

NEW OR INSUFFICIENTLY-KNOWN CRANE-FLIES FROM CHILE

(*Family Tipulidae, Order Diptera*)

Part V (*)

by

CHARLES P. ALEXANDER (**)

All of the crane-flies discussed at this time were taken by Señor Luis E. Peña G., chiefly on the Island of Chiloé. As the work of determination of the great series of specimens taken on Chiloé by Señor Peña proceeds it is evident that very important additions to our previous knowledge have been made. When this study has been completed it is expected that a complete listing of the species of the island will be provided. My deepest thanks and appreciation are extended to Señor Peña and to my friend, Señor Raúl Cortés P., for their unfailing aid and encouragement in the development of our knowledge of the Tipulidae of Chile.

TIPULINAE

78 *Longurio (Longurio) nociva* sp. n.

Size small (wing 11 mm. or less); general coloration of praescutum brownish gray, with three dark brown stripes; mesepisternum patterned with darker; antennae short, 12-segmented; wings with a weak brownish tinge, the stigma darker; cell M_1 sessile or very short-petiolate; abdominal tergites yellow laterally, variegated with dark brown; sternites more uniformly yellow; ovipositor with short blunt valves; male hypopygium with the inner dististyle provided with 8 to 10 short black spines.

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(**) University of Massachusetts, Amherst, Mass.

Male. Length about 8.5-9 mm.; wing 10.5-11 mm.;
antenna about 1.1-1.3 mm.

Female. Length about 9 mm.; wing 11 mm.

Frontal prolongation of head light brown, paler beneath, nasus lacking; palpi brownish black. Antennae short, 12-segmented; scape and pedicel yellowish brown, flagellum brownish black; flagellar segments suboval to more elongate, with short verticils; first flagellar segment longer, about one-half more than the second. Head above dark brown, the front, anterior vertex and orbits more yellowed, the surface pruinose, especially the orbits; vertical tubercle appearing as two narrow lobes placed side by side, separated by a narrow notch; anterior vertex broad.

Pronotum dark brown, the sides of the scutellum more yellowed. Mesonotal praescutum with the ground brownish gray, with three broad dark brown stripes that greatly restrict the interspaces; posterior sclerites of notum pale, the scutal lobes dark brown; postnotum with dense microscopic scales; pleurotergite and lateral borders of medio-tergite yellow. Pleura yellow, the mesepisternum variegated with dark brown on the anepisternum, ventral sternopleurite and ventral meron. Halteres infuscated, the base of stem restrictedly pale. Legs with the coxae and trochanters pale; femora brownish yellow, the tips narrowly and vaguely brownish black; tibiae and tarsi brown, the latter passing into black; legs, especially the tarsi, long and slender. Wings (Fig. 4) with a weak brownish tinge, cells C and Sc a trifle more yellowed; stigma brown, its more basal part somewhat paler; veins dark brown. Veins beyond cord with abundant macrotrichia, basad of cord occurring on most of R and M, lacking on Rs. Venation: Cell 1st M, long, pointed at outer end; cell M₁ deep, short-sessile or with the petiole very short; M₃₊₄ very short, less than r-m; cell 2nd A relatively narrow.

Abdominal tergites handsomely patterned with yellow and dark brown, the latter including the central part and posterior borders, leaving large yellow areas isolated on the sides; sternites more uniformly yellow, the posterior borders narrowly and weakly darkened; hypopygium chiefly brownish yellow, the tergite and subterminal segment darker. Ovipositor with the valves short and blunt. Male hypopygium (Fig. 5) with the tergite, 9t, transverse, the posterior border with a broad and very shallow emargination, the lobes correspondingly low; upper surface of tergite with unusually abundant strong setae. Basistyle, b, with the setae few and scattered, relatively weak. Outer dististyle, d, small, oval, with relatively sparse but elongate setae; inner dististyle produced into a long parallel-sided rod, its apex obtuse; enlarged basal portion with from eight to ten short conical black spines, with more numerous backwardly-directed strong setae.

Holotype, male Toi-Goi, Chiloé Island, February 3, 1952 (Peña).

Allotype, female, Aulen, February 8, 1952 (Peña). *Paratopotypes*, males; paratypes, males, with the female allotype.

Most similar to the larger *Longurio* (*Longurio*) *bullocki* (Alexander) which differs in the coloration of the body and wings, venation, and especially the structure of the male hypopygium. I am no longer attempting to maintain the genus *Macromastix* Osten Sacken as separate from *Longurio* Loew, the earlier name.

79 *Longurio* (*Longurio*) *eucrypta* sp. n.

Size medium (wing, female, 14 mm.); mesonotum grayish yellow, the praescutum with four brown stripes; pleura gray pruinose, more or less patterned with darker; antennae (female) 11-segmented; wings light brown, patterned with darker and cream-colored areas; cell 1st M_2 elongate, pointed outwardly, m longer than the petiole of cell M_1 ; abdomen gray, patterned with brown; ovipositor with the valves very obtuse.

Female. Length about 11 mm.; wing 14 mm.; antenna about 1.6 mm.

Frontal prolongation of head moderately long, shorter than the remainder, dark brown above, paler below; nasus broad, with numerous black setae; palpi black. Antennae (female) 11-segmented, the terminal segment elongate; scape and pedicel yellow, flagellum black; verticils exceeding the segments. Head yellow pollinose; vertical tubercle conspicuous, farther elevated into paired ridges at summit, with setae lying just inside the ridges, erect; setae of posterior vertex relatively short and sparse, proclinate.

Pronotum brown variegated with yellow pollinose areas. Mesonotal praescutum grayish yellow with four brown stripes, the intermediate pair separated by a somewhat darker gray line; posterior sclerites of notum gray pruinose, the outer half of scutal lobes with brown markings; parascutella white, glabrous. Pleura gray pruinose, the anepisternum and ventral sternopleurite more or less patterned with darker below the pruinosity; pleurotergite and pteropleurite paler. Halteres with stem yellow, knob weakly infuscated, narrowly more yellowed at tip. Legs with the coxae yellow; trochanters yellow, the fore pair elongated; femora and tibiae obscure yellow, the tips passing into brown; tarsi brown, darker outwardly. Wings (Fig. 3) light brown, patterned with darker and cream-colored markings, the darker areas including the arculus and h , tip of Sc and bases of cells R_3 and R_5 adjoining the anterior cord; stigma bicolored, its proximal end yellow, the outer part brown; the most evident creamy areas include a major brightening across outer ends of cells R and M and subbasally beyond the arculus,

extending from cell *R* to the posterior border in the Anal field; veins brown, yellow in the brightened stigmal area. Veins beyond cord with trichia. Venation: *Rs* long, more than one-half longer than *m-cu*; cell 1st *M*₂ elongate, pointed outwardly; *m* longer than the petiole of cell *M*₁; cell *M*₁ deep.

Abdomen gray, patterned with darker, including a broken central tergal stripe, broader and more distinct on the more proximal segments, becoming broadly interrupted behind at the posterior borders of the segments; sides of tergites two, three and five with less evident darker markings; basal sternites yellow, the intermediate segments extensively darkened medially. Ovipositor with the valves very obtuse, the cerci rounded at tips, the larger hypovalvae very compressed-flattened.

Holotype, female, Aulen, Chiloé Island, February 6, 1952 (Peña).

Most similar to *Longurio* (*Longurio*) *bullocki* (Alexander), differing especially in the coloration of the body and wings and in the venation.

80 *Tipula* (*Eumicrotipula*) *petalura* sp. n.

Belongs to the *glaphyoptera* group; general coloration gray, the praescutum with four somewhat polished brownish black stripes; antennae black, the scape reddened apically; femora brown, the tips brownish black, preceded by a very vaguely indicated brighter ring; wings brown, variegated by darker brown and whitened areas, those in the costal interspaces more yellowed, the dark areas more extensive than the pale ones; male hypopygium with the tergite large, its posterior border with a deep and narrow median notch; eighth sternite with an unusually large depressed-flattened spatula, without lateral lobes.

Male. Length about 15 mm.; wing 15.5 mm.; antenna about 4 mm.

Frontal prolongation of head brown, pruinose; nasus relatively stout; palpi broken. Antennae with the scape black, pruinose, reddened apically; pedicel and flagellum black, the former paler apically; flagellar segments with very small basal swellings. Head with the vertex brown, orbits gray; vertical tubercle low, rounded.

Pronotum dark brownish gray. Mesonotal praescutum light gray with four somewhat polished brownish black stripes, the lateral praescutal borders less distinctly darkened above the spiracle; posterior sclerites of notum gray, each scutal lobe with two darkened areas, the anterior one very small; scutellum and mediotergite with a capillary blackened central line. Pleura and pleurotergite light gray; dorsopleural membrane yellow below, more infuscated above. Halteres with stem brownish yellow, knob dark brown. Legs with the coxae light gray, with

long pale setae; trochanters brown; femora brown, the bases narrowly yellow, the tips more broadly brownish black, preceded by a broader very vaguely brightened ring; tibiae and tarsi yellowish brown to light brown, the tarsi passing into black; claws (male) toothed. Wings brown, variegated with darker brown, yellow and whitened areas, the dark color more extensive than the pale, the yellowed marks occupying the interspaces in cells C and Sc being a little less extensive than the alternating dark areas; the chief whitened spots are as follows: Three in cell R, the outermost crossing Rs into cell R_1 ; outer end of cell Cu; at near midlength of 1st A, with smaller outer spots; beyond the cord a relatively narrow incomplete band across the bases of the radial cells from C into cell R_{5+6} ; a somewhat similar band across cell 1st M_2 from the outer end of cell R into M_3 ; a small prestigmal brightening; prearcular field chiefly yellow; veins dark brown, paler in the costal interspaces. Venation: Rs about two and one-half times $m-cu$; R_1+ , pale but entire; petiole of cell M_1 nearly twice m ; cell 1st M_2 relatively small, pentagonal.

Abdomen brown, the first tergite darker; succeeding tergites paler, with broad gray lateral margins, more or less trivittate with black, the basal sternites darkened; outer segments, including the hypopygium, black. Male hypopygium (Figs. 1, 2) with the ninth tergite, 9t, large, narrowed outwardly, the posterior border with a very deep and narrow median notch, the broad lateral lobes obliquely truncated on their more mesal portions and provided with dense setulae. Proctiger with heavily thickened margins. Basistyle, b, with the mesal lobe large and darkened, the produced outer part with abundant short blackened spines, the lower angle with a group of long slender setae. Outer dististyle, d, dilated on about the outer half; inner dististyle with the beak slender, straight; setae of the dorsal crest abundant but unusually short, black. Gonapophysis, g, distinctive, the major part a flattened blade, before apex produced into a slender spine; inner apophysis appearing as a slender rod with a short basal branch. Eighth sternite, 8s, transverse, unusually narrow, the posterior border with an unusually large depressed-flattened spatula, the area of the latter fully one-half that of the sternite itself; margin of more than the proximal half of spatula thickened, bearing about three small teeth near base, these produced into a strong bristle; no lateral or accessory lobes.

Holotype, male, Chepu, Chiloé Island, February 10, 1952 (Peña).

This striking fly is most similar in its general appearance to species such as *Tipula* (*Eumicrotipula*) *tristillata* Alexander and *T. (E.) satrapa* Alexander, differing in all details of structure of the male hypopygium, including especially the ninth tergite, basistyle, inner dististyle, gonapophysis, and appendage of the eighth sternite.

LIMONIINAE

LIMONIINI

81 *Limonia (Zelandoglochina) pervincta percelestis* subsp. n.

Female. Length about 8 mm.; wing 7.3 mm.

Rostrum black, approximately as long as the remainder of head; palpi black. Antennae black throughout; basal flagellar segments subglobular, with an abrupt glabrous apical neck; succeeding segments becoming more oval, the necks less abrupt; outer segments long-oval, merging gradually into the apical portion; terminal segment slightly exceeding the penultimate; verticils of intermediate flagellar segments slightly longer than the segments. Head polished black; anterior vertex slightly more than twice the diameter of the scape.

Pronotum black, the posterior half yellowed. Mesonotal praescutum with the ground obscure polished yellow, with three polished black stripes, the lateral pair reaching the side margins and becoming slightly dilated on their anterior ends, constricting the interspaces; posterior sclerites of notum polished black, the scutellum with a central yellow triangular area; anterior end of suture of the postnotum vaguely brightened. Pleura with a broad dorso-longitudinal black stripe, more than the ventral half abruptly brownish yellow; dorsopleural membrane yellow, weakly more infuscated before the wing-root. Halteres black, the base of stem broadly pale yellow. Legs with all coxae and trochanters reddish yellow; femora yellow, each with two unequal black rings, the outer one broader, terminal in position, subequal in extent or a little shorter than the subterminal ground ring; bases of posterior femora broadly infuscated; tibiae brown, the tips narrowly blackened; tarsi black. Wings yellow, handsomely patterned with dark brown, including slightly darker areas at arculus, origin of *Rs*, fork of *Sc*, and stigmal; broad dark seams over cord and outer end of cell 1st *M*₁; slightly paler washes in base of cell *M*, subbasal in cell *Cu*, apical and subapical in 1st *A*, and in outer half of cell 2nd *A*, the latter area enclosing a broad oval ground spot; wing tip in outer radial field darkened; veins black, the interspaces of *Sc* and *R* more yellowed. Cells beyond cord, including the stigma, with abundant macrotrichia. Venation: *Sc* relatively short, both *Sc*₁ and *Sc*₂ ending shortly beyond origin of *Rs*, the latter angulated and weakly spurred at origin; cell 1st *M*₂ about equal in length to vein *M*₃ beyond it; *m-cu* close to fork of *M*.

Abdomen conspicuously bicolored, the bases of the segments blackened, the spines obscure yellow, broadest on the more basal segments, very narrow on the outer ones; genital shield obscure yellow.

Holotype, female, Curacautín, Malleco, December 19, 1950 (Peña).

Differs from the typical form (Lago Nahuel Huapi, Patagonia) by the coloration, especially of the thorax and legs. In the latter, the subterminal darkened femoral ring is broad, at least equal in extent to the terminal one.

PEDICIINI

82 *Pedicia* (*Tricyphona*) *peñai* sp. n.

General coloration of thorax gray, the praescutum with four dark brownish gray stripes; antennae 16-segmented, the outer two segments being fused; wings with a yellowish tinge, stigma pale brown; a slightly indicated darkened cloud over the anterior cord; male hypopygium large, the tergite divided into two halves by a profound median split, bearing a small fingerlike lobule on lateral portion; interbase a powerful curved rod, the cuplike apex subtended by an acute spine.

Male. Length about 11-12 mm.; wing 13-14 mm.; antenna about 1.2-1.3 mm.

Rostrum dark brown; palpi black. Antennae black throughout, 16-segmented, relatively short; flagellar segments short-cylindrical, shorter than their verticils, the outer segments somewhat longer; terminal segment elongate, nearly twice the penultimate and presumably formed by the fusion of two segments. Head dark gray; anterior vertex broad, with a small darkened median tubercle.

Pronotum gray, the scutellum more yellowed. Mesonotum gray, the humeral region and anterior interspaces of the praescutum slightly more reddened, the disk with four dark brownish gray stripes, the intermediate pair only narrowly separated; each scutal lobe with two comparable darkened areas; posterior border of scutellum and the parascutella more reddened. Pleura gray, the posterior portion of the pleurotergite brown; dorsopleural membrane yellow. Halteres with stem whitened, apex of knob infuscated. Legs with the coxae obscure yellow, vaguely pruinose; trochanters yellow; femora brown; tibiae yellow, the tips narrowly dark brown; tarsi brownish yellow, the outer segments brownish black; basitarsi elongate, subequal to the tibiae. Wings tinged with yellow; stigma large, pale brown; the usual brown cloud over the anterior cord barely indicated; veins brownish yellow. Venation: *r-m* variable in position on R_4+ , from near midlength to opposite the fork; cell M_2 open by the atrophy of *m*.

Abdominal tergites dark brown, the sternites more reddened, darker laterally, their posterior borders narrowly yellow; hypopygium

fulvous. Male hypopygium (Fig. 6) very large, most as in *crassipyga*. Ninth tergite, 9t, large, profoundly split into two halves by a deep median notch, the major plate covered with delicate setulae and scattered pale setae, glabrous at margins; at near midlength on lateral portion with a curved fingerlike setiferous lobule. Basistyle, b, large, especially its mesal lobe which is provided with abundant long delicate setae; interbase, i, much as in *crassipyga*, differing in details, the base a dilated subquadrate plate, narrowed abruptly into a stout curved glabrous arm, the apex a little expanded and excavated, the apical margin farther produced into a strong curved spine. Dististyle, d, provided with a dense brush of stout dark setae.

Holotype, male, Río Blanco, Malleco, altitude 1050 meters, March 5-27, 1951 (Peña). *Paratopotypes*, 2 males.

I take great pleasure in naming this fly for the collector, Señor Luis E. Peña G., to whom much of our recent knowledge of crane-fly distribution in Chile is due. The most similar described species is *Pedicia* (*Tricypsona*) *crassipyga* Alexander, which differs in minor details of coloration but especially in the structure of the antennae and male hypopygium, notably the tergite and interbase.

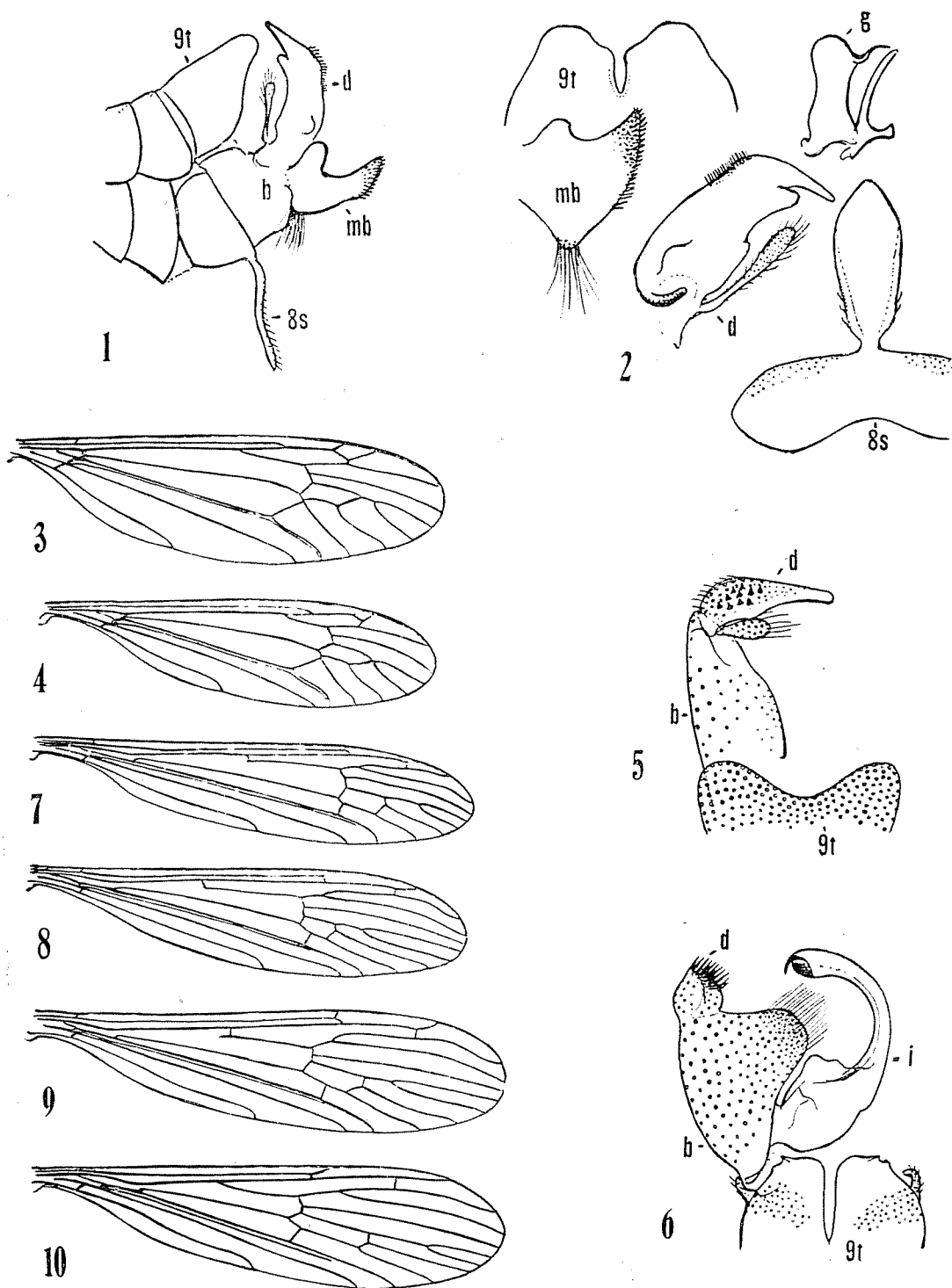
HEXATOMINI

83 *Austrolimnophila* (*Austrolimnophila*) *macropyga* sp. n.

Size medium (wing, male, 10 mm.); antennae (male) short; general coloration yellow to gray, the praescutum with three brown stripes, the median one divided on anterior third by a pale line; thoracic pleura with a darker dorsal stripe; legs pale brown, the tarsi passing into black; wings pale brown, very restrictedly patterned with darker; male hypopygium black, large and conspicuous; apex of ninth tergite unequally trilobed; outer dististyle a stout hairy rod, the apex produced into two unequal spines; inner dististyle a pale flattened disk, its inner margin produced into a fingerlike lobe; gonapophysis appearing as a strong incurved rod.

Male. Length about 10 mm.; wing 10 mm.; antenna about 2.4 mm.

Rostrum yellow; palpi pale brown. Antennae relatively short, as shown by the measurements, black; flagellar segments subcylindrical, passing into cylindrical, the verticils exceeding the segments. Head dull gray, clearer in front; posterior vertex with a darker brown triangular area, its point directed cephalad; anterior vertex relatively broad, slightly more than twice the diameter of the scape.



Figs. 1, 2. *Tipula* (*Eumicrotipula*) *petalura* sp. n.: male hypopygium. — Fig. 3. *Longurio* (*Longurio*) *eucrypta* sp. n.: venation. — Fig. 4. *Longurio* (*Longurio*) *nociva* sp. n.: venation. — Fig. 5. *Longurio* (*Longurio*) *nociva* sp. n.: male hypopygium. — Fig. 6. *Pedicia* (*Tricyphona*) *peñai* sp. n.: male hypopygium. — Fig. 7. *Austrolimnophila* (*Austrolimnophila*) *joana* Alexander sp. n.: venation. — Fig. 8. *Austrolimnophila* (*Austrolimnophila*) *joana* Alexander sp. n.: venation. — Fig. 9. *Austrolimnophila* (*Austrolimnophila*) *chiloeana* sp. n.: venation. — Fig. 10. *Polymera* (*Polymera*) *albiditarsis* sp. n.: venation.

(Explanation of symbols: *b*, basistyle; *d*, dististyle; *g*, gonapophysis; *i*, interbase; *mb*, mesal lobe of basistyle; *s*, sternite; *t*, tergite).

Pronotum brownish yellow, patterned with gray. Mesonotum buffy yellow, the praescutum with three dark brown stripes, the intermediate pair separated by a vague pale median line on anterior third; scutal lobes similarly patterned with dark brown; mediotergite with a vague darker central area that is narrowed posteriorly. Pleura and pleurotergite light gray, the ventral sternopleurite slightly more darkened; a short dark brown dorsopleural stripe, extending from the cervical region backward into the ventral anepisternum and dorsal sternopleurite. Halteres elongate, stem pale brown, narrowly yellowed basally, knob dark brown. Legs with the coxae and trochanters yellow; remainder of legs pale brown, the tarsi passing into brownish black; segments with exceedingly long and narrow setoid scales scattered among the still longer setae. Wings (Fig. 7) pale brown, very restrictedly patterned with slightly darker areas, including spots at origin of R_s , cord, outer end of cell 1st M_2 , fork of M_1+2 , at both ends of the otherwise pale stigma, and as a spot near outer end of cell R_4 ; veins dark brown, paler in the prearcular field. Venation: R_s long, nearly square and more or less spurred at origin; R_1+2 and R_2 subequal; cell M_1 about one-half longer than its petiole; $m-cu$ up to one-half its length beyond the fork of M .

Abdominal tergites brownish black, the posterior borders of segments two to six, inclusive, narrowly pale; basal sternites yellow, patterned laterally with darker; segments eight and nine, including the hypopygium, black. Male hypopygium (Fig. 11) unusually elongate and conspicuous. Ninth tergite, $9t$, large, narrowed outwardly, terminating in two long glabrous rods that are separated by a U-shaped emargination, with a third much shorter but stouter median lobe lying a little more dorsally. Outer dististyle, d , appearing as a stout curved rod that terminates in a long slender black spine, with a smaller black spine on outer face at base of the former; style conspicuously hairy. Inner dististyle closely applied to the outer, appearing as a flattened disk that is produced mesad into a fingerlike lobe, the face of the blade with a longitudinal ridge. Phallosome, η , includes about incurved gonapophyses that are virtually contiguous at their outer ends and a pair of incurved plates that form a partial cylinder.

Holotype, male, Chepu, Chiloé Island, February 14, 1952 (Peña).
Paratype, male, pinned with the type.

In its general appearance, the present fly suggests species such as *Austrolimnophila* (*Austrolimnophila*) *tremula* Alexander, differing in the short antennae and, especially, in the very distinctive male hypopygium.

84 *Austrolimnophila* (*Austrolimnophila*) *joana* Alexander.

Austrolimnophila (*Austrolimnophila*) *joana* Alexander; Diptera Patagonia & S. Chile, 1:126-127, pl. 3, fig. 66 (wing), pl. 10, fig. 201 (male hypopygium).

Known hitherto only from the unique badly broken type that was taken at Casa Pangue on the Chilean side of Rosales Pass between Chile and Argentina.

One male, Toi-Goi, Chiloé Island, February 3, 1952 (Peña).

Wings (Fig. 8) weakly infuscated, unpatterned, even the stigma scarcely differentiated; veins dark brown, with long conspicuous trichia. Venation: Sc_1 ending opposite fork of R_2+3+4 , Sc_2 at its tip; Rs long, angulated at origin; R_1+2 nearly three times R_2 alone; R_2+3+4 a little longer than R_1+2 ; inner ends of cells R_1 , R_3 and 1st M_2 in transverse alignment; cell M_1 deep, nearly four times its petiole; cell 1st M_2 relatively small, subrectangular, with $m-cu$ at near two-fifths its length.

Male hypopygium (Fig. 12) with the tergite, 9t, transverse, the posterior border with a conspicuous U-shaped median emargination, the subtending lateral lobes slender. Basistyle, b , with the apical inner lobe densely setuliferous. Outer dististyle, d , short and stout, narrowed to an acute black spike, the outer margin with relatively few strong setae; inner dististyle dilated on more than the basal half, narrowed abruptly into a long slender apical lobe. Gonapophysis, g , appearing as a flattened blade, the appearance not entirely clear in the slide.

85 *Austrolimnophila* (*Austrolimnophila*) *chiloeana* sp. n.

Size small (wing, male, 6.5 mm.); antennae relatively short, black throughout; mesonotum reddish brown, the praescutum slightly darkened medially but not forming distinct stripes; legs brown; wings subhyaline, with a restricted brown spotted pattern; male hypopygium with the caudal margin of ninth tergite with a U-shaped notch, the lateral lobes slender; outer dististyle hairy, narrowed to a strong black spine; gonapophysis bispinous.

Male. Length about 6 mm.; wing 6.5 mm.; antenna about 1.4 mm.

Female. Length about 7 mm.; wing 7.5 mm.

Rostrum pale, light gray pruinose; palpi brownish black. Antennae relatively short, black throughout; flagellar segments subcylindrical, subequal to or a trifle shorter than their verticils. Head brownish gray; anterior vertex broad.

Pronotum brown, paler posteriorly. Mesonotum reddish brown, the praescutum slightly more darkened medially but not forming distinct stripes. Pleura reddish, gray pruinose. Halteres with stem brown,

yellowed at base, knob dark brown. Legs with all coxae and trochanters pale yellow; femora brown, slightly paler basally; tibiae and tarsi slightly darker brown, especially the latter. Wings (Fig. 9) subhyaline, with a restricted brown spotted pattern, arranged much as in *hazelae*, including small spots at origin of R_s , and at forks of Sc , R_2+3+4 , and M_1+2 ; narrow seams over cord and outer end of cell 1st M_2 ; stigma oval, slightly darker brown; veins brownish black. Venation: Sc moderately long, Sc_1 ending shortly beyond the fork of R_2+3+4 , Sc_2 near its tip; R_2+3+4 about twice the basal section of R_5 ; R_s square and spurred at origin; R_1+2 nearly twice R_2 alone; petiole of cell M_1 nearly three times m ; $m-cu$ at near midlength of cell 1st M_2 .

Abdominal tergites dark brown, in male the sternites more bicolored, darkened basally, obscure yellow at apex; outer segments, including hypopygium, brownish black. Male hypopygium (Fig. 13) with the ninth tergite, $9t$, large, the caudal margin with a U-shaped notch, the subtending lobes slender, narrowly obtuse at tips; margin of tergite nearly glabrous, with a few scattered punctures, the disk before this border with numerous setae. Outer dististyle, d , slender, gently curved, narrowed to a strong blackened spine, the surface with numerous setae; inner dististyle shorter. Gonapophysis, g , appearing as a curved rod from a dilated base, the slender outer part unequally bispinous.

Holotype, male, Aucar, Chiloé Island, January 10, 1952 (Peña).
Allotopotype, female, pinned with type.

Although generally similar to *Austrolimnophila* (*Austrolimnophila*) *hazelae* Alexander and some other allied regional forms, the present fly is quite distinct in the general coloration and in the structure of the male hypopygium.

86 *Polymera* (*Polymera*) *albiditarsis* sp. n.

Size small (wing, female, about 5 mm.); general coloration of mesonotum reddish brown; legs brown, the intermediate tarsal segments dirty white; wings with a dusky tinge; R_2+3+4 straight, shorter than R_2+3 ; R_1+2 and R_2+3 subequal; cell M_1 present; cell 1st M_2 closed, long and narrow, with $m-cu$ about its own length beyond the fork of M ; ovipositor with the long straight hypovalvae exceeding the slender curved cerci.

Female. Length about 4.5 mm.; wing 4.9 mm.

Rostrum brownish gray; palpi brown. Antennae with the scape and pedicel brown, the former short; flagellum broken. Head brownish gray; anterior vertex broad, approximately four times the diameter of scape.

Pronotum brown, the scutellum more yellowed. Mesonotum reddish brown, more darkened medially but without evident stripes; pseudosutural foveae pale, poorly differentiated against the ground. Pleura reddish brown, very sparsely pruinose. Halteres brown, the elongate knob darker, the base of stem restrictedly yellow. Legs with the coxae dark reddish brown, the middle pair elongate; trochanters yellowish brown; remainder of legs brown, tarsal segments two to four, with outer end of basitarsus, dirty white; vestiture of legs relatively sparse, the tibiae with scattered longer setae, with fewer of these on femora; tibial spurs long and conspicuous. Wings (Fig. 10) with a dusky tinge, the costal border a trifle more darkened; veins and macrotrichia dark brown. Veins with conspicuous trichia. Venation: Sc_1 ending shortly before level of fork of R_2+3+4 , Sc_2 about one-third as long as Sc_1 ; R_2+3+4 straight, shorter than R_2+3 ; $1+2$ and R_2+3 subequal; cell M_1 subequal to its petiole; cell 1st M_2 long and narrow, almost parallel-sided; $m-cu$ about its own length beyond the fork of M ; cell 2nd A narrow.

Abdomen dark brown. Ovipositor with the cerci slender, curved, shorter than the elongate straight hypovalvae.

Holotype, female, Ancud, Chiloé Island, January 23, 1952 (Peña).

Although only a single female specimen is available I can see no reason for not placing the present fly in the genus *Polymera* Wiedemann, the first record for the genus in the Chilean Subregion. Among the numerous Neotropical species of the genus, it agrees most nearly with *Polymera* (*Polymera*) *clausa* Alexander in the closed cell 1st M_2 , differing widely in the other details of venation. All of the known species of *Polymera* have the antennae of the male sex elongate, with the flagellar segments more or less nodulose.

87 *Limnophila tuber* sp. n.

Allied to *feriata*; size large (wing, male, 9 mm. or more); mesonotum light reddish brown; antennae (male) short; legs brown, the outer segments brownish black; wings subhyaline, stigma medium brown; a darkened seam along vein Cu ; macrotrichia in stigmal area and in centers of outer cells; male hypopygium with the basistyle bearing a large darkened tubercle on mesal face at base; aedeagus elongate, closely convoluted, subtended by a semimembranous sheath.

Male. Length about 9-9.5 mm.; wing 9-10 mm.; antenna about 1.2-1.4 mm.

Rostrum and palpi brownish black. Antennae (male) relatively short, as shown by the measurements; scape brown, pedicel darker brown,

flagellum black; flagellar segments passing from short-oval into elongate, with long conspicuous verticils. Head dark gray; anterior vertex somewhat less than three times the diameter of scape; head narrowed posteriorly.

Pronotal scutum brownish yellow, the scutellum yellow. Mesonotum light reddish brown, the praescutum with a slightly indicated darker median stripe that becomes darker and better marked in front; scutellum weakly infuscated; pleurotergite and pleura yellowed. Halteres pale, knob very weakly darkened. Legs with all coxae and trochanters yellow; femora brown, the tibiae somewhat paler, with narrowly darkened tips; tarsi passing into brownish black. Wings (Fig. 14) subhyaline, the prearcular and costal fields a trifle more yellowed; stigma oval, medium brown; a darkened seam along vein Cu_1 , chiefly behind the vein; veins pale brown, more yellowed in the brightened portions. Macrotrichia in the stigma and in centers of cells R_1 to M_3 inclusive, appearing as rows that extend basad for more than half the length of the cells. Venation: $R_1 +_2$ nearly twice R_2 ; $R_2 +_3 +_4$ short, subequal to basal section of R_5 ; $r-m$ arcuated; cell M_1 much shorter than its petiole; $m-cu$ from just before to about opposite midlength of cell 1st M_2 .

Abdominal tergites dark brown, the basal sternites somewhat brightened; eighth and ninth segments more yellowed, the styli dark brown. Male hypopygium (Fig. 11) with the posterior border of the tergite, 9t, deeply notched medially, the subtending lobes relatively small. Basistyle, b , elongate, with a large conspicuous tubercle on mesal face at base, this provided at apex with long erect setae, the remaining surface densely microscopically punctulate. Outer dististyle, d , relatively slender, narrowed outwardly, the apex stout cultriform, with an erect slender spine before apex on outer margin; styli provided on outer half with long pale setae, the lower or ventral edge pale membranous; inner dististyle smaller, its base membranous, the outer third strongly narrowed and decurved. Gonapophysis, g , appearing as two superimposed flattened plates, one terminating in a slender acute spine, directed mesad (on slide), the other directed more cephalad; subtending the apophyses on either side of base of aedeagus a pale conical lobe that bears a group of setae at apex. Aedeagus, a , elongate, closely convoluted, subtended for about two-thirds its length by a paler semimembranous sheath.

Holotype, male, Chepu, Chiloé Island, February 10, 1952 (Peña).
Paratopotype, male, pinned with type.

The most similar regional species include *Limnophila feriata* Alexander and *L. sparsissima* Alexander, both of which differ in coloration, length of antennae, venation, and especially in the structure of the male hypopygium, particularly the tubercle on the basistyle.

88 *Limnophila nemorivaga* Alexander.

Aulen, Chiloé Island, February 8, 1952 (Peña).

Wing (Fig. 16) brownish yellow, restrictedly patterned with darker brown, including a small spot at anterior end of the otherwise pale stigma; cord, outer end of cell 1st M_2 and origin of Rs ; a dark seam along vein Cu and less distinctly so along vein 2nd A ; costal region a little darker than the remainder of ground; veins dark brown. Veins beyond cord with abundant short macrotrichia. Venation: Sc_1 ending before fork of R_2+3+4 , Sc_2 longer, ending about opposite this fork; Rs long, about equal to the anterior branch of Rs ; R_2 faint, bisecting the pale part of the stigmal area; cell R_4 deep; inner ends of cells R_4 , R_5 and 1st M_2 in approximate transverse alignment; $r-m$ arcuated; cell M_1 subequal to or a trifle shorter than its petiole; $m-cu$ about opposite two-fifths to midlength of cell 1st M_2 .

Male hypopygium (Fig. 17) with the ninth tergite, 9t, transverse, the posterior border emarginate, with broadly rounded lobes that lack setae. Outer dististyle, d , blackened, gently widened outwardly, the outer apical angle produced into a slender spine, the outer two-thirds of style blackened and provided with setae; inner dististyle smaller, setiferous, gently curved. Gonapophysis, g , produced into a slender spine, with a posterior prolongation or fimbriated crest. Aedeagus, a , short and stout, feebly convoluted, the apex decurved.

ERIOPTERINI

89 *Molophilus (Molophilus) exemptus* sp. n.

Belongs to the *plagiatus* group; general coloration plumbeous brown; knobs of halteres weakly infuscated; male hypopygium with the beak of the basistyle low and flangelike; outer dististyle with the arms very dissimilar, the outer a strong blackened horn, the inner a slender pale rod; basal dististyle unusually small and insignificant, with spinous setae at apex; phallosome a long pale depressed plate, the outer apical angles slightly produced, the base with microscopic setae; aedeagus very conspicuous, blackened, the lower margin of the outer third with spinous points and spurs.

Male. Length about 2.6-2.7 mm.; wing 3.4-3.5 mm;
antenna about 0.8-0.85 mm.

Rostrum and palpi brownish black. Antennae black; flagellar segments long-oval, becoming even more elongate outwardly; verticils of the more proximal segments very long. Head gray.

Pronotum dark brown, the lateral ends of the scutellum and the pretergites very restrictedly obscure yellow. Mesonotum with the lateral borders reddish brown, the disk of the praescutum dark plumbeous; posterior sclerites of notum plumbeous, the scutellum vaguely more brightened. Pleura dark brown to plumbeous. Halteres with stem obscure yellow, knob weakly infuscated. Legs with the coxae and trochanters yellowish testaceous, the fore coxae somewhat darker; femora yellowish brown, the color obscured by dense setae; outer tarsal segments darker. Wings with a strong dusky tinge, even darker in the costal and basal portions; veins pale brown, the macrotrichia darker. Venation: R_s moderately long, about three times R ; R_2 and $r-m$ in approximate transverse alignment; petiole of cell M_3 about twice the gently arcuated $m-cu$; vein 2nd A ending just beyond $m-cu$.

Abdomen dark brown, the hypopygium a little brightened. Male hypopygium (Fig. 18) with the apex of ventral lobe of basistyle, b , produced into a low ledge or flange, not forming a distinct beak. Outer dististyle consisting of a strong curved blackened horn, at base bearing a slender pale rod. Basal dististyle, bd , unusually small and insignificant, about as long as the outer dististyle, appearing as a pale blade, the lower apical margin produced into small points, the outer end with abundant spinous setae, the ones nearest the apical point longer and stronger. Phallosome, p , a long pale depressed plate, broadest across the base, the apex truncate, each outer apical angle slightly produced, the base with microscopic setae. Aedeagus, a , very conspicuous, appearing as a stout blackened rod that is gently curved, ending in a slender point, with various spinous spurs and roughenings on lower margin of about the outer third; aedeagus exceeding three times the length of the basal dististyle.

Holotype, male, Aucar, Chiloé Island, January 6-15, 1952 (Peña).
Paratopotype, male.

The most similar species is *Molophilus (Molophilus) pretiosus* Alexander, which differs in the much larger size and, especially, in the structure of the male hypopygium.

90 *Molophilus (Molophilus) obliviosus* sp. n.

Belongs to the *plagiatus* group; general coloration of mesonotum brown, the praescutum more brightened laterally, scutellum obscure brownish yellow; male hypopygium with the basal dististyle a long slender simple rod, the outer fourth strongly curved to the acute tip; phallosome with unusually conspicuous setae, the tip weakly notched.

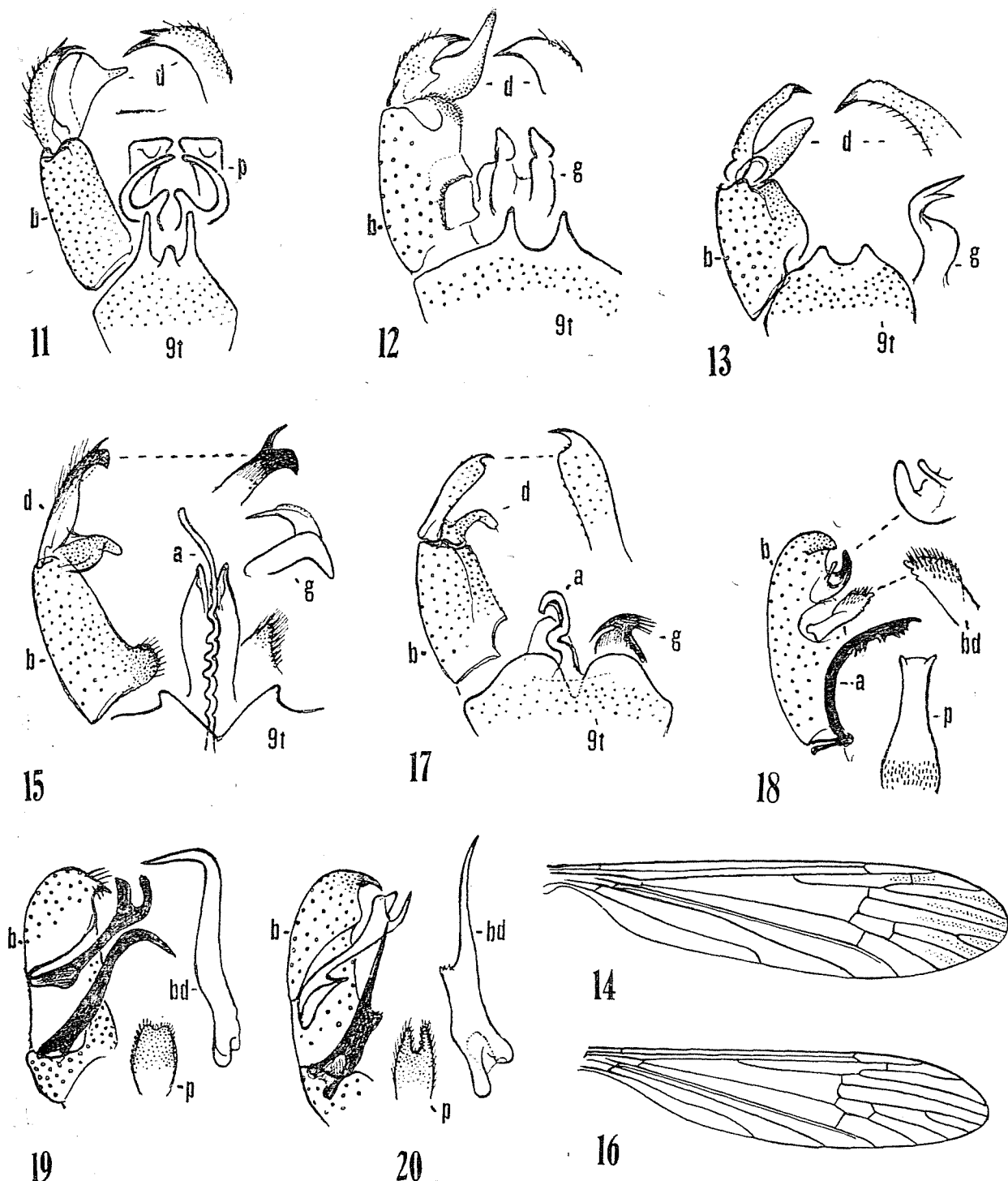


Fig. 11. *Austrolimnophila* (*Austrolimnophila*) *macropyga* sp. n.; male hypopygium.
 Fig. 12. *Austrolimnophila* (*Austrolimnophila*) *joana* Alexander; male hypopygium.
 Fig. 13. *Austrolimnophila* (*Austrolimnophila*) *chiloeana* sp. n.; male hypopygium.
 Fig. 14. *Limnophila tuber* sp. n.; venation. — Fig. 15. *Limnophila tuber* sp. n.; male hypopygium. — Fig. 16. *Limnophila nemorivaga* Alexander; venation. — Fig. 17. *Limnophila nemorivaga* Alexander; male hypopygium. — Fig. 18. *Molophilus* (*Molophilus*) *exemptus* sp. n.; male hypopygium. Fig. 19. *Molophilus* (*Molophilus*) *obliviosus* sp. n.; male hypopygium. — Fig. 20. *Molophilus* (*Molophilus*) *erectus* sp. n.; male hypopygium.

(Explanation of symbols: *a*, aedeagus; *b*, basistyle; *bd*, basal dististyle; *g*, gonapophysis; *p*, phallosome; *t*, tergite).

Male. Length about 3.5 mm.; wing 3.9-4 mm.; antenna about 0.6-0.65 mm.

Rostrum and palpi black. Antennae brownish black; flagellar segments oval, the elongate verticils unilaterally arranged. Head dark gray.

Pronotum dark brown, the pretergites yellow. Mesonotal praescutum reddish brown laterally, darker on central portion, especially in front; scutum more uniformly dark brown; scutellum obscure brownish yellow, darker basally, the parascutella darker; postnotum and pleura dark brown, the posterior sclerites of the latter slightly more reddened. Halteres yellow. Legs with the coxae and trochanters yellow, the fore coxae slightly darker; remainder of legs yellow, the femoral tips narrowly darkened, the outer segments, especially the tarsi, slightly infuscated. Wings yellowish gray, the prearcular and costal fields clearer yellow; veins yellow, macrotrichia brown. Venation: R_2 lying shortly beyond level of $r-m$, R_2^+ short, the basal section of R_2 leaving as a right angle; petiole of cell M_3 slightly less than twice $m-cu$; vein 2nd A ending shortly beyond $m-cu$.

Abdomen dark brown. Male hypopygium (Fig. 19) with the beak of the basistyle, b , slender. Outer dististyle with the arms very unequal, the inner slender, curved. Basal dististyle, bd , a long slender simple rod, the outer fourth strongly curved to the acute tip. Phallosome, p , weakly notched at tip, provided with unusually strong and conspicuous setae.

Holotype, male, Aucar, Chiloé Island, January 10, 1952 (Peña).
Paratopotype, male, pinned with type.

In the simple elongate basal dististyle of the male hypopygium, the present fly is closest to species such as *Molophilus* (*Molophilus*) *excavatus* Alexander, *M. (M.) fagutorum* Alexander, and *M. (M.) rubidithorax* Alexander, differing from all in the conformation of this style, which is longer and strongly curved before its apex.

91 *Molophilus* (*Molophilus*) *erectus* sp. n.

Belongs to the *plagiatus* group; general coloration of mesonotum chestnut brown, the praescutum somewhat darker medially in front, the pleura and postnotum dark brown; antennae obscure yellow basally, flagellum brown, the segments with very long unilaterally distributed verticils; halteres yellow; legs brownish yellow, with darker vestiture; wings brownish yellow; male hypopygium with the basal dististyle an almost straight blackened rod, its basal half stouter, the outer part suddenly narrowed into a slender spine, at its base on inner angle of style with a rectangular shoulder that is produced into a small spine or few

obtuse points; phallosome setiferous, the posterior border with a very deep U-shaped notch that is broader than either subtending lobe.

Male. Length about 3.1-3.2 mm.; wing 3.7-3.8 mm.; antenna about 1 mm.

Rostrum and palpi black. Antennae with the scape and pedicel obscure yellow, flagellum brown; flagellar segments passing into elongate, their ends truncate; longest verticils unilaterally arranged, approximately three times the segments. Head brownish gray.

Pronotum brownish black, dark testaceous behind. Mesonotal praescutum, scutum and scutellum chestnut brown, the first somewhat darker medially in front; postnotum darker brown. Pleura dark brown. Halteres yellow. Legs with the coxae and trochanters yellow; remainder brownish yellow, with long darker vestiture; glandular area on fore tibia (male) conspicuous, weakly darkened. Wings brownish yellow, the prearcular and costal fields clearer yellow; veins pale brownish yellow. Venation: R_2 some distance beyond level of $r-m$; petiole of cell M_3 about one-half longer than $m-cu$; vein 2nd A long and gently sinuous, ending a short distance beyond $m-cu$.

Abdomen dark brown, hypopygium more yellowed. Male hypopygium (Fig. 20) with the beak of the basistyle, b , relatively slender, blackened. Outer dististyle with the arms very dissimilar. Basal dististyle, bd , distinctive, appearing as a nearly straight blackened rod, the basal half stouter, the outer part suddenly narrowed into a slender spine, at base of latter on inner margin of style produced into a rectangular shoulder that bears a small acute spine or, in cases, two or three small blunt points. Phallosome, p , a setiferous cushion, its posterior border with a very deep U-shaped notch that is broader than either subtending lobe.

Holotype, male, Aulen, Chiloé Island, February 8, 1952 (Peña).
Paratopotypes, 2 males.

The most similar species include *Molophilus* (*Molophilus*) *ascendens* Alexander, of southeastern Brazil, and *M. (M.) diceros* Alexander, of southern Chile, both differing evidently in the structure of the male hypopygium.

SUMARIO

El autor describe en esta quinta parte de su serie sobre Tipúlidos chilenos nuevos o poco conocidos, 11 especies y una sub-especie pertenecientes a los géneros *Longurio*, *Tipula*, *Limonia*, *Pedicia*, *Austrolimnophila*, *Polymera*, *Limnophila* y *Molophilus*, sobre material procedente en su mayor parte de la Isla de Chiloé, provincia de Chiloé (Chile).