

**NEW OR INSUFFICIENTLY - KNOWN CRANE - FLIES FROM CHILE**

**(Family Tipulidae, Order Diptera)**

(Apartado de Agricultura Técnica - Año XI - Diciembre de 1951 - N° 2)

Imp. y Lito. "STANLEY" — Manuel Rodríguez 852 — Santiago

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**SANTIAGO — CHILE**

# NEW OR INSUFFICIENTLY - KNOWN CRANE - FLIES FROM CHILE

(Family Tipulidae, Order Diptera)

Part IV (\*)

CHARLES P. ALEXANDER (\*\*)

In continuing the present series of papers on rare and undescribed species of Chilean Tipulidae, I am here discussing some unusually interesting species taken by Señor Luis E. Peña G. in Malleco and on the Island of Chiloé. A few records from other sources are mentioned in the text. Señor Peña has added vastly to our knowledge of these flies and I am very greatly indebted to him for the privilege of securing and studying these materials.

## TIPULINAE

### 60 *Holorusia (Ischnotoma) peñai* sp. n.

General coloration of thorax light brown, the praescutum with four plumbeous gray stripes, the intermediate pair separated by a narrow blackened line; antennal scape yellow, pedicel obscure yellow, flagellum black, the flagellar segments produced beneath; legs black, the extreme bases of femora vaguely paler; wings with the restricted ground color brownish yellow, vaguely patterned with darker, most evident as broad seams to the veins; basal abdominal segments orange, the sixth and succeeding segments darkened, the eighth more intensely blackened to form a narrow ring, hypopygium brownish yellow; male hypopygium with the caudal margin of the tergite obtusely produced; basistyle produced at apex into a strong flattened spine; dististyles subterminal, the inner style complex.

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(\*) Part III of this series of papers was published in Agric. Tec. Chile 11: 5 - 19, 10 figs., 1951.

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*Male.* Length about 18 mm.; wing 18 mm.; antenna about 3.6 mm.

Frontal prolongation of head relatively long, a little shorter than the remainder, dark brown above, more reddened beneath; nasus elongate, blackened. Antennae (male) with scape brownish yellow, narrowly darkened at apex, elongate; pedicel obscure yellow, flagellum black; first flagellar segment long-cylindrical, nearly as long as the succeeding two combined; intermediate flagellar segments rather strongly and conspicuously produced on ventral face at near midlength, most accentuated on about the fourth or fifth flagellar segments; terminal segment attenuated on outer part; verticils lacking, the produced lower faces of the segments subglabrous. Head dark fulvous, whitish pruinose, especially on the front, anterior vertex and the very narrow posterior orbits; vertical tubercle low and rounded.

Pronotum brownish yellow, conspicuously dark brown on sides. Mesonotal praescutum with the ground color light brown, with four plumbeous gray stripes, the intermediate pair separated by a narrow blackened line, the mesal edge of the lateral stripe of this same color; sublateral part of praescutum silvery gray pruinose; scutum with lobes light gray; mediotergite light brown, heavily and very conspicuously yellow pollinose; pleurotergite black, the katapleurotergite golden yellow pollinose. Pleura chiefly light gray, the ventral sternopleurite and the dorsopleural membrane dark brown. Halteres dark brown, the apex of knob narrowly paler. Legs with the coxae and trochanters black, gray pruinose; remainder of legs black, the extreme bases of femora vaguely paler; claws (male) with an obtuse tooth at near midlength. Wings (Fig. 5) with the restricted ground color brownish yellow, vaguely patterned with darker, most evident as broad seams to the veins, leaving central lines of the ground color in most cells; stigma and cell *Sc* still darker brown; veins brown. Venation: *Rs* about one-third longer than *m-cu*; vein *R*<sub>3</sub> only slightly arcuated, not narrowing the cell at midlength; basal section of *R*<sub>4+5</sub> very short; petiole of cell *M*<sub>1</sub> nearly three times *m*; cell 2nd *A* relatively broad.

Basal abdominal segments orange, the first tergite infuscated on sides; sixth and succeeding segments darkened, sparsely pruinose; eighth segment blackened to form a narrow subterminal ring; hypopygium brownish yellow. Male hypopygium (Fig. 1) with the ninth tergite, 9t, very large, gradually narrowed outwardly, the apex obtuse, not emarginate as common in the genus; dorsal surface of tergite with numerous small black spinous setae directed caudad, sparse or lacking on the midline and at apex. Basistyle, *b*, produced at apex into a strong flattened spine. Dististyles, *d*, subterminal, inserted at base of the spine of the basistyle; outer style flattened or scooplike, its length about equal to twice the greatest width; inner style complex, approximately as figured, evidently appearing different in various views.

*Holotype*, male Aucar, Chiloé Island, January 6 - 15, 1952 (Peña):

I am most pleased to name this interesting crane-fly for the collector, Señor Luis E. Peña Guzmán, to whom we owe our chief recent knowledge of the Chilean Tipulidae. The only related described species is *Holorusia* (*Ischnotoma*) *problematica* Alexander (Agr. Tec. Chile, 5, Nº 1: 8 - 10, figs. 5, 7; 1945), which differs evidently in the coloration of the body, legs and wings. The male sex of *problematica* is still unknown.

I can see no reason why these two flies cannot be assigned to the subgenus *Ischnotoma* Skuse, with several additional species in Australia. It seems probable that various other South America species at present placed in *Holorusia* in the narrow sense will be found to be better placed in the present subgenus. It may be re-affirmed that several of the generic and subgeneric groups at present recognized in the so-called primitive Tipulinae will be found increasingly difficult to maintain as more and more annectant types are discovered. It seems certain to me that we have here a condition entirely comparable to and more or less paralleling that found in the vast genus *Limonia* Meigen. In *Limonia*, a score or more of subgeneric elements are now recognized in place of that number of closely allied and very weak supposedly valid generic groups that became impossible to maintain as the World fauna became better known.

61 *Tipula* (*Eumicrotipula*) *amphion*, sp.n.

Belongs to the *glaphyoptera* group; size relatively large (wing over 20 mm.); antenna (male) long, more than one-third the body, the flagellar segments bicolored; mesonotal praescutum brownish yellow, with a narrow nearly terminal brown ring, claws simple; wings with the ground weakly infuscated, restrictedly patterned with darker brown and cream-colored areas, the former appearing as small clouds in the subcostal field; male hypopygium with the posterior border of the tergite produced, with a U-shaped notch that is subtended on either side by a spinous point; eighth sternite short, the apex membranous, unequally trilobed, the median lobe smallest.

*Male*. Length about 17 - 18 mm.; wing 22 - 23 mm.; antenna, about 7.5 mm.

*Female*. Length about 29 - 30 mm.; wing 25.5 - 26 mm.

Frontal prolongation of head obscure yellow and subnitidous above, slightly darker beneath; nasus long and conspicuous; palpi brownish black. Antennae (male) elongate, as shown by the measurements; scape and pedicel yellow, flagellar segments bicolored, the basal enlargements brownish black, the stems obscure yellow, becoming darker

outwardly, the distal segments more nearly uniform in color; flagellar segments strongly incised, subequal to the longest verticils. Head above brown, the front, anterior vertex and posterior orbits gray; a vaguely indicated dusky capillary median vitta.

Pronotum obscure brownish yellow, narrowly infuscated medially. Mesonotum brownish yellow, the praescutum with brown stripes, the median one paler on central portion and divided by a capillary dark brown vitta, the lateral stripes entire; lateral praescutal borders vaguely darkened; posterior sclerites of notum yellowish brown, the scutal lobes and a vague central line on the scutellum and mediotergite more darkened. Pleura and pleurotergite brownish yellow to light brown, the katapleurotergite a little darker; dorsopleural membrane weakly darkened. Halteres with stem pale, knob weakly infuscated. Legs with the coxae and trochanters yellow; femora obscure yellow with a narrow nearly terminal brown ring; tibiae and proximal two tarsal segments obscure brownish yellow, the tips very narrowly darkened, remainder of tarsi black; claws small, simple. Wings with a weak brown ground, restrictedly patterned with darker brown and small cream-colored areas, the former chiefly appearing as small clouds centering in cell *Sc*, the third at origin of *Rs*; stigma pale, only a little darker than the ground, the ends darker; the pale areas are chiefly in cells *M* and *Cu*, together with the obliterative mark across the base of cell *1st M*<sub>2</sub>; veins brown, more brownish yellow in the costal interspaces, infuscated in the darkened areas. Venation: *Rs* straight, less than twice *m-cu*; cell *1st M*<sub>2</sub> short-pentagonal.

Abdominal tergites brown, becoming darker outwardly, the center of tergite two and the basal rings of segments three and four more yellowed; outer segments more uniformly darkened but not forming a ring; sternites obscure yellow, the posterior borders darker; hypopygium obscure yellow. Male hypopygium (Fig. 2) with the posterior border of the ninth tergite, *9t*, produced, with a small U-shaped median notch, the lobes weakly notched to form an inner spinous point and a broader lateral lobule. Outer dististyle, *d*, long and slender, cylindrical, the setae of outer half, and especially of the apex, elongate; inner style with the setae of the dorsal crest all small, pale and inconspicuous. Gonapophysis, *g*, stout, shaped about as in figure. Eighth sternite, *8s*, short, the apex pale and submembranous, unequally trilobed, the lateral lobes provided with five or six setae, the smaller median lobe with more numerous blackened punctures and relatively short setae. Abdomen (female) relatively long.

*Holotype*, male, Farellones, Santiago, altitude 2200 meters, December 10, 1950 (Guillermo Kuschel). *Allotopotype*, female, pinned with type. *Paratopotypes*, 2 males. Type returned to Father Kuschel, to be deposited in the Colección de Insectos of the Universidad de Chile.

The weakly patterned wings are much as in *Tipula* (*Eumicrotipula*) *crepera*, sp.n., which differs in all details of coloration and in the structure of the male hypopygium.

62 *Tipula* (*Eumicrotipula*) *crepera*, sp.n.

Belongs to the *glaphyoptera* group; size large (wing, male, 20 mm.); mesonotum gray, the praescutum with four narrow clearly defined dark brown stripes; femora brown, the tips black, preceded by a very vague more brightened ring; wings broad, brown, with restricted darker brown and yellowish subhyaline areas; male hypopygium with the caudal region of tergite produced into two acute points that are separated by a U-shaped notch; mesal lobe of basistyle larger than the ventral-caudal one, the latter approximately twice as long as thick; appendage of eighth sternite unequally trilobed, the lateral lobes very low and more sclerotized than the elongate pale median ligula.

*Male.* Length about 18 mm.; wing 20 mm.; antenna about 3.5 mm.

Frontal prolongation of head dark brown above, paler on ventral surface, sparsely pruinose; nasus stout and conspicuous; palpi brownish black. Antennae (male) relatively short, dark brown, the pedicel obscure yellow; flagellar segments with the weak basal enlargements still darker brown; verticils shorter than the segments. Head dark gray; vertical tubercle very low.

Pronotal scutum gray, patterned with brown, including a narrow median line; scutellum obscure yellow. Mesonotum gray, the praescutum with four narrow, clearly defined, dark brown stripes, the intermediate pair well separated, slightly bowed at near midlength to widen the central interspace; lateral praescutal border a little more yellowed; posterior sclerites of notum gray, scutal lobes each with two disconnected brown spots; scutellum and mediotergite with a weak blackish central vitta, most distinct on the former; parascutella more yellowed. Pleura gray, the ventral anepisternum and ventral sternopleurite more darkened; dorsopleural membrane infuscated, more yellowed in front. Halteres obscure yellow, the knob more darkened, with the extreme tip pale. Legs with the coxae gray pruinose; trochanters brownish yellow, the posterior and middle pairs more pruinose; femora brown, the tips rather broadly black, the bases more brightened, with vague indications of a more brightened subterminal ring; tibiae and tarsi dark brown; claws simple. Wings broad; ground color brown, restrictedly variegated by darker brown and yellowish subhyaline areas; cell Sc with three dark brown areas, the usual basal one paler and diffuse; stigma paler brown; a small but conspicuous oblique area across cell 1st  $M_2$  and adjacent cells; small prestigmal and poststigmal brightenings; further small areas

in the subcostal interspaces and adjacent parts of cells  $R$  and  $R_1$ ; at near two-thirds cell  $M$  adjoining vein  $Cu$ , and as zigzag markings in cell  $1st A$ , extended into cell  $Cu$  as two brightenings; outer apical border narrowly darker than the ground, vaguely interrupted by brightened marginal areas in the medial field, clearest in cell  $M_4$ ; veins brown, the outer end of  $R_{1+2}$  broadly pale. Venation:  $R_s$  nearly twice  $m-cu$ ; vein  $R_{1+2}$  swung strongly cephalad, widening cell  $R_2$ ; cell  $1st M_2$  small-pentagonal; petiole of cell  $M_1$  subequal to  $m$ .

Abdomen obscure yellow, the tergites with the lateral borders broadly, the posterior margins narrowly clearer yellow; a poorly indicated and broken sublateral darkened stripe on tergites; subterminal segments more uniformly darkened, the hypopygium vaguely brightened. Male hypopygium (Fig. 3) with the posterior border of the tergite,  $9t$ , subtruncate, produced medially into two acute points that are separated by a U-shaped notch. Basistyle with the mesal lobe much larger than the ventrocaudal one, more or less triangular in outline, densely covered with strong setae, those near the summit longer and more conspicuous; ventrocaudal lobe short and stout, only about twice as long as thick, provided with only about 15 or 18 long setae. Outer dististyle,  $d$ , long and slender, the outer half a trifle stouter; inner style with the beak obtuse, the lower beak small, rounded at apex; face of outer blade obliquely ribbed or corrugated; outer margin or crest with numerous strong setae, these fewer but larger near the base. Gonapophysis,  $g$ , with the base expanded, the narrowed apical part terminating in an obtuse head. Eighth sternite,  $8s$ , with the appendage unequally trilobed, the lateral lobes very low and more sclerotized, the thickening continued for a distance up the sides of the elongate paler median ligula, the latter with abundant setae distributed virtually over the entire length.

*Holotype*, ♂, Termas de Río Blanco, Malleco, altitude 1050 meters, March 5 - 27, 1951 (Peña).

*Tipula* (*Eumicrotipula*) *crepera* is most similar to species such as *T. (E.) amphion*, sp.n., and *T. (E.) crossospila* Alexander, differing in all details of coloration of the body and wings, and especially in the structure of the male hypopygium, notably the tergite, dististyles and appendage of the eighth sternite.

### 63 *Tipula* (*Eumicrotipula*) *satrapa*, sp.n.

Belongs to the *glaphyoptera* group; general coloration dark gray, the praescutum with three entire brown stripes; antennae with basal two segments yellow, flagellum black; legs black, the femora with a narrow subterminal yellow ring; wings brown, heavily patterned with cream-colored areas; abdominal tergites yellow, trivittate with black, the outer segments, including the large hypopygium, black; male hypopygium with the ninth tergite scarcely emarginate; apparently a single dististyle;

gonapophysis appearing as a long sinuous blade; eighth sternite with a very conspicuous median spatula, the densely setiferous blade nearly as long as broad.

*Male.* Length about 16 - 17 mm.; wing 15.5 - 16 mm.; antenna about 5.3 - 5.4 mm.

*Female.* Length about 20 mm.; wing 18 mm.; antenna about 3 mm.

Frontal prolongation of head long, dark brown, sparsely pruinose; nasus short; palpi black. Antennae (male) relatively long; scape yellow, narrowly darkened basally, pedicel yellow, flagellum black, the extreme base of the first segment paler; basal enlargements of the flagellar segments small, verticils shorter than the segments. Head light gray in front, more infuscated on posterior vertex.

Pronotum gray, patterned with brown. Mesonotal praescutum gray, with three broad brown stripes; scutum gray, each lobe with two disconnected brown areas; posterior sclerites of notum gray, dark brown medially, provided with long pale setae. Pleura and pleurotergite dark gray; dorsopleural membrane infuscated. Halteres infuscated, the base of stem and apex of knob paler. Legs with the coxae brown, pruinose; trochanters yellow; femora black, the extreme bases pale, with a narrow subterminal yellow ring that is only about one-third as extensive as the blackened tip; tibiae and tarsi brownish black to black; claws with a small subbasal tooth. Wings conspicuously patterned, the ground color brown, variegated with cream-colored areas, particularly before the cord, including cells *C* and *Sc*, prearcular field, and bases of cells *M* and *Cu*; similar pale areas before and beyond origin of *Rs* and as marginal spots in outer ends of cells *R*<sub>5</sub> to 2nd *A*, smallest to virtually lacking in cells *M*<sub>1</sub> and 2nd *M*<sub>2</sub>; more whitened areas across base of cell 1st *M*<sub>2</sub> and beyond the stigma, chiefly in cell *R*<sub>2</sub>; cell *Sc* with a darkened area before origin of *Rs*, the area at the latter place not crossing cell *Sc*; stigma darker brown; veins dark brown, more brownish yellow in the brightened costal portions. Venation: *R*<sub>1+2</sub> short and pale but complete; *Rs* a little less than twice *m-cu*; petiole of cell *M*<sub>1</sub> subequal to *m*.

Abdomen yellow, the tergites trivittate with black, the median stripe unbroken or virtually so, the sublateral stripes narrowly interrupted at the posterior borders; lateral margins of tergites narrowly gray; sternites obscure yellow, slightly more darkened medially; outer segments, including the large hypopygium, blackened. In the female, the abdominal stripes broader and less intense; cerci long and slender, straight. Male hypopygium (Fig. 4) with the ninth tergite, 9*t*, large, its posterior border subtruncate, with a median triangular area more or less delimited by lines; the margin of this area with about three microscopic denticles at and near the midline; cephalic part of tergite with



a median membranous area at the midline, extending caudad to beyond midlength of the tergite. Basistyle with the mesal lobe, *mb*, large, darkened, its apex obliquely truncated; ventrocaudal lobe, *vb*, long weakly clavate, provided with scattered powerful bristles, mostly near the apex. Dististyle, *d*, unusually glabrous; beak slender; an oblique series of retrorse setae on face of style opposite the lower beak; outer dististyle apparently lacking, as in *chillanica* Alexander. Gonapophysis, *g*, distinctive, appearing as a long sinuous blade, narrowed and twisted at and near midlength, the apex dilated, terminating in a pendant lobe. Eighth sternite, *8s*, with a very conspicuous setiferous spatula, the blade nearly as broad as long.

*Holotype*, male, Rio Coluco, Chiloé Island, January 30, 1952 (Peña). *Allotopotype*, female. *Paratopotypes*, 2 males, one pinned with the allotype.

The most similar species is *Tipula (Eumicrotipula) jaennickeana* Alexander, which has the spatula of the eighth sternite of the male hypopygium somewhat the same but which differs conspicuously in all details of coloration and structure of the male hypopygium.

#### LIMONIINAE

#### LIMONIINI

#### 64 *Limonia (Limonia) praevia*, sp.n.

General coloration brown; antennal flagellum brownish black; femora brown, the tips abruptly yellow; wings brownish gray, with three large brown spots in cell *R* adjoining vein *R*, the first at near middistance between arculus and origin of *Rs*; *Sc* short, both *Sc*<sub>1</sub> and *Sc*<sub>2</sub> ending shortly beyond the origin of *Rs*; *m-cu* approximately one-third its length before fork of *M*; abdominal segments bicolored, brown, with less than the outer half yellowish white; ovipositor with cerci straight, only a little longer than the hypovalvae.

*Female*. Length about 7.5 mm.; wing 8.5 mm.; antenna about 1.3 mm.

Rostrum dark brown; palpi brownish black. Antennae with scape and pedicel brown, flagellum brownish black; flagellar segments oval, the more proximal ones well-separated by very short glabrous apical necks; terminal segment about one-third longer than the penultimate; longest verticils subequal to the segments. Head brown; anterior vertex about two and one-half times the diameter of the scape.

Pronotum yellowish brown, darker above. Mesonotum chiefly brown, the lateral praescutal borders, centers of scutal lobes and the scutellum darker brown; pleurotergite slightly more darkened. Pleura brown; dorsopleural membrane dusky. Halteres brownish black, the base of stem narrowly yellow. Legs with the coxae brown; trochanters testaceous; femora brown, the tips abruptly but rather narrowly yellow; remainder of legs brownish black; claws with a major outer tooth and about three small basal denticles. Wings with the ground brownish gray, patterned with medium brown, as follows: three large areas in cell *R*, the first at near midlength of vein *R* or about one-third cell *R*; second area at fork of *Sc* and origin of *Rs*; third spot at fork of *Rs*, confluent with the stigma; narrow and very inconspicuous pale brown seams over the cord and outer end of cell 1st *M*<sub>2</sub>; outer and posterior wing cells a trifle darker than those of the anterior half of wing; indications of weak darkenings at end of vein 2nd *A* and in the wing axilla; veins brown. Venation: *Sc*<sub>1</sub> ending a short distance beyond the origin of *Rs*, *Sc*<sub>2</sub> near its tip, likewise beyond *Rs*; free tip of *Sc*<sub>2</sub> and *R*<sub>2</sub> in transverse alignment; *Rs* about one-half longer than the basal section of *R*<sub>4+5</sub>; *m-cu* from one-third to one-fourth its length before fork of *M*; vein 2nd *A* sinuous, the cell moderately broad.

Abdomen bicolored, the segments brown with less than the outer half yellowish white; genital segment brownish yellow. Ovipositor with the cerci straight, acute at tips, only a little longer than the hypovalvae.

*Holotype*, female, Rio Blanco, Malleco, altitude 1050 meters, March 5 - 27, 1951 (Peña).

*Limonia (Limonia) praevia* is most nearly related to *L. (L.) trogliphila* Alexander and *L. (L.) nothofagi* Alexander, differing especially in the details of coloration of the body and wings, and in the venation.

#### HEXATOMINI

##### 65 *Austrolimnophila (Austrolimnophila) eutaeniata* (Bigot).

One female, taken at Cayutue, Llanquihue, May 18, 1939, by the late Dr. Kurt Wolffhügel. Previously known only from Tierra del Fuego.

##### 66 *Limnophila araucania macracantha*, subsp. n.

Characters as in the typical form, differing in the structure of the male hypopygium. Gonapophysis with a single powerful spine at caudal end of the plate, lacking in typical *araucania*.

*Holotype*, male, Curacautin, Malleco, December 14, 1950 (Peña).  
*Paratopotypes*, males December 8 - 14, 1950 (Peña); *paratype*, 1 male  
 Temuco, Cautin, October 28, 1936 (Espinoza), through Bullock.

67 *Limnophila lyra*, sp. n.

Size medium (wing, male, 6 mm.); general coloration of thorax brownish fulvous, the abdomen brown; antennae short, the proximal three flagellar segments incompletely united to form a fusion-segment; wings weakly tinted with brownish yellow, the stigma not indicated; vein  $R_{2+3+4}$  elongate, exceeding three times  $R_{1+2}$  or  $R_{2+3}$ ; cell  $M_1$  present; *m-cu* at near midlength of cell 1st  $M_2$ ; hypopygium yellow, outer dististyle glabrous, the dilated apex provided with dense appressed spinulose points; gonapophysis black, long and slender, strongly twisted.

*Male*. Length about 5 mm.; wing 6 mm.; antenna about 1 mm.

Rostrum obscure yellow; palpi dark brown short. Antennae (male) short; scape yellow, the remainder black; proximal three flagellar segments enlarged and partly united into an elongate fusion-segment, the sutures well-indicated; fourth and succeeding segments progressively more slender and elongate, shorter than the unusually long verticils. Head brownish fulvous, sparsely pruinose, more yellowed in front; anterior vertex broad.

Pronotum relatively massive, infuscated, sparsely pruinose. Mesonotum almost uniformly brownish yellow, the midregion of the praescutum vaguely more darkened; tuberculate pits small and inconspicuous, placed close to the cephalic border; pseudosutural foveae pale and inconspicuous, relatively small. Pleura yellow, the dorsal anepisternum weakly darkened; meral region reduced, the middle and hind coxae approximated. Halteres yellow. Legs with the coxae and trochanters testaceous yellow; remainder of legs light brown to brownish yellow, the outer tarsal darker; tibial spurs conspicuous; claws long, simple. Wings weakly tinted with brownish yellow, the prearcular and costal fields more evidently yellowed; stigma not defined; veins brown, more yellowed at wing base and in costal region. Venation: Anterior arculus preserved but faint;  $Sc$  moderately long,  $Sc_1$  ending just beyond the fork of  $R_s$ ,  $Sc_2$  a short distance from its tip; vein  $R_2$  faint to atrophied;  $R_{2+3+4}$  elongate, exceeding three times  $R_{1+2}$  or  $R_{2+3}$ ; veins  $R_3$  and  $R_4$  extending generally parallel to one another until outer end where  $R_4$  is deflected toward the wing tip, widening cell  $R_3$ ; inner end of cell  $R_3$  arcuated, lying more basad than the other cells in the region of the anterior cord; cell  $M_1$  present, small, a little more than one-third its petiole; cell 1st  $M_2$  small, rectangular, slightly widened outwardly, with *m-cu* at midlength.

Abdomen brown, the two subterminal segments still darker; hypopygium yellow. Male hypopygium (Fig. 7) with the region of the tergite, 9t, produced into a semicircular lobe. Outer dististyle, *d*, glabrous, stout, at apex more dilated, the margin and outer surface with dense appressed spinulose points; inner style much smaller, the margin darkened, the surface with several yellow setae, some of which are long. Gonapophysis, *g*, black, very long and slender, strongly twisted, longer than the aedeagus.

*Holotype*, male, Curacautin, Malleco, altitude 400 meters, December 14, 1950 (Peña).

*Limnophila lyra* is a very isolated fly whose strict generic position must be held in question. The affinities seem to lie with *Limnophila*, s.l., but the fused proximal segments of the antennal flagellum, and the structure of the male hypopygium, indicate an isolated type for which a new higher group may need to be proposed. The dense appressed spinulose setae of the outer dististyle are suggestive of the condition found in various species of *Ormosia* and allied Eriopterine genera.

68 *Gynoplistia* (*Gynoplistia*) *variata flavidula*, subsp.n.

Generally similar to the typical form (Ann. Ent. Soc. America, 24: 628 - 629; 1931), differing in details of coloration and in the structure of the male hypopygium.

Praescutal stripes and darkened areas on scutal lobes more distinct. Wings unpatterned except for a very narrow seam on  $R_2$  at outer end of the stigma. Male hypopygium with the subterminal spine of the outer dististyle far removed from the elongate tip. Apex of inner dististyle rather suddenly and abruptly narrowed. Gonapophysis simple, produced into a very long straight spine.

*Holotype*, male, Rio Blanco, Malleco, altitude 1050 meters, March 5 - 27, 1951 (Peña).

(43 a) *Gynoplistia* (*Gynoplistia*) *bicolor dillmani*, subsp.n.

*Male*. Length about 17 mm.; wing 14 mm.; antenna about 3.4 mm.

As in the typical subspecies, differing especially in the uniformly purplish black abdomen. Antennae relatively small, 20-segmented; formula 2+2+12+4; longest branches (at midlength of organ) exceeding one-third the length of the flagellum. Legs, especially the hind pair, shorter (Hind leg, femur 8 mm.; tibia 7.5 mm.; tarsus 6 mm.). A male

of typical *bicolor* in my collection shows the following measurements of the hind leg: femur 9 mm.; tibia 9.5 mm.; tarsus 7 mm.

*Holotype*, male, Cerros de Nahuelbuta, Angol, altitude 1200 meters, among the Araucarian pines, January 8, 1952 (D. S. Bullock).

This interesting race is dedicated to the collector, my long-time friend Dr. Dillman S. Bullock.

#### ERIOPTERINI

##### 69 *Cryptolabis (Cryptolabis) cortesi*, sp. n.

General coloration of mesonotum dark fulvous, the scutellum yellow; femora yellow, the tips narrowly darkened, tibiae with the base and apex narrowly infuscated, the intermediate part yellow; wings whitish subhyaline, more yellowed at base; *r-m* shortly before the fork of *Rs*; male hypopygium with the single dististyle appearing as a stout rod bears an obtuse blackened lobe near apex.

*Male*. Length about 5.5 mm.; wing 6.5 mm.; antenna about 0.7 mm.

Rostrum brownish yellow; palpi dark brown. Antennae with the scape and pedicel dark brown, flagellum paler brown; flagellar segments subcylindrical, the longest verticils of the more proximal segments very long, of the outer ones shorter and more appressed. Head obscure yellow.

Pronotum, pretergites and lateral border of praescutum light yellow, the dorsum of the mesonotum dark fulvous; scutellum light yellow. Pleura with a brown dorsal stripe, the ventral sclerites yellow; dorsopleural membrane pale yellow. Halteres with stem yellow, knob infuscated. Legs with the fore coxae weakly infuscated, the remaining coxae and all trochanters yellow; femora yellow, the tips narrowly darkened; tibiae yellow, the base and apex narrowly dark brown; basal tarsal segments obscure yellow, the outer ones darker. Wings (Fig. 6) whitish subhyaline, the base more yellowed; stigma restrictedly infuscated, the axillary region more distinctly so; veins brown, those in the prearcular field yellow. Rather numerous macrotrichia in the outer cells (their position shown by the dots in the figure). Venation:  $Sc_2$  about opposite two-thirds the length of *Rs*; *r-m* just before the fork of *Rs*; *m-cu* at near three-fifths the length of  $M_3+4$ .

Abdomen dark brown. Male hypopygium chiefly destroyed through an accident but the distinctive dististyle preserved. Dististyle (Fig. 8, d) appearing as a stout rod that is deflected at outer end into a flattened blade, the apex obtuse; on face before apex with a strong blackened triangular lobe or flange that narrows to an acute point, the surface with a few scattered setigerous punctures and with abundant erect setulae.

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

I am most pleased to name this very distinct fly for my friend Señor Raúl Cortés P., to whom I am indebted for many favors in the past. The species is entirely distinct from the other regional members of the subgenus, being more similar in general appearance to species such as *Cryptolabis (Cryptolabis) varipes* Alexander, differing from all in the structure of the dististyle of the male hypopygium.

70 *Amphineurus (Rhamphoneurus) insanus*, sp. n.

Mesonotum dark brown medially, the sides broadly yellowish brown; pleura yellow with a broad dorsal brown stripe; proximal antennal segments yellow, the outer ones infuscated; posterior femora dark brown on basal half, the outer part yellow; wings pale yellow, very restrictedly patterned with darker; male hypopygium with the tergite broadly notched; mesal lobes of basistyle asymmetrical on the two sides; phallosome a strong blackened rod, dilated at apex and farther produced into a powerful spine.

*Male*. Length about 6 mm.; wing 7 mm.; antenna about 1.5 mm.

Rostrum black, about one-third longer than the remainder of head; palpi black. Antennae with about the proximal half yellow, the outer flagellar segments infuscated; flagellar segments subcylindrical, weakly swollen at midlength, the verticils of the more basal segments almost twice the segments. Head dark brown.

Pronotum weakly darkened in front, the posterior part, with the pretergites, white. Mesonotal praescutum broadly dark brown medially, the area narrowed posteriorly, the sides broadly yellowish brown, the restricted humeri clearer yellow; scutal lobes brown; scutellum and central part of mediotergite still darker brown, the suture between the mediotergite and pleurotergite, with the parascutella, extensively yellowed. Pleura chiefly pale, with a broad dorsal brown stripe, interrupted by the pale propleura, widened behind; meral region broadly infuscated, sternopleurite pale. Halteres with base of stem broadly whitened, the remainder brownish black, knob obscure brownish yellow. Legs with the coxae and trochanters yellow; fore and middle femora brown, the posterior pair conspicuously bicolored, dark brown on basal half, yellow on apical portion; tibiae brown; tarsi brownish black. Wings pale yellow, the prearcular and costal regions more saturated yellow; a narrow and very inconspicuous brown seam along the cord, most evident on  $R_2$  at proximal end of the otherwise yellow stigma; veins brown, yellow in the more brightened portions. Venation:  $M_{3+4}$  sessile, the sinuous *m-cu* at its fork.

Abdomen dark brown, the outer lobes of the basistyle more yellowed. Male hypopygium (Fig. 9) with the tergite, *9t*, large, gently narrowed outwardly, the posterior margin with a broad V-shaped notch, the lateral lobes glabrous. Dorsal lobe of basistyle, *b*, short, the ventral lobe, *vb*, long, projecting beyond the other elements of the hypopygium, the mesal face with abundant delicate setae, those of the outer face longer and coarser. What are interpreted as being the mesal lobes of the basistyle, *mb*, are markedly asymmetrical on the two sides, one long and slender, curved apically to a long slender point, the outer margin before apex with delicate erect setulae; mesal lobe of opposite side with the basal portion about the same, the apex a short beaklike structure. Outer dististyle, *d*, of both sides very unequally divided on outer portion into two flattened blades, the outer much longer, flattened; inner style the longest of the dististyles, unequally bilobed, the outer arm a slender spine. Phallosome, *p*, a strong blackened rod, dilated at apex and farther produced into a powerful spine, the structure much longer and more conspicuous than the yellow aedeagus, *a*.

*Holotype*, male, Rio Blanco, Malleco, altitude 1050 meters, March 5 - 27, 1951 (Peña).

From the general features of the male hypopygium, the present fly is evidently allied to *Amphineurus* (*Rhamphoneurus*) *nothofagetorum* Alexander, and allies, differing in the coloration of the legs and especially in the details of structure of the male hypopygium, particularly the mesal lobes of the basistyle, the dististyles, and the phallosome.

71 *Molophilus* (*Molophilus*) *eumonostylus*, sp. n.

Belongs to the *monostylus* group; size very large (wing, male, 6 mm. or more); general coloration of notum brownish gray; legs brown, the tarsi passing into black; male hypopygium with the basistyle elongate, the single dististyle inserted at near midlength of the mesal face, the outer end with numerous long black setae; dististyle unequally tripartite, including two long slender arms and a powerful blackened basal spine.

*Male*. Length about 5.5 - 5.7 mm.; wing 6.5 - 7 mm.; antenna about 1.4 - 1.5 mm.

*Female*. Length about 6 - 6.5 mm.; wing 6 - 6.6 mm.; antenna about 1.5 - 1.6 mm.

Rostrum dark brown; palpi black. Antennae black; flagellar segments subcylindrical to truncate-oval, the basal verticils very long. Head gray.

Pronotal scutum fulvous, the scutellum and pretergites yellow. Mesonotum brownish gray, the humeral region of praescutum obscure orange, central praescutal stripe darker, pleurotergite paler brown. Pleura gray, the dorsopleural membrane obscure yellow. Halteres yellow. Legs with the coxae brownish testaceous; trochanters yellow; femora brown, somewhat brighter basally; tibiae brownish yellow, the tips narrowly darkened, tarsi passing into black. Wings strongly tinged with brown, the axilla still darker; prearcular and costal fields more yellowed; veins light brown to yellowish brown; macrotrichia dark. Venation:  $R_2$  opposite or just beyond the level of  $r-m$ ; petiole of cell  $M_3$  short, less than twice  $m-cu$ ; vein 2nd  $A$  long, ending nearly opposite the base of cell  $M_3$ .

Abdomen dark brown. Male hypopygium (Fig. 10) with the basistyle,  $b$ , elongate, the single dististyle,  $d$ , placed close to midlength; outer produced lobe constricted at apex into a small blackened lobe that is microscopically corrugated and provided with a brush of long yellow setae. Dististyle,  $d$ , unequally tripartite, including two longer blades or spines, in addition to a powerful basal spur; outer arm a little shorter than the lower one, extended into a long straight black spine; lower arm a little dilated to the obtuse tip. Aedeagus,  $a$ , appearing as in the group, with two naked black filamentous rods for more than the basal half, thence encased in the sheath, the latter narrowed at apex.

*Holotype*, male Aucar, Chiloé Island, January 6 - 15, 1952. (Peña).  
*Allotopotype*, female. *Paratopotypes*, 1 male, 1 female.

The only other described members of the *monostylus* group are the smaller *Molophilus (Molophilus) monostylus* Alexander and *M. (M.) monostyloides* Alexander, both of which have the male hypopygia quite distinct.

72 *Molophilus (Molophilus) setosistylus* Alexander.

1952 *Molophilus (Molophilus) setosistylus* Alexander; Journ N. Y. Ent. Soc., 60 (in press).

The type was from Rio Blanco, Malleco, Chile, altitude 1050 meters, taken March 5 - 27, 1951, by Peña.

Male hypopygium (Fig. 11) with the beak of the basistyle,  $b$ , long and slender, blackened, curved to the acute tip. Outer dististyle,  $d$ , with the arms very unequal in shape, the inner a gently curved finger-like rod. Basal dististyle,  $bd$ , profoundly bifid, as in the *flavidus* subgroup; outer arm slender basally, with about the outer third or more dilated, thence narrowed to a long straight apical spine; inner margin of the dilated portion with abundant delicate blackened setae, forming a dense brush; inner arm about two-thirds as long, appearing as a slender



rod that terminates in a long acute spine, the outer margin at near midlength with five or six spines, the outermost longest.

73 *Molophilus (Molophilus) sparsispinus* Alexander

1952 *Molophilus (Molophilus) sparsispinus* Alexander; Journ. N. Y. Ent. Soc., 60 (in press).

The type was from Curacautin, Malleco, altitude 400 meters, taken December 6 - 25, 1950, by Peña.

Male hypopygium (Fig. 12) with the beak of the basistyle, *b*, unusually long and slender, blackened, the outer third decurved to the acute tip. Outer dististyle, *d*, relatively short, the outer arm a gently curved black spine. Basal dististyle, *bd*, profoundly bifid, as in the *flavidus* subgroup; outer arm longest, provided with unusually few spines, those of the outer third about ten in number, all restricted to the outer face, the outermost spines larger; basal half of arm with smaller spiculose points or roughenings; inner face of arm entirely glabrous; inner arm of style about two-thirds as long, terminating in a long simple spine, with about two small spinules on outer face beyond midlength; no setae on style.

74 *Molophilus (Molophilus) echo* Alexander.

1952 *Molophilus (Molophilus) echo* Alexander; Journ. N. Y. Ent. Soc., 60 (in press).

The types were from Rio Blanco, Malleco, altitude 1050 meters, taken March 5 - 27, 1951, by Peña, and Curacautin, Malleco, altitude 400 meters, December 10, 1950, by Peña.

Male hypopygium (Fig. 13) with the beak of the basistyle, *b*, slender; in the paratype, one basistyle shows the beak split at the apex. Outer dististyle, *d*, with its outer arm flattened, the inner apical angle produced into a small point. Basal dististyle, *bd*, appearing as a blackened rod, beyond midlength forking into two unequal spines, the outer or axial arm stouter, the lateral one shorter and more slender. Phallosome setiferous, the apex shallowly emarginate.

75 *Molophilus (Molophilus) rubidithorax excavatus*, subsp. n.

Characteres essentially as in typical *rubidithorax* Alexander, of Patagonia and South Chile, differing in slight details of structure of the male hypopygium. Basal dististyle simple, relatively stout, strongly curved to the acute tip. Phallosome very deeply and conspicuously

bilobed at apex, the lobes unusually slender, narrower than the deep U-shaped apical notch. In the typical form, the phallosome is truncated across the apex or very shallowly emarginate.

*Holotype*, male Rio Blanco, Malleco, altitude 1050 meters, March 5 - 27, 1951 (Peña). *Allotopotype*, female, pinned with type. *Paratopotype*, male, pinned with type.

76 *Molophilus (Molophilus) isolatus* Alexander.

1952 *Molophilus (Molophilus) isolatus* Alexander; Journ. N. Y. Ent. Soc., 60 (in press).

The type was from Rio Blanco, Malleco, altitude 1050 meters, taken March 5 - 27, 1951, by Peña.

Male hypopygium (Fig. 14) with the beak of the basistyle, *b*, unusually stout, its apex blunt to subtruncate. Outer dististyle, *d*, with the arms very unequal, the outer a slender rod, the inner arm twisted at apex. Basal dististyle, *bd*, distinctive, appearing as a blackened structure that narrows gradually to a long apical spine, the outer margin provided with about five spinous points, the two subbasal ones stoutest, the subapical pair small and slender. Phallosome, *p*, emarginate, the notch broad, the lobes correspondingly narrow; surface, especially the margins of the lobes, conspicuously setiferous.

77 *Molophilus (Molophilus) lethaeus*, sp.n.

Belongs to the *plagiatus* group; general coloration of praescutum dark chestnut, more blackened in front; scutellum obscure yellow, pleura dark brown; male hypopygium with the basal dististyle profoundly forked, each arm terminating in a few points; phallosomic plate a darkened depressed-flattened blade, the basal half more dilated, its margins microscopically toothed.

*Male*. Length about 4 - 4.2 mm.; wing 4.5 - 4.6 mm.; antenna about 1.1 - 1.2 mm.

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

Rostrum and palpi black. Antennae (male) moderately long, if bent backward extending about to the wing root, black; flagellar segments oval, with long white setae additional to the verticils, the latter very long on the more proximal segments. Head dark gray.

Pronotum pale above, darker on sides; scutellum and pretergites whitened. Mesonotal praescutum dark chestnut, more blackened in front,

especialmente medialmente; scutellum oscuro amarillo; postnotum oscuro marrón. Pleura, incluyendo la dorsopleural membrana, oscuro marrón. Halteres amarillo. Patas con las coxas castaño testáceas; trocánteres pálido marrón; el resto de las patas amarillo, oscurecido por la vestimenta, los segmentos externos más infuscados. Alas suffused con gris, los prearcular y costal campos más amarillentos; venas amarillo, macrotrichia más oscura. Costal borde y células en la cercanía del stigma y punta de ala con trichia. Venación:  $R_s$  muy largo;  $R_2$  yaciendo a corta distancia más allá del nivel de  $r-m$ ; pedicelo de célula  $M_3$  relativamente corto, aproximadamente la mitad más largo que  $m-cu$ ; vena 2nd A largo y sinuoso.

Abdomen oscuro marrón, hipopigium más castaño amarillo. Macho hipopigium (Fig. 15) con el basistyle,  $b$ , terminando en un robusto blackened beak, rodeado por numerosas setulae. Outer dististyle,  $d$ , pequeño, apareciendo como un simple curved rod. Basal dististyle,  $bd$ , distintivo, profundamente forrado, cada brazo terminando en unos pocos puntos. Phallosomic plate,  $p$ , apareciendo como un darkened depressed-flattened blade, la mitad basal o menos ligeramente más dilatada, los márgenes microscópicamente toothed. Aedeagus,  $a$ , largo y recto, cerca del ápice producido en pequeños subacute shoulders inmediatamente antes del ápice.

*Holotype*, macho, Chepu, Chiloé Island, February 8, 1952 (Peña).

*Allotopotype*, hembra, February 1 - 3, 1952. *Paratopotypes*, machos.

*Molophilus (Molophilus) lethaeus* es bastante distinto de todas las otras especies conocidas en los detalles de la estructura del macho hipopigium. En la naturaleza de la phallosomic plate, esto sugiere algo *M. (M.) pretiosus* Alexander, que puede presumirse que sea el pariente más cercano descrito.

## SUMARIO

En esta cuarta parte de su serie sobre nuevos o poco conocidos Tipúlidos de Chile, el autor describe 14 especies o sub-especies nuevas de los géneros *Holorusia*, *Tipula*, *Limonia*, *Limnophila*, *Gynoplistia*, *Cryptolabis*, *Amphineurus* y *Molophilus*, refiriéndose también a otras especies anteriormente descritas por el mismo autor.

## EXPLANATION OF FIGURES

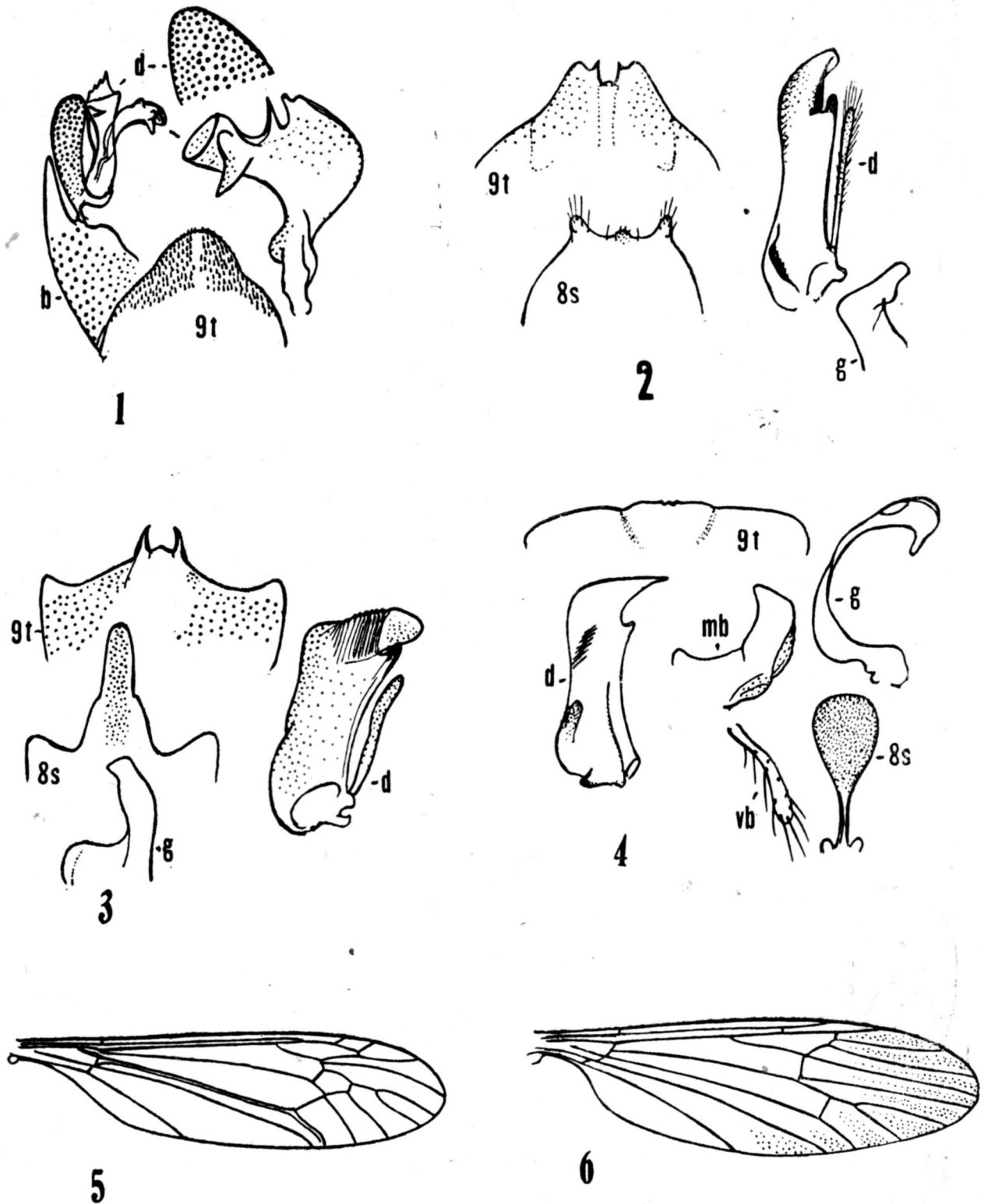


Fig. 1. *Holorusia (Ischnotoma) peñai*, sp. n. — Fig. 2. *Tipula (Eumicrotipula) amphion*, sp. n.  
 Fig. 3. *Tipula (Eumicrotipula) crepera*, sp. n. — Fig. 4. *Tipula (Eumicrotipula) satrapa*,  
 sp. n. — Fig. 5. *Holorusia (Ischnotoma) peñai*, sp. n.; venation. — Fig. 6. *Cryptolabis*  
*(Cryptolabis) cortesi*, sp. n.; venation.

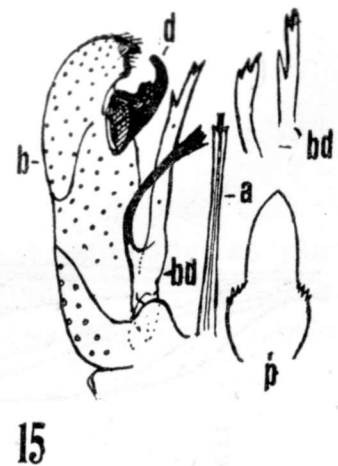
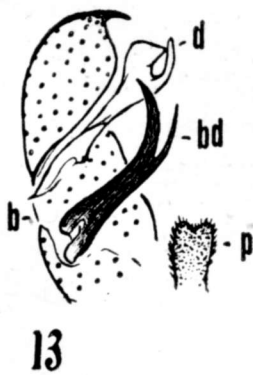
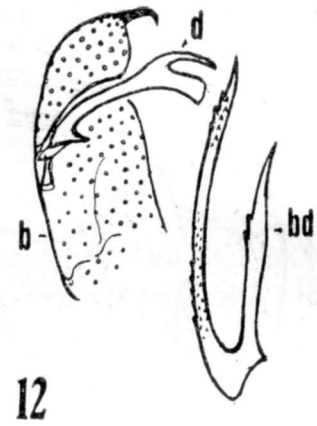
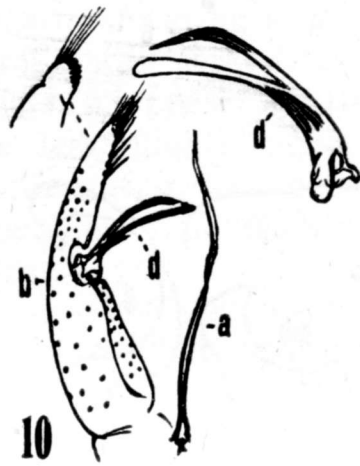
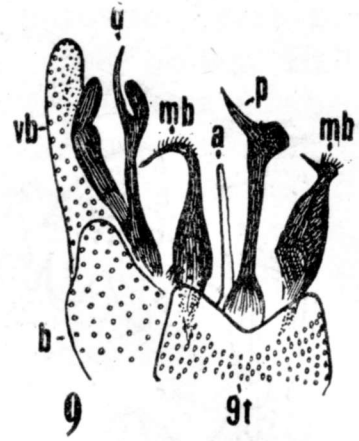
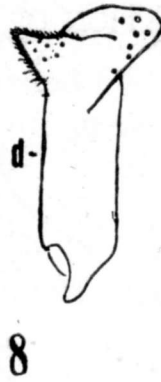
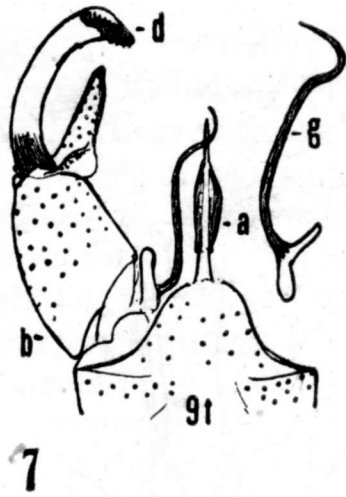


Fig. 7. *Limnophila lyra*, sp. n. — Fig. 8. *Cryptolabis (Cryptolabis) cortesi*, sp. n. — Fig. 9. *Amphineurus (Rhamphoneurus) insanus*, sp. n. — Fig. 10. *Molophilus (Molophilus) eumonostylus*, sp. n. — Fig. 11. *Molophilus (Molophilus) setosistylus* Alexander — Fig. 12. *Molophilus (Molophilus) sparsispinus* Alexander. — Fig. 13. *Molophilus (Molophilus) echo* Alexander. — Fig. 14. *Molophilus (Molophilus) isolatus* Alexander. — Fig. 15. *Molophilus (Molophilus) lethaeus*, sp. n.

(Explanation of symbols: *a*, aedeagus; *b*, basistyle; *bd*, basal dististyle; *d*, dististyle; *g*, gonapophysis; *mb*, mesal lobe of basistyle; *p*, phallosome; *s*, sternite; *t*, tergite; *vb*, ventral lobe of basistyle).