond the fork of R_{2+3+4} , the latter approximately twice as long as the basal section of R_5 ; Rs square and short-spurred at origin; cell M_1 nearly twice its petiole; $m-cu$ at or near midlength of cell $1st M_3$.

Abdominal tergites brown, basal sternites light yellow, the posterior borders of the segments vaguely darkened; hypopygium dark. Male hypopygium (fig. 9) with the posterior border of tergite produced into two slender fingerlike lobes, the median notch broadly U-shaped, Basistyle, b , stout, the interbasal lobe very weakly developed. Outer dististyle, d , setiferous, narrowed outwardly, terminating in a slender black spine; inner dististyle a little shorter, appearing as a simple straight yellow rod, its tip obtusely rounded. Aedeagus small and simple.

Holotype, ♂, Antillanca, South Chile, altitude 400 meters, March 18, 1955 (Luis E. Peña).

By my key to the regional species of *Austrolimnophila* (Diptera Patagonia and South Chile, 1: 116: 1929), the present fly runs to *Austrolimnophila (Austrolimnophila) clnora* Alexander, which differs in the elongate antennae, pattern of the body, legs and wings, and especially in the structure of the male hypopygium.

15. *Austrolimnophila (Austrolimnophila) sternolobata*, sp. n.

General coloration of praescutum brownish yellow, the posterior sclerites of the notum somewhat darker, pleura yellow; wings with a weak brownish tinge, restrictedly patterned with darker; R_{1+2} elongate, about one half longer than R_{2+3+4} ; male hypopygium with the tergite transverse, the posterior border with two slender lobes; basistyle with a large lobe on lower surface; interbase short and compact, terminating in two longer curved spines and about six smaller straight ones.

Male. — Length about 12 mm.; wing 11.5 mm.; antenna about 2.1 mm.

Rostrum dark brown; palpi black. Antennae of male moderately long, as shown by the measurements; scape brown, pedicel obscure yellow, flagellum brown; segments cylindrical with very long verticils. Head buffy, the center of the posterior vertex more or less infuscated; anterior vertex narrow.

Pronotum in front brown above, paling to yellow on sides and behind. Mesonotal praescutum chiefly brownish yellow, representing the usual stripes, the interspaces very restricted; scutum obscure yellow medially, the lobes weakly darkened; scutellum and postnotum obscure brownish yellow. Pleura yellow. Halteres elongate, stem medium brown, knob dark brown. Legs with the coxae and trochanters yellow; femora pale brown, the tips

narrowly darker; tibiae pale brown, the tips becoming dirty white; tarsi white. Wings (fig. 2) with a weak brownish tinge, restrictedly patterned with small darker brown areas, placed at origin of R_s , cord, forks of Sc and R_{2+3+4} , R_2 , outer end of cell $1st\ M_2$, fork of M_{1+2} and tip of vein R_{1+2} ; a more or less distinct darkened streak down the center of cell R ; veins brown. Venation: Sc_1 and Sc_2 subequal; R_s long, short-spurred and nearly square at origin; R_{1+2} very long, about one-half longer than R_{2+3+4} ; cell M_1 nearly three times its petiole; $m-cu$ at near one-third the length of cell $1st\ M_2$.

Abdomen elongate; tergites dark brown, basal sternites yellowed. Male hypopygium (fig. 8) with the tergite transverse, the posterior border with a small U-shaped notch, subtended on either side by a slender fingerlike lobe that is tipped with short black setae. Basistyle, b , stout, with a very large lobe on its lower surface, provided with long yellow setae, longer and more numerous at and near tip. Outer dististyle, d , dilated at near midlength, the membranous expanded part with numerous setae; apex of style obtuse; inner dististyle a little longer. What are interpreted as being interbases are short compact structures terminating in spines, the outer pair longer and curved, with six or seven small straight spines between. Aedeagus short.

Holotype, δ , El Limbo, Chapare, Cochabamba, Bolivia, altitude 2,000 meters, November 7, 1953 (A. Martínez).

In its structure and coloration, the present fly is most like *Austrolimnophila* (*Austrolimnophila*) *bulbifera* Alexander and *A. (A.) candiditarsis* Alexander, of southeastern Brazil, differing especially in the very distinct male hypopygium.

16. *Austrolimnophila* (*Austrolimnophila*) *tergifera* Alexander.

Austrolimnophila (*Austrolimnophila*) *tergifera* Alexander; Rev. Chilena Ent., 3: 13-15, pl. 1, fig. 2 (wing), pl. 1, fig. 10 (δ hypopygium); 1953.

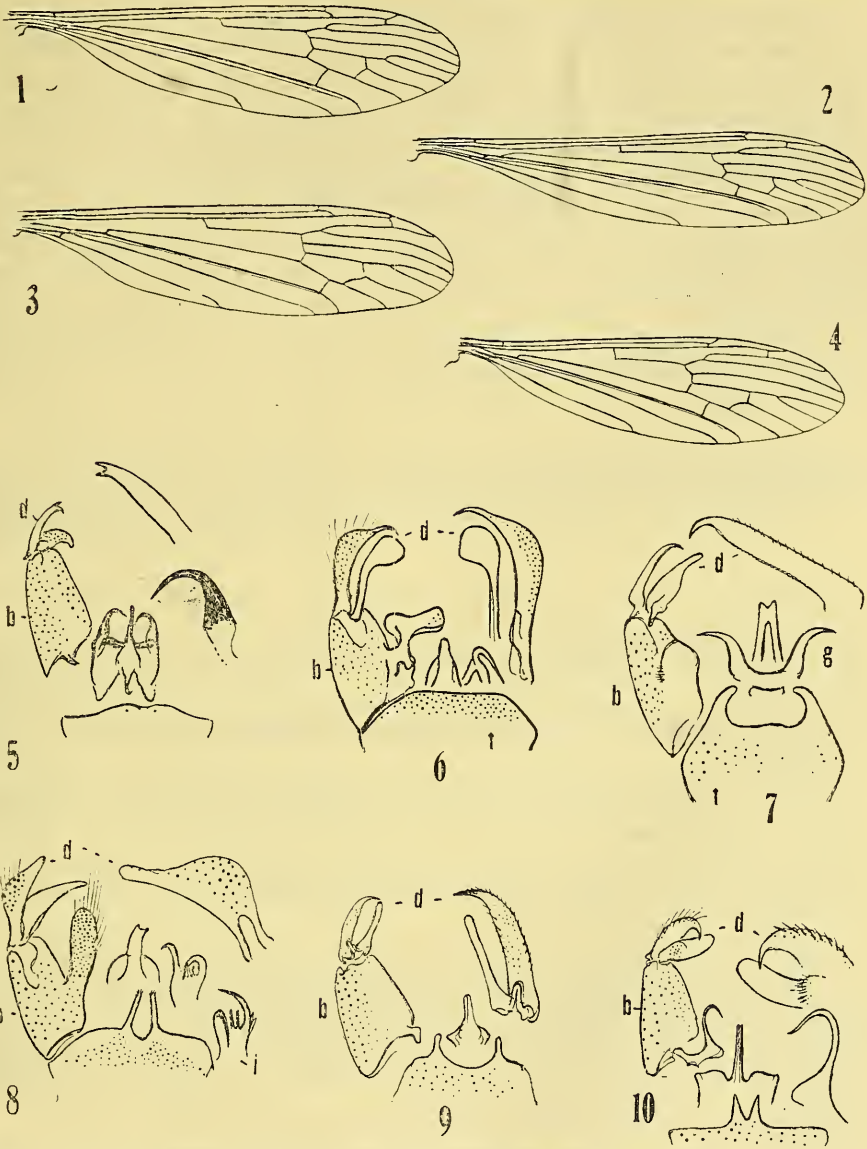
The types were from various stations on Chiloé Island, taken in January-February 1952 by Peña.

South Chile: Caramávida, Nahuelbuta, 1,000 meters, February 5-10, 1953. Enco, 120-700 meters, February 26, 1955; Pucatrihue, 10-50 meters, March 1-13, 1955 (Luis E. Peña).

17. *Austrolimnophila* (*Austrolimnophila*) *tremula* Alexander.

Austrolimnophila tremula Alexander; Diptera Patagonia and South Chile, 1: 128-129, pl. 3, fig. 53 (wing); 1929.

The types were from various stations in South Chile, including Chiloé Island, taken by Edwards and Shannon in December 1926.



- Fig. 1. *Austrolimnophila* (*Austrolimnophila*) *martinezi*, sp. n.; wing.
 Fig. 2. *Austrolimnophila* (*Austrolimnophila*) *sternolobata*, sp. n.; wing.
 Fig. 3. *Austrolimnophila* (*Austrolimnophila*) *nahuelicola*, sp. n.; wing.
 Fig. 4. *Austrolimnophila* (*Austrolimnophila*) *percara*, sp. n.; wing.
 Fig. 5. *Austrolimnophila* (*Austrolimnophila*) *celestissima* Alexander; male hypopygium.
 Fig. 6. *Austrolimnophila* (*Austrolimnophila*) *martinezi*, sp. n.; male hypopygium.
 Fig. 7. *Austrolimnophila* (*Austrolimnophila*) *nahuelicola*, sp. n.; male hypopygium.
 Fig. 8. *Austrolimnophila* (*Austrolimnophila*) *sternolobata*, sp. n.; male hypopygium.
 Fig. 9. *Austrolimnophila* (*Austrolimnophila*) *percara*, sp. n.; male hypopygium.
 Fig. 10. *Austrolimnophila* (*Austrolimnophila*) *tremula* Alexander; male hypopygium.
 (Symbols: *b*, basistyle; *d*, dististyle; *g*, gonapophysis; *i*, interbase; *t*, tergite).

South Chile: Contulmo (Palo Botado), February 1, 1953; Caramávida, 1,000 meters, February 5-10, 1953; Chacay, Pichinahuel, Nahuelbuta, 1,500 meters, February 11-12, 1953. Enco. 1,400-1,600 meters, March 6, 1955; Pucatrihue, 10-60 meters, March 12, 1955; Toi-Goi, Chiloé, February 1-3, 1952; Aulén-Duhatao, Chiloé, February 6-8, 1952 (Luis E. Peña).

Male hypopygium (fig. 10) with the ninth tergite pale, narrowly transverse, the posterior margin truncate, with two long-triangular lobes that are separated by a similarly narrow median notch. Basistyle, *b*, stout. Outer dististyle, *d*, broad, pale, narrowed to a slender gently curved spine. the surface with long pale setae; inner dististyle a little longer, appearing as a flattened blade, the apex obtuse, near base with a low lobe that bears several setae. Gonapophysis appearing as a long slender hook, strongly curved, narrowed to a long terminal spine. Aedeagus slender.

18. *Austrolimnophila* (*Austrolimnophila*) *xanthoptera* Alexander.

Austrolimnophila xanthoptera Alexander; Diptera Patagonia and South Chile, 1: 121-122, pl. 4, fig. 62 (wing), pl. 9, fig. 199 (♂ hypopygium); 1929.

The type of the present subspecies was taken at Castro, Chiloé Island, on December 20-22, 1926, by Fred W. Edwards.

South Chile: Chaihuín, 810 meters, March 20, 1955 (Luis E. Peña).

18 a. *Austrolimnophila* (*Austrolimnophila*) *xanthoptera cayutuensis* Alexander.

Austrolimnophila xanthoptera cayutuensis Alexander; Bol. San. Veg., Chile, 4: 130-131; 1944.

The type was from Cayutúe, Llanquihue, South Chile, taken March 12, 1935, by Kurt Wolffhügel.

South Chile: Neltume, 480 meters, March 3, 1955 (Luis E. Peña).

The present specimen differs from the type in the more conspicuously blackened femoral rings which are terminal in position. Despite the differences in the leg pattern of the two subspecies here recorded, it seems certain that they belong to the same species since the structure of the male hypopygium is the same in both forms.