

The Neotropical Tipulidae in the Hungarian national museum (Diptera). IV

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The Neotropical Tipulidae in the Hungarian National Museum (Diptera).—IV.

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(Plate XV.)

Sub-family TIPULINAE, Tribe TIPULINI.

Genus **Macromastix** Osten Sacken.

Macromastix pygmaea sp. n. (Pl. XV, fig. 1).

Size small (wing of ♂ about 10.5 mm.); wings with *R*₂ obliterated; halteres very long and slender.

Male.—Length 8 mm.; wing, 10.3 mm.; antennae about 9.5-10 mm.

Palpi dark brown; frontal prolongation of the head brown, antennae a little longer than the body, the flagellar segments being greatly elongated, antennae densely clothed with rather short delicate hairs; fore part of the vertex produced into a prominent conical tubercle; front and vertex gray, occiput brownish.

Mesonotal praescutum light brown somewhat darker in front and on the sides, but without apparent stripes; scutum with the lobes brown; scutellum and postnotum light brownish yellow. Pleurae, mesopleurae darker brown than the yellowish metapleurae. Halteres very long and slender, yellowish at base, the remainder brown.

Legs, coxae and trochanters dull yellow; femora dull yellow basally soon passing into brown; tibiae and tarsi brown.

Wings subhyaline, cells *C* and *Sc* more yellowish; stigma scarcely indicated; veins brown. Venation, *Rs* very short, *R*₂ obliterated. (See Plate XV, figure 1).

Abdomen with the two basal segments light brown; remainder of abdomen dark brown; hypopygium simple.

Holotype.—Male, Callanga, Peru, in the Hungarian National Museum.

The reference of this species to *Macromastix* is somewhat provisional. It agrees with *M. chilensis* Philippi¹ in its antennae and simple hypopygium, but the obliteration of vein *R*₂ is a character suggesting certain of the *Dolichopezini*. I do not care to erect a new genus upon a single specimen. As I have shown before,² Enderlein's *M. appendens* (Zool. Jahrb., Vol. 32, pt. I, pp. 14, 15) is not a *Macromastix* at all, but a true *Tipula*.

¹Philippi, Verh. Zool. bot. Gesell. Wien. Vol. 15, p. 617 (1865).

²Alexander, Ann. Ent. Soc. Am., Vol. 5, No. 4, p. 355 (1912).

Genus **Holorusia** Loew.**Holorusia flavicornis** sp. n. (Pl. XV, fig. 2).

Antennæ of ♂ elongate, without bristles; thoracic dorsum rich chestnut; pleuræ yellow above, paler beneath, a dark lateral stripe; wings pale brown.

Male.—Length, 13.2 mm.; wing, 19.3 mm.; antennæ, about 7.5 mm. Fore leg, femur, 10.8 mm.; tibia, 12.3 mm.; tarsus, segment I, 21.4 mm.

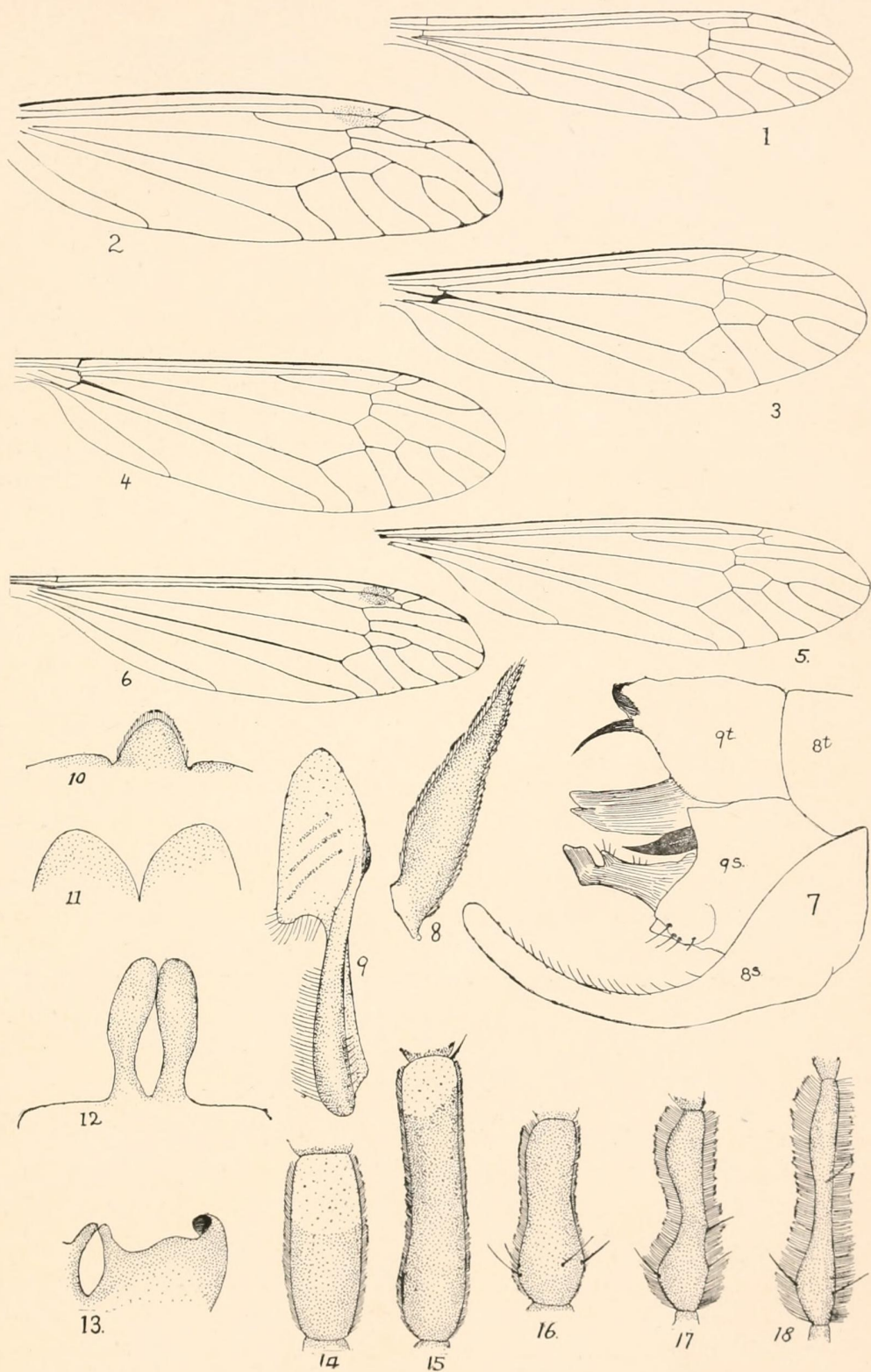
Palpi rather short, dark brownish black, the frontal prolongation of the head rather long, the nasus very long and sharply pointed, the prolongation is brown, rather darker on the sides; antennæ elongate, scapal segments very small, the first only a little longer than the second, the flagellar segments elongate cylindrical, not incised, without bristles but densely clothed with very short pale hairs; antennæ light yellow, the apical flagellar segments a little darker; head with a light brown median stripe, the sides behind the eyes rich chestnut brown.

Pronotum rich chestnut medially, light yellow on the sides, this color being the anterior end of a broad pale stripe underneath the mesonotal præscutum. Mesonotal præscutum rich chestnut brown, stripes not very distinct, the lateral margins of the sclerite rather darker; scutum dark brown; scutellum brown; postnotum dark brown in front, light dull yellow behind. Pleuræ rather pale; a yellow stripe, described above, running from the pronotum almost to the wing root; ventrad of this, a dark brown stripe running from the cervical sclerites almost to the wing root; ventral pleural sclerites brownish yellow. Halteres rather short, brown.

Legs, coxæ and trochanters dull yellow; femora yellowish brown, passing into brown, the tip dark brown; tibiæ brown, the extreme base pale, almost white; tarsi brown; legs long and slender.

Wings with a pale brown suffusion, cell *C* more yellowish, stigmal region dark brown; a brown cloud at the origin of *Rs*; subhyaline droplets in cell *1stR1*, end of *R5*, *M1*, base of *M2* and tip of *1stA* near the vein *2ndA*. Venation, see Plate XV, figure 2. The wing figured shows an adventitious crossvein in cell *R3* dividing this into two cells the other wing being normal.

Abdominal tergites brown, the genitalia more yellowish, sternites a little more yellowish. Hypopygium small, 8th tergite rather narrow, especially medially; 8th sternite rather short, produced caudad into a very short sheath for the 9th sternite. Ninth tergite rather square, the caudal margin deeply concave, the latero-caudal angles produced into prominent lobes which are somewhat divergent, the tips and caudal margin provided with numerous black bristles. Ninth sternite rather large, pleura not distinct, near the base of the sclerite on the



NEOTROPICAL TIPULIDAE, IV.—ALEXANDER.



ventro-median line underneath the protecting sheath of the 8th sternite is a median lobe directed ventrad, deeply divided medially to form two cylindrical lobes which are densely clothed with long, appressed silky hairs. Pleural region with the following appendages: a large pale external appendage, directed dorsad in a position of rest, its tip rather sharp-pointed, on its outer margin near the middle, with a prominent chitinized tooth, the whole appendage clothed with long pale hairs; inner appendage smaller, flattened, fleshy, pale, clothed with abundant pale hairs. Inside of the genital chamber, just beneath the lobes of the 9th tergite is a pair of irregular appendages very densely provided with small, rounded chitinized tubercles.

Holotype.—Male, Venezuela, ex. Coll. H. Fruhstorfer, in the Hungarian National Museum.

From the species of what seem to be *Holorusia pallidivervis* Mcqt. (Dipt. Exot., Suppl. I, p. 16) and *albocostata* Mcqt. (l. c., pp. 15, 16), this differs in its wing-pattern and long pale yellow antennae. From *H. maya* Alex. (Ann. Ent. Soc. Am., Vol. 5, p. 358, 1912) it differs in its much smaller size and quite different color.

Holorusia laevis, sp. n. (Pl. XV, figs. 8, 15).

Flagellum of antennæ without bristles; antennæ of ♂ moderately long, flagellum bicolored; mesonotum reddish brown with indistinct darker lines; wings light brown, a square spot in cell *M* near the middle of its length.

Male.—Length, 13.4 mm.; wing, 18 mm.; fore leg, femur, 11 mm.; tibia, 11.5 mm.; tarsus, segment 1, 19 mm.

Palpi moderate in length, dark brown; frontal prolongation of the head rather short, nasus very long and prominent, front light brown; antennæ moderately long, if bent back, extending a little beyond the wing root, segment 1 rather short, about one-half as long as the third segment, flagellar segments cylindrical, not constricted, unarmed with bristles except a small pair at the tip, segments 1 and 2 light brown, 3 dark brown, 4 to 8 dark brown, yellowish at the tip, 9 to the end dark brown, the entire flagellum densely covered with white downy hairs; head rich brown. (See Plate XV, fig. 15).

Pronotal scutum reddish brown, scutellum almost white. Mesonotal præscutum reddish brown with very narrow indistinct darker lines; scutum reddish brown; scutellum and postnotum pale yellowish white. Pleuræ uniform pale yellowish. Halteres rather long, brown.

Legs, coxæ and trochanters light yellow, femora light yellowish brown, dark brown at the tip; tibiæ brown, scarcely darker at the tip; tarsi brown.

Wings subhyaline, cells *C* and *Sc* brownish, stigmal region brown, a brown cloud at the origin of *Rs*, a square patch in the middle of cell *M* over the vein *Cu*; base of cell *M* dark.

Abdominal tergites 1-5 dull yellowish, 6-8 dark brown, 9 yellowish, pale; segments 3-6 pale on the lateral margin; apical sternites dark brown; 9th and caudal part of the 8th light yellow. Hypopygium: 9th tergite from above, rather quadrate, the caudal margin with a median notch, the whole posterior face provided with numerous black bristles as in this group of species (*flavicornis*, et al). Eighth sternite short, dark basally, pale reddish yellow apically; 9th sternite very elongate giving the caudal margin of the hypopygium an oblique appearance when viewed from the side, pleural suture incomplete; outer pleural appendage long, flat and tapering to a point, fleshy, pale, clothed with long hairs. (See Plate XV, fig. 8). Inner appendage short, fleshy, concave on the outer face.

Holotype.—Male, Asuncion, Paraguay, May 5, 1904 (Vezényi), in the Hungarian National Museum.

Holorusia orophila sp. n. (Pl. XV, fig. 14).

Flagellum of antennæ without bristles; antennæ short, the flagellum bicolored; mesonotum light brown with about five narrow darker lines; wings with a square spot in cell *M* near the middle of its length.

Male.—Length, 13.5 mm.; wing, 16.8 mm. Fore leg, femur, 9.6 mm.; tibia, 10.8 mm.

Palpi rather short, dark brown; frontal prolongation of the head short, nasus very long and prominent, brown; antennæ short, if bent backward, not attaining the wing root; the first segment elongate as long as the succeeding three segments combined; flagellar segments short-cylindrical, without bristles; first three antennal segments dull yellow; segments 4-10 dark brown basally, yellow apically, terminal antennal segments dark brown; head dark brown, narrowly paler behind adjoining the eyes. (See Plate XV, figure 14).

Thoracic notum, præscutum light brown with about five narrow darker lines, one median and with two indistinct lateral stripes on either side; scutum and scutellum light brown, the latter paler, yellowish; postnotum dull yellow, darker on the sides. Pleuræ pale dull yellow, unmarked. Halteres rather long, brown, a little paler basally.

Legs, coxæ dull light yellow; trochanters and femora yellowish brown, the latter a little darker at the tip, tibiæ and tarsi brown.

Wings subhyaline; cells *C* and *Sc* brown; stigma brown; a brown spot in cell *M* near the middle of the length of *Cu*; cells *R* and *M* brown at the base.

Abdomen with the basal tergites dull yellow; 5-6 with a broad brown median stripe; 7 with the caudal margin dark brown; 8 en-

tirely dark brown; 9 yellowish. Sternites 1-6 dull brownish yellow, the apical sternites dark brown.

Holotype.—Male, San Lorenzo, Sierra, Colombia (Ujhelyi), in the Hungarian National Museum.

***Holorusia peruviana* sp. n.**

Flagellum of antennæ without bristles; antennæ dark brown; mesonotum light brown with broad brown stripes; wings without well defined markings.

Male.—Length, 13.3 mm.; wing, 17.1 mm.; fore leg, femur, 7.8 mm.; tibia, 8.9 mm.; tarsus, 14.2 mm.

Palpi short, dark brown; frontal prolongation of the head very short and stout, brown, nasus distinct, large; antennæ, scapal segments short, brown, flagellar segments elongate-cylindrical, dark brown, without bristles, but clothed with a dense fine pubescence; head brown, a median line and the region adjoining the eyes very dark brown.

Mesonotal præscutum pale with three broad brown stripes, the median one very broad, bisected by a dark brown line; scutum brownish gray; scutellum and postnotum light gray with a narrow indistinct brown median line. Pleuræ with a broad light band across the dorsal sclerites extending from the pronotum to the wing root; median pleural sclerites light gray with three oval dark brown spots which form an interrupted lateral band; mesosternum gray with a light brown suffusion. Halteres rather long, brown, pale at the extreme base.

Legs, coxæ light gray; trochanters dark brown; femora brown, darker at the tip; tibiæ and tarsi brown.

Wings with a light gray suffusion; stigma light brown; a rounded gray cloud at the origin of *Rs*; a subhyaline blotch in cell *1stA* at the margin. Venation: Cell *1stM2* very long, petiole of cell *M1* short or lacking.

Abdominal tergites light brown, a slightly darker median stripe; segments 6-8 dark brown; sternites, segment 1 dark brown, 2-5 light yellow, dark brown medially, 6-8 dark brown.

Holotype.—Male, Callanga, Peru, in the Hungarian National Museum.

The reference of some of the above species to *Holorusia* is doubtful, but they agree better with that genus than with the typical *Tipula* and so I describe them as species of *Holorusia*.

Genus *Tipula* Linnaeus.***Tipula gladiator* sp. n.** (Pl. XV, figs. 6, 7).

Antennæ of the male elongate, basal segments yellow, flagellum dark brown; thorax dark grayish brown; wings dull yellowish; 8th sternite of the ♂ genitalia produced caudad into a long curved sabre-like appendage.

Male.—Length, 16.2 mm.; wing, 14 mm.

Palpi with the basal segments a little darker than the dull yellow apical segments; frontal prolongation of the head short, nasus distinct, darker brown above, more yellowish beneath and on the sides; antennæ elongate, if bent backward extending about to the 3rd abdominal segment; segments 1 and 2 light yellow, flagellar segments dark brown covered with short pale hairs; the segments not cylindrical, but feebly incised on the lower face; head gray, a little clearer on the occiput.

Pronotal scutum dark brown bordered with gray. Mesonotal præscutum brown with indistinct darker brown stripes of which the median one is double; scutum brownish gray; scutellum brown; postnotum light gray. Pleuræ pale with a clear light gray bloom on the mesopleuræ. Halteres brown, pale at the base.

Legs, coxæ pale yellow with a sparse grayish bloom, most pronounced on the fore coxæ; trochanters dull yellow; remainder of legs broken.

Wings with a brownish yellow suffusion; stigma oval, brown. Venation as in Plate XV, figure 6.

Abdominal tergites dark brown; a large triangular yellow blotch on the sides of the second segment on the caudal half; genitalia yellowish; two basal sternites dull yellow, 3-7 dark brown. Hypopygium: Eighth tergite broad; 8th sternite with the caudal margin produced backward in a long curved appendage, much exceeding the remaining parts of the hypopygium; its dorsal face concave, the appendage sparsely clothed with short appressed hairs. Ninth tergite with a blunt lobe on the caudal margin on either side of the concave median portion, the latero-caudal angles produced backward into long, slender, chitinized spines which are directed caudad and slightly ventrad; 9th sternite small. Appendages which seem to come from the pleural region are: first, a ventral appendage, irregular, rather chitinized apically, its dorsal margin near the tip with a rounded notch; second appendage, above the first, a sharp, heavily chitinized spine directed caudad; third appendage, large, feebly chitinized, its apex notched (possibly median in position as it seems to be unpaired); fourth, dorsad of these three appendages and just underneath the spines of the 9th tergite is a sub-fleshy lobe more chitinized apically, clothed with long delicate hairs (not shown in the figure). Lateral aspect of the hypopygium shown in Plate XV, figure 7.

Holotype.—Male, Theresopolis, Brazil, in the Hungarian National Museum.

The remarkable hypopygium of the male at once separates it off from the other species in the Neotropical fauna.

***Tipula guarani* sp. n.**

Antennæ brownish yellow; thorax brownish gray with brown stripes; femora brownish yellow, tip broadly brown; wings hyaline with brown spots and gray clouds.

Female.—Length, 33 mm.; wing, 23.2 mm.; fore leg, femur, 11.6 mm.; tibia, 14.4 mm.

Palpi rather long, the three basal segments rather stout, the last segment slender, palpi dark brown; frontal prolongation of the head rather long, brown; antennæ, segment 1 elongate, first flagellar segment rather stout, antennæ brownish yellow; head pale yellowish brown with a narrow stripe of dark brown.

Thoracic pronotum pale gray, dark brown medially. Mesonotal præscutum light brownish-gray with dark brown stripes, the median stripe broadest in front, a little narrowed behind, the thoracic stripes contrasting strongly against the pale ground color; scutal lobes largely brown with an isolated rounded brown spot on the cephalic margin of each lobe, this being the caudal end of the lateral præscutal stripe; median portion of the scutum brown; scutellum and postnotum grayish brown medially. Pleuræ dull gray with brown spots on the mesopleuræ. Halteres rather long, brown, the knob darker.

Leg, coxæ grayish brown; trochanters dull yellow; femora brownish yellow, the tip broadly dark brown; the fore legs, especially, show a broad yellow subapical ring; tibiæ brownish yellow, the tip indistinctly darker; tarsi brown.

Wings hyaline with brown spots and gray clouds, as follows: Brown spots at the base of the wing, midlength of the distance between the base of *R*₁ and the origin of the sector; at origin of *R*_s, stigmal region, brown seam to vein *Cu* and most of the crossveins and deflections of veins; tip of cells *R*₂ and *R*₃ grayish brown; gray clouds in all the caudal cells of the wing. Venation: *R*_s long, slender, lying rather close to *R*₁; crossvein *m-cu* present.

Abdominal tergite 1 brownish gray; 2-8, dull orange-yellow, a little suffused with darker; segment 9 and ovipositor brown; sternites yellow, median line brown. Ovipositor, tergal valves very long, very slender and straight, the margins smooth, tips scarcely expanded, sternal valves short.

Holotype.—Female, Rio Grande, Brazil, in the Hungarian National Museum.

The specific name is that of a native Indian tribe.

Tipula oblique-fasciata Macquart.

One female from Chiriqui, Central America.

Tipula sp.

One female, *monilifera* group, Mexico.

Tipula apterogyne Philippi.

Three males, Concepcion, Chile; P. Herbst, 1903, 1904.

Tipula abortiva sp. n.

Female with rudimentary wings; wings black with a whitish cross-vein in the neighborhood of the cord.

Female.—Length, 16 mm.; wing, 8 mm.; fore leg, femur, 5.3 mm.; tibia, 5.4 mm.; tarsus, 6.1 mm.

Palpi short, dark brownish black; frontal prolongation of the head brown, the nasus rather prominent; antennæ, segments 1 and 2 brown; flagellum brownish black; head light brown, more gray on the occiput, with a very indistinct, narrow brown median line best indicated on the occiput.

Pronotal scutum dark brownish black, a little paler on either side behind; scutellum pale grayish with three brown marks. Mesonotal præscutum suffused with dark brownish black in front, light gray with three very pale brown stripes, the median one broadest, the lateral ones very indistinct. Scutum, scutellum and postnotum dull gray, the two latter with an indistinct median brown mark. Pleuræ mostly dark brown. Halteres rather short, brown.

Legs, coxæ grayish brown; trochanters brownish yellow; femora, tibiæ and tarsi dark brown.

Wings very short, dark brown with a faint white crossband across the cell 1stM₂ extending from the end of cell R to the middle of cell M₃.

Abdominal tergites with segment 1 brown, segments 2-8 reddish brown, the lateral margins suffused with brown; sternites reddish brown, the segments with an indistinct median brown mark; segments 8-9 dark brown; caudal segments of body and ovipositor shiny; tergal valves of the ovipositor long, slender, straight; sternal valves much shorter.

Holotype.—Female, Callanga, Peru, in the Hungarian National Museum.

Tipula campá sp. n. (Pl. XV, figs. 5, 9-12, 18).

Color of the thorax light gray; basal abdominal segments orange-yellow; subterminal segments dark brown; antennæ of the ♂ very long.

Male.—Length about 11 mm.; wing, 14.4 mm.; fore leg, femur, 8 mm.; tibia, 8.6 mm.; tarsus, 11 mm.

Palpi very short, dark brown; frontal prolongation of the head short, light gray; antennæ very long, if bent backward extending about to the eighth abdominal segment, scapal segments light brown, flagellar segments very dark brown; after the first, each segment is swollen at its base and less so before its tip, provided with a few black bristles and abundant long pale hairs. (See Plate XV, figure 18). Front with a well defined tubercle which is bisected by a deep median furrow; head gray.

Pronotum dark brown, bordered with gray; mesonotal præscutum very light gray with four bright brown stripes, one on either side of the median line, pale and indistinct in front, clearer behind; lateral stripes short, lateral margin of the sclerite of the same color; scutum gray, the anterior end of each lobe with a rounded chestnut brown spot; scutellum and postnotum light gray, the latter dusky on the sides. Pleuræ clear light gray. Halteres light brownish yellow basally, passing into brown.

Legs, coxæ light gray, trochanters yellow; femora light brown, dark brown at the tip; tibiæ and tarsi brown.

Wings subhyaline, cells *C* and *Sc* pale brown, a brownish tinge in the vicinity of the stigma, at ends of cells *R*₂ and *R*₃; hyaline blotches not well defined. Venation, see Plate XV, figure 5.

Abdomen, tergites 1-4 bright yellow, 5-8 passing into brown; 9 light yellow; sternites yellowish; the lateral margins of the tergites are broadly dark brown. The male genitalia with the 8th tergite broad, dark colored, except at the base where it is reddish; 9th tergite very pale yellow, viewed from above (see Plate XV, figure 11), large, subquadrate, the outer lateral angles rounded, caudal margin with a very deep median notch; viewed from the side the caudo-lateral margin with a rather sharp protuberance. Eighth sternite (Plate XV, figure 10) with the caudal margin rounded and with a prominent median protuberance. Ninth sternite (from beneath, see Plate XV, figure 12) with the caudal margin produced backward as a prominent, sub-lyriform appendage; viewed from the side, the 9th sternite is small, the pleural piece complete, almost oval, its ventro-caudal margin applied closely to the caudal appendage of the 9th sternite. Pleural appendages two, the more cephalic and dorsal being a long, cylindrical fleshy appendage, pale, clothed with long hairs, directed dorsad; the second appendage is large, viewed from behind (see Plate XV, figure 9); it is slender basally, with the inner part of the base clothed with long pale hairs, the tip expanded out like a knife blade, meeting its mate of the opposite side on the median line, the caudal face of this blade with a few transverse ridges, the outer face somewhat chitinized, in contact with a chitinized appendage having the same general blade-like shape which lies between the caudal appendage and the 9th tergite.

Holotype.—Male, Callanga, Peru, in the Hungarian National Museum.

The specific name, *campa*, is that of a native Indian tribe living in eastern Peru.

This species and the two following belong to the same group of species as *inca* Alexander,³ possessing short palpi, short legs, and the peculiar genitalia of the male as described above. These three species are closely related to one another and differ from *inca* in the bright orange-yellow color of the abdominal tergites, in the structure of the antennae, etc.; they are separable amongst themselves by very striking differences in the antennae of the male and in the details of the male hypopygium.

Tipula piro sp. n. (Pl. XV, figs. 4, 13, 17).

Color of the thorax light gray; basal abdominal segments orange yellow; subterminal segments dark brown; antennae of ♂ moderate in length.

Male.—Length, 12.3 mm.; wing, 15.5 mm.; fore leg, femur, 8.4 mm.; tibia, 9.6 mm.; tarsus, 13 mm.

Palpi very short, dark brown; frontal prolongation of the head moderate in length, grayish, tinged with brown on the sides; antennae moderately long, if bent back they would extend about to the base of the fourth abdominal segment, the scapal segments light brown, flagellum dark brown, the ventral face of each flagellar segment very deeply incised (see Plate XV, figure 17); head gray tinged with brownish.

Thorax light gray; pronotum with a short, dark brown median line; mesonotal præscutum light gray with a very narrow, indistinct median brown line, and, behind, with indications of a pale brown stripe on either side of the middle; lateral margin of the sclerite and a short lateral stripe brown, the latter much lighter and brighter; scutum light gray with two bright brown rounded spots on each lobe; scutellum and postnotum light gray suffused with dusky on the sides. Pleuræ light gray, a large brown spot on the mesoepisternum and another on the mesoepimerum. Halteres rather long, brown, paler at the base.

Legs, coxæ gray, trochanters and femora brown; tibiæ and tarsi darker brown.

Wings with a faint brown tinge, cells *C* and *Sc* yellowish; hyaline

³ Ann. Ent. Soc. Am., Vol. 5, pp. 351, 352; pl. 24, fig. c.; pl. 25, fig. 1, (1912).

spots on the wing disk, one being in cell *1stM2*, another in the middle of cell *M*, etc. Venation as in Plate XV, figure 4.

Abdomen with the first tergite gray; 2-4 bright yellow, remainder brown, including the genitalia; lateral margins of the tergites broadly dark brown; sternites dull yellow. The genitalia agree with *T. campa*, differing as follows: Ninth tergite (see Plate XV, figure 13) with the caudal margin more tuberculate, on either side of the elongate-oval median notch is a short, cylindrical lobe, the caudolateral angles slender and reflexed; 8th sternite dark brown, only the median lobe being paler; the second pleural appendage, viewed from behind, has the narrowed base very elongate, the blade relatively small, the whole appendage being hidden beneath the 9th tergite.

Holotype.—Male, Callanga, Peru, in the Hungarian National Museum.

The specific name, *piro*, is that of a native Indian tribe of eastern Peru.

Tipula curinao sp. n. (Pl. XV, figs. 3, 16).

Color of the thorax light gray; basal abdominal segments orange yellow, subterminal segments dark brown; antennæ short.

Male.—Length, 12 mm.; wing, 15.5 mm.; fore leg, femur, 8.1 mm.; tibia, 9 mm.

Palpi very short; frontal prolongation of the head moderate, grayish brown; antennæ short, if bent backward, extending about to the base of the halteres, dark brownish black, the scapal segments alone a little paler, flagellar segments short, cylindrical, the base enlarged (see Plate XV, figure 16); frontal tubercle rather prominent; head dull yellow, more brownish in the middle of the vertex and on the occiput.

Pronotum dark brown; mesonotal præscutum light gray, the lateral margin of the sclerites very dark brown, a very broad light brown median stripe, broadest in front, narrowed behind, partially bisected from behind by a pale line, lateral stripes of the same color; scutum light gray with two light brown spots on each lobe; scutellum and postnotum light gray with a brown median vitta and with the sides of the sclerites tinged with dusky. Pleuræ brown with a sparse gray bloom. Halteres rather long, brown.

Legs, coxæ and trochanters brown; femora reddish brown passing into brown at the tip, and with an indistinct yellowish brown annulus before the tip; tibiæ and tarsi dark brown.

Wings light brown, cells *C* and *Sc* a little brighter; a dark brown spot at the origin of *Rs* and others in the stigmal area; a hyaline spot in cell *1stM2* and a smaller one in cell *M*. Venation as in Plate XV, figure 3.

Abdomen, tergites 1-7 orange yellow, the lateral margins broadly brownish black, segments 8-9 dark brown; sternites orange, apical sternites more brownish. The genitalia agree with *T. campa*, differing as follows: Ninth tergite without a median incision on the caudal margin; 8th sternite about as in *campa* but the lobe larger and more pronounced; 9th sternite with a great median notch which divides the segment into two except behind; the inner angles of each of the lobes thus formed is a rounded ball densely clothed with long hairs; the second pleural appendage has the blade very small and inconspicuous, the appendage being mostly stem.

Holotype.—Male, Callanga, Peru, in the Hungarian National Museum.

The specific name, *curinao*, is that of a native Indian tribe of eastern Peru and western Bolivia.

Genus *Microtipula* Alexander.

Microtipula amazonica Alexander.⁴

One male from Surinam (Michaelis).

Genus *Pachyrrhina* Macquart.

Pachyrrhina consularis Osten Sacken.

Seven specimens in the collection that agree sufficiently with *consularis*; that this last named species is specifically distinct from *P. elegans* Fabricius, as stated by Osten Sacken, is by no means certain. The present material is as follows:

Bolivia, Coroico, 1 female; Peru, Vilcanota, 1 male; Brazil, Rio Grande, 1 female; Paraguay, San Bernardino, March, 1908 (Fiebig), 2 females, 1 male; Argentina (Vezenyi), 1 male. The Peruvian specimen and one of the San Bernardino females have been retained; the remainder of the material is in the collection of the Hungarian National Museum.

EXPLANATION OF PLATE XV.

- Figure 1. Wing of *Macromastix pygmaea*, sp. n.
 Figure 2. Wing of *Holorusia flavicornis*, sp. n.
 Figure 3. Wing of *Tipula curinao*, sp. n.
 Figure 4. Wing of *Tipula piro*, sp. n.
 Figure 5. Wing of *Tipula campa*, sp. n.
 Figure 6. Wing of *Tipula gladiator*, sp. n.

⁴ Ann. Ent. Soc. Am., Vol. 5, pp. 361, 362; pl. 24, fig. i; pl. 25, fig. q (1912).

Figure 7. Hypopygium of *Tipula gladiator*. Lateral aspect; 8s, 9s, equal 8th and 9th sternites; 8t and 9t equal 8th and 9th tergites.

Figure 8. Hypopygium of *Holorusia laevis*, sp. n. Lateral aspect of the pleural appendage.

Figures 9-12 Hypopygium of *Tipula campa*, sp. n. 9, 2nd pleural appendage from behind; 10, 8th sternite, ventral aspect; 11, 9th tergite, dorsal aspect; 12, 9th sternite, ventral aspect.

Figure 13. Hypopygium of *Tipula piro*, sp. n., 9th tergite, dorsal aspect.

Figure 14. Sixth antennal segment of ♂ *Holorusia orophila*, sp. n.

Figure 15. Sixth antennal segment of ♂ *Holorusia laevis*, sp. n.

Figure 16. Sixth antennal segment of ♂ *Tipula curinao*, sp. n.

Figure 17. Sixth antennal segment of ♂ *Tipula piro*, sp. n.

Figure 18. Sixth antennal segment of ♂ *Tipula campa*, sp. n.

Minnesota Butterflies (Lepid.).

By JOHN WERNER FRANZEN, Minneapolis, Minn.

(Plate XVI, fig. 1.)

The following list of butterflies taken in Minnesota, mostly from Hennepin County, with dates of capture and notes on distribution, is based on the collection of the author, and those of the Museum of the Academy of Science, and at the University of Minnesota.

I acknowledge gratefully the assistance of Professor Oscar W. Oestlund of Minnesota University; Dr. Harrison G. Dyar, of Washington, and Mr. P. O. Fryklund, of Badger, Minn., in the preparation of this list.

Where only two dates are given, they represent the earliest and the latest records. The numbers in brackets refer to Dyar's List of North American Lepidoptera, U. S. N. M. Bull. No. 52.

Family PAPILIONIDAE.

1 (5b) *Papilio ajax* var. *marcellus* Bd. Lec. Zebra Swallow tail.

A single specimen in the University collection taken in the downtown districts of the city of Minneapolis; evidently accidental and escaped from some pupae brought in by shipment.

2 (11a) *Papilio glaucus* var. *turnus* Linn. Tiger Swallow tail.

The distribution of this species in the state is peculiar. In Hennepin and Ramsey Counties it is rare, while about 50 miles north-east of Minneapolis close to the Wisconsin line, it is common. At