

NEW OR LITTLE-KNOWN NEOTROPICAL TIPULIDAE  
(DIPTERA). V

BY  
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## NEW OR LITTLE-KNOWN NEOTROPICAL TIPULIDAE (DIPTERA). V

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The undescribed species of crane flies discussed in the present paper were taken by Luis E. Peña Guzman, virtually all in Ecuador in 1977. A single species (*Atarba integra*) was taken in Bolivia by Peña in 1976. I am very greatly indebted to my longtime friend Luis Peña for his efforts in making known the vastly rich crane fly fauna of these Andean countries. The materials here discussed are in the Alexander Collection, to be preserved in the United States National Museum, as discussed in the initial paper under this general title (Transactions of the American Entomological Society, Volume 104, page 1; 1978).

LIMONIINAE

LIMONIINI

### ***Limonia (Rhipidia) hedys* sp.n.**

Thoracic dorsum reddish brown, ventral pleura light yellow; antennae of male black, outer pedicels of the flagellar segments white, flagellum with ten long-biflabellate segments; legs obscure yellow to brownish yellow; wings yellowish brown with an inconspicuous darker brown costal pattern; abdominal tergites brownish yellow, posterior borders darker brown; sternites light yellow, posterior margins narrowly dark brown to black; male hypopygium with the dorsal dististyle a slender curved blackened rod, ventral style with two rostral spines; basistyle with the ventromesal lobe broad.

*Male.* Length about 6.5-7 mm.; wing 7.3-7.5 mm.; antenna about 3.5 mm. Rostrum dark brown to black; palpi black. Antenna of male (Fig. 1) with flagellar segments bicolored, black, outer pedicels of segments beyond the branches white; antennal formula 2 + 1 + 10 + 1; flagellar segments 4 to 13 long-biflabellate, as shown; terminal segment simple, elongate. Head gray pruinose; eyes contiguous, holoptic anteriorly.

Pronotum light brown. Mesonotal praescutum and scutal lobes reddish brown; median region of scutum, scutellum and postnotum testaceous yellow. Pleura

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<sup>1</sup>Contribution from the Entomological Laboratory, University of Massachusetts.

brownish yellow dorsally, sternopleural region light yellow. Halteres with stem yellow, knob pale brown. Legs with coxae and trochanters light yellow; remainder of legs obscure yellow to pale brownish yellow, outer tarsal segments brown; claws small, slender. Wings pale brown, costal region paler yellow; disk with an inconspicuous darker brown pattern, including the stigma and three small areas along  $Sc$ , the basal one largest, the apical mark smallest; stigma oval, light brown; narrow darkened seams over cord and outer end of cell  $1st M_2$ . Venation:  $Sc$  long,  $Sc_1$  about opposite two-thirds the length of  $Rs$ ,  $Sc_2$  near its tip;  $Rs$  long; free tip of  $Sc_2$  and  $R_2$  in transverse alignment;  $m-cu$  close to the fork of  $M$ .

Abdominal tergites brownish yellow, basal segments and the posterior borders of the remainder dark brown, the areas more extensive on the outer segments; proximal sternites clear light yellow, posterior borders more narrowly dark brown to brownish black; hypopygium black. Male hypopygium (Fig. 4) with posterior border of tergite,  $t$ , nearly truncate, anterior part more produced and rounded. Basistyle,  $b$ , subequal in area to slightly larger than the ventral dististyle; ventromesal lobe broad, apex subtruncate. Dorsal dististyle an unusually slender gently curved blackened rod, the apex a narrowed spine; ventral dististyle,  $vd$ , with rostral prolongation slender, as shown; the two spines subequal, the outer one from a small basal tubercle. Gonapophysis,  $g$ , as shown, outer angle produced, terminating in a small black spine. Aedeagus,  $a$ , narrow, apex with two small rounded lobes.

*Holotype*. ♂, Sebundoi, Ecuador, 2600 meters, September 11-15, 1977 (Peña). Paratopotypes, 2 ♂♂, with the type.

*Limonia (Rhipidia) hedys* is generally similar to *L. (R.) parahedys* sp.n., differing chiefly in the male hypopygium, including especially the dorsal dististyle, ventromesal lobe of the basistyle, and the ventral dististyle, as described and figured.

### ***Limonia (Rhipidia) katernes* sp.n.**

Antennae of male with eight biflagellate segments; mesonotal praescutum brownish yellow with a brown central stripe, posterior sclerites of notum yellow; pleura with a conspicuous brownish black longitudinal stripe; meral and adjoining segments yellow; wings subhyaline, with a pale brown pattern, including three costal areas; abdominal segments bicolored, bases yellow, apices darkened; male hypopygium with rostral prolongation of ventral dististyle elongate, with two pale spines; basistyle with ventromesal lobe slightly widened outwardly, as shown.

*Male*. Length about 8 mm.; wing 7.5 mm.; antenna about 3 mm. Rostrum and palpi dark brown. Antennae of male brown, the apical pedicels of the flagellar segments whitened; antennal formula 2 + 1 + 7 + 1 + 3; branches of intermediate biflagellate segments long; terminal segments unbranched, the last strongly narrowed on outer fourth. Head brown.

Pronotum brownish gray. Mesonotal praescutum brownish yellow with a broad brown central stripe; scutum with lobes dark brown, median area pale; scutellum and postnotum uniformly pale yellow. Pleura with a conspicuous brownish black longitudinal stripe, broadest anteriorly, including also the propleura and dorsal

mesopleura; meral and adjoining segments light yellow. Halteres with stem obscure yellow, knob more infuscated. Legs with fore coxae infuscated, remaining coxae and all trochanters yellow; remainder of legs brown, femoral bases narrowly yellowed, outer tarsal segments brownish black; claws small, the outer point of the comb of spines unusually large and conspicuous. Wings subhyaline, with a pale brown pattern, including three costal areas, the one at origin of *Rs* subcircular; other comparable darkenings include the stigma and broad seams at cord and outer end of cell *1st m*<sub>2</sub>; veins pale brown, slightly darker in the patterned areas. Venation: Free tip of *Sc*<sub>2</sub> pale, in transverse alignment with *R*<sub>2</sub>; *m-cu* at fork of *M*.

Abdominal tergites bicolored, bases obscure yellow, apices broadly pale brown; sternites more extensively light yellow, posterior borders very narrowly darkened. Male hypopygium (Fig. 5) with tergite, *t*, transverse, posterior border very shallowly emarginate, each lateral lobe with about 18 unusually long slender setae that are directed slightly mesad; anterior end of tergite truncate. Dorsal dististyle a blackened curved rod, narrowed very gradually into a long acute spine. Ventral dististyle, *vd*, fleshy, rounded; rostral prolongation elongate, on outer margin of the slightly enlarged base with two pale spines that are shorter than the apex of the style beyond. Basistyle, *b*, about two-thirds the area of the ventral dististyle; ventromesal lobe distinctive, slightly widened outwardly, the outer angle more produced, inner angle with a concentration of long setae. Gonapophysis, *g*, about as shown. Aedeagus, *a*, a straight pale rod, terminating in two small rounded lobes.

*Holotype*. ♂, Cochabamba, Bolivia; Unduavi — Corioco, Yungas — La Paz, 3000 meters, January 1-3, 1976 (Peña).

From other generally similar regional species the present fly differs in the distinctive hypopygium, especially the rostral prolongation of the ventral dististyle and the shape of the lobe of the basistyle.

### ***Limonia (Rhipidia) neomelanaria* sp.n.**

General coloration of thorax reddish brown, darker brown medially; pleura darkened above, more yellowed ventrally; antennae of male with eight biflabellate segments, in the female antennal flagellum serrate; legs brownish black to black; wings almost uniformly darkened in the holotype, in other specimens with whitened areas in costal region and in the Anal cells; male hypopygium with posterior border of tergite nearly truncate; basistyle with ventromesal lobe stout, apex obtusely rounded; dorsal dististyle gently curved to the acute apex; ventral dististyle subequal to or slightly smaller than the basistyle; rostral prolongation slender, terminating in two unusually long setae; rostral spines two, long, closely approximated, placed at near midlength of the prolongation; aedeagus terminating in two very small lobes; no proctigeral scaffolding.

*Male*. Length about 6-6.5 mm.; wing 8 mm.; antennae about 2.8-2.9 mm.

*Female*. Length about 6.5 mm.; wing 7.5 mm.; antennae about 1.6-1.7 mm.

Rostrum and palpi black. Antennae of male (Figs. 2, 3 B) black, in cases with outer end of the pedicel yellowed; first flagellar segment broadly produced, segments two to nine long-biflabellate, beyond the first segment the branches nearly

equal in length; outer three segments simple (Fig. 2) or with the first slightly produced (Fig. 3 B); terminal segment elongate, outer third narrowed. Antenna of female (Fig. 3 A) with intermediate segments serrate. Head dark brown, slightly pruinose; eyes of male large, anterior vertex reduced to a narrow strip that is about equal to the width of two ommatidia.

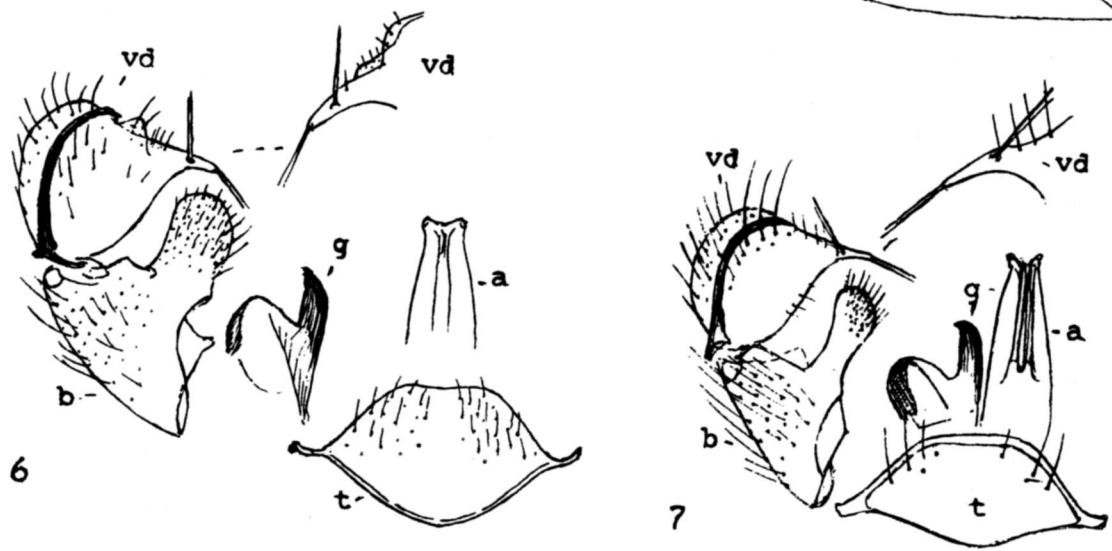
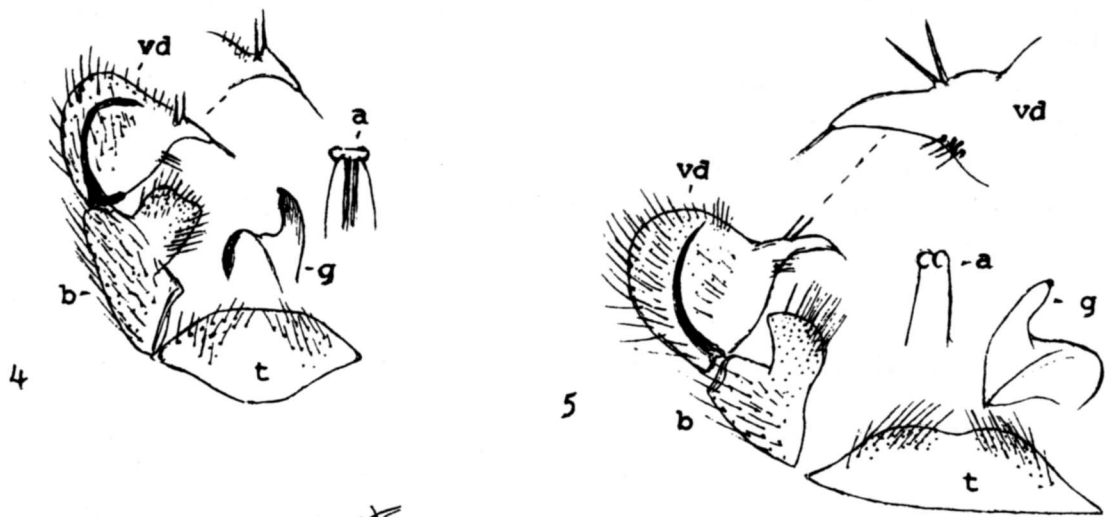
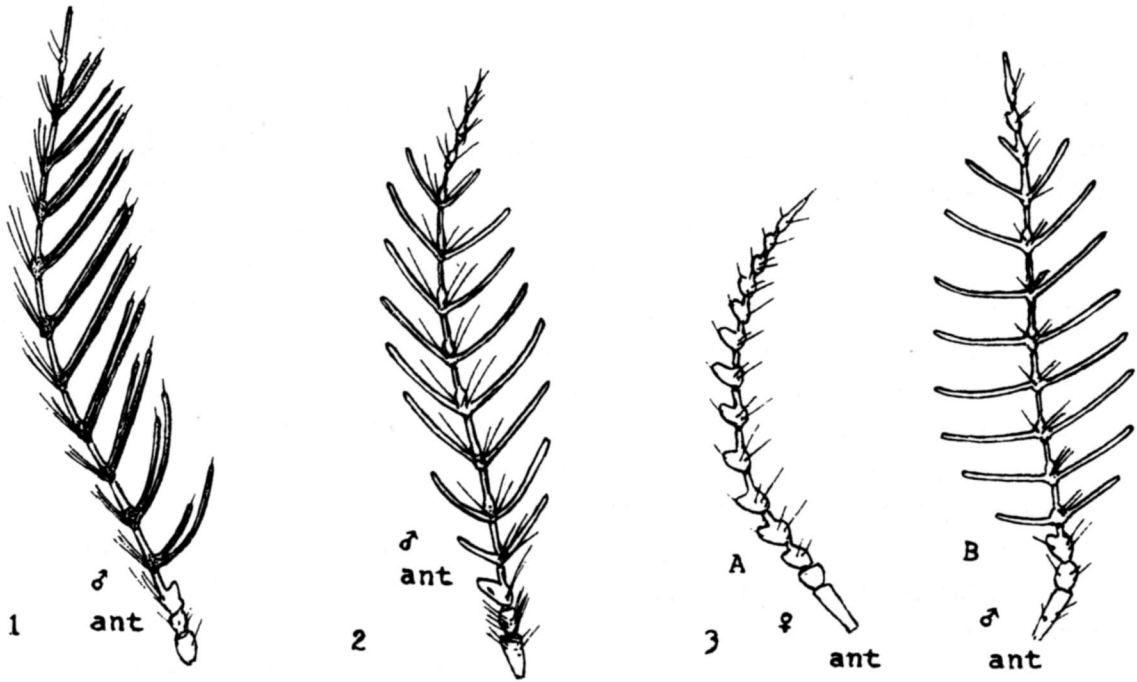
Pronotum dark brown to black. Mesonotal praescutum dark brown, sides brownish yellow; scutal lobes dark brown, central area obscure yellow; scutellum and postnotum black, sparsely pruinose. Pleura brownish black dorsally, lower sclerites and the sternum more yellowed. Halteres brownish black, base of stem narrowly yellowed. Legs with fore coxae weakly darkened, remaining coxae and the trochanters yellow; femora brownish black to black, bases narrowly more yellowed; tibiae and tarsi brownish black to black. Wings variable in coloration, in cases almost uniformly darkened, the oval stigma more intense; radial field in cases with five or six whitened areas that involve cells *C*, *Sc* and *R*, in other specimens with the pale areas less distinct, especially in the Anal cells, including the outer end of *1st A* and the base of *2nd A*; veins darker brown. Venation: *Sc* long, *Sc*, ending about opposite midlength to approximately three-fifths *Rs*, *Sc*, near tip; *m-cu* at or shortly beyond the fork of *M*.

Abdominal tergites dark brown, the narrow bases and posterior borders still darker; proximal five or six sternites light yellow, posterior borders narrowly darker, outer sternites slightly darker; hypopygium dark brown. Male hypopygium (Figs. 6 and 7, to show variation) with tergite, *t*, subequal in length to the basistyle, broad, posterior border nearly truncate; the paratype with three or four longer setae on either side, less developed in the holotype (Fig. 6). Basistyle, *b*, with ventromesal lobe slightly expanded outwardly, apex obtuse. Dorsal dististyle unusually long and slender, tip acute; ventral dististyle, *vd*, slightly smaller than the basistyle; rostrum long and slender, terminating in two long setae; outer margin at near midlength with two long straight spines, closely approximated so as to appear as a single element, as shown. Gonapophyses, *g*, with mesal-apical lobe blackened, terminating in a short point. Aedeagus, *a*, with two very small lobes at apex. No proctigeral structure.

*Holotype*. ♂, Sebundoi, Ecuador, 2600 meters, September 11-15, 1977 (Peña). Allotopotype, ♀, with type. Paratopotypes, ♂ ♀.

FIGURES 1-7. 1, *Limonia (Rhipidia) hedys* sp.n., male antenna. 2, *Limonia (Rhipidia) neomelanaria* sp.n., male antenna. 3A, *Limonia (Rhipidia) neomelanaria* sp.n., female antenna, allotype. 3B, *Limonia (Rhipidia) neomelanaria* sp.n. male antenna, paratype. 4, *Limonia (Rhipidia) hedys* sp.n., male hypopygium. 5, *Limonia (Rhipidia) katernes* sp.n., male hypopygium. 6, *Limonia (Rhipidia) neomelanaria* sp.n., male hypopygium, holotype. 7, *Limonia (Rhipidia) neomelanaria* sp.n., male hypopygium, paratype.

Male hypopygium and antenna: *a*, aedeagus; *ant*, antenna; *b*, basistyle; *g*, gonapophysis; *t*, 9th tergite; *vd*, ventral dististyle.



Other generally similar regional species with somewhat similar body coloration and wing pattern include *Limonia (Rhipidia) eremnoptera* Alexander, Peru, *L. (R.) melanaria* Alexander, Peru, *L. (R.) neorhasma* Alexander, Bolivia, *L. (R.) rhasma* Alexander, *L. (R.) sprucei* Alexander, Ecuador, *L. (R.) vafra* Alexander, Ecuador, Peru, and some others, all differing especially in hypopygial characters, including in some a developed proctigeral structure that is not found in the present fly.

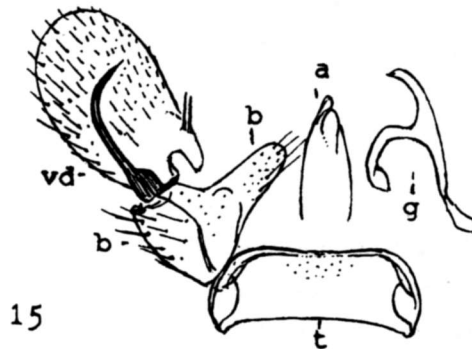
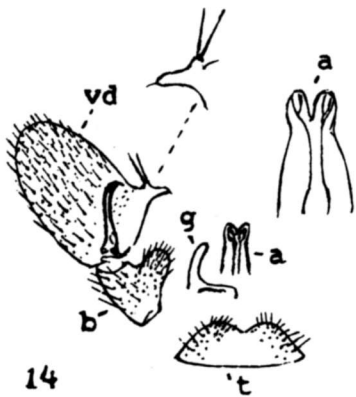
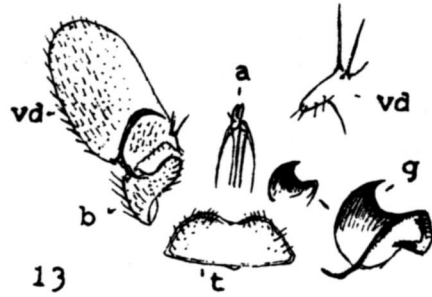
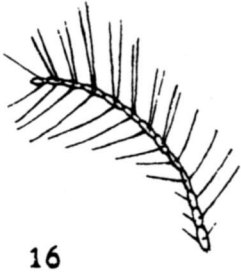
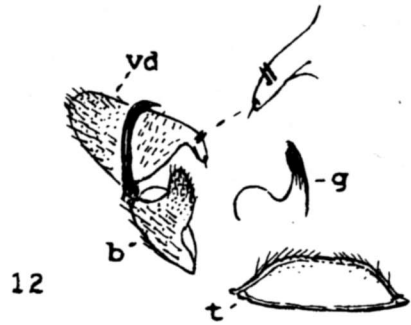
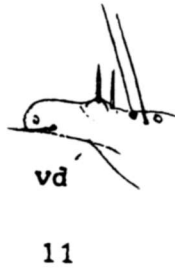
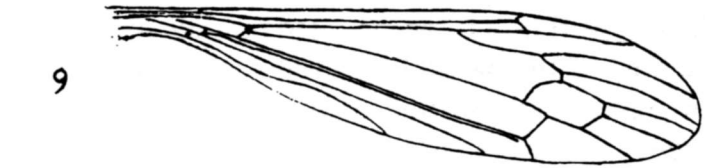
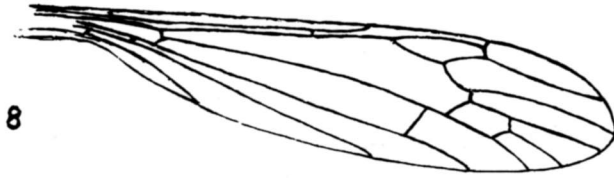
### ***Limonia (Rhipidia) neomystica* sp.n.**

Antennae of male with 11 uniflabellate segments, as shown; head and appendages black; eyes large, broadly holoptic; thorax with mesonotum yellowed, patterned with darker, pleura yellow with a broad black stripe; halteres black; legs brownish yellow, tips of femora narrowly clearer yellow; wings whitish yellow, patterned with darker; costal region with four darkened areas, the second subcircular, smaller than the pale interspaces; male hypopygium with posterior border of tergite nearly straight; ventral dististyle large, more than twice the area of the basistyle; rostral spines two, placed at near midlength of the prolongation.

*Male.* Length about 6.5 mm.; wing 7 mm.; antennae about 2.4 mm. Rostrum and palpi black. Antennae of male (Fig. 10) black throughout; flagellar segments one to eleven uniflabellate; longest branch more than one-half longer than the segment, last branch subequal to the segment; proportions of branches and arrangement of setae about as shown. Eyes large, broadly holoptic. Head dark gray.

Pronotum obscure yellow. Mesonotal praescutum and dorsopleural membrane yellow, lateral and median praescutal stripes confluent, pale reddish, scutum similarly reddened; posterior notal sclerites pale yellow. Pleura yellowed, with a broad blackened longitudinal stripe, narrow on propleura, widened posteriorly, including the sternopleurite and posterior coxae. Halteres black, base of stem narrowly light yellow. Legs with coxae dark brown; trochanters obscure yellow; remainder of legs obscure brownish yellow, tips of femora narrowly clearer yellow. Wings with the ground whitish yellow, including chiefly the anterior half of wing and extensive areas near outer end of cell *M*, outer end of cell *1st A* and the anal angle; beyond the cord the cells yellowed, with a subapical darker cloud at midlength of the outer radial and bases of the medial cells; wing tip yellowed; veins brown, more yellowed in the costal interspaces; costal border with four dark areas,

FIGURES 8-16. 8, *Limonia (Peripheroptera) parvistigmata* sp.n., venation. 9, *Helius (Helius) setigerus* sp.n., venation. 10, *Limonia (Rhipidia) neomystica* sp.n., male antenna. 11, *Limonia (Rhipidia) neomystica* sp.n., male hypopygium, ventral dististyle. 12, *Limonia (Rhipidia) parahedys* sp.n., male hypopygium. 13, *Limonia (Geranomyia) melanomera* sp.n., male hypopygium. 14, *Limonia (Geranomyia) argentea* sp.n., male hypopygium. 15, *Limonia (Peripheroptera) parvistigmata* sp.n., male hypopygium. 16, *Helius (Helius) setigerus* sp.n., male antenna. Symbols explained in Figs. 1-7.





the subcircular second one smaller than the interspaces, the third darkened area at origin of *Rs*. Venation: Cell *1st M*<sub>2</sub> closed; *m-cu* at fork of *M*.

Abdominal tergites brown, the posterior borders slightly more darkened; sternites brownish yellow, apices more broadly infuscated; hypopygium brownish yellow. Male hypopygium with the tergite transverse, posterior border nearly straight. Basistyle with ventromesal lobe bearing relatively sparse long setae. Ventral dististyle of type (Fig. 11), as mounted on slide damaged but apparently more than twice the area of the basistyle; rostral prolongation ( $\sigma$ ) small, apex subtruncate; spines two, placed at near midlength of the prolongation.

*Holotype*.  $\sigma$ , Reventador, East Ecuador, 1750 meters, October 3-6, 1977 (Peña).

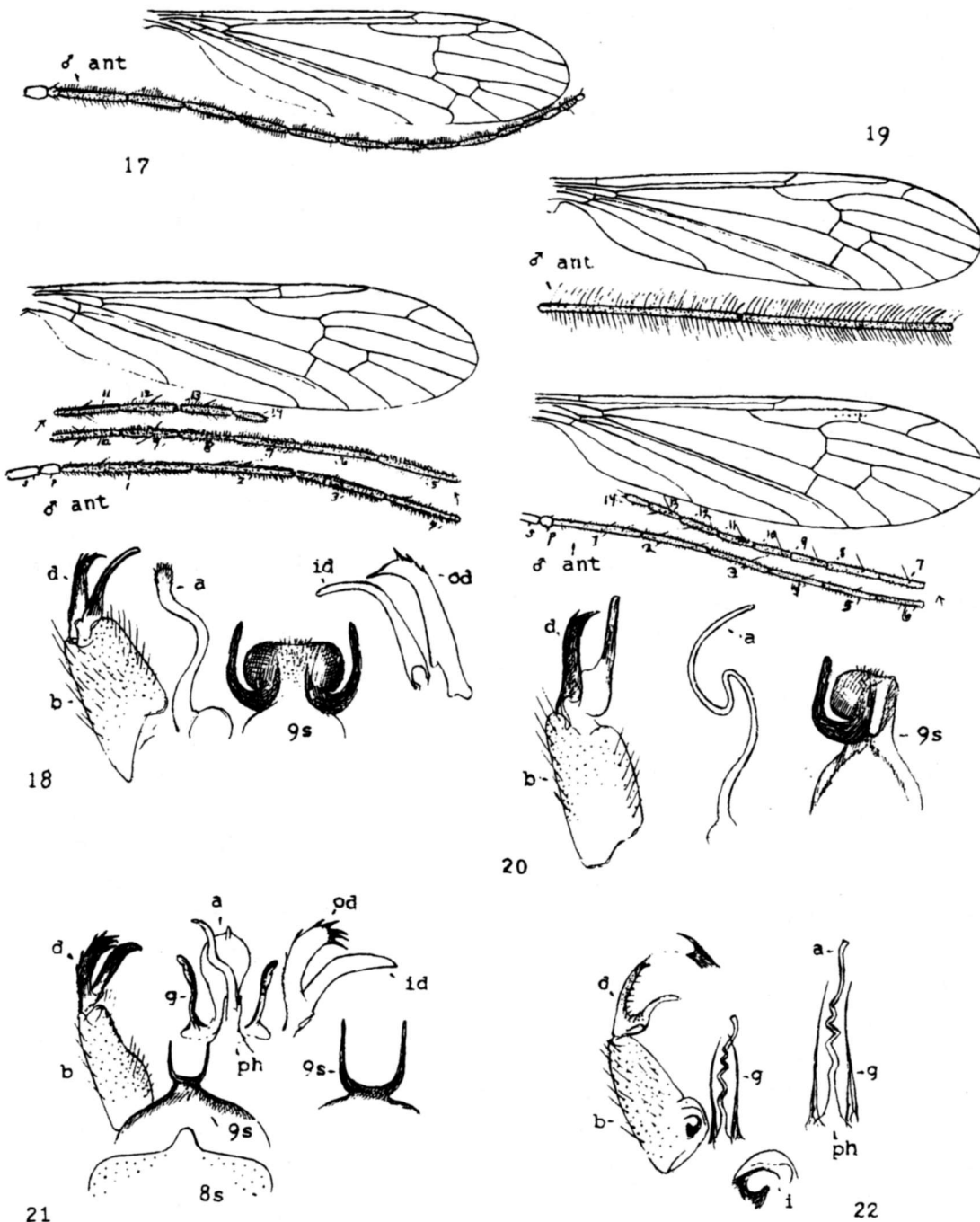
The details of coloration of the body and wings, and the antennal and hypopygial structure provide the most important characters for separating this species. The most similar of these include *Limonia (Rhipidia) mystica* Alexander, Honduras to Colombia, and some others, as *L. (R.) cermatoleuca* Alexander, Panama to Peru, *L. (R.) claricostata* Alexander, Ecuador; *L. (R.) diacaena* Alexander, Bolivia, *L. (R.) paulus* Alexander, Venezuela, *L. (R.) surinamica* Alexander, Surinam, and some others.

### ***Limonia (Rhipidia) parahedys* sp.n.**

General coloration of mesonotal praescutum medium brown, the sides broadly yellowed, posterior sclerites chiefly yellow; pleura yellow with a conspicuous dark brown longitudinal stripe; sternum clear yellow; legs yellow, tips of femora and outer tarsal segments brown; wings pale yellow with a reduced darkened pattern, including the stigma and four subcostal areas; cord and outer end of cell *1st M*<sub>2</sub> narrowly brown; vein *Sc* long, *Sc*<sub>1</sub> ending at near two-thirds the length of *Rs*; *m-cu* shortly before the fork of *M*; abdominal tergites chiefly dark brown, sternites bicolored, yellow basally, apices broadly brown; male hypopygium with the rostral prolongation of the ventral dististyle gently curved, the two spines short, closely approximated; aedeagus pale, apical lobes small.

*Male*. Length about 7.5 mm.; wing 8 mm.; antenna broken. Rostrum and palpi brown. Antennae broken beyond the first flagellar segment, the latter subglobular, not produced. Head light brown.

Pronotum dark brown, lateral borders light yellow. Mesonotal praescutum with disk uniformly medium brown, lateral portions broadly yellowed; scutal lobes darker brown, median region yellow; scutellum and postnotum obscure yellow. Pleura obscure yellow with a relatively narrow conspicuous dark brown dorsal longitudinal stripe; sternum clear yellow. Halteres yellow, knob weakly darkened. Legs with coxae and trochanters light yellow; femora yellow, tips medium brown; tibiae and basal tarsal segments light yellow, outer segments dark brown; last tarsal segment ventrally at base with stout setae; claw long; outer ventral spine strong, basal spinules progressively smaller basally. Wings pale yellow with a reduced darkened pattern, including the stigma and four small subcostal areas, the last at tip of vein *Sc*; stigma brown, its center narrowly yellowed; narrow brown seams at cord



FIGURES 17-22. 17, *Shannonomyia exilifila* sp.n., antenna ♂, venation. 18, *Atarba (Ischnothrix) integra* sp.n., venation, antenna ♂, male hypopygium. 19, *Atarba (Ischnothrix) melanolyra* sp.n., venation, antenna ♂. 20, *Atarba (Ischnothrix) supplicata* sp.n., venation, antenna ♂, male hypopygium. 21, *Atarba (Ischnothrix) melanolyra* sp.n., male hypopygium. 22, *Shannonomyia exilifila* sp.n., male hypopygium.

Symbols: *d*, dististyles; *i*, interbase; *id*, inner dististyle; *od*, outer dististyle; *ph*, phallosome; *s*, 8th sternite. Other symbols as in Figs. 1-7.

and outer end of cell *1st M*<sub>2</sub>; wing apex pale, with a very weak subterminal darkening; veins pale yellow in the ground, darker in the patterned portions. Venation: *Sc* long, *Sc*<sub>1</sub> ending at nearly two-thirds the length of *Rs*, *Sc*<sub>2</sub> slightly removed; *m-cu* about one-half its length before the fork of *M*.

Abdominal tergites dark brown, slightly patterned with pale; sternites yellowed basally, apices broadly brown; hypopygium yellowed. Male hypopygium (Fig. 12) with the tergite, *t*, having both the anterior and posterior borders virtually straight; setae short, pale yellow, poorly visible. Dorsal dististyle nearly straight, outer fourth slightly curved, at tip extended into a strong spine; ventral dististyle, *vd*, about twice the size of the basistyle, vestiture short and inconspicuous, pale yellow; rostrum produced, slightly curved, with two short closely approximated spines, as shown. Gonapophysis, *g*, with mesal-apical lobe blackened at outer end. Aedeagus pale, apical lobes small, inconspicuous.

*Holotype*. ♂, Sebundoi, Ecuador, 2600 meters, September 11-15, 1977 (Peña).

The present fly is generally similar to *Limonia (Dicranomyia) hedys* sp.n. differing especially in hypopygial structure, as described and figured.

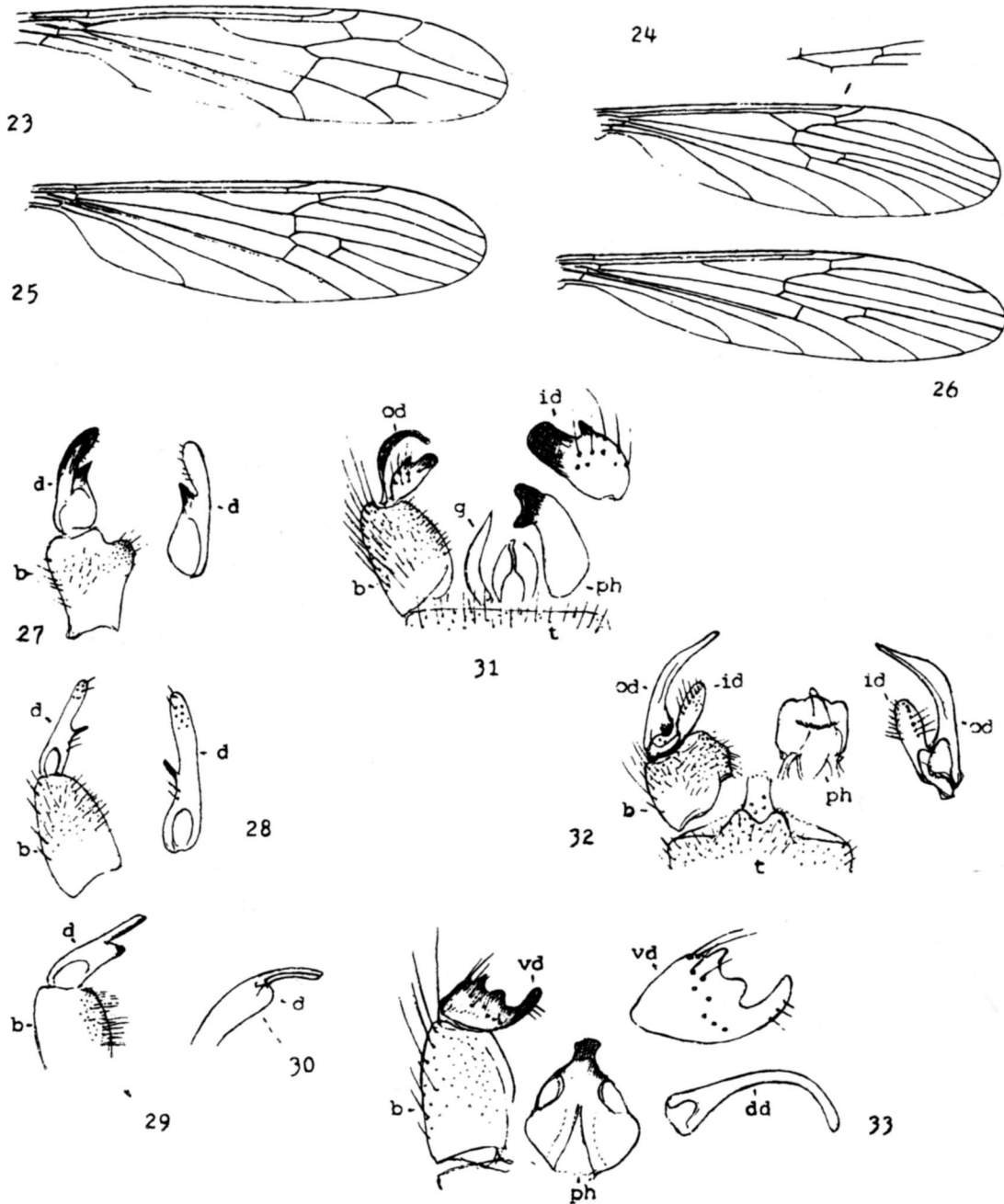
### ***Limonia (Geranomyia) argentacea* sp.n.**

Head black, with a narrow central silvery line; rostrum about twice the length of the antennae; mesonotum chiefly greenish yellow, praescutum with a median brown stripe, pleura pale green; legs with femora yellow with a broad brownish black subterminal ring; wings yellowed, with a restricted brown pattern, *Sc*<sub>1</sub> nearly opposite midlength of *Rs*; male hypopygium with tergite small, its area about one-fourth that of the large fleshy ventral dististyle; gonapophysis and aedeagus pale, their structure as described and figured.

*Male*. Length, excluding rostrum, about 7.5 mm.; wing 7 mm.; rostrum about 3.3 mm.; antenna about 1.5 mm.

Head with rostrum, palpi and antennae black. Rostrum nearly one-half the remainder of body, black. Antennae with scape elongate, dark brown, pedicel paler; flagellum light brown, segments subcylindrical. Head black, the anterior vertex a narrow silvery line, extended caudad to the posterior border of the vertex.

Pronotum above light brown, sides broadly greenish yellow. Mesonotal praescutum greenish yellow with a broad median brown central stripe, margins of the latter vaguely more darkened, the lateral posterior borders similarly darkened; scutal lobes uniformly medium brown, central area, with the scutellum and postnotum greenish yellow. Pleura uniformly pale green. Halteres with knob pale brown, stem pale green. Legs with coxae light green, trochanters more yellowed; femora yellow, with a broad brownish black subterminal ring, subequal to the yellowed apex; tibiae and tarsi brownish yellow, outer segments brown. Wings yellowed, with a restricted brown pattern; three subcostal darkened areas that are much smaller than the interspaces, the mark at the end of *Sc* larger and barely contiguous with the small darkening at origin of *Rs*; stigma and areas at ends of veins *R*<sub>2+3</sub>, *Cu* and the Anals pale brown; other dark markings over the cord, outer end of cell *1st M*<sub>2</sub> and at ends of *R*<sub>2+3</sub> and medial veins more restricted; veins yellow, darker in the



FIGURES 23-33. 23, *Trentepohlia (Paramongoma) aequivena* sp.n., venation. 24, *Gnophomyia (Gnophomyia) angusticellula* sp.n., venation. 25, *Gnophomyia (Gnophomyia) suffusibasis* sp.n., venation. 26, *Gnophomyia (Gnophomyia) trilobata* sp.n., venation. 27, *Trentepohlia (Paramongoma) aequivena* sp.n., male hypopygium. 28, *Trentepohlia (Paramongoma) suberrans* sp.n., male hypopygium. 29, *Trentepohlia (Paramongoma) pallidistigma* sp.n., male hypopygium. 30, *Trentepohlia (Paramongoma) pallidistigma* sp.n., male hypopygium. 31, *Gnophomyia (Gnophomyia) angusticellula* sp.n., male hypopygium. 32, *Gnophomyia (Gnophomyia) suffusibasis* sp.n., male hypopygium. 33, *Gnophomyia (Gnophomyia) trilobata* sp.n., male hypopygium.

Symbols *dd*, dorsal dististyle. Other symbols as in previous figs.

patterned areas. Venation: *Sc*<sub>1</sub> ending at near midlength of *Rs*, *Sc*<sub>2</sub> shortly removed; supernumerary crossvein in cell *Sc* distinct; cell *1st M*<sub>2</sub> subequal in length to outer section of *M*<sub>1+2</sub>; *m-cu* shortly beyond the fork of *M*.

Abdomen brown, tergites darker, proximal sternites more yellowed. Male hypopygium (Fig. 14) with the tergite, *t*, small, its area about one-fourth that of the very large fleshy ventral dististyle. Dorsal dististyle a gently curved rod, the acute tip decurved into a spine. Ventral dististyle, *vd*, large, as figured; rostral prolongation small, slender, with two subequal spines, both at summit of a small tubercle that is about one-third the size of the body of the rostrum. Gonapophyses, *g*, relatively small, entirely pale; mesal-apical lobe erect, pale. Aedeagus, *a*, pale, broad basally, terminating in two oval lobes; internal rods narrow, slender, closely approximated; terminal lobes oval, each with a small subhyaline area.

*Holotype*. ♂, Loja — Malacatos, Ecuador, 1900 meters, August 21-22, 1977 (Peña).

The present fly resembles various other regional species in the wing pattern and venation, differing especially in hypopygial structure, especially the relative proportions of the tergite and ventral dististyle, and in the aedeagus. Other generally similar regional species include *Limonia (Geranomyia) dstricta* Alexander, Ecuador, *L. (G.) parilis* Alexander, Ecuador, *L. (G.) neoparilis* Alexander, Bolivia, and some others.

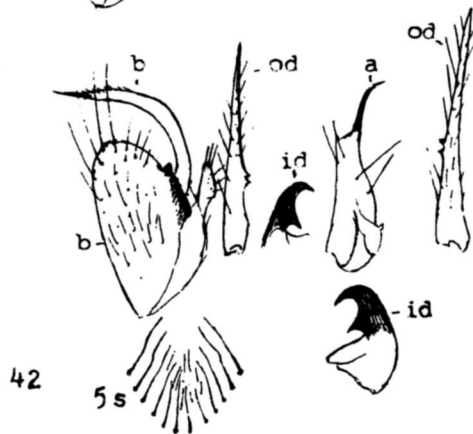
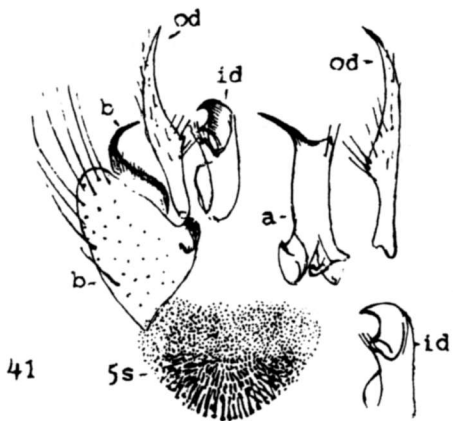
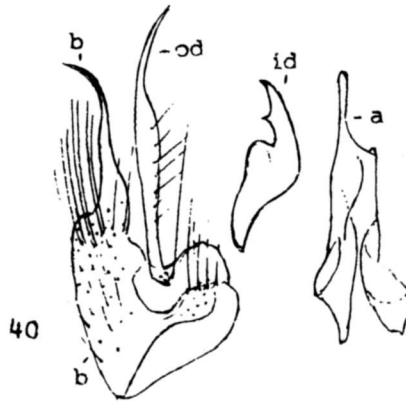
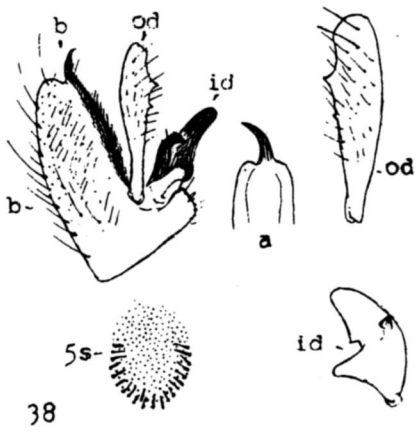
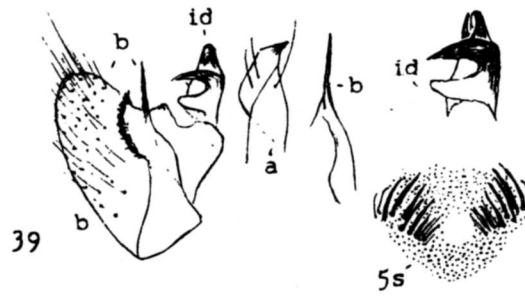
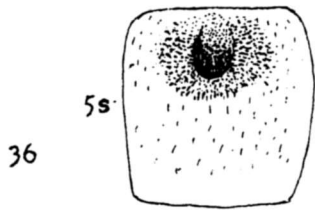
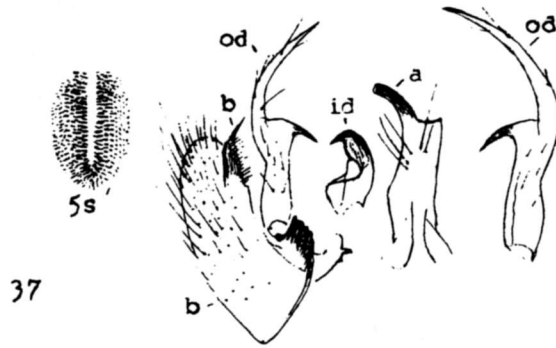
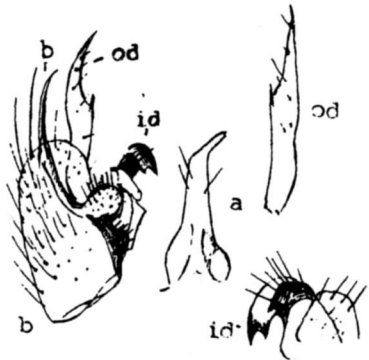
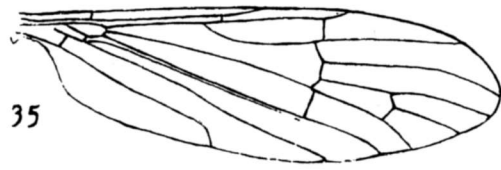
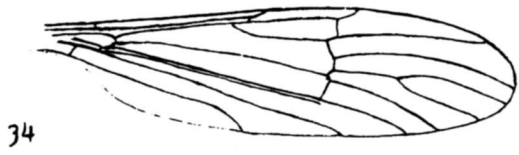
### *Limonia (Geranomyia) discors* sp.n.

Size large (wing, ♀, 8.5 mm.); rostrum unusually long; mesonotum light brown, with a distinctive pattern of darker brown and yellow; legs with femora obscure yellow with two brown rings on outer half; wings almost uniformly strongly infuscated, costal border yellowed, with four brown areas; *Sc*<sub>1</sub> beyond one-third the length of *Rs*; *m-cu* at or close to fork of *M*; abdominal tergites dark brown, sternites light yellow.

*Female*. Length, excluding rostrum about 8.5 mm.; rostrum about 5 mm.; wing 8.5 mm.; antenna 2.7 mm.

FIGURES 34-42. 34, *Teucholabis (Teucholabis) vacuata* sp.n., venation. 35, *Teucholabis (Teucholabis) varipes* sp.n., venation. 36, *Teucholabis (Teucholabis) angustifusca* sp.n., male hypopygium, sternal pocket. 37, *Teucholabis (Teucholabis) flavocincta* sp.n., male hypopygium, sternal pocket. 38, *Teucholabis (Teucholabis) phaeostigmata* sp.n., male hypopygium, sternal pocket. 39, *Teucholabis (Teucholabis) semiermis* sp.n., male hypopygium, sternal pocket. 40, *Teucholabis (Teucholabis) melanoderma* sp.n., male hypopygium. 41, *Teucholabis (Teucholabis) vacuata* sp.n., male hypopygium, sternal pocket. 42, *Teucholabis (Teucholabis) varipes* sp.n., male hypopygium, sternal pocket.

Symbols: male hypopygium: *Ss*, sternal pocket; *s*, sternite of fifth abdominal segment. Other symbols as in previous figs.



Rostrum unusually long, nearly twice the antenna, brown. Antenna dark brown; flagellar segments short-cylindrical, verticils small, shorter than the segments; terminal segment subequal in length to the penultimate. Head dark brown.

Pronotum small, brown, darker medially. Mesonotal praescutum medially with the ground light brown, with three narrow brown stripes, the median one paler, the stripes subequal in width to the interspaces, posterior border darker, humeral areas yellow; scutal lobes gray, the borders darker, median area yellow; scutellum testaceous yellow, parascutella brownish yellow; postnotal mediotergite brown. Pleura chiefly dark gray, dorsal sternopleurite and meral region yellow. Halteres with stem light yellow, knob brown. Legs with coxae brownish yellow, posterior pair and all trochanters clear yellow; a single leg (fore) is preserved, femora obscure yellow, clear basally, outer half with two brown rings, the subterminal outer one broader, about three times the narrow yellow apex; tibiae dark brown; tarsi slightly paler brown. Wings strongly infuscated; costal border yellowed, with four brown areas, the narrow basal one at *h*, the third largest, including the origin of *Rs* and outer end of vein *Sc*; stigmal area paler brown; paler costal areas before origin of *Rs* between the darkenings near base and before origin of *Rs*, with a smaller similar pale area in cell *R*, before the stigma; wing base in prearcular region, including the bases of the Anal cells yellowed; very vague to scarcely indicated pale marks beyond the cord, beyond the stigmal region and in the center of cell *1st M*<sub>2</sub>; veins brown. *Rs* and the outer veins beyond the cord with trichia, lacking on *M* and *Cu*; three or four trichia at outer end of vein *2nd A*. Venation: *Sc* long, *Sc*<sub>1</sub> beyond one-third the length of *Rs*, *Sc*<sub>2</sub> near its tip; *m-cu* at or close to the fork of *M*.

Abdominal tergites dark brown; sternites light yellow. Ovipositor and genital segment brownish yellow. Ovipositor with valves relatively short and slender.

*Holotype*. ♀, Reventador, Ecuador, 1750 meters, October 3-5, 1977 (Peña).

This distinct fly is best determined by the unusually long rostrum and the wing pattern. The still unknown male will undoubtedly provide further hypopygial differences.

### ***Limonia (Geranomyia) melanomera* sp.n.**

General coloration of thorax brownish gray, praescutum with five darkened stripes, pleura with dorsal sternopleurite yellowed; knob of halter dark brown; legs brownish yellow to pale brown; wings with anterior half whitened, with six brown areas, posterior half of wing weakly darkened; *Sc* long, *m-cu* before the fork of *M*; male hypopygium with ventral dististyle very large and fleshy, rostral prolongation small, the two spines basal in position, from very small basal tubercles; gonapophyses broadly flattened, strongly darkened; aedeagus terminating in two very small elongate lobules.

*Male*. Length, excluding rostrum, about 6.5-7 mm.; wing 6.5-7.2 mm.; antenna about 1-1.1 mm.; rostrum about 2.5-2.6 mm. Rostrum black, elongate, as shown by the measurements; palpi very reduced in size. Antennae black; flagellar segments oval. Anterior vertex narrow, gray; posterior vertex black with a narrow central gray line.

Cervical region brownish black. Pronotum very small, yellow. Mesonotal praescutum brownish gray, central area with three narrow brownish black stripes, the lateral pair extended caudad beyond the suture forming broad inner margins of the scutal lobes, behind reaching the scutellum; praescutum additionally with a more narrow darkened lateral stripe, reaching the suture behind, the extreme lateral praescutal borders pale; scutellum and postnotum brownish gray. Pleura brownish gray, dorsal sternopleurite vaguely more yellowed. Halteres with stem yellow, knob dark brown. Legs with coxae and trochanters obscure yellow; femora brownish yellow, gradually darkened outwardly, tips darker brown; tibiae and tarsi medium brown; claws slender outwardly, basally with crowded spinules, the outermost largest. Wings with ground color of anterior half whitened, posterior half weakly darkened; anterior border with six darker brown areas, those at origin of *Rs* and tip of *Sc* separated, the oval stigma largest, the outermost area at end of vein *R*<sub>1</sub>; cord and outer end of cell *1st M*<sub>2</sub> with narrow paler brown seams. Venation: *Sc* long, *Sc*<sub>1</sub> about opposite three-fifths the length of *Rs*; *m-cu* shortly before fork of *M*.

Basal abdominal segments obscure yellow medially, lateral borders darker brown to brownish black; outer segments, including the hypopygium, chiefly dark brown. Male hypopygium (Fig. 13) with the tergite, *t*, small, its area only about one-fourth that of the ventral dististyle, posterior border slightly emarginate, lobes low, vestiture sparse. Ventral dististyle, *vd*, very large and fleshy, approximately five times the area of the basistyle; rostral prolongation small, as shown, the two basal spines from very small tubercles. Dorsal dististyle a blackened curved sickle, broadest on outer half, the apex a long slender spine. Gonapophyses, *g*, distinctive, appearing as broadly flattened darkened blades. Aedeagus *a*, terminating in two very small elongate blades.

*Holotype*. ♂, Loja — Malacatos, Ecuador, 1900 meters, August 21-22, 1977 (Peña). Paratopotypes, 4 ♂♂, with the type.

The present fly is most readily distinguished from the relatively numerous generally similar regional species by hypopygial structure, including the relative proportions of the dististyles and the shape and coloration of the gonapophyses that have suggested the use of the specific name.

### ***Limonia (Neolimonia) subporrecta* sp.n.**

General coloration of thoracic dorsum brown, ventral pleurites yellowed; knobs of halteres black; legs brownish black to black; wings obscure yellow, outer half at and beyond the origin of *Rs* with a distinctive brown spotted pattern; *Sc* long, *Sc*<sub>1</sub> ending nearly opposite outer end of *Rs*, *Sc*<sub>2</sub> near its tip; *Rs* rectangular and short-spurred at origin; veins *R*<sub>2</sub> and *R*<sub>4+5</sub> parallel; *m-cu* at fork of *M*; abdominal tergites brownish black, sternites slightly bicolored.

*Female*. Length about 9 mm.; wing 10.4 mm. Rostrum and palpi black. Antennae black; first flagellar segment subglobular, succeeding segments oval, passing into elongate; terminal segment slightly less than twice the length of the penultimate; verticils of outer segments very long, on the penultimate about one and one-half times the segment; terminal segment not constricted at midlength. Head dark gray.



Pronotum obscure yellow. Mesonotal praescutum with a semipolished central brown stripe, behind confluent with more obscure lateral areas; scutal lobes and scutellum darker brown; postnotum and a broad dorsopleural stripe still darker brown, ventral pleurites yellowed. Halteres with stem light brown, base narrowly yellow, knob black. Legs with coxae and trochanters obscure yellow; remainder of legs brownish black to black. Wings with the ground obscure yellow, outer half with a distinctive brown pattern, the most basal being a large area at origin of  $R_5$ ; stigma slightly larger, similar in color; smaller brown areas at tip of  $Sc_1$  cord and outer end of cell  $1st M_2$ ; wing apex in cells  $R_2$  to  $M_2$  suffused with paler brown; no darkenings at ends of Anal veins; veins brown, only slightly darker in the patterned areas; stigma with about nine strong trichia. Longitudinal veins beyond general level of origin of  $R_5$  with strong trichia, lacking on Anal veins. Venation:  $Sc$  long,  $Sc_1$  nearly opposite the outer end of  $R_5$ ,  $Sc_1$  and  $Sc_2$  subequal;  $R_5$  rectangular and short-spurred at origin, in longitudinal alignment with  $R_{2+3}$ ; free tip of  $Sc_2$  and  $R_2$  pale, in transverse alignment;  $R_3$  decurved on outer half, parallel to  $R_{4+5}$ ; cell  $1st M_2$  longer than  $2nd M_2$ ;  $m-cu$  at fork of  $M$ .

Abdominal tergites brownish black; sternites slightly bicolored, bases obscure brownish yellow, outer ends broadly more brownish black, becoming less extensive on outer segments. Base of ovipositor extensively obscure yellow, valves broadly blackened basally, outer ends extensively horn-yellow; cerci gently narrowed into slender slightly upcurved needle-like points.

*Holotype*. ♀, West Sebundoi, North Ecuador, 3000 meters, September 11, 1977 (Peña).

The present species is most readily distinguished from other generally similar species in the female sex by the details of coloration of the wing pattern. The more similar species are *Limonia* (*Neolimonia*) *dicax* Alexander, Peru, Bolivia; *L. (N.) lawlori* Alexander, Panama; *L. (N.) onoma* Alexander, Venezuela; *L. (N.) porrecta* Alexander, Peru, and *L. (N.) tragica* Alexander, Mexico to Panama, all differing among themselves in details of the wing pattern.

### ***Limonia* (*Periphoptera*) *parvistigmata* sp.n.**

General coloration of body brown, including the antennae and legs; wings nearly hyaline, prearcular field slightly more yellowed; stigma unusually small, pale brown; male hypopygium with tergite narrow, transverse, both the anterior and posterior borders nearly straight, parallel to one another; gonapophysis with outer spine slender.

*Male*. Length about 5.5 mm.; wing 6.4 mm.; antenna about 1.5 mm.

*Holotype* mounted on slide. Head and appendages dark brown. Antennae with flagellar segments progressively reduced in size outwardly, the terminal one smallest.

Thorax generally brown. Legs dark brown to brownish black throughout. Wings (Fig. 8) nearly hyaline, the prearcular field slightly more yellowed, including the veins; stigma unusually small, pale brown; wing veins medium brown. Venation as shown:  $Sc$ , ending shortly before origin of  $R_5$ ,  $Sc_2$  far removed; veins at end of  $Sc$ ,

including  $Sc_1$  and  $Sc_2$ , virtually obsolete; basal section of  $R_{4+5}$  strongly arcuated.

Abdomen brown, the abdomen on slide appearing paler brown, trilineate with slightly darker brown; hypopygium dark brown. Male hypopygium (Fig. 15) with tergite,  $t$ , relatively narrow, transverse, both the anterior and posterior borders nearly straight, parallel; outer lateral ends more thickened, darker brown. Ventral dististyle,  $vd$ , large, oval, its area about twice that of the basistyle; rostral prolongation as shown, near its base with two closely approximated straight spines, apex obtuse. Dorsal dististyle a slender gently curved rod, narrowed into a long terminal spine. Gonapophysis,  $g$ , with outer spine slender, nearly straight, the small terminal spine slightly decurved. Aedeagus,  $a$ , pale, shaped about as figured.

*Holotype*. ♂, on slide, Troya, Carchi Province, Ecuador, 2900 meters, June 13, 1965 (Peña).

The more similar species are *Limonia (Peripheroptera) glochinoides* Alexander, Venezuela; *L. (P.) lissomelania* Alexander, Ecuador; *L. (P.) machupichuana* Alexander, Peru, and a few others, all most readily separated by the details of venation and hypopygial structure, as described and figured.

### ***Helius (Helius) setigerus* sp.n.**

General coloration of thoracic dorsum light brown, pleura more yellowed; antennae apparently 15-segmented, flagellar segments with very long verticils; legs brown, outer tarsal segments slightly whitened; wings weakly darkened, stigma somewhat darker; outer radial veins generally parallel to one another; cell  $R_1$  at margin about two and one-half times as extensive as cell  $R_3$ ; cell  $1st M_2$  relatively large, basal section of vein  $M_{1+2}$  conspicuously arcuated;  $m-cu$  at near midlength of cell  $1st M_2$ .

*Female*. Length (without head) about 5 mm.; wing 4.8 mm.; antenna about 1 mm.

Head lost. Antenna (Fig. 16) mounted on slide, apparently 15-segmented, dark brown; scape and pedicel lacking, flagellar segments subcylindrical to long-oval, with very long setae on all segments except the first; verticils of segments two to five single, on intermediate segments with two on outer face, one on the lower; longest verticils about three times the segments, as shown.

Pronotum brown. Mesonotum almost uniformly light brown, without pattern; pleura more yellowed. Halteres with knob dark brown, stem slightly paler. Legs with fore coxae brownish yellow, middle and hind coxae and all trochanters light yellow; remainder of legs brown, third tarsal segment obscurely whitened, outer two segments dark brown; on fore legs all tarsal segments more clearly white; claws pale yellow, simple. Wings (Fig. 9) very weakly darkened, the oval stigma slightly deeper brown, inconspicuous; veins delicate, brown. Trichia on longitudinal veins beyond general level of origin of  $Rs$ , lacking on  $1st A$ ; vein  $2nd A$  with about five long trichia distributed over most of the length. Venation as shown; veins  $R_1$  and  $R_{4+5}$  virtually parallel to one another for their entire lengths, cell  $R_2$  at margin about two and one-half times as extensive as cell  $R_3$ ; cell  $1st M_2$  generally rectangular in outline, base gently arcuated, as shown;  $m-cu$  at near midlength of cell  $1st M_2$ , longer than the distal section of vein  $Cu_1$ .

Proximal abdominal tergites dark brown, outer segments paler, more brownish yellow; sternites obscure yellow, subterminal segment slightly darker. Ovipositor with cerci long and nearly straight, the acute tips slightly upcurved.

*Holotype*. ♀, Dureno, Ecuador, 150 meters, September 23-30, 1977 (Peña).

The present fly appears to be correctly assigned to the genus *Helius* despite the differences in venation of the outer radial and medial fields, as described and figured. All other generally similar species with whitened tarsi have the venation of the radial and medial fields distinctive. Particular attention is directed to the antennal structure, especially the excessively long flagellar verticils, as described and figured.

## HEXATOMINI

### *Shannonomyia exilifila* sp.n.

General coloration of body brown, ventral thoracic pleurites clearer yellow; antennae of male very long, nearly two-thirds the wing, segments long-cylindrical, with abundant delicate erect setae; wings with cell *M*<sub>1</sub> lacking, *m-cu* at near two-thirds cell *1st M*<sub>2</sub>; male hypopygium with outer dististyle very slender, apex blackened, bispinous; interbases appearing as strongly curved slender spines; aedeagus strongly convoluted, gonapophyses very long, needlelike.

*Male*. Length about 5.5 mm.; wing 5.8 mm.; antennae about 4 mm. Rostrum and palpi black. Antennae of male (Fig. 17) black, very long, nearly two-thirds the body or wing; flagellar segments long-cylindrical, proportions about as shown, terminal segment small; vestiture including abundant erect delicate setae, the longest slightly exceeding the diameter of the segment. Head brownish gray.

Pronotum dark brown. Mesonotal praescutum light brown, with a broad more blackened median stripe, lateral darkened areas smaller and inconspicuous; posterior sclerites of notum dark brown. Pleura brownish yellow, clearer yellow ventrally. Halteres with stem obscurely whitened, knob slightly darker. Legs with fore coxae brownish yellow, remaining coxae and trochanters light yellow; remainder of legs brown. Wings (Fig. 17) light brown, stigma oval, slightly darker brown, veins brown. Wing veins beyond general level of origin of *Rs* with trichia, lacking on the crossveins and deflections, *2nd A* with about six or seven long trichia on outer third; *1st A* entirely glabrous. No macrotrichia in outer wing cells. Venation as shown; cell *M*<sub>1</sub> lacking; cell *1st M*<sub>2</sub> closed; *m-cu* at near two-thirds the length of cell *1st M*<sub>2</sub>; veins *r-m* and distal section of *Cu*<sub>1</sub> strongly arcuated, as shown.

Abdomen brown, outer segments slightly darker. Male hypopygium (Fig. 22) with outer dististyle, *d*, very slender, apex blackened, unequally bispinose. Interbase *i*, very slender, strongly curved, bases dilated. Aedeagus, *a*, elongate, strongly convoluted. Gonapophysis, *g*, appearing as very long needlelike spines.

*Holotype*. ♂, Reventador, East Ecuador, 1750 meters, October 3-5, 1977 (Peña).

Other Neotropical species having very long antennae in the male, as in the present fly, include *Shannonomyia dampfi* Alexander, Mexico; *S. exilistyla* Alexander, Panama; *S. myersiana* Alexander, Jamaica; and *S. nudipennis* Alexander, Jamaica,

all differing in the structure of the antennae and male hypopygium, and in venational details, including the closed cell *1st M*<sub>2</sub>, this being open in certain of the above species.

### *Atarba (Ischnothrix) integra* sp.n.

General coloration of thoracic dorsum brown to brownish black, pleura more yellowed; head and abdominal tergites black; antennae of male long and slender, flagellar segments long-cylindrical with relatively long setae, the longest subequal to the diameter of the segment; male hypopygium with median plate of the ninth sternite with a lateral arm on either side to appear sublyriform; aedeagus moderately long, stout, gently sinuous, apex obtuse, with microscopic setulae.

*Male.* Length about 7 mm.; wing 7 mm.; antenna about 5 mm. Rostrum yellow; mouthparts and palpi black. Antennae of male long (Fig. 18), as shown by the measurements and figure; brownish black throughout; flagellar segments long-cylindrical, the erect normal setae relatively long, slightly shorter than or equal to the diameter of the segment. Head blackened, sparsely pruinose.

Pronotum small, light brown. Mesonotal praescutum light brown, scutal lobes dark brown to brownish black; scutellum brown, posterior border darker; postnotum brown. Pleura brownish yellow, dorsally vaguely more darkened. Halteres with stem obscure yellow, knob brown. Legs with coxae and trochanters brownish yellow to clearer yellow; femora brownish black, bases and a broad ring at the outer two-thirds obscure yellow, the latter broader and more distinct on the posterior legs, extreme tips yellow; tibiae dark brown, tarsi black. Wings (Fig. 18) pale brown to subhyaline, with a distinct darker brown pattern, including the stigma and broad seams at origin of *Rs* and over the cord; veins brown. Longitudinal veins beyond general level of origin of *Rs* with trichia, including the outer two-thirds of vein *2nd A*, *1st A* glabrous. Stigmal trichia lacking or represented by a single element only. Venation as shown; *R*<sub>2</sub> lacking; *m-cu* about one-third its length beyond the fork of *M*.

Abdominal tergites black; proximal sternites pale brown, bases yellowed, outer segments uniformly blackened, hypopygium slightly paler. Male hypopygium (Fig. 18) with the appendage of the ninth sternite, *9s*, distinctive, symmetrical, as shown; median plate broadly transverse, with a lateral arm on either side to appear sublyriform. Outer dististyle, *od*, with a single well-developed subterminal spine, with two or three smaller appressed more basal points. Inner dististyle, *id*, slender, gently curved to form a rod. Aedeagus, *a*, distinctive, large and stout, about as long as the combined basal and outer dististyles, gently sinuous, the obtuse apex with microscopic setulae.

*Holotype.* ♂, Cochabamba, Chapare, Yungas, Bolivia, 2900 meters, January 29-31, 1976 (Peña).

The present fly is most similar to *Atarba (Ischnothrix) supplicata* Alexander, from Peru, from which it differs in the longer antennae, with a more conspicuous flagellar vestiture, and in hypopygial characters, including the symmetrical appendage of the ninth sternite and the shorter stout aedeagus with the obtuse apex microscopically

setulose. Both species are shown for comparison, *integra* (Fig. 18; *supplicata* (Fig. 20).

The original description of *supplicata* (Ann. Mag. Nat. Hist., (11) 10:537-539, fig. 5 (hypopygium); 1943) was based on a series of nine specimens, all from Yanamonte, La Mar, Peru, and evidently representing a single species. This material shows a confusing difference in certain males, especially concerning the appendage of the ninth sternite. In the available materials, including the holotype, some have both lateral arms present, with others lacking one arm, as shown in figure 20. More materials may be needed to clarify this variation in what appears to represent a single species. The more stable specific characters appear to be in the structure of the aedeagus, as described and figured, and in the antennae of the two species.

### ***Atarba (Ischnothrix) melanolyra* sp.n.**

General coloration of head brownish gray; antennae of male elongate, more than one-half longer than the body, flagellar segments with abundant erect delicate setulae; thoracic dorsum dull black, pleura yellow ventrally; legs brownish black; wings pale brown, stigma darker brown, conspicuous;  $R_{2+3+4}$  and  $R_4$  subequal,  $R_5$  shorter; male hypopygium with outer dististyle a stout curved black rod, with about seven subappressed spines, the outer ones larger; ninth sternite with a conspicuous blackened lyriform structure; eighth sternite with a median lobule on posterior border; phallosome with aedeagus sinuous on outer half.

*Male.* Length about 6.5 mm.; wing 7 mm.; antenna about 12 mm. Rostrum brownish gray; palpi black. Antennae of male (Fig. 19) elongate, broken beyond midlength, the measurements approximately as given; scape and pedicel obscure yellow, flagellum black; flagellar segments very long-cylindrical, the abundant vestiture comprised of unusually short erect delicate setulae (proximal two flagellar segments shown). Head brownish gray.

Thoracic dorsum almost uniformly dull black, anteriorly with sparse grayish yellow pollen, more pruinose posteriorly. Pleura yellow ventrally, more obscured above. Halteres yellow, knob infuscated. Legs with coxae and trochanters yellow; remainder of legs dark brown to brownish black. Wings (Fig. 19) almost uniformly pale brown; stigma conspicuous, dark brown; veins darker brown. Longitudinal veins beyond general level of origin of  $R_5$  with trichia; vein  $2nd\ A$  with trichia on distal half. Venation:  $Sc$ , shortly before midlength of  $R_5$ ;  $R_{2+3+4}$  long;  $R_4$  suberect;  $m-cu$  beyond midlength of  $M_{3+4}$ .

Abdomen brownish black, incisures of segments broadly yellow; hypopygium black. Male hypopygium (fig. 21) with the ninth sternite,  $9s$ , narrowed posteriorly, the border with a conspicuous blackened lyre-shaped armature, the rods long and slender, subparallel to one another. Eighth sternite,  $8s$ , with a conspicuous median lobule on posterior border. Dististyles,  $d$ , blackened; outer style,  $od$ , diagnostic, appearing as a stout curved rod, the outer end with four strong blackened spines, with three progressively smaller appressed spinules on dorsal margin; inner style,  $id$ , boomerang-shaped, without setae. Phallosome,  $ph$ , small; aedeagus,  $a$ , short, nar-

rowed and weakly sinuous on outer half.

*Holotype*. ♂, Sebundoi, Ecuador, 2600 meters, September 11-15, 1977 (Peña).

The present fly is most readily distinguished by the antennal structure, venation and coloration of the wing, and especially by hypopygial structure, including the outer dististyle and ninth sternite. Other somewhat similar regional species include *Atarba* (*Ischnothrix*) *brevisetosa* Alexander, Bolivia, *A. (I.) geminata* Alexander, Peru, *A. (I.) voracis* Alexander, Peru, and some others, all most readily distinguished by details of structure of the antennae and male hypopygium.

## ERIOPTERINI

### *Trentepohlia* (*Paramongoma*) *aequivena* sp.n.

General coloration of body pale brown; rostrum yellow; pleura yellowed; legs uniformly light brown; wings pale brown, without pattern; veins  $R_{1+2+3}$  and  $R_{3+4}$  subequal; cell *1st M*<sub>2</sub> long, subequal to the distal section of  $R_2$ ; *m-cu* close to the fork of  $M$ ; male hypopygium with mesal face of basistyle produced into a rounded lobe; dististyle with lower lobe blackened, triangular apex acutely pointed.

*Male*. Length about 5 mm.; wing 5.8 mm.; antenna about 1.1 mm. Rostrum yellow; palpi light brown. Antennae darker brown; flagellar segments oval, outwardly becoming more slender and elongate. Head brownish yellow.

Cervical region and pronotum light brown. Thoracic dorsum almost uniformly pale brown, without pattern; pleura more yellowed. Halteres with stem whitened, knob light brown. Legs with coxae and trochanters pale yellow; remainder of legs uniformly very light brown; claws slender. Wings (Fig. 23) uniformly pale brown, without stigma or other pattern; veins light brown. Veins posterior to costa glabrous; distal section of  $R_2$  with about 18 small trichia distributed over the entire length. Venation as shown; vein  $R_{1+2+3}$  subequal to or slightly shorter than  $R_{3+4}$ ; veins  $R_{4+5}$  and  $R_6$  widely separated at margin, the distance about two-thirds that of cell  $R_3$ ; cell *1st M*<sub>2</sub> long, subequal in length to the distal section of vein  $R_2$ ; *m-cu* close to fork of  $M$ ; veins  $Cu_1$  and *1st A* widely separated at margin.

Abdomen pale yellowish brown. Male hypopygium (Fig. 27) as shown. Basistyle, *b*, with a conspicuous rounded lobe on mesal face. Dististyle, *d*, with lower lobe short, blackened, apex acutely pointed. The hypopygium of the more similar species are shown. Note especially the conformation of the lower lobe of the dististyle and the mesal lobe of the basistyle.

*Holotype*. ♂, Sebundoi, Ecuador, 2600 meters, September 11-15, 1977 (Peña).

The more similar species include *Trentepohlia* (*Paramongoma*) *longifusa* Alexander, Ecuador, Brazil, Panama; *T. (P.) pallidistigma* Alexander, Panama; and *T. (P.) suberrans* Alexander, Bolivia, all most readily distinguished by venational and hypopygial characters. The styli of the male hypopygium of the related species mentioned are figured in the present paper, — *T. (P.) aequivena* Alexander, fig. 27, *T. (P.) longifusa* Alexander, fig. 29; *T. (P.) pallidistigma* Alexander, fig. 30, and *T. (P.) suberrans* Alexander, fig. 28.

**Gnophomyia (Gnophomyia) angusticellula** sp.n.

Thorax and abdomen almost entirely yellow; legs yellow; wings light yellow, faintly patterned with pale brown; cord of wing far basad at near midlength; veins beyond cord very long, as described and figured; cell *1st M*<sub>1</sub> long and narrow.

*Male*. Length about 6.5 mm.; wing 7 mm.; Rostrum obscure yellow; palpi very short, terminal segment longer. Antennae with scape and pedicel pale brown; flagellum lacking. Head light brown.

Thorax with dorsum yellow, praescutal stripes very faintly more reddened; pleura yellow. Halteres broken. Legs with coxae very pale yellow, faintly tinged with green; remainder of legs yellow, outer two tarsal segments brown; claws small, smooth. Wings (Fig. 24) almost uniformly light yellow; stigma small, pale brown; veins chiefly yellow, general region of the cord and outer end of vein *2nd A* slightly more darkened, including the veins. Outer radial and medial veins with trichia, lacking on veins basad of the cord excepting a series of very small trichia on about the outer third of *2nd A*. Venation as shown; *Sc* very long; cord of wing far basad, at near midlength of wing, all outer veins correspondingly lengthened; veins *R*<sub>1</sub> and *R*<sub>2</sub> generally parallel throughout their lengths, cell *R*<sub>1</sub> at margin very extensive; cell *1st M*<sub>1</sub> distinctive, long and narrow, as shown in the subfigure, base narrowed; basal section of *M*<sub>1</sub> angulated; *m-cu* at near one-third the length of cell *1st M*<sub>1</sub>; cell *M*<sub>1</sub> very long; cell *2nd A* broadest just beyond base.

Abdomen yellow. Male hypopygium (Fig. 31) with posterior border of tergite, *t*, straight; setae numerous and long but pale yellow and inconspicuous. Basistyle short and stout, without lobes. Outer dististyle, *od*, a long blackened blade, gently curved to the obtuse tip; inner style, *id*, with base stout, bearing a few long setae, apex a blackened lobe, obtuse, outer margin with a small stout blackened spine. Phallosome, *ph*, as shown, including paired yellow lateral blades; aedeagus short, slender. A large stout central phallosomic structure, yellow, apex blackened.

*Holotype*. ♂, Sebundoi, Ecuador, 2600 meters, September 11-15, 1977 (Peña).

The present fly is quite distinct from most other regional species in the wing venation, as described and figured, especially the very long outer veins and the long narrow cell *1st M*<sub>1</sub>. The most similar species is *Gnophomyia (Gnophomyia) teleneura* Alexander, likewise from Ecuador, which differs in body coloration, details of venation, and especially in hypopygial structure.

**Gnophomyia (Gnophomyia) suffusibasis** sp.n.

General coloration of thoracic dorsum brown, pleura yellowed below; wings pale yellow, patterned with pale brown, proximal fourth of wing with a large pale brown suffusion; cell *1st M*<sub>1</sub> small, much shorter than the outer veins; male hypopygium with posterior border of tergite produced medially; basistyle short, mesal lobe broad, apex truncate.

*Male*. Length about 8.5 mm.; wing 9 mm.

*Female*. Length about 9 mm.; wing 8 mm. Rostrum brownish yellow; palpi black. Antennae brownish black; basal flagellar segments long oval, becoming pro-

gressively smaller outwardly. Head with the narrow vertex obscure orange.

Pronotum brownish yellow, pretergites clear light yellow. Mesonotal praescutum almost uniformly medium brown, with vague indications of pale intermediate stripes, lateral borders vaguely more yellowed; scutum, scutellum and postnotum relatively dark brown. Pleura of male dark gray dorsally, ventral regions yellowed, posteriorly clear light yellow; in female the dorsal stripe is more blackened, conspicuous, ventrally the pleura is light gray with a narrow obscure yellow dividing line. Halteres light yellow. Legs with fore coxae darkened basally, remaining coxae and all trochanters yellow; femora yellow with a conspicuous brownish black nearly terminal ring; tibiae and basitarsi more obscure yellow, tips of segments narrowly more infuscated; basal tarsal segments obscure yellow, the outer ones dark brown. Wings (Fig. 25) with the ground pale yellow, the central costal region clearer yellow; stigma long and very narrow, dark brown; very pale brown extensive areas before cord, including a major marking on proximal fourth of wing, extending from *R* to posterior border at *2nd A*; similar narrower major areas over the cord and subterminally near outer ends of veins *R*<sub>1</sub> and *M*<sub>1</sub>; veins yellow, pale brown in the clouded portions. Trichia of veins beyond cord abundant but small, lacking on *M*, *Cu* and the Anals, with a few at outer end of *2nd A*. Venation as shown; *Rs* long; *R*<sub>2</sub> shortly beyond fork of *R*<sub>1+2+3+4</sub>, slightly more distad in the allotype; cell *1st M*<sub>2</sub> small, less than vein *M*<sub>2</sub>; cell *2nd A* broad.

Abdominal tergites medium to darker brown, sternites paler brown to brownish yellow. Male hypopygium (Fig. 32) with posterior border of tergite, *t*, produced medially. Basistyle, *b*, short; mesal lobe broad, apex truncate. Dististyles black, their shapes as shown (*id*, *sd*). Phallosome, *ph*, subquadrate in outline; aedeagus short.

*Holotype*. ♂, Otavalo — Apuela, Ecuador, 2200 meters, September 8-9, 1977 (Peña). Allotopotype, ♀, pinned with type.

The present fly is distinguished from *Gnophomyia* (*Gnophomyia*) *regatrix* Alexander, Peru, and some other generally similar regional species, chiefly in hypopygial characters, including both dististyles and the phallosome.

### ***Gnophomyia* (*Gnophomyia*) *trilobata* sp.n.**

General coloration of body dark brown; head with front light yellow; wings subhyaline, stigma lacking; cord far basad, at near midlength of wing; male hypopygium with the dististyles terminal, their shapes diagnostic, as described and figured.

*Male*. Length about 6 mm.; wing 5.5 mm.; antenna about 1.5 mm. Rostrum and palpi black. Antennae black; flagellar segments oval, progressively smaller outwardly. Front conspicuously light yellow, remainder of head light gray laterally, central region of vertex more infuscated.

Pronotum brownish gray, sides conspicuously light yellow. Mesonotum almost uniformly blackened, very sparsely pruinose. Pleura blackened, pruinose, dorsal sternopleurite paler brown; meron yellow. Halteres with stem obscure yellow, knob brownish black. Legs with coxae brownish black, apices more yellowed basally;



tibiae and tarsi paler brownish yellow, outer tarsal segments black. Wings (Fig. 26) subhyaline; stigma lacking; veins brown. Venation as shown; cord far basad, at near midlength of wing, the outer veins correspondingly lengthened; *Rs* long, in direct alignment with vein *R*<sub>1</sub>; cell 1st *M*<sub>2</sub> long and narrow, *m-cu* before midlength.

Abdomen brownish black, hypopygium more intensely blackened. Male hypopygium (Fig. 33) with basistyle, *b*, relatively short, subcylindrical. Dististyles terminal; dorsal style, *dd*, shown separately so as not to confuse the figures, long and slender; ventral, *vd*, massive, outwardly extended into a cylindrical rod, upper margin with two further lobes, the upper one more pointed. Phallosome, *ph*, diagnostic, appearing as a depressed-flattened yellowed plate, apex narrowed, blackened.

*Holotype*. ♂, La Alegria, Ecuador, 2700 meters, September 14-15, 1977 (Peña).

*Gnophomyia* (*Gnophomyia*) *trilobata* is entirely distinct from other generally similar species in hypopygial structure, including both dististyles and the phallosome.

### **Teucholabis (Teucholabis) angustifusca sp.n.**

General coloration of entire body black; legs with femora light yellow, tips narrowly darkened; wings whitish subhyaline, stigma brown, small; a narrow paler brown seam along the anterior cord; sternal pocket of fifth abdominal segment distinctive, on posterior half of the sternite; male hypopygium with inner dististyle bearing a small blackened blade at base of the longer apical plate.

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

Head, including the long rostrum, black; palpi black. Antennae black; flagellar segments suboval, outwardly progressively smaller and more slender. Head black.

Thoracic dorsum polished black; pleura extensively dusted with light gray pruinosity. Halteres dark brown, extreme base of stem paler. Legs with fore coxae black, remaining coxae more yellowed, especially the posterior pair; trochanters yellow; femora light yellow, tips narrowly dark brown, the amount subequal on fore and hind pairs (middle legs broken); tibiae yellow, tips more narrowly darkened; tarsi dark brown, posterior pair with basitarsi slightly more dilated on proximal third. Wings whitish subhyaline; stigma small, oval, brown; a narrow paler brown seam over the anterior cord; veins pale brown. Venation: *Rs* long, *Sc*, opposite two-thirds its length; vein *R*<sub>1+2</sub> straight *R*, moderately decurved on outer fourth, cell *R*<sub>2</sub> at margin nearly twice as extensive as cell *R*<sub>1</sub>; cell 1st *M*<sub>2</sub> long and narrow, exceeding cell *M*<sub>1</sub>; *m-cu* shortly beyond fork of *M*.

Abdomen black. Sternal pocket, *5s* (Fig. 36) of fifth segment placed on posterior half of segment, appearing as a small very compact suboval group of abundant setae and points, at outer end so dense as to appear blackened, the group enclosed by a broader area of small microscopic setae, their points directed inwardly toward the pocket. Male hypopygium, Fig. 36, as shown; basistyle, *b*, with apex obtuse, the long subterminal spine nearly straight, its base extended cephalad as a similar ridge; basal mesal flange small. Outer dististyle, *od*, subterminal, appearing as a nearly straight rod, narrowed very gradually into a small terminal spine, inner edge at near

midlength with a small appressed slender point; inner dististyle, *id*, with a small blackened blade at base of the apical bispinous plate.

*Holotype*. ♂, Junction of the Napo and Coca Rivers, Ecuador, April 24, 1965 (Peña).

Other generally similar black regional species include *Teucholabis* (*Teucholabis*) *brevisetosa* Alexander, Peru; *T. (T.) denuda* Alexander, Ecuador; *T. (T.) subanthracina* Alexander, Ecuador, and some others, all differing from the present fly in details of leg and wing coloration and especially pocket of the male abdomen.

### ***Teucholabis* (*Teucholabis*) *flavocincta* sp.n.**

General coloration of thorax yellow, restrictedly patterned by black areas on both the notum and pleura; wings subhyaline, marked brown, including a conspicuous area at end of vein *2nd A*; abdominal segments bicolored, brownish black, posterior borders of tergites yellowed; sternal pocket of fifth segment distinctive; male hypopygium with subterminal spine of basistyle distinctive, as shown, unusually small; outer dististyle unusually large, with an erect spine at near midlength of inner face.

*Male*. Length about 7 mm.; wing 6.7 mm.; antenna about 1.4 mm. Rostrum brownish black, sparsely pruinose; palpi black. Antennae with scape and pedicel blackened, flagellum brown; flagellar segments long-oval; verticils long and conspicuous, black. Head gray.

Pronotum light yellow. Mesonotal praescutum obscure yellow, clearer yellow on sides, median area restrictedly blackened at anterior end, paling to reddish brown behind, lateral markings oval, black; scutum yellow, each lobe with a single large black area; scutellum brownish yellow; postnotum obscure yellow on anterior half, brownish black behind. Pleura yellow, slightly pruinose, with major polished black areas on anepisternum and sternopleurite. Halteres with stem obscure yellow, knob brownish black basally, apex broadly light yellow. Legs with coxae and trochanters yellow; remainder of legs broken. Wings with ground subhyaline, costal region pale yellow; a restricted brown spotted pattern, including the oval stigma and a comparable area at end of vein *2nd A*; more restricted brown seams at cord, outer end of cell *1st M*, and at apex of vein *R*; very pale brown washes in basal cells from midlength of cell *R* to cell *Cu*; veins brown, darker in the patterned areas. Venation: *Sc* long, *Sc*<sub>1</sub> ending opposite two-thirds *Rs*; vein *R*<sub>1</sub> strongly deflected caudad on outer half, paralleling vein *M*<sub>1+2</sub>, ending beyond the wing apex; *m-cu* shortly beyond the fork of *M*.

Abdomen with basal tergite brownish black, second segment more uniformly blackened; succeeding tergites brownish black, posterior borders broadly yellow, suggesting the specific name for the species; sternites dimidiate, dark brown basally, apices broadly light yellow, the amount of the latter increasing on outer segments, eighth and ninth segments yellow. Sternal pocket, *5s*, (Fig. 37) of fifth segment distinctive, unusually long, whitened medially, with very numerous elongate modified setae on either side, directed toward the central line; pocket of fourth segment much smaller, suboval in outline. Male hypopygium (Fig. 37) with the spine

of the basistyle, *b*, subterminal, unusually small, at end of a larger stout basal tubercle; mesal face of style at base with a small blackened flange. Outer dististyle, *od*, distinctive, unusually large, slightly longer than the basistyle, outer half extended into a long nearly straight spine, inner margin at near midlength with an erect slender blackened spine; inner dististyle, *id*, as figured. Aedeagus, *a*, flattened, before apex farther extended into a short gently curved blackened rod.

*Holotype*. ♂, Dureno, Ecuador, 150 meters, September 28-30, 1977 (Peña).

The present fly is readily told by the body and wing coloration and especially in hypopygial structure, as described and figured.

### **Teucholabis (Teucholabis) melanoderma sp.n.**

Body polished black, head and pronotum slightly paler; knobs of halteres light yellow; legs with posterior pair entirely black; wings whitened, with three broad brownish black areas, including the apical fourth and narrower bands at cord and origin of *Rs*; male hypopygium with terminal spine of basistyle long and slender; outer dististyle elongate, about one-half longer than the spine of the basistyle; inner dististyle, *id*, with outer blade unusually narrow; aedeagus relatively slender.

*Male*. Length about 5.5-6 mm.; wing 5-5.5 mm. Rostrum, antennae and palpi black. Head above brownish black, pale brown pollinose, especially anteriorly.

Pronotum yellowish brown. Mesothorax intensely polished black throughout. Halteres with stem brownish black, knob light yellow. Legs with fore coxae and trochanters brown, remainder of fore legs broken; middle legs with coxae black, trochanters yellow, femora black with basal half yellow, tibiae and tarsi black; posterior legs black throughout. Wings with the ground whitened, with three broad brownish black areas, including the outer fourth and narrower complete bands at cord and at origin of *Rs*, the latter not evidently wider in the medial and cubital fields; a small darkening in the prearcular field; veins brown throughout. Venation: *Sc*<sub>1</sub> ending opposite midlength of *Rs*; *R*<sub>2</sub> at fork of *Rs* (in type) or slightly beyond; *m-cu* shortly beyond fork of *Cu*.

Abdomen black. Sternal pocket of fifth segment not clearly visible in available materials. Male hypopygium (Fig. 40) with terminal spine of the basistyle, *b*, long and slender, nearly equal in length to remainder of segment. Outer dististyle, *od*, elongate, about one-half longer than the spine of the basistyle; inner dististyle, *id*, with outer blade unusually narrow, as shown. Aedeagus, *a*, relatively slender, straight, including the narrowed distal end.

*Holotype*. ♂, Dureno, Ecuador, 150 meters, September 28-30, 1977 (Peña). Paratopotype, 2 ♂♂.

Other regional species that are generally similar to the present fly include *Teucholabis (Teucholabis) bigladius* Alexander, Peru; *T. (T.) felicitia* Alexander, Peru; *T. (T.) lipacantha* Alexander, Peru; *T. (T.) longispina* Alexander, Ecuador; *T. (T.) multispinosa* Alexander, Venezuela; *T. (T.) perproducta* Alexander, Ecuador; *T. (T.) rostrata* Enderlein, Costa Rica to Panama; *T. (T.) sackeni* Alexander, Mexico to Peru; *T. (T.) trifasciata* (Enderlein), Panama to Venezuela, and a few others, all differing among themselves chiefly in hypopygial characters.

**Teucholabis (Teucholabis) phaeostigma sp.n.**

General coloration of head and thorax polished black, dorsopleural membrane of thorax light yellow; halteres and legs black; wings light yellow, stigma and narrow seams over *Cu* and cord brown; abdominal sternal pocket of segment five with numerous small pale spines; basistyle with mesal face of lobe narrowly darkened, extended outwardly into a spine, basally with numerous setae; male hypopygium with outer dististyle a darkened club.

*Male.* Length about 6 mm.; wing 7 mm.; antenna about 1.3 mm. Rostrum, palpi and antennae black. Head polished black, posterior vertex with abundant yellowed setae that are directed cephalad.

Pronotum black, scutal angles light yellow. Mesonotum polished black, posterior margins of scutal lobes with a small obscure yellow area. Pleura black; dorsopleural membrane restrictedly light yellow; ventral pleurites with abundant short silvery setae, a few of the anterior ones longer. Halteres black. Legs black throughout, vestiture short. Wings light yellow, with a narrow brown seam along midlength of vein *Cu*; stigma short-oval darker brown; cord brown, *Cu* and the veins beyond the cord brownish black. Longitudinal veins beyond cord with trichia, lacking on *Cu* and both *Anals*; *Rs* with trichia almost to base. Venation:  $R_{1+2+3}$  shorter than  $R_{3+4}$ ; veins  $R_1$  and  $R_2$  divergent outwardly, cell  $R_1$  at margin extensive, nearly three times cell  $R_2$ ; *m-cu* shortly beyond fork of *M*, in alignment with the remainder of the cord.

Abdomen entirely black. Sternite five (Fig. 38, 5s) with the modified pocket large but inconspicuous, including very numerous small punctures, the more cephalic ones larger with pale spines, none long laterally on sides of the pocket, as common in the genus. Male hypopygium (Fig. 38) with the lobe of the basistyle, *b*, distinctive, the mesal face with an appressed darkened modified structure, at outer end extended into an acute spine; inner surface of style with long subappressed setae. Outer dististyle, *od*, a darkened club, apex obtuse, inner margin with a small angular protrusion; inner style, *id*, small and compact, as shown. Aedeagus, *a*, terminating in a slender gently curved black spine.

*Holotype.* ♂, Loja — Zamora, Ecuador, 2800 meters, October 6-28, 1977 (Peña).

Other somewhat similar species with the wings virtually unpatterned and darkened legs include *Teucholabis (Teucholabis) diacantha* Alexander, Ecuador; *T. (T.) hera* Alexander, Peru; *T. (T.) jivaro* Alexander, Ecuador; *T. (T.) longisetosa* Alexander, Peru; *T. (T.) perebenina* Alexander, Bolivia; *T. (T.) schistostyla* Alexander, Peru; *T. (T.) spinigera* Schiner, Venezuela, Colombia, Peru, and some others, all differing from one another chiefly in hypopygial structure.

**Teucholabis (Teucholabis) semiermis sp.n.**

Mesonotum polished black with a conspicuous orange yellow central stripe extending from the posterior praescutum to the anterior half of mediotergite; pleura black, heavily silvery pruinose; knobs of halteres yellow; legs with femora dark

brown with two narrow yellow rings; wings whitish yellow with broad pale brown bands, apex narrowly pale brown; abdomen almost uniformly light yellow, hypopygium very slightly darker; male hypopygium with outer dististyle apparently lacking; aedeagus terminating in a small blackened point.

*Male.* Length about 8.5 mm.; wing 7 mm.; antenna about 1.7 mm. Rostrum orange; palpi black. Antennae with scape light brown, pedicel brownish black, flagellum black. Head above immediately behind the antennae with two light orange knobs, remainder polished black.

Cervical region long and narrow, black. Pronotum brownish black, margins yellow. Mesonotal praescutum with ground polished orange yellow, disk with three virtually confluent polished black stripes, the lateral pair behind continued over the scutal lobes, parascutella and postnotal pleurotergites; median area of dorsum with a continuous broad light orange yellow stripe that includes the posterior praescutum, mid area of scutum, scutellum and anterior half of the postnotal mediotergite; a small obscure yellow spot on posterior scutal lobes. Metapleura black, heavily silvery pruinose. Halteres with stem light brown, apex of knob pale yellow. Legs with coxae silvery brown; trochanters brown; femora dark brown with two narrow yellow rings, the outer subterminal one more distinct; tibiae brownish yellow to yellow; basitarsi obscure yellow, narrowly darkened on posterior pair; second tarsal segment obscure yellow, remainder black. Wings with ground pale whitish yellow, including cells *C* and *Sc*, with broad pale brown bands beyond wing base and over the cord; wing apex narrowly pale brown; stigma darker brown; veins yellow in the ground, darker in the patterned areas, especially the cord. Venation: *R*<sub>1</sub> shortly beyond fork of *R*<sub>2</sub>, in transverse alignment with *r-m*; *m-cu* shortly beyond the fork of *M*; cell *2nd A* broad on basal half.

Abdomen almost uniformly light yellow, hypopygium very slightly darker; armature of the fifth and sixth sternites conspicuously blackened. Fifth sternite (Fig. 39, 5s) distinctive; posterior border on either side with about ten strong black setae directed inwardly, the outer ones longer and stouter, progressively shorter toward the midline, as shown. Male hypopygium (Fig. 39) with armature of basistyle, *b*, as shown, including a slender black spine. Outer dististyle apparently lacking; inner style, *id*, as shown. Aedeagus, *a*, terminating in a small blackened point.

*Holotype.* ♂, Junction of Coca and Napo Rivers, Ecuador, May 12, 1965 (Peña).

Among the regional members of the genus the species is most similar to *Teucholabis* (*Teucholabis*) *neosalva* Alexander, Peru; *T. (T.) salva* Alexander, Peru, and some related species, differing in body coloration, wing pattern, and especially in hypopygial structure, as described and figured.

### ***Teucholabis* (*Teucholabis*) *vacuata* sp.n.**

General coloration of thorax polished orange yellow, praescutum with three black areas, remainder of notum restrictedly patterned with black; pleura black dorsally, lower half polished yellow; legs with femora yellow, tips black, tibiae chiefly yellow;

wings bicolored; cell  $M_2$  open by atrophy of basal section of  $M_1$ ; abdomen weakly bicolored, bases of segments pale brown, apices yellowed; male with pocket of the fifth sternite distinctive, as described and figured.

*Male.* Length about 5.5 mm.; wing 5.5 mm.; antenna about 1 mm. Rostrum brown; at base of antenna with a small erect point. Antennae black; flagellar segments oval. Head polished brownish black.

Pronotum above light yellow, sides narrowly brownish black. Mesonotal praescutum polished orange yellow, sides clearer yellow, disk with three narrow black areas, the median region before the suture and the scutal lobes more orange yellow; remainder of notum orange yellow, the anterior half of scutal lobes and the postnotal pleurotergite behind blackened. Pleura broadly black dorsally, lower half polished yellow. Halteres brownish black. Legs with fore coxae brownish black, trochanters obscure yellow, remainder of coxae and trochanters clear yellow; a single leg (posterior) remains, femora yellow, tips broadly black; tibiae yellow, apex and a similar subterminal annulus dark brown; tarsi black; basitarsi with basal third slightly dilated. Wings (Fig. 34) bicolored, whitened, apex and a band at cord broadly medium brown; stigma oval, dark brown; before cord central part of wing paler brown; veins brown. Radial and medial veins beyond the cord with trichia, lacking on *Cu* and all veins before the cord, excepting a series of about eight scattered trichia on *Rs*. Venation: *Sc* long, *Sc*<sub>1</sub> ending shortly before midlength of *Rs*; cell  $M_2$  open by atrophy of basal section of  $M_1$ .

Abdomen weakly bicolored, bases of segments broadly pale brown, apices yellowed; outer segments more extensively darkened; hypopygium brownish black. Fifth sternite (Fig. 41, 5s) distinctive, as shown, appearing as a transversely oval dense area of very abundant black setae, all directed toward the center of the area; at posterior end of the area the setae microscopic, as shown, totalling more than 100. Sixth segment with median setae greatly reduced in number to only two or three on either side. Male hypopygium (Fig. 41) with the spine of the basistyle, *b*, strongly curved, basal flange small. Outer dististyle, *ad*, long, broadest at near midlength, narrowed outwardly into a slender spine; inner margin slightly expanded, with a few long setae; inner style, *id*, as shown. Aedeagus, *a*, with the elongate base parallel-sided, apex extended into a long nearly straight spine.

*Holotype.* ♂, Dureno, Ecuador, 150 meters, September 23-28, 1977 (Peña).

Other Neotropical species of the genus having cell  $M_2$  of the wings open by the atrophy of the basal section of vein  $M_1$  include *Teucholabis (Teucholabis) omissa* Alexander, Argentina; *T. (T.) omissinervis* Alexander, Peru; *T. (T.) patens* Alexander, Mexico to Panama; *T. (T.) seposita* Alexander, Panama; *T. (T.) stadelmanni* Alexander, Honduras, and a few others, all differing in details of coloration and structure, especially the sternal abdominal pocket of the male and in hypopygial characters.

### **Teucholabis (Teucholabis) varipes sp.n.**

General coloration of mesothorax polished black, prothorax clear yellow; halteres with knob yellow; fore legs black, proximal fourth of femora yellow; middle and

posterior legs light yellow, including the femora; wings light yellow, patterned with brown, including a large kite-shaped brown area before the cord, apex broadly brown; male with the abdominal sternal pocket of the fifth segment with only about a dozen major setae, as shown; hypopygium with outer spine of the basistyle unusually long; outer dististyle a long straight rod that gradually narrows into a terminal spine; aedeagus terminating in a long slightly curved spine.

*Male.* Length about 5.8-6mm.; wing 5.4-5.8 mm.; antenna about 1.8-2 mm.

Frontal prolongation of head brownish black, relatively long, about one-half the remainder of head or more; palpi black. Antennae with scape brownish black, pedicel yellow, flagellum black; proximal flagellar segments long-oval, outer segments more elongate, with very short apical pedicels; terminal segment long and very slender, about one-half longer than the penultimate. Head with anterior vertex polished black, remainder obscure brownish yellow.

Prothorax, including the fore coxae and trochanters, clear light yellow. Mesothorax, including pleura, polished black, the meral region restrictedly paler. Halteres with stem black, knob yellow. Legs with all coxae and trochanters yellow; fore legs black, proximal fourth of femur light yellow; middle and hind legs with femora and tibiae clear light yellow; tarsi basally brownish black, outwardly passing into black. Wings (Fig. 35) with basal three-fourths light yellow, with a large kite-shaped brown area extending from the origin of *Rs* caudad to end of vein *2nd A*, widest in cell *M*; stigma oval, darker brown, continued over the cord as a very narrow seam; outer fourth of wing medium brown; veins darker brown. Outer longitudinal veins beyond the cord with trichia, lacking on most of basal medial veins and *Cu*; *Rs* with trichia over the entire length, lacking on the Anal veins. Venation: Cell *1st M*; long, slightly widened outwardly; *m-cu* shortly beyond the fork of *M*.

Abdominal tergites chiefly black, proximal sternites brownish black, their apices yellow, decreasing in amount on the outer segments; hypopygium black. Sternal pocket of fifth segment (Fig. 42, 5s) with setae very few, including only about six on either side, with fewer shorter ones enclosed in the group; sternite six with about five strong black setae on either side of the midline. Male hypopygium (Fig. 42) with the terminal spine of the basistyle, *b*, unusually long, strongly curved, apex a long straight spine; mesal flange of basistyle long. Outer dististyle, *od*, a long straight rod, narrowed gradually into a long terminal spine; inner margin before midlength with two microscopic points; style with very long setae, chiefly on the mesal face. Inner dististyle, *id*, as shown. Aedeagus, *a*, terminating in a long slender gently curved rod.

*Holotype.* ♂, Dureno, Ecuador, 150 meters, September 23-28, 1977 (Peña). Paratopotypes, 2 ♂♂, with the type. Paratype, ♂, Junction of Coca and Napo Rivers, May 1965 (Peña).

A few species resemble the present fly in general coloration differing among themselves chiefly in leg coloration and in details of structure of the hypopygium and the sternal pocket on the fifth abdominal segment. Species in this category include *Teucholabis* (*Teucholabis*) *adamesi* Alexander, Panama; *T. (T.) aequinigr* Alexander, Panama; *T. (T.) multispinosa* Alexander, Venezuela; and especially *T.*

*(T.) sackeni* Alexander, Mexico south to Ecuador and Peru; and *T. (T.) trifasciata* (Enderlein), Guatemala, south to Ecuador and Peru.