

Records and descriptions of Brazilian Tipulidae (Dipt.). Part X.

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(With 6 figures)

In the present paper I wish to discuss part of a small series of Tipulidae that were collected by my friend, Mr. Lério Gomes, at unusually high altitudes on Mount Caparaó, State of Minas Gerais. I hope later to compare these materials with a further very interesting series of these flies from high altitudes on Mount Itatiaya, State of Rio de Janeiro. These two mountains are the highest in Brazil and a survey of the fauna from altitudes above 2,000 meters has proved to be of unusual interest. In the present report, with a single exception only materials from Alto Caparaó, between 2,000 and 2,700 meters, collected in November and December 1941 are considered. I am greatly indebted to Mr. Gomes for his continued interest in saving specimens of these flies. The types are preserved in my collection of World Tipulidae.

Ozodicerca (Dihexaclonus) effecta, sp. n.

General coloration of mesonotum yellowish gray, the praescutum with three conspicuous dark brown stripes; femora reddish brown, with vague indications of a narrow darker subterminal ring; wings strongly tinged with brownish gray; abdominal tergites dark brown or brownish black, the basal two segments more or less variegated with yellow; hypopygium yellow; male hypopygium with the apex of basistyle terminating in a broad spiculate lobe that is distinctly notched at apex to form two lobules; inner dististyle unequally bidentate at apex.

Male. — Length, about 18 mm.; wing, 17 mm.; antenna, about 4 mm.

Frontal prolongation of head obscure yellow, somewhat more castaneous outwardly; nasus darker, very short and stout; palpi dark brown, the basal segment brighter. Antennae (male) relatively short; scape and pedicel obscure yellow; first flagellar segment brownish yellow, succeeding segments light brown, the extreme tips pale; branches and outer simple segments black; flagellar branches distinctly separated to their bases, slightly unequal in length, those of the more proximal segments more nearly equal in length; longest branch (about flagellar segment five) a little more than one-half longer than the segment. Head

gray, somewhat lighter gray in front; anterior vertex narrow, about two-thirds the diameter of scape.

Pronotum brown, sparsely yellowish gray pruinose. Mesonotal praescutum yellowish gray, with three conspicuous dark brown stripes that are more or less polished and well-differentiated against the ground; median stripe wide, on cephalic fourth slightly divided by a capillary gray vitta; posterior sclerites of notum gray pruinose, each scutal lobe with two confluent dark brown areas. Pleura light reddish, the surface sparsely pruinose; extreme lateral border of praescutum darkened. Halteres obscure testaceous yellow, the knob weakly darkened. Legs with coxae reddish, sparsely pruinose; trochanters yellow; femora reddish brown, with vague indications of a narrow darker subterminal ring; tibiae reddish brown, the tips narrowly darker; tarsi passing into black. Wings strongly tinged with brownish gray, the prearcular field, cells C and Sc, and the stigma pale yellowish brown; veins brown, somewhat brighter in the flavous areas and including vein Cu. Venation: R_{1-2} short, less than one-third R_{2-3} ; cell M_1 broadly sessile.

Abdomen with the tergites dark brown or brownish black, the first segment yellow, sparsely pruinose; second tergite with obscure yellow sublateral stripes; caudal borders of segments restrictedly pale; basal sternites obscure yellow; subterminal segments blackened; hypopygium yellow. Male hypopygium with the tergite transverse, its caudal margin with a relatively shallow V-shaped notch, the lateral lobes low and blunt. Apex of basistyle terminating in a broad lobe that is distinctly notched at apex to form two lobules, the surface with microscopic roughenings. Inner dististyle narrowed outwardly, its apex unequally bidentate, the longest arm acutely pointed at apex, the shorter one darkened and microscopically roughened.

Holotype, male, Alto Caparão, altitude 2,500 meters, December 1941 (Gomes).

Ozodicera (Dihexaclonus) effecta is quite distinct from other members of the subgenus so far defined. Apparently it is closest to *O. (D.) lanei* Alexander, of southeastern Brasil, but differs in all details of coloration and in the structure of the male hypopygium. Superficially it somewhat suggests *O. (Ozodicera) schwarzmaierana* Alexander, of southeastern Brasil, but is well-distinguished by the subgeneric characters of the antennae.

Ozodicera (Dihexaclonus) perfuga, sp. n.

General coloration of praescutum yellowish gray, with four brownish black stripes, the intermediate pair confluent in front

or virtually so; posterior sclerites of notum light gray; antennae (male) with six bipectinate segments, the branches equalling or exceeding the segments in length; wings handsomely patterned with pale brown and whitish subhyaline, the latter color distributed chiefly as a broad interrupted central stripe; stigma uniformly pale yellow; abdomen black, the surface sparsely pruinose, the lateral borders of tergites dull black; male hypopygium with the tergal lobes low; basistyle unarmed at apex; outer dististyle on outer margin near base with a small blackened spine.

Male. — Length, about 21 mm. wing, 20 mm.; antenna, about 4.5 mm.

Frontal prolongation of head dark reddish brown, relatively long, about equal in length to remainder of head; nasus distinct; palpi black. Antennae relatively short; scape and pedicel obscure yellow, flagellum black, the basal two or three segments a very little paler and slightly pruinose; flagellar segments two to seven, inclusive, two-branched, the branches separate to their very bases; branches of second flagellar segment about as long as the segment itself; succeeding branches slightly unequal in length, the longest about one-third longer than the segment; simple terminal segments about equal in total length to the branched ones; flagellar branches and outer simple segments somewhat darker than the axes. Head brown, pruinose.

Pronotum gray pruinose. Mesonotal praescutum with the interspaces yellowish gray, with four conspicuous brownish black stripes, the intermediate pair separated behind by a ground vitta, in front very nearly confluent; lateral stripes in front confluent with the narrowly darkened humeral border, behind becoming heavily pruinose; posterior sclerites of notum light gray, the scutal lobes each with two darker gray areas; scutellum with a barely indicated dark median vitta. Pleura light gray, variegated with darker gray, especially on the meron and ventral sternopleurite; dorsopleural membrane buffy. Halteres elongate, stem obscure yellow, knob dark brown. Legs with the coxae light gray pruinose; trochanters obscure yellow; femora yellow basally, more infuscated outwardly, the tips rather narrowly blackened; tibiae reddish brown, the tips darker; tarsi passing into brownish black. Wings handsomely patterned with pale brown and whitish subhyaline; prearcular field and proximal portion of cell *Sc* chiefly yellow; stigma uniformly clear light yellow; the whitish areas occur chiefly as a broad, interrupted, central stripe that includes the bases of the anal and cubital cells, outer half of cell *M* and most of

remaining outer medial cells; a narrow linear streak in cell R_4 ; outer third of cell R_5 whitened; the brown areas include the remainder of the wing disk, deeper along veins Cu , $m-cu$ and the cord; outer radial field and the distal ends of the cubital and anal cells paler brown; veins brown. Venation: Cell M_1 broadly sessile.

Abdomen with the basal tergite buffy, sparsely pruinose; extreme bases of tergite and sternite two faintly brightened; succeeding segments uniformly blackened, sparsely pruinose, the lateral borders of the segments broadly dull black; ninth segment, including the hypopygium, yellowish brown. Male hypopygium with the tergal lobes low and inconspicuous, the median notch deep. Basistyle unarmed at apex. Inner dististyle narrowed on distal third, its apex very shallowly bidentate. Outer margin of outer dististyle near base with a short blackened spine.

Holotype, male, Alto Caparão, altitude 2,700 meters, December 1941 (Gomes).

The wing pattern of the present fly readily separates it from all other described members of the subgenus. In this latter respect, it somewhat suggests *Ozodicera (Ozodicera) witteana* Alexander, of Parana, southeastern Brazil, but all details of these markings are distinct in the two species. As indicated in other papers by the present writer, the distinctions separating the typical subgenus *Ozodicera* Westwood from *Dihexaclonus* Enderlein are restricted to the antennal flagellum and the groups are scarcely worthy of recognition except for convenience in handling the now numerous species.

Limonia (Dicranomyia) illepidata, sp. n.

General coloration of mesonotum brownish yellow, the pleura clear yellow; rostrum and antennae black throughout; head gray, the vertex darkened; anterior vertex broad; halteres short, knob darkened; wings brownish yellow, the stigma pale brown; cord and outer end of cell $1st M_2$ vaguely darkened, indicated by a deepening in color of the veins; Sc_1 long, nearly equal to R_s ; male hypopygium with the caudal border of tergite not or only vaguely emarginate, the lobes low; ventromesal lobe of basistyle simple; rostral spines two, approximately one-half the length of the prolongation.

Male. — Length, about 6 mm.; wing, 6.8 mm.

Rostrum and palpi black. Antennae black throughout; flagellar segments oval. Head gray, the center of vertex slightly darkened; anterior vertex relatively wide, nearly three times the diameter of the scape.

Pronotum yellow. Mesonotum brownish yellow to orange-yellow, the disk of praescutum with three very slightly darker stripes, the median one much darker in front; scutal lobes less distinctly darkened; scutellum weakly infuscated, with indications of a pale median line; postnotum very sparsely pruinose. Pleura yellow. Halteres with stem pale, knobs darkened, the stem relatively short. Legs with coxae yellow; trochanters testaceous yellow; remainder of legs dark brown, the femoral bases restrictedly obscure yellow; claws with one well-developed basal spine. Wings brownish yellow, the prearcular and costal fields clearer yellow; stigma very pale brown, scarcely differentiated against the ground; outer end of stigma, cord and outer end of cell *1st M*₂ very vaguely darkened, indicated by a deepening in color of the veins; veins of basal two-thirds of wing more yellowish. Venation: *Sc*₁ ending just before origin of *Rs*, *Sc*₂ far from its tip, *Sc*₁ alone only a little less than *Rs*; free tip of *Sc*₂ about its own length proximad of *R*₂; cell *1st M*₂ a trifle longer than vein *M*₄ beyond it; *m-cu* at or very close to the fork of *M*; Anal veins on their basal half lying nearly parallel to one another.

Abdominal tergites infuscated, the sternites obscure yellow; apices of subterminal segments obscure yellow; subterminal segments and hypopygium more yellow. Male hypopygium with the caudal border of the ninth tergite not or very vaguely emarginate, the lateral lobes thus formed very low, provided with conspicuous setae. Basistyle with the ventromesal lobe simple. Dorsal dististyle a powerful curved rod, at apex suddenly narrowed to a long straight spine. Ventral dististyle a fleshy oval lobe, the pendant rostral prolongation small; spines two, placed near base of prolongation, approximately one-half the length of the latter. Gonapophyses with mesal-apical lobe a simple erect spine, its tip slightly curved, acute.

Holotype, male, Alto Caparão, altitude 2,600 meters, December 1941 (G o m e s).

In its general appearance, the present fly suggests species such as *Limonia (Dicranomyia) divisa* Alexander, *L. (D.) simillima* (Alexander), and others, but is a very different insect, differing especially in the short halteres and in the structure of the male hypopygium.

Limonia (Dicranomyia) microsoma, sp. n.

General coloration gray, the praescutum with four dark brown stripes; posterior sclerites of notum and the pleura clearer gray; antennae black throughout; knobs of halteres dark brown; wings with a weak brown suffusion, the stigma darker; a more

or less distinct brownish seam along vein *Cu* in cell *M*; *Sc* relatively short, *Sc*₁ ending before origin of *Rs*; *Sc*₁ elongate, subequal to *Rs*; male hypopygium with the ventromesal lobe of basistyle and the ventral dististyle conspicuously whitened, contrasting with the otherwise blackened hypopygium; ninth tergite conspicuously notched medially; ventromesal lobe of basistyle long but simple; dorsal dististyle a stout curved sickle; ventral dististyle unusually small, its rostral prolongation stout, the two spines widely separated, each arising from a small tubercle; inner margin of mesal-apical lobe of gonapophysis microscopically toothed.

Male. — Length, about 5.5-5.6 mm.; wing, 6.4-6.5 mm.

Female. — Length, about 6.3-6.8 mm.; wing, 7-7.5 mm.

Rostrum black, sparsely pruinose; palpi black. Antennae black throughout, the scape sparsely pruinose; flagellar segments oval, the outer ones more elongate. Head dark gray; anterior vertex of moderate width, approximately twice the diameter of the scape.

Pronotum dark gray, more infuscated medially. Mesonotal praescutum gray, with four dark brown stripes; posterior sclerites of notum light gray, the centers of the scutal lobes infuscated. Pleura light gray. Halteres with stem dusky, the base restrictedly light yellow, knob dark brown. Legs with the fore and middle coxae dark brown, pruinose, posterior coxae much brighter, more yellowish; trochanters yellow; femora yellow basally, more obscured outwardly, the tips gradually darker; tibiae dark brown; tarsi passing into black. Wings (Fig. 1) with a weak brown suffusion, the oval stigma darker brown; a more or less distinct brownish seam in cell *M* adjoining vein *Cu*; prearcular field more brightened, especially the veins; remaining veins dark brown. Venation: *Sc* short, *Sc*₁ ending from one-third to one-half the length of *Rs* before the origin of the latter; *Sc*₂ far from tip of *Sc*₁, the latter subequal in length to *Rs*; cell *1st M*₂ a trifle shorter than vein *M*₄ beyond it; *m-cu* at fork of *M*.

Abdomen dark brown to brownish black, including the hypopygium, with the exception of the whitened ventral dististyle and ventromesal lobe of the basistyle. Male hypopygium (Fig. 4) with the tergite, *9t*, transverse, its caudal margin with a broad, deep V-shaped notch, the lateral lobes broadly obtuse, with long conspicuous setae. Basistyle, *b*, with the ventromesal lobe long but simple, obtuse at tip. Dorsal dististyle unusually stout, sickle-shaped, gradually narrowed to the long acute tip. Ventral dististyle,

vd, with the main body unusually small, its area subequal to that of the basistyle; rostral prolongation stout, the tip obtuse to subtruncate; rostral spines black, widely separated, arising from small, slightly unequal tubercles, the inner spine a trifle longer and arising from a slightly more developed tubercle. Gonapophyses, *g*, with the mesal-apical lobe gently curved, the margin of inner edge with irregular denticles.

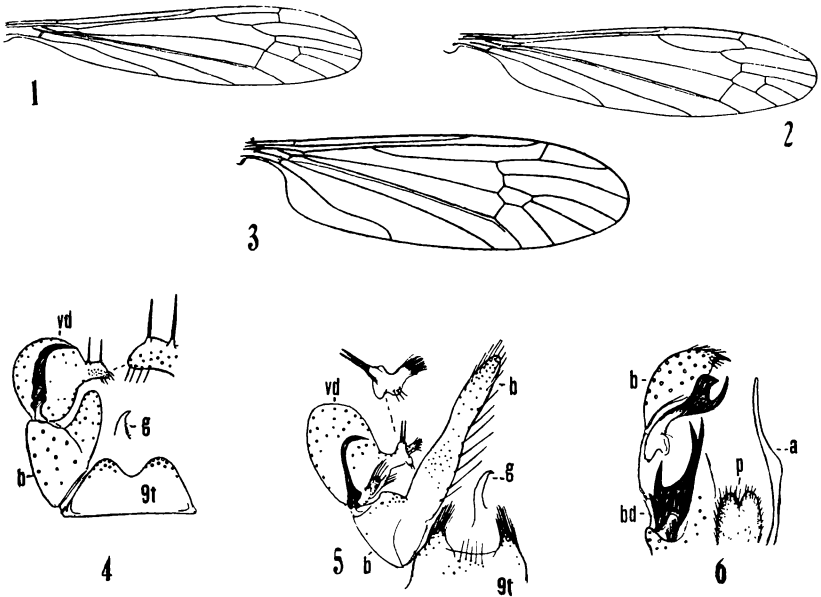


Fig. 1. *Limonia (Dicranomyia) microsoma*, sp. n.; venation. — Fig. 2. *Limonia (Dicranomyia) extranea*, sp. n.; venation. — Fig. 3. *Rhabdomastix caparaoensis*, sp. n.; venation. — Fig. 4. *Limonia (Dicranomyia) microsoma*, sp. n.; male hypopygium. — Fig. 5. *Limonia (Dicranomyia) extranea*, sp. n.; male hypopygium. — Fig. 6. *Molophilus (Molophilus) triparcus*, sp. n.; male hypopygium. (Symbols: *a*, aedeagus; *b*, basistyle; *bd*, basal dististyle; *g*, gonapophysis; *p*, phallosome; *t*, tergite; *vd*, ventral dististyle).

Holotype, male, Alto Caparaão, altitude 2,500 meters, November 1941 (G o m e s). Allotopotype, female, pinned with type. Paratopotypes, 1 male, several females, altitude 2,500-2,600 meters, November-December 1941 (G o m e s).

In its general appearance, *Limonia (Dicranomyia) microsoma* is similar to species such as *L. (D.) mutata* Alexander, of the Brazil-Venezuela-British Guiana border, differing especially in the venation and in the structure of the male hypopygium. I do not consider it as belonging to the same group (*tristis* or *liberta* group) as does *mutata* and the general similarity seems to be merely superficial.

Limonia (Dicranomyia) extranea, sp. n.

General coloration of mesonotal praescutum brownish yellow, with four dark brown stripes; antennae black throughout; thoracic

pleura reddish brown, sparsely pruinose; halteres black, the base of stem restrictedly yellow; femora obscure yellow, the tips darkened; wings brownish yellow, patterned with darker brown, including large areas at stigma, cord, outer end of cell *1st M*₂ and origin of *Rs*; vein *Sc*₁ long, exceeding two-thirds the length of *Rs*; cell *1st M*₂ closed; male hypopygium with the ventromesal lobe of basistyle unusually long and conspicuous.

Male. — Length, about 7-7.3 mm.; wing, 8-8.2 mm.

Female. — Length, about 7-7.5 mm.; wing, 7.5-8 mm.

Rostrum yellowish brown; palpi black. Antennae black throughout, the scape pruinose; flagellar segments oval, the outer ones more elongate; verticils relatively inconspicuous. Head gray, variegated with darker on the anterior vertex, the latter (male) about one-third wider than the diameter of the scape.

Pronotum dark brown, paler laterally. Mesonotal praescutum brownish yellow to reddish brown, with four dark brown stripes, the intermediate pair separated only by a vague capillary ground vitta; scutal lobes dark brown, the scutellum paler brown; central area of both scutum and scutellum with a whitish median line; postnotum dark brown. Pleura and pleurotergite reddish brown, sparsely pruinose. Halteres black, the base of stem restrictedly yellow. Legs with coxae obscure yellow, the fore pair more darkened; trochanters yellow; femora obscure yellow, becoming gradually darker at tips; tibiae and basitarsi pale to darker brown, the outer tarsal segments blackened. Wings (Fig. 2) with a brownish yellow tinge, rather conspicuously patterned with darker brown, including the stigma, cord, outer end of cell *1st M*₂ and an area at origin of *Rs*, the last large and conspicuous; less distinct cloudings at *Sc*₂ and along vein *Cu*; immediately before and beyond origin of *Rs* the ground color clearer yellow; prearcular and costal fields clearer yellow; veins brown, brighter at wing base. Venation: *Sc*₁ ending opposite to just beyond origin of *Rs*, *Sc*₂ some distance from its tip, *Sc*₁ alone more than two-thirds *Rs*; cell *1st M*₂ varying from short-rectangular to rectangular, subequal to or shorter than vein *M*₁₋₂ beyond it; *m-cu* at or very close to the fork of *M*.

Abdominal tergites (male) dark brown to black; basal sternites yellow, the outer segments bicolored, blackened on more than the basal half, the apices yellow; hypopygium chiefly blackened; in female, the tergites are distinctly bicolored, similar to the sternites. Ovipositor with the valves elongate, subequal in length; cerci slender, a very little upcurved. Male hypopygium

(Fig. 5) with the tergite, *gt*, transverse, the posterior margin with a very broad U-shaped notch, the lateral lobes thus formed relatively slender, at their tips with numerous conspicuous setae. Basistyle, *b*, small, the area of its body only about one-third that of the ventral dististyle but with the ventromesal lobe of unusual length, about equal in length to the combined length of the basistyle and ventral dististyle, gradually narrowed outwardly, the apex pale, narrowly obtuse. Dorsal dististyle a slender, strongly curved rod, its tip acute. Ventral dististyle, *vd*, large and fleshy; rostral prolongation short and inconspicuous, the two spines arising close together at summit of a single moderate-sized tubercle; outer portion of prolongation bearing an oval lobe that is tufted with yellow setae; face of style near base of dorsal dististyle with a further small lobe that bears a brush of long setae. Gonapophyses, *g*, with mesal-apical lobe long and slender, darkened, the margins vaguely roughened, the tips acute.

Holotype, male, Alto Caparão, altitude 2,650 meters, December 1941 (G o m e s). Allotopotype, female, pinned with type. Paratopotypes, several males and females, altitude 2,000-2,650 meters, November-December 1941 (G o m e s).

The nearest relative of the present fly is *Limonia (Dicranomyia) mistura* Alexander, likewise from southeastern Brazil. The general type or structure of the tergite and lobe of the basistyle is found in both of these flies but in the present species all such characters are much more exaggerated and accentuated.

Austrolimnophila (Austrolimnophila) caparaoensis,
sp. n.

General coloration of mesonotum yellow, the scutal lobes darker; antennae with scape dark brown, pedicel and flagellum obscure brownish yellow; thoracic pleura uniform pale yellow; femora yellow, the tips narrowly but abruptly blackened; wings yellowish subhyaline, the cephalic third slightly more infuscated; a restricted pale brown and dark brown pattern; a supernumerary crossvein at midlength of cell M_1 ; *m-cu* a short distance before the fork of *M*; abdominal tergites dark brown, the outer portions of the basal and intermediate segments obscure yellow; outer segments, including the genital shield, brownish black.

F e m a l e. — Length, about 11 mm.; wing, 10.5 mm.; antenna, about 2 mm.

Rostrum and palpi black. Antennae with scape dark brown; pedicel and flagellum obscure brownish yellow, the terminal flagellar segments brownish black; flagellar segments long-

cylindrical, the outer ones more cylindrical; longest verticils unilaterally distributed, exceeding the segments in length. Head brown, the anterior vertex and orbits light gray; anterior vertex moderately wide, nearly twice the diameter of the scape.

Pronotum dark brown above, paling to yellow on sides. Mesonotal praescutum testaceous yellow, the median cephalic portion slightly more infuscated; scutum abruptly brown, the median region a trifle paler; scutellum and mediotergite obscure yellow, the latter narrowly bordered laterally by brown. Pleura uniformly pale yellow. Halteres relatively long, the stem testaceous, the knob weakly infuscated. Legs with the coxae and trochanters pale yellow; femora yellow, the tips narrowly but abruptly and conspicuously blackened, the amount subequal on all legs, involving about the distal twelfth; tibiae and tarsi light yellow, the terminal tarsal segments infuscated. Wings yellowish subhyaline, the cephalic third more infuscated; a sparse light and dark brown pattern; the darker areas include the origin of R_s , cord, R_2 , outer end of cell $1st\ M_2$, supernumerary crossvein in cell M_1 and the fork of M_{1-2} ; paler brown areas include a series of about ten small spots in cell C , a wash over arculus and in prearcular field, and as small marginal dots on veins R_{1-2} , R_3 and R_4 ; veins brown, somewhat darker in the patterned areas, Cu , $1st\ A$ and $2nd\ A$ more brownish yellow. Venation: Sc_2 at extreme tip of Sc_1 ; R_2 far from tip of R_{1-2} ; R_{2-3-4} a little longer than basal section of R_5 ; R_s angulated but not spurred at origin; a supernumerary crossvein at near midlength of cell M_1 ; $m-cu$ a short distance before the fork of M .

Abdominal tergites dark brown, the caudal and caudolateral borders of the basal and intermediate segments obscure yellow; subterminal segments, including the genital shield, uniform brownish black; basal sternites yellow, the more proximal segments with a narrow brown ring near base; outer segments more uniformly dusky. Ovipositor with the cerci yellowish brown, the valves slender, gently upcurved.

Holotype, female, Alto Caparaão, altitude 2,500 meters, November 1941 (G o m e s).

Austrolimnophila (Austrolimnophila) caparaoensis is most closely allied to *A. (A.) bifidaria* Alexander, likewise from southeastern Brazil. This latter fly differs especially in the coloration of the body, legs and wings, the short antennae, and the venation, as the long-spurred R_s and position of $m-cu$. Both of these flies have a supernumerary crossvein at near midlength of the deep cell M_1 .

Atarba (Atarba) fuscoapicalis, sp. n.

General coloration yellow; antennae (male) relatively long; basal flagellar segments bicolored, brownish black, with very narrow yellow bases; halteres with dark brown knobs; femora yellow, the tips broadly blackened, the tibial tips more narrowly wings yellow, stigma scarcely indicated; *Rs* more or less angulated near origin; *m-cu* close to the fork of *M*; abdomen (male) with a broad black subterminal ring; male hypopygium with the outer dististyle rather widely expanded at near midlength, the actual apical spine short; outer margin with about five further spines, the central pair longest; gonapophyses elongate, abundantly spinous along outer face of stem.

Male. — Length, about 6 mm.; wing, 7 mm.; antenna, about 3.2 mm.

Female. — Length, about 7 mm.; wing, 7.2 mm.

Rostrum obscure yellow, with numerous coarse black setae; rostrum brownish black. Antennae (male) relatively long, exceeding one-half the length of body; scape brownish yellow, pedicel yellow; basal flagellar segments bicolored, brownish black, with very narrow yellow bases, the amount of the latter decreasing on the outer segments, becoming obsolete at about the ninth flagellar segment; verticils shorter than the segments; an abundant shorter white pubescence. Head brown, the front and occiput more reddish brown, the surface sparsely pruinose.

Pronotum and mesonotum uniform reddish yellow, without pattern; pleura yellow. In female, the posterior pleurites more darkened and sparsely pruinose. Halteres with stem yellow, knob dark brown. Legs with the coxae and trochanters yellow; femora yellow, the tips unusually broadly and conspicuously black or brownish black, broader and more intense in male, the amount subequal on all legs; tibiae yellow, with more narrowly darkened tips; tarsi brownish black, the proximal portion of basitarsi obscure yellow. Wings yellow, the prearcular and costal fields somewhat clearer yellow; stigma very pale brownish yellow to scarcely indicated; veins light brown, more yellowed in the flavous portions. Venation: *Sc* short, *Sc*₁ ending about opposite to just beyond the origin of *Rs*, the latter relatively long, approximately twice the basal section of *R*₅, more or less angulated near origin; *m-cu* at or immediately beyond the fork of *M*.

Basal abdominal tergites obscure brownish yellow, the sternites clearer yellow; a weak pleural darkening; in male,

subterminal four segments blackened to form a broad ring; hypopygium yellow. In female, the tergites beyond the first are more heavily and conspicuously patterned with brown, on the subterminal tergites more uniformly blackened; sternites yellow. Male hypopygium with the sternal plate a little longer than broad, the caudal-lateral angles produced into acute horns, the caudal between the horns very gently emarginate to nearly truncate. Outer dististyle rather widely expanded at near midlength, the apical third long-extended, the actual point very short, with a subequal spine a short distance back from tip; outer margin of style with two powerful spines at near midlength, with two further smaller ones closer to base. Inner dististyle only gently curved. Gonapophyses elongate, terminating in a glabrous apical blade, the outer surface of the stem with unusually abundant but small appressed spinulae. Aedeagus unusually long and conspicuous, more or less dilated near midlength, the apex only moderately flaring.

Holotype, male, Alto Itatiaya, March 1941 (Gomes). Allotopotype, female.

Atarba (Atarba) fuscoapicalis is entirely distinct from all other generally similar yellow species having broadly blackened femoral tips and with the wings unpatterned. The fly appears to be closest to *A. (A.) brevicornis* Alexander and *A. (A.) brevissima*, sp. nov., differing in the length of the antennae and in the details of structure of the male hypopygium.

Atarba (Atarba) brevissima, sp. n.

General coloration reddish yellow, unpatterned; antennae (male) very short, only about one-fourth the length of body; proximal flagellar segments bicolored; verticils exceeding the segments in length; halteres with darkened knobs; legs yellow, the outer tarsal segments passing into black; wings yellow; Sc_1 ending a short distance beyond origin of R_s ; abdomen reddish yellow, the tergites patterned with brown; a broad black subterminal ring; male hypopygium with the sternal plate long, the horns conspicuous; outer dististyle with three major spines along outer margin; gonapophyses flattened, the apex glabrous, obtusely rounded, the lateral margin with numerous pale spinous point; aedeagus elongate, becoming more expanded at near one-third and again at near two-thirds the length.

Male. — Length, about 6-6.2 mm.; wing, 6.8-7 mm.; antenna, about 1.4-1.6 mm.

Rostrum yellow, palpi brown. Antennae unusually short; scape and pedicel yellow; flagellum bicolored, the proximal five or six segments with both ends yellow, the central portion brown; succeeding segments with only the extreme bases yellow, the ninth and succeeding ones uniformly brownish black; flagellar segments subcylindrical, the outer ones more elongate-oval; verticils exceeding the segments in length; remaining vestiture pale and relatively sparse. Head brownish gray.

Pronotum brown. Mesonotum uniformly reddish yellow, the surface more or less pollinose, on the posterior sclerites somewhat more pruinose; vestiture of praescutal interspaces black, sparse and erect, forming a single row. Pleura reddish or yellow. Halteres pale, the knob darkened. Legs with the coxae yellow, with conspicuous black setae; trochanters pale yellow; remainder of legs yellow, the outer tarsal segments passing into black; tibial spurs present. Wings yellow, the stigmal region scarcely differentiated, the prearcular and costal fields clearer yellow; veins yellow. Venation: Sc_1 ending a short distance beyond origin of R_s , the latter varying from arcuated to weakly angulated or even slightly spurred near origin; $m-cu$ usually close to fork of M , in cases more than one-third its length beyond this point.

Abdomen reddish yellow, the tergites patterned with brown, the subterminal segments deepening to black; hypopygium reddish yellow; vestiture of abdomen conspicuous, long and white. Male hypopygium with the plate of the ninth sternite elongate, its length approximately twice the width at midlength; horns relatively conspicuous and acute, glabrous; caudal margin of plate gently concave to more evidently notched. Outer dististyle with three major teeth, additional to the small curved apical spine. Inner dististyle relatively narrow, its tip very obtuse, the base more expanded. Gonapophyses appearing as flattened smooth blades, the tips broadly rounded; outer portion back from tip with abundant pale spinous points. Aedeagus long and conspicuous, more expanded at near one-third and again at near two-thirds the length.

Holotype, male, Alto Caparão, altitude 2,500 meters, December 1941 (G o m e s). Paratopotypes, 8 males, altitude 2,200-2,600 meters, November-December 1941 (G o m e s).

The present fly is closest to *Atarba (Atarba) brevicornis* Alexander, of Paraguay, differing especially in the shorter antennae, the venation, and in the structure of the male hypopygium, as the sternal plate, both dististyles, and the gonapophyses.

Rhabdomastix caparaoensis, sp. n.

Size large (wing, 8 mm. or more); general coloration dull black; antennae short in both sexes; antennae, halteres and legs black; wings with a strong blackish tinge, the ill-defined stigma a little darker; male hypopygium with the interbase narrowed into an acute spine; outer dististyle heavily blackened, widest just beyond base, thence narrowed to an apical spine; inner dististyle with a conspicuous group of erect elongate setae at apex.

Male. — Length, about 5-5.5 mm.; wing, 8-8.5 mm.; antenna, about 1.2-1.3 mm.

Female. — Length, about 6 mm.; wing, 8 mm.

Rostrum and palpi black. Antennae short in both sexes, 15-segmented; outer flagellar segments much smaller than the basal ones. Head dull brownish black; anterior vertex broad.

Pronotum brownish black. Mesonotum almost uniform dull black, the surface sparsely pruinose. Pleura similarly dull black, the dorsopleural membrane darkened. Halteres short, dark brown, the base of stem restrictedly brightened. Legs black. Wings (Fig. 3) unusually large for the size of body, especially in male; membrane strongly blackened, the stigma slightly darkened but very diffuse; veins dark brown. Macrotrichia of veins very sparse, beyond cord restricted to series on outer portions of veins R_5 , M_{1-2} , M_3 and M_4 , the last often quite glabrous. Venation: Sc long, Sc_1 ending about opposite three-fourths the length of the long R_s ; Sc_2 evidently atrophied, as in the *lurida* group of the genus; vein R_3 erect, the distance on costa between tips of R_{1-2} and R_3 subequal to or a little less than the length of R_3 ; *m-cu* at from one-third to nearly one-half the length of cell 1st M_2 ; vein 2nd A very strongly sinuous.

Abdomen, including hypopygium, black. Ovipositor with valves elongate, sclerotized; cerci horn-colored, the bases more darkened. Male hypopygium with the caudal border of tergite convexly rounded. Basistyle short and stout; interbasal rod conspicuous, gradually narrowed to a long slender spine. Outer dististyle heavily blackened, widest just beyond base, thence gradually narrowed to a simple spine; outer margin with appressed microscopic spinulae almost to base. Inner dististyle a little shorter, nearly straight, at apex with a conspicuous group of erect elongate setae.

Holotype, male, Alto Caparaão, altitude 2,650 meters, December 1941 (Gomes). Allotopotype, female, pinned with type.

Paratopotypes, 11 males, altitude 2,500-2,650 meters, December 1941 (G o m e s).

Rhabdomastix caparaoensis is entirely distinct from any of the now numerous species of the genus in the Neotropical fauna. The large size, general blackened coloration and short antennae readily separate the fly from all other regional species.

Molophilus (Molophilus) triparcus, sp. n.

Belongs to the *plagiatus* group; general coloration light reddish yellow; antennae (male) elongate, exceeding one-third the length of body; flagellar segments fusiform, the more proximal ones with very long verticils; wings yellow, the veins concolorous, the macrotrichia pale brown; male hypopygium with the basistyle a massive blackened structure that is produced into a strong spine on outer face and with the apex produced into a long rod that splits at tip into two strong spines; phallosomic structure emarginate at apex, covered with abundant elongate erect setae; aedeagus elongate, angulated and slightly expanded at near midlength.

Male. — Length, about 4 mm.; wing, 4.5-4.7 mm.; antenna, about 1.5 mm.

Rostrum obscure yellow; palpi black. Antennae with scape yellow, pedicel a little darker; flagellum dark brown; antennae elongate, exceeding one-third the length of body; flagellar segments fusiform, the more proximal segments with a few unusually long verticils; remainder of segments clothed with an abundant long erect white pubescence. Head yellow, the sides of vertex a little more darkened.

Pronotum and pretergites light yellow. Mesonotal praescutum chiefly covered by confluent reddish brown stripes, the lateral and humeral portions light yellow; posterior sclerites of notum reddish yellow. Pleura extensively reddish yellow. Halteres pale yellow, the knob a trifle darkened. Legs with the coxae and trochanters yellow; remainder of legs medium brown, the outer tarsal segments darker; fore tibiae (male) with an undarkened subbasal enlargement. Wings yellow, the veins concolorous; macrotrichia pale brown. Venation: R_2 lying just distad of level of $r-m$; petiole of cell M_3 about twice $m-cu$; vein 2nd A relatively long, ending about opposite $m-cu$.

Abdomen light brown, the hypopygium more brownish yellow. Male hypopygium (Fig. 6) with the beak of basistyle relatively slender, blackened, nearly straight. Outer dististyle with the stem

sclerotized but not heavily blackened; arms black, unequal in shape. Basal dististyle, *bd*, a massive blackened structure; base broad, the outer portion extended into a powerful spine, with a more or less developed spinule closer to base; apex of style produced into a long rod that splits at tip into two strong spines. Phallosomic structure emarginate at apex, covered with abundant long erect setae. Aedeagus, *a*, elongate, angulated and slightly expanded at near midlength.

Holotype, male, Alto Caparão, altitude 2,500 meters, November 1941 (G o m e s). Paratopotype, 1 male, altitude 2,600 meters, December 1941 (G o m e s).

The nearest regional allies of the present fly are *Molophilus* (*Molophilus*) *bidigitatus* Alexander, *M. (M.) emarginatus* Alexander, and *M. (M.) hystrix* Alexander, all differing conspicuously in the structure of the male hypopygium, especially of the basal dististyle.